ROADS, STORM DRAINS PLANS

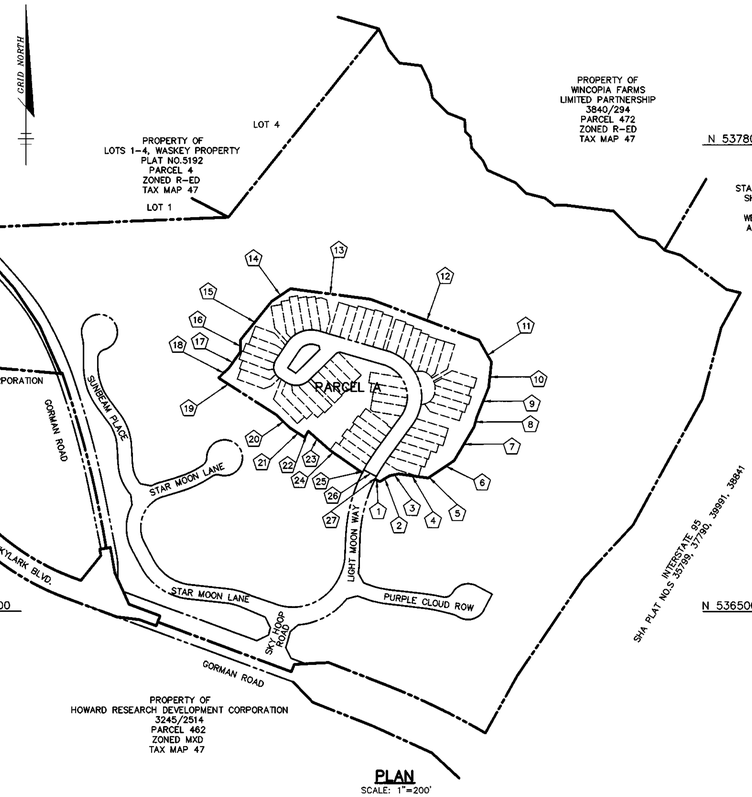
EMERSON

SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE OF LIGHT MOON WAY
3	ROAD DETAILS AND STORM DRAIN PROFILES
4	DRAINAGE AREA MAP, GRADING PLAN AND SOILS MAP
5	SEDIMENT CONTROL NOTES AND DETAILS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS, (JANUARY 1998)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY MAPS WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY AIR SURVEY CORP. FLOWN IN APRIL 1998.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 47 E4 ALONG WITH 2 TRAVERSE POINTS WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 34-3971-D
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: PATUXENT CONTRACT NO. 34-3971-D
10. STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MDE STORMWATER MANAGEMENT MANUAL UNDER F-01-140. PORTIONS OF OPEN SPACE LOTS 35, 36 & 39 ARE BEING USED AS NATURAL AREA CONSERVATION CREDIT AREAS, A CENTRAL PRIVATELY MAINTAINED STORMWATER WET POND IS BEING USED TO PROVIDE THE WATER QUALITY AND CHANNEL PROTECTION VOLUMES FOR THIS DEVELOPMENT.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY DAFT McCUNE & WALKER, INC.
13. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY WELLS & ASSOCIATES DATED FEBRUARY 2000, AND WAS APPROVED UNDER F-01-140.
14. THE NOISE STUDY FOR THIS PROJECT WAS PREPARED BY CENTURY ENGINEERING DATED DATED MARCH 1999, AND WAS APPROVED UNDER F-01-140.
15. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY DAFT, McCUNE & WALKER, INC. JULY 2000.
16. SUBJECT PROPERTY ZONED R-ED PER 10-18-93 COMPREHENSIVE ZONING PLAN. DATED JUNE 1999.
17. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
18. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S.: S-00-12, WP-00-87, WP-01-39, WP-01-99, P-01-21, F-01-140, WP-02-15.
19. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
20. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
21. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
22. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
23. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
24. ALL PIPE ELEVATIONS SHOWN ARE INVERT ⌒ ELEVATIONS.
25. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
26. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
27. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. III. ALL ROAD RIGHT OF WAYS ARE 40' WIDE AND 25 M.P.H.
28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
29. ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.
30. ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 2'-0" AND 4'-0" BEHIND FACE OF CURB.
31. STREET TREES (35) LOCATION, TYPE AND NUMBER OF TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMODATE FIELD CONDITIONS INCLUDING 20' CLEARANCE OF ANY STREET LIGHT AND SHALL BE IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. BOND RELEASE IS CONTINGENT UPON SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.
32. WP-00-87 - A WAIVER OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116(a)(2)(ii), WHICH PROHIBITED GRADING, REMOVAL OF VEGETATION WITHIN 75 FEET OF A STREAM, DATED JULY 21,2000. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. THE GRADING AND CLEARING ASSOCIATED WITH IMPACT AREA #1, FOR SUNBEAM PLACE TO CROSS THE STREAM, SHALL BE MINIMIZED AND COMPLY WITH THE FINAL ROAD PLANS, WHICH WILL BE REVIEWED AND APPROVED BY THE SRC. AS PROPOSED BY THE DEVELOPER WITH THIS WAIVER PETITION, THE UTILITY CROSSING OF THE STREAM MUST BE COINCIDENTAL WITH THE ROAD CROSSING. AS POSSIBLE, THE DEVELOPER SHALL COMPLY WITH COMMENT #1 OF THE JUNE 1,2000, REVIEW COMMENTS FROM THE SOIL CONSERVATION DISTRICT (SCD) REGARDING ROAD DESIGN AND LOCATION, AND SHALL CONFIGURE THE ROAD SO THAT ANY REQUIRED CALMING FEATURE ALIGNS WITH THE STREAM CROSSING, AND THEREBY LESSENS THE ASSOCIATED GRADING/CLEARING.
    2. AS INDICATED IN THE COMMENTS FROM THE SCD, THE OUTFALL ASSOCIATED WITH IMPACT AREA #2 IS TO OUTFALL AT GRADE ELEVATION 308, UNLESS THE PRESENCE OF ROCK IS FOUND DURING FIELD INVESTIGATION, IN WHICH CASE THE OUTFALL MAY BE SHIFTED TO OUTFALL AT GRADE ELEVATION 314.
    3. THE L.O.D. FOR IMPACT AREAS #3 AND #4 SHALL BE IN ACCORDANCE WITH THEIR WAIVER EXHIBIT DATED MARCH 17,2000. NEITHER THE WATER NOR THE SEWER LINES MAY BE EXTENDED BEHIND PROPOSED LOTS 34-40 (AS SHOWN IN THE EXHIBIT DATED MAY 8,2000). DUE TO ADDITIONAL IMPACT TO THE STREAM BUFFER, FOR IMPACT AREAS #3 AND #4, LIMIT TREE CLEARING AS MUCH AS POSSIBLE, ESPECIALLY SPECIMEN TREES. TO FURTHER DECREASE GRADING OR CLEARING, THE UTILITIES MUST BE CONSOLIDATED INTO A SINGLE EASEMENT, AS PROPOSED ON THE WAIVER EXHIBIT. (REVISED BY WP-01-99.)
33. WP-01-39 - A WAIVER OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.146, WHICH REQUIRES THE SUBMISSION OF A PRELIMINARY PLAN AFTER A SKETCH PLAN HAD BEEN SIGNED. THE WAIVER WAS DENIED, NOVEMBER 17, 2000.
34. THERE ARE 55 TENTATIVE HOUSING UNIT ALLOCATIONS RESERVED FOR THE SFA UNITS ON BULK PARCEL A, AS SHOWN ON S-00-12, AND IN ACCORDANCE WITH SECTION 16.1106.h.2.(ii) OF THE SUBDIVISION REGULATIONS.
35. THERE ARE NO EXISTING PERMANENT STRUCTURES ON-SITE.
36. WP-01-99 - A WAIVER OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.115.c.(2) TO ALLOW GRADING AND CLEARING IN A FLOODPLAIN AREA, AND SECTION 16.116.a.2.(ii) TO ALLOW GRADING AND CLEARING IN A STREAM BUFFER. FOR WORK ASSOCIATED WITH THE INSTALLATION OF THE WATER AND SEWER EXTENSIONS FROM THE ADJOINING SHA REST AREA PROPERTY.
37. INTERNAL LANDSCAPING REQUIREMENTS TO BE ADDRESSED UNDER THE SITE DEVELOPMENT PLAN, SDP-02-34.
38. WP-02-15 - A WAIVER OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116(a)(2)(ii), TO ALLOW GRADING AND CLEARING WITHIN 75' STREAM BUFFER, AND SECTION 16.115(c) TO ALLOW WORK IN A FLOODPLAIN AREA IN ORDER TO CONSTRUCT A PEDESTRIAN PATHWAY SYSTEM AS SHOWN ON THE WAIVER EXHIBIT. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. THE DISTURBANCE SHALL BE LIMITED TO ASSOCIATED WITH THE CONSTRUCTION OF THE PEDESTRIAN PATHWAY ONLY.
    2. THE ROAD CONSTRUCTION DRAWINGS FOR F-01-140 WILL HAVE TO BE RED-LINED TO REFLECT THE LOCATION OF THE PATHWAY AND ALL ASSOCIATED GRADING AND CLEARING. THE PATHWAY SHALL BE LOCATED AS SHOWN ON THE WAIVER EXHIBIT (EXHIBIT 1). THE ROAD PLANS SHALL ALSO INCLUDE A FOOTBRIDGE DETAIL.
    3. THE PETITIONER SHALL COMPLY WITH THE COMMENTS ISSUED BY THE SOIL CONSERVATION DISTRICT (SCD), DATED 8/29/01.
39. FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS ENTIRELY ADDRESSED WITH F-01-140.



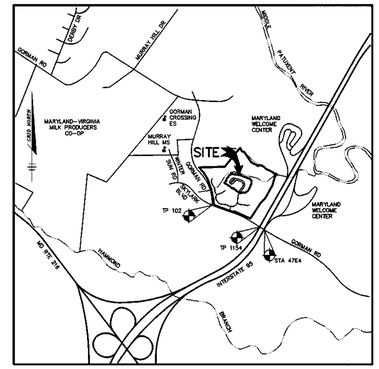
PLAN
SCALE: 1"=200'

BENCHMARKS

TRAVERSE POINT 102
ELEVATION 346.19
N 536,499.165
E 1,353,974.017
LOCATED NEAR THE INTERSECTION OF GORMAN ROAD AND SKYLARK BLVD.

TRAVERSE POINT 1154
ELEVATION 347.45
N 536,018.069
E 1,355,129.333
LOCATED NEAR THE I-95 BRIDGE ALONG GORMAN ROAD

CONTROL STATION 47E4
ELEVATION 339.00
N 535,846.16
E 1,355,431.23
LOCATED NEAR THE I-95 BRIDGE ALONG GORMAN ROAD



VICINITY MAP
SCALE: 1"=2000'

BOUNDARY CHART

1	S 63°21'59" E	15.00'
2	N 58°47'03" W	31.52'
3	N 78°34'42" E	26.08'
4	S 82°06'32" W	82.59'
5	S 56°37'58" W	7.70'
6	S 56°16'20" W	80.32'
7	S 30°33'56" W	109.08'
8	S 15°52'32" W	31.83'
9	S 21°46'05" W	56.22'
10	S 06°13'11" W	71.33'
11	S 29°37'55" E	70.32'
12	S 69°19'10" E	323.06'
13	S 82°35'36" E	225.01'
14	S 55°55'54" W	63.53'
15	S 39°04'11" W	137.70'
16	S 00°13'45" W	33.36'
17	N 35°41'13" W	54.97'
18	S 45°43'53" W	40.45'
19	S 57°14'52" E	193.04'
20	S 45°42'39" E	50.00'
21	S 57°14'52" E	50.14'
22	S 29°42'51" W	20.03'
23	S 48°37'15" E	80.00'
24	S 54°56'15" E	110.16'
25	R = 440.00' L = 9.00'	
26	S 62°13'14" E	40.00'
27	R = 400.00' L = 8.00'	

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 11-15-01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/20/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/19/01

DATE	NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
410-730-7065

PROJECT
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
TITLE SHEET

Patton Harris Rust & Associates, pc
ENGINEERS ● SURVEYORS ● PLANNERS
LANDSCAPE ARCHITECTS ● ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	01058 'RD1.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	1 OF 5

F-02-15

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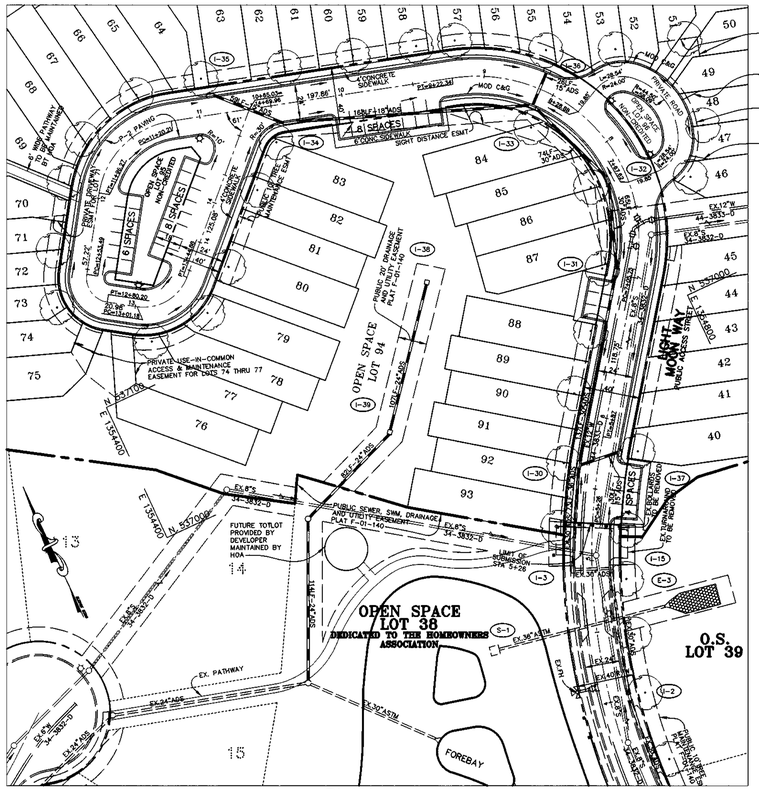


PLAN
SCALE : 1"=50'

CL CURVE DATA
FROM CL STA 5+26 TO STA 5+87
RADIUS = 420.00'
LENGTH = 61.00'
TANGENT = 30.55'
DELTA = 08°19'16"
CHORD = S 31°56'25"W 60.94'

CL CURVE DATA
FROM CL STA 7+05.75 TO STA 9+22.34
RADIUS = 113.00'
LENGTH = 216.60'
TANGENT = 160.85'
DELTA = 109°49'23"
CHORD = S 18°48'39"E 184.93'

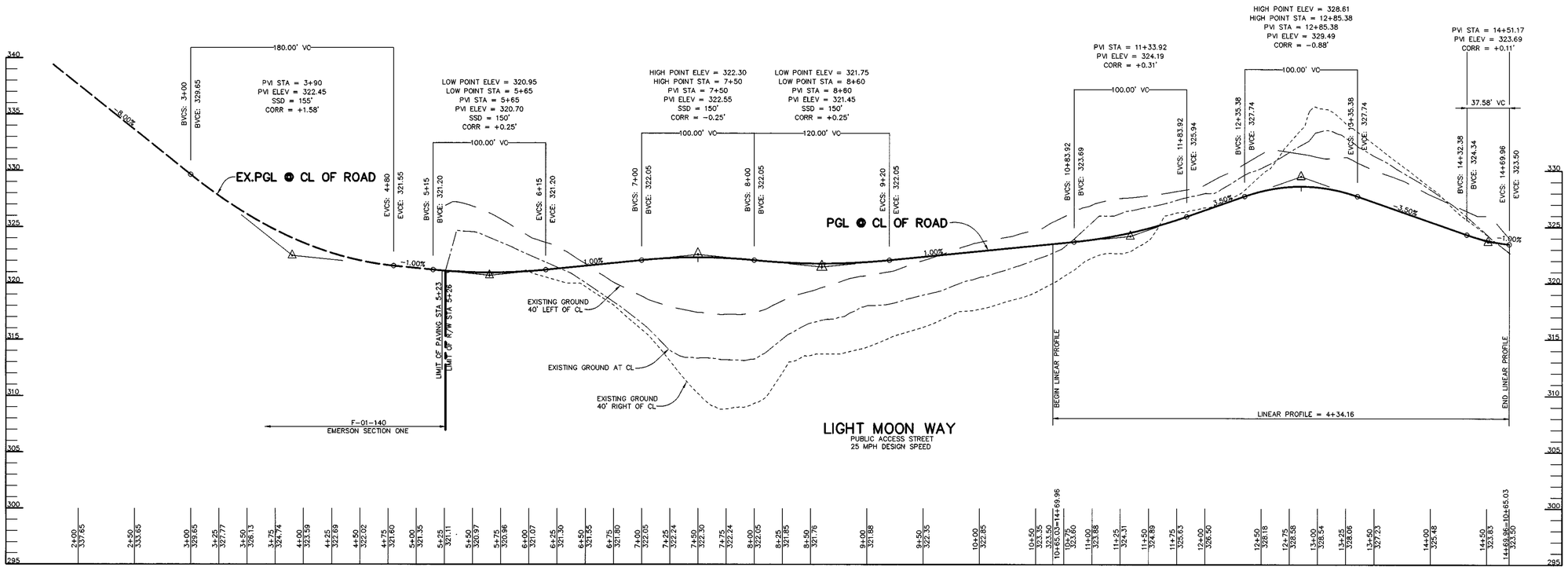
CL CURVE DATA
FROM CL STA11+20.21 TO STA 11+96.27
RADIUS = 60.00'
LENGTH = 76.07'
TANGENT = 44.11'
DELTA = 72°38'27"
CHORD = S 69°57'26"W 71.08'

CL CURVE DATA
FROM CL STA 12+53.49 TO STA 12+80.20
RADIUS = 17.00'
LENGTH = 26.70'
TANGENT = 17.00'
DELTA = 90°00'00"
CHORD = S 11°21'47"E 24.04"

CL CURVE DATA
FROM CL STA 13+01.18 TO STA 13+44.88
RADIUS = 32.00'
LENGTH = 43.71'
TANGENT = 26.03'
DELTA = 78°15'37"
CHORD = S 84°30'24"W 40.39'

STREET LIGHT CHART

LOCATION	TYPE
21' RIGHT OF STA 7+80 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
21' RIGHT OF STA 8+17 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
15' RIGHT OF STA 11+03 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
15' LEFT OF STA 13+00 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE



LIGHT MOON WAY
PUBLIC ACCESS STREET
25 MPH DESIGN SPEED

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS. 11-15-01 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT 11/20/01 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION 11/19/01 DATE

DATE	NO.	REVISION

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TITLE
PLAN AND PROFILE OF LIGHT MOON WAY

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8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND CHRISTOPHER J. REID No. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO	.01058 RD2.DWG
DATE	:OCTOBER 29, 2001
SCALE	: AS SHOWN
DRAWING NO.	2 OF 5

F-02-15

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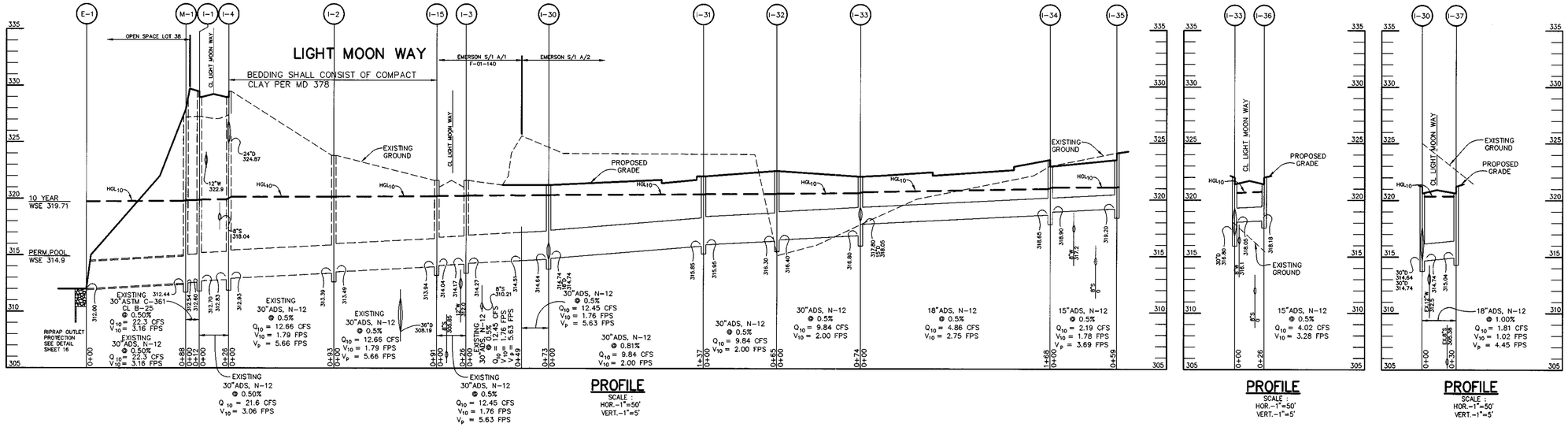
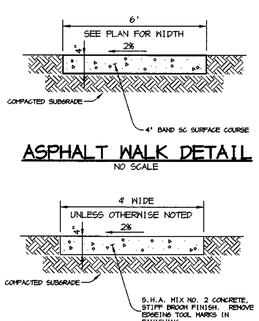


PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



ASPHALT WALK DETAIL
NO SCALE

NOTES:
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

SIDEWALK DETAIL
NO SCALE

STRUCTURE SCHEDULE

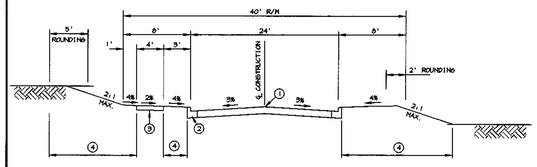
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-30	A-5 4.5'WIDE	12.52 LT OF CL STA 5+65 LIGHT MOON WAY	315.14 (30") 314.64 (18")	314.64 (30")	321.23	HOCO STD. DETAIL SD-4.40
I-31	A-5 4'WIDE	12.52 LT OF CL STA 7+01 LIGHT MOON WAY	315.95 (30")	315.85 (30")	322.30	HOCO STD. DETAIL SD-4.40
I-32	A-5 4'WIDE	12.52 LT OF CL STA 7+75 LIGHT MOON WAY	316.40 (30")	316.30 (30")	322.52	HOCO STD. DETAIL SD-4.40
I-33	A-5 4'WIDE	12.52 LT OF CL STA 8+60 LIGHT MOON WAY	317.80 (18") 318.05 (15")	316.80 (30")	322.03	HOCO STD. DETAIL SD-4.40
I-34	A-10 2.5'WIDE	12.52 LT OF CL STA 10+38 LIGHT MOON WAY	318.90 (15")	318.65 (18")	323.51	HOCO STD. DETAIL SD-4.41
I-35	A-5 2.5'WIDE	12.52 RT OF CL STA 10+90 LIGHT MOON WAY	–	319.20 (15")	324.05	HOCO STD. DETAIL SD-4.40
I-36	A-5 2.5'WIDE	12.52 RT OF CL STA 8+60 LIGHT MOON WAY	–	318.18 (15")	322.07	HOCO STD. DETAIL SD-4.40
I-37	A-5 2.5'WIDE	30.52 RT OF CL STA 5+67 LIGHT MOON WAY	–	314.94 (18")	321.23	HOCO STD. DETAIL SD-4.40
I-38	S	N 537085 E 1354639	–	316.00 (24")	320.2	HOCO STD. DETAIL SD-4.22
I-39	S	N 537001 E 1354572	314.88 (24")	314.78 (24")	320.2	HOCO STD. DETAIL SD-4.22
M-6	4'-0" MANHOLE	N 537001 E 1354572	313.96 (24")	313.86 (24")	328.0	HOCO STD. DETAIL G 5.11

NOTES: ✳ LOCATION OF INLETS AND MANHOLES IS AT CENTER OF TOP-COVER; FOR "A" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB;

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
85	15"	ADS, N-12
198	18"	ADS, N-12
291	24"	ADS, N-12
303	30"	ADS, N-12

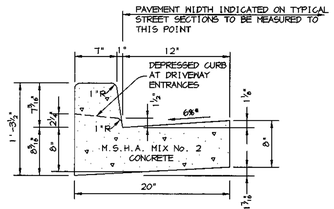
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



① PROFILE GRADE LINE (P&L), SEE DESIGN MANUAL.
② TYPE OF CURB (MOD. COMB. CURB & GUTTER) SEE DESIGN MANUAL.
③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
④ INDICATES 2" TOPSOIL, SEED AND MULCH.

TYPICAL SECTION ACCESS STREET
NO SCALE

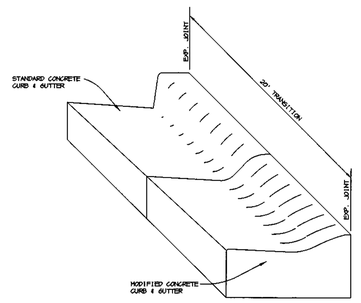
LIGHT MOON WAY FROM STA 5+26 TO STA 14+69 – 25 MPH DESIGN SPEED



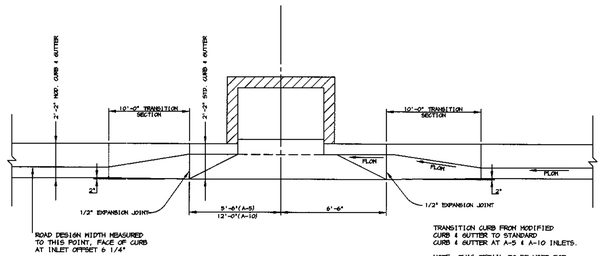
HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE



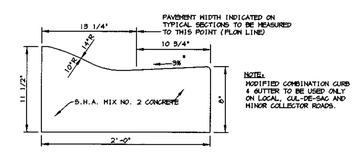
CONCRETE CURB AND GUTTER TRANSITION
NO SCALE



TRANSITION CURB FROM MODIFIED CURB & GUTTER TO STANDARD CURB & GUTTER AT A-5 & A-10 INLETS.

NOTE: THIS DETAIL TO BE USED FOR MODIFIED CURB & GUTTER HAVING AN OVERALL HEIGHT OF 11 1/2" AT THE BACK OF CURB SECTION.

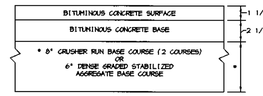
MODIFIED COMBINATION CURB AND GUTTER TRANSITION CURB SECTION AT "A" TYPE INLETS



NOTE: MODIFIED COMBINATION CURB & GUTTER TO BE USED ONLY ON LOCAL, CUL-DE-SAC AND MINOR COLLECTOR ROADS.

MODIFIED COMBINATION CURB AND GUTTER

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



(ALTERNATE)

HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING
NO SCALE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 11-15-01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/2/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/19/01

DATE	NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
410-730-7065

PROJECT
EMERSON
SECTION ONE, AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
ROAD DETAILS AND STORM DRAIN PROFILES

Patton Harris Rust & Associates, pc
ENGINEERS ● SURVEYORS ● PLANNERS
LANDSCAPE ARCHITECTS ● ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND CHRISTOPHER J. REID NO. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	.01058 'RD3.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	3 OF 5

F-02-15

P:\project\01058\Dwg\RD3.dwg Fri Oct 26 08:51:35 2001 PATTON HARRIS RUST & ASSOCIATES

SOILS CLASSIFICATION

	SYMBOL	NAME	GROUP	DESCRIPTION
**	GnB2	GLENVILLE	C	LOAM, 3% – 8% SLOPES, MODERATELY ERODED
	MgC3	MANOR	B	GRAVELLY LOAM, 8% – 15% SLOPES, SEVERLY ERODED
	MIC2	MANOR	B	LOAM, 8% – 15% SLOPES, MODERATELY ERODED
	MID2	MANOR	B	LOAM, 15% – 25% SLOPES, MODERATELY ERODED
	MIE	MANOR	B	LOAM, 25% – 45% SLOPES
	SfC2	SASSAFRAS	B	GRAVELLY SANDY LOAM, 5% – 10% SLOPES, MODERATELY ERODED
	SfD2	SASSAFRAS	B	GRAVELLY SANDY LOAM, 10% – 15% SLOPES, MODERATELY ERODED
	SIB2	SASSAFRAS	B	LOAM, 1% – 5% SLOPES, MODERATELY ERODED
	SIC2	SASSAFRAS	B	LOAM, 5% – 10% SLOPES, MODERATELY ERODED

* HYDRIC SOILS

** MAY CONTAIN HYDRIC INCLUSIONS

DRAINAGE CHART

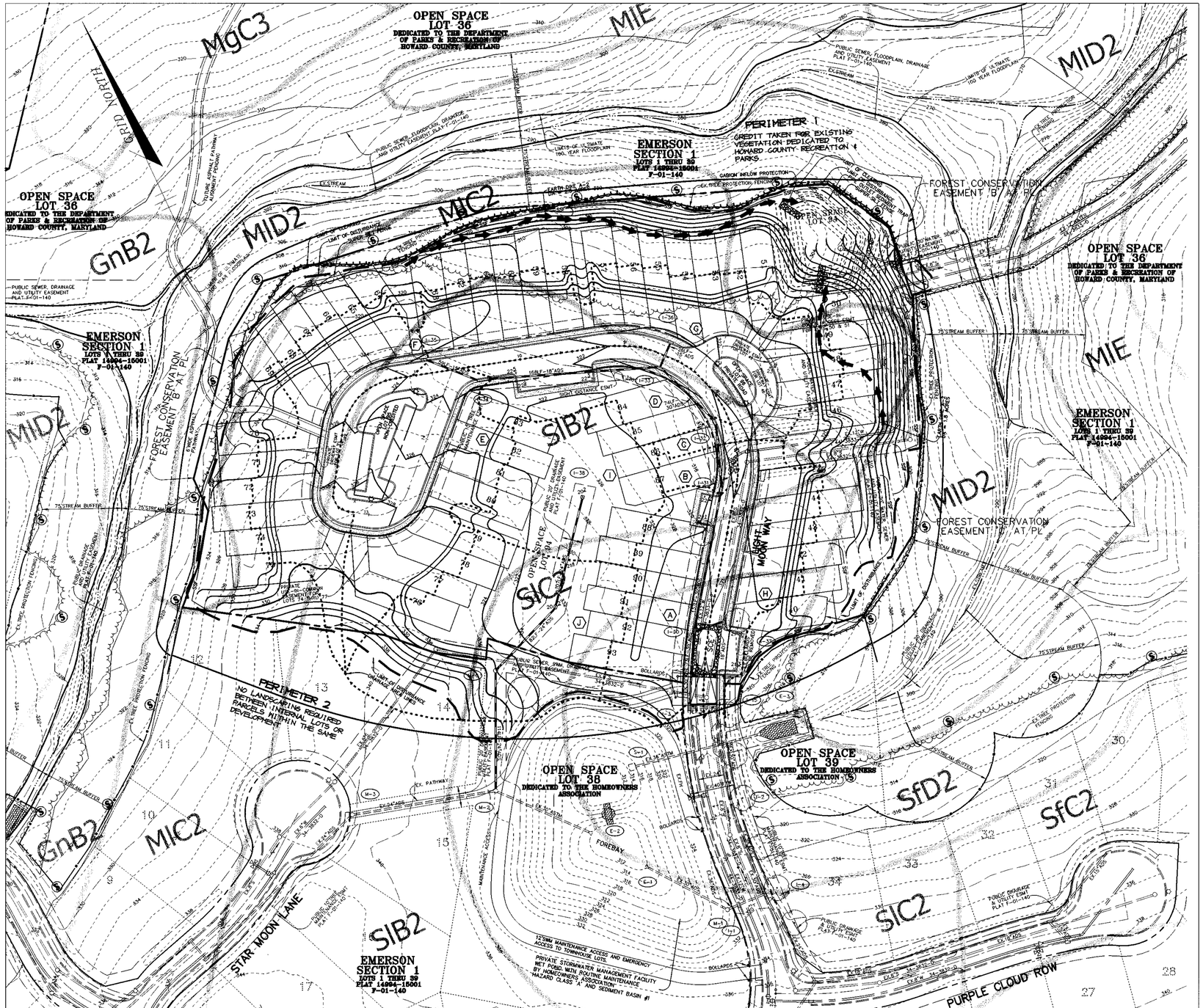
INLET NO.	INLET DESIGNATION	DRAINAGE AREA (AC)	'C' FACTOR	PERCENT IMPERVIOUS
I-30	A	0.41	0.60	41
I-31	B	0.06	0.65	33
I-32	C	0.04	0.54	50
I-33	D	0.32	0.62	63
I-34	E	0.66	0.64	65
I-35	F	0.51	0.65	67
I-36	G	0.80	0.67	70
I-37	H	0.34	0.71	76
I-38	I	0.62	0.34	19
I-39	J	0.58	0.26	7

STONE OUTLET SEDIMENT TRAP #1

DRAINAGE AREA	4.1 ACRES
STORAGE REQUIRED (WET)	3690 CF
STORAGE REQUIRED (DRY)	3690 CF
STORAGE PROVIDED (WET)	3690 CF @ 296.00
STORAGE PROVIDED (DRY)	3690 CF @ 297.44
RISER CREST ELEVATION	301.0
TOP OF DAM	302.0
BOTTOM ELEVATION	294.0
SIDE SLOPES	2:1
DEPTH	7'
CLEANOUT ELEVATION	295.00
EX Q2	2.1 CFS
PR Q2	2.1 CFS
2 YEAR WSE	301.00

N 537500 E 1356000

N 537000 E 1356150



N 536750 E 1356150

PLAN
SCALE: 1" = 50'

LEGEND

SYMBOL	DESCRIPTION
	LIMIT OF DISTURBANCE
	EXISTING TREELINE
	DRAINAGE AREA LINES
	SOIL LINES

BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 10.26.01

BY THE ENGINEER :

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 — DATE 10.26.01

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 11/8/01

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/8/01

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 11-15-01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/20/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/19/01

DATE	NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
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DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
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PROJECT
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
DRAINAGE AREA MAP, GRADING PLAN AND SOILS MAP

Patton Harris Rust & Associates, pc
ENGINEERS ● SURVEYORS ● PLANNERS
LANDSCAPE ARCHITECTS ● ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

10.26.01
DATE

STATE OF MARYLAND — CHRISTOPHER JOHN REID — No. 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	01058 RD4.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	4 OF 5

F-02-15

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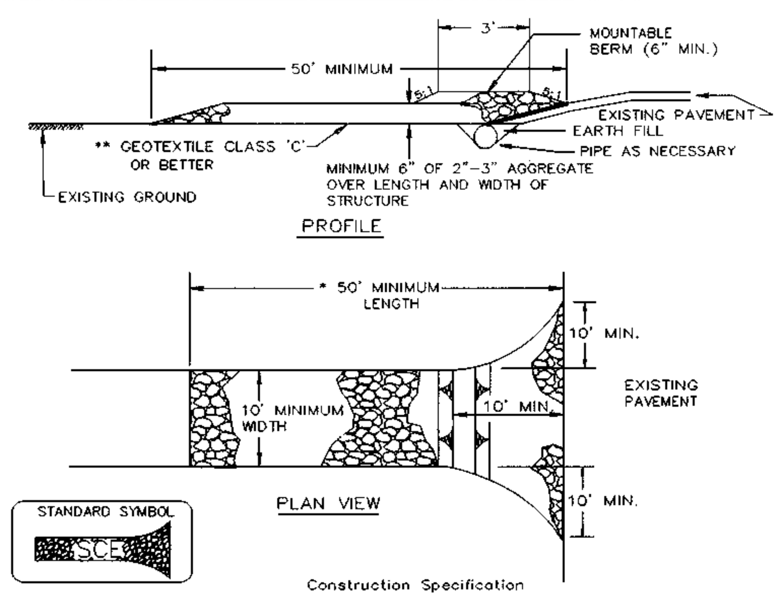
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length — minimum of 50' (*30' for single residence lot).

2. Width — 10' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

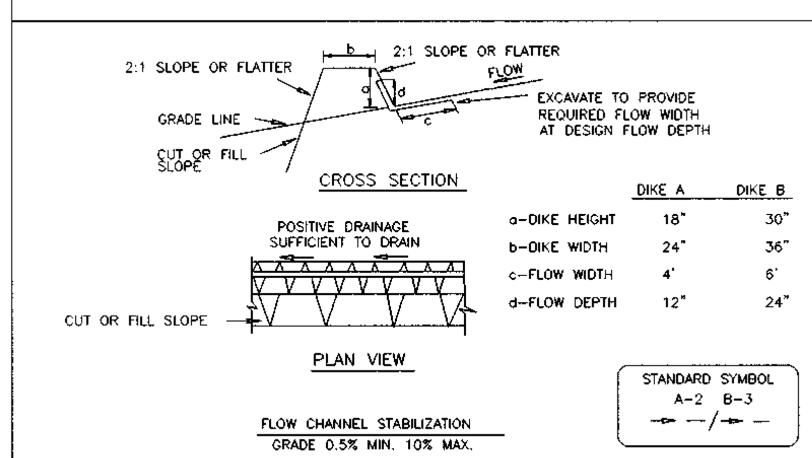
4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location — A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

FLOW CHANNEL STABILIZATION

GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

30.0 - DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGATATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILIAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENGY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

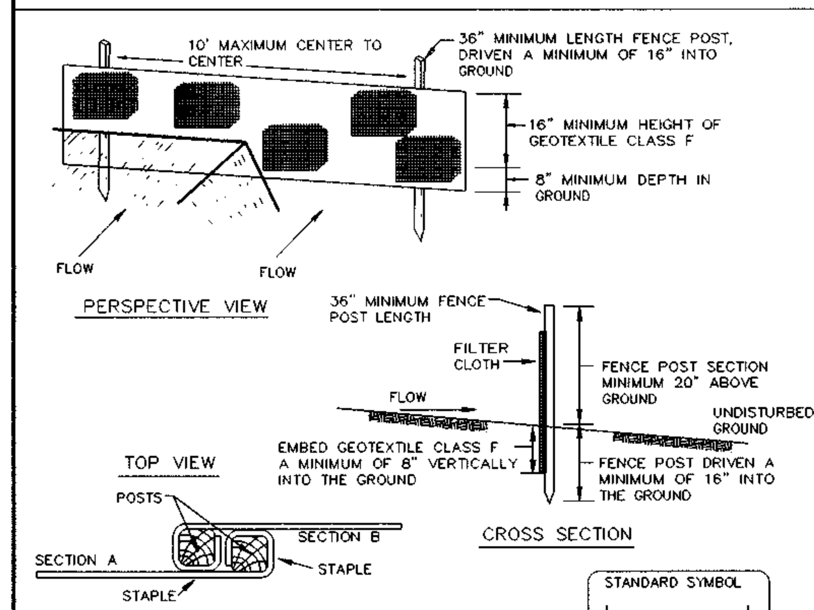
1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES

1. AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREDICTING SOIL LOSS.
2. AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 30 - 1	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

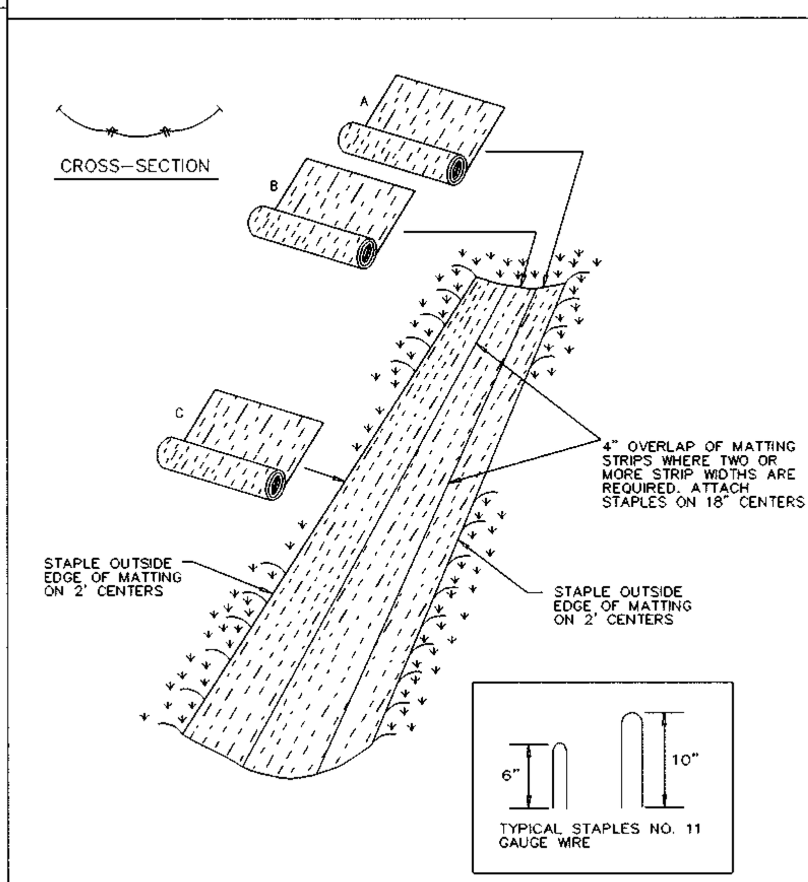
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

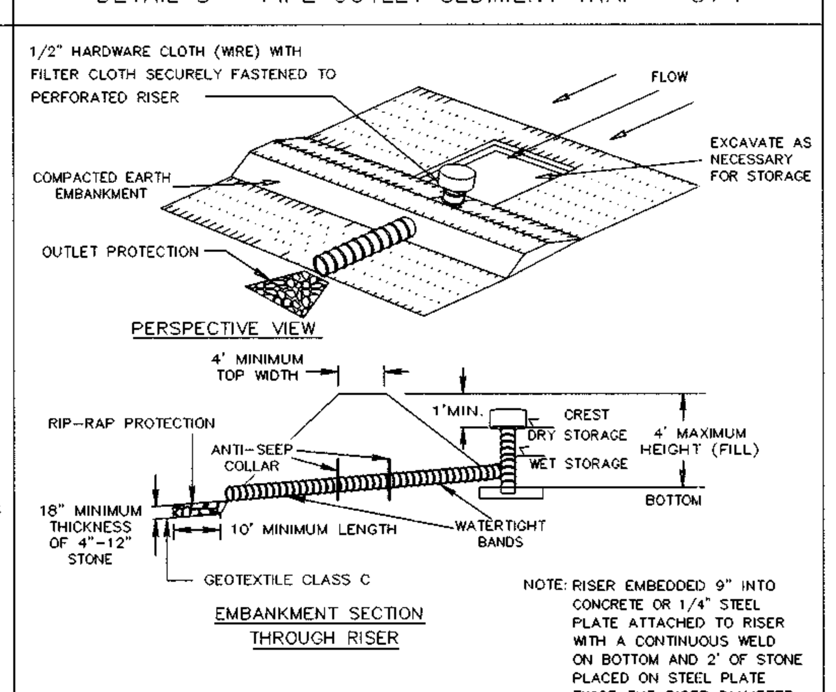
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 8 - PIPE OUTLET SEDIMENT TRAP - ST I



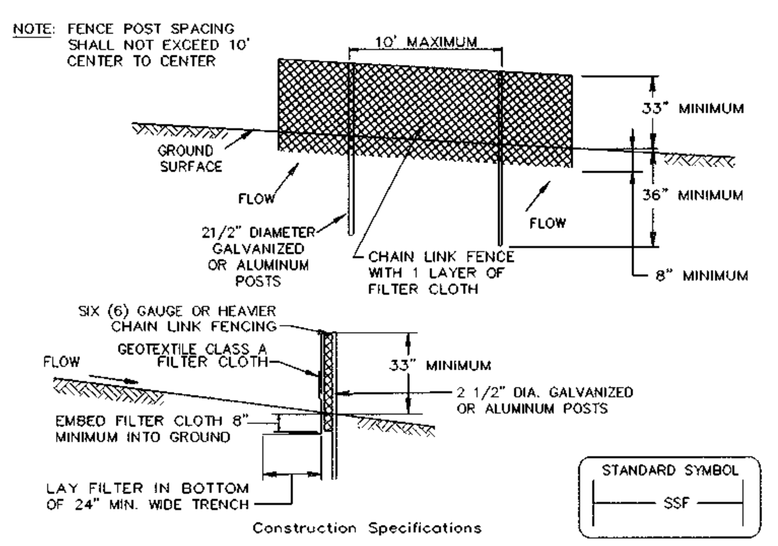
Construction Specifications

1. The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be 1' above the riser crest elevation.
4. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (900cf/ac). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
5. The structure shall be inspected periodically and after each rain and repairs made as necessary.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 7	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.

4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

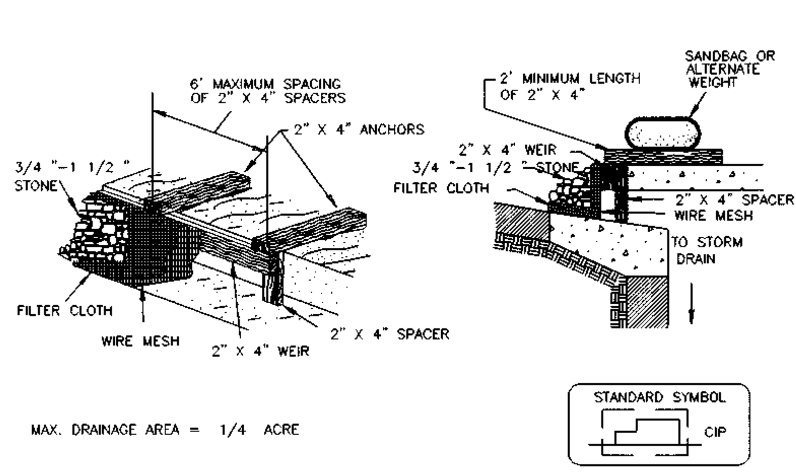
5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23C - CURB INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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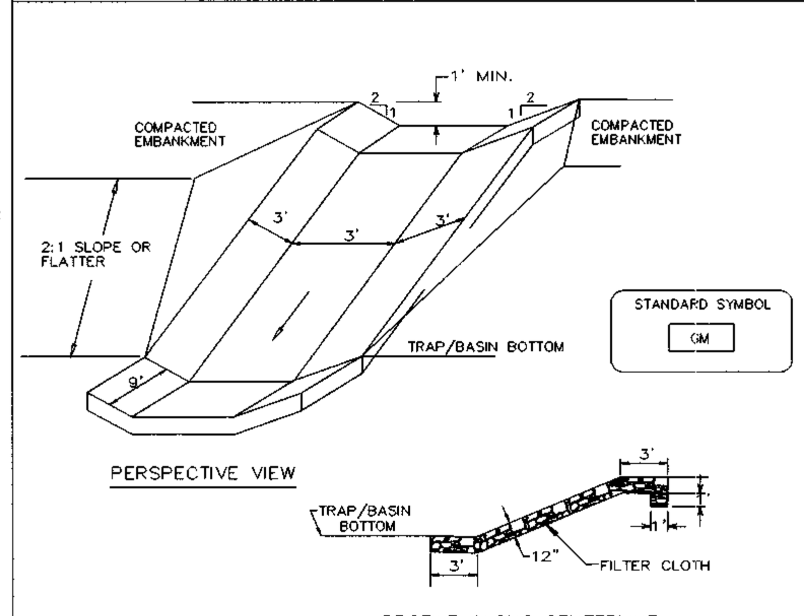
DETAIL 6 - GABION INFLOW PROTECTION



Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
2. Geotextile Class C shall be installed under all gabion baskets.
3. The stone used to fill the gabion baskets shall be 4" - 7".
4. Gabions shall be installed in accordance with manufacturers recommendations.
5. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 7 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

   i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

   ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

   iii. Where subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:
   I. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

   I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.

   II. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

   I. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

   II. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

   III. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

   iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

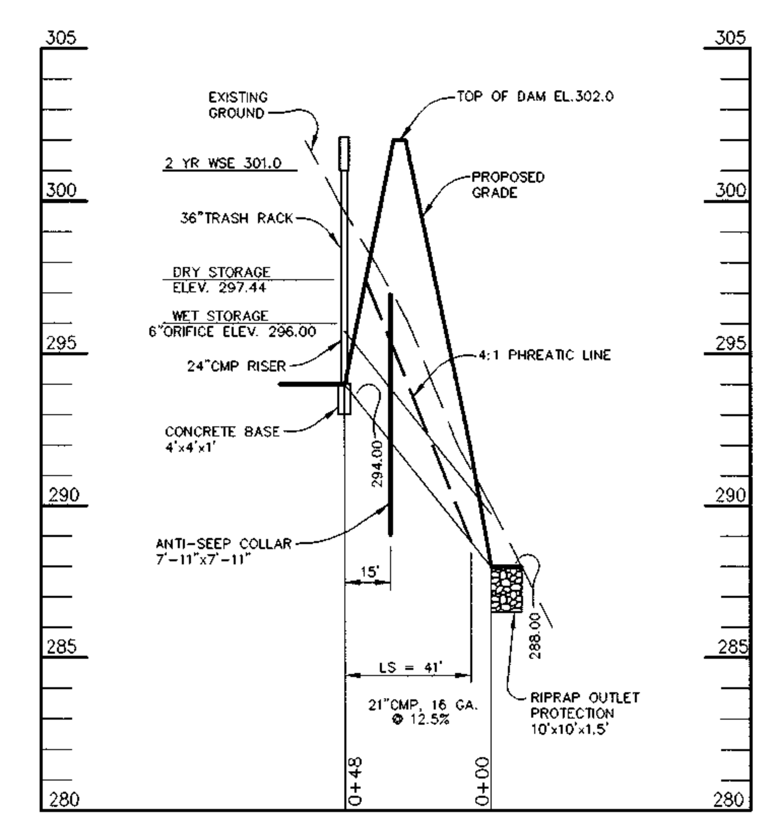
VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

   I. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for site having disturbed areas under 5 acres shall conform to the following requirements:
      a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
      d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

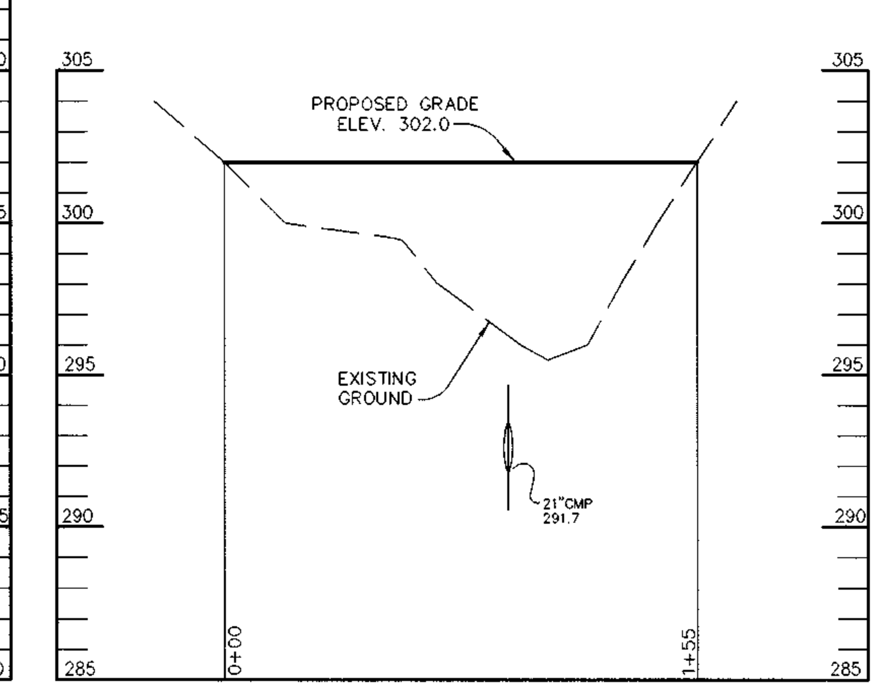
SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE. (3 DAYS)
3. INSTALL PIPE OUTLET SEDIMENT TRAP #1, AND EARTH DIKES. (5 DAYS)
4. ROUGH GRADE SITE EXCEPT FOR LOTS 46-50 AND REAR OF LOTS 51-63. (2 WEEKS) FINAL GRADING FOR LOTS 46-50 AND 51-63 WILL TAKE PLACE ONCE SEDIMENT TRAP AND EARTH DIKE ARE REMOVED. (4 WEEKS)
5. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM DRAINS, WATER AND SEWER.
6. INSTALL CURB AND GUTTER AND PAVE ROADWAYS. (2 WEEKS)
7. REMOVE EARTH DIKE AND SEDIMENT TRAP AND GRADE LOTS 46-50 AND 51-63.
8. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 WEEK)
9. PERFORM FINE GRADING, LANDSCAPING, LIGHTING AND SIDEWALKS. (3 WEEKS)
10. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)



PROFILE THRU TRAP SPILLWAY

SCALE :
HOR.-1"=50'
VERT.-1"=5'



PROFILE THRU CL TRAP EMBANKMENT

SCALE :
HOR.-1"=50'
VERT.-1"=5'

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OF SITE (PARCEL A)	6.1 ACRES
AREA DISTURBED	6.2 ACRES
AREA TO BE ROOFED OR PAVED	0.9 ACRES
AREA TO BE VEGETATIVELY STABILIZED	5.3 ACRES
TOTAL CUT	23800 CU. YARDS
TOTAL FILL	25500 CU. YARDS

OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT.

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.

13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.

14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetation cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments : Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.).

Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments : In lieu of soil test recommendations, use one of the following schedules :

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) before seeding. Harrow or disc intoupper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureafoam fertilizer (9 lbs. per 1000 sq. ft.).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru october 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft. of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Maintenance : Inspect all seeded areas and make needed repairs, replacements and reseedings.

BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 10·26·01

DEVELOPER DATE

BY THE ENGINEER :

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.

[signature] 10·26·01

ENGINEER DATE

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

[signature] 11/8/01

NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 11/8/01

HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[signature] 11-15-01

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 11/20/01

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[signature] 11/19/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
410-730-7065

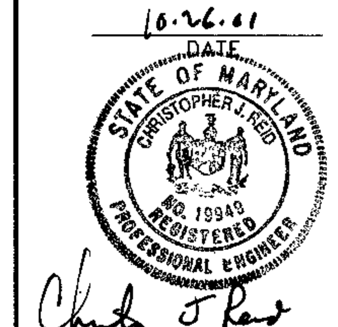
PROJECT
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL NOTES AND DETAILS

Patton Harris Rust & Associates, pc
ENGINEERS ● SURVEYORS ● PLANNERS
LANDSCAPE ARCHITECTS ● ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

10·26·01
DATE



CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	01058 RD5.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	5 OF 5

F-02-15

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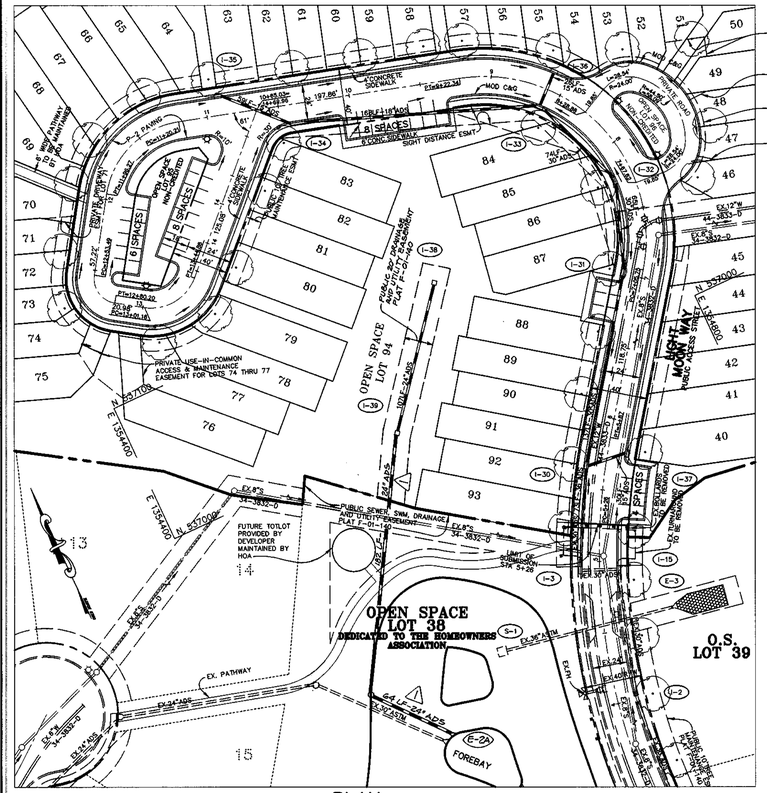


PLAN
SCALE : 1"=50'

CL CURVE DATA
FROM CL STA 5+26 TO STA 5+87
RADIUS = 420.00'
LENGTH = 61.00'
TANGENT = 30.55'
DELTA = 08°19'16"
CHORD = S 31°56'25"W 60.94'

CL CURVE DATA
FROM CL STA 7+05.75 TO STA 9+22.34
RADIUS = 113.00'
LENGTH = 216.60'
TANGENT = 160.85'
DELTA = 109°49'23"
CHORD = S 18°48'39"E 184.93'

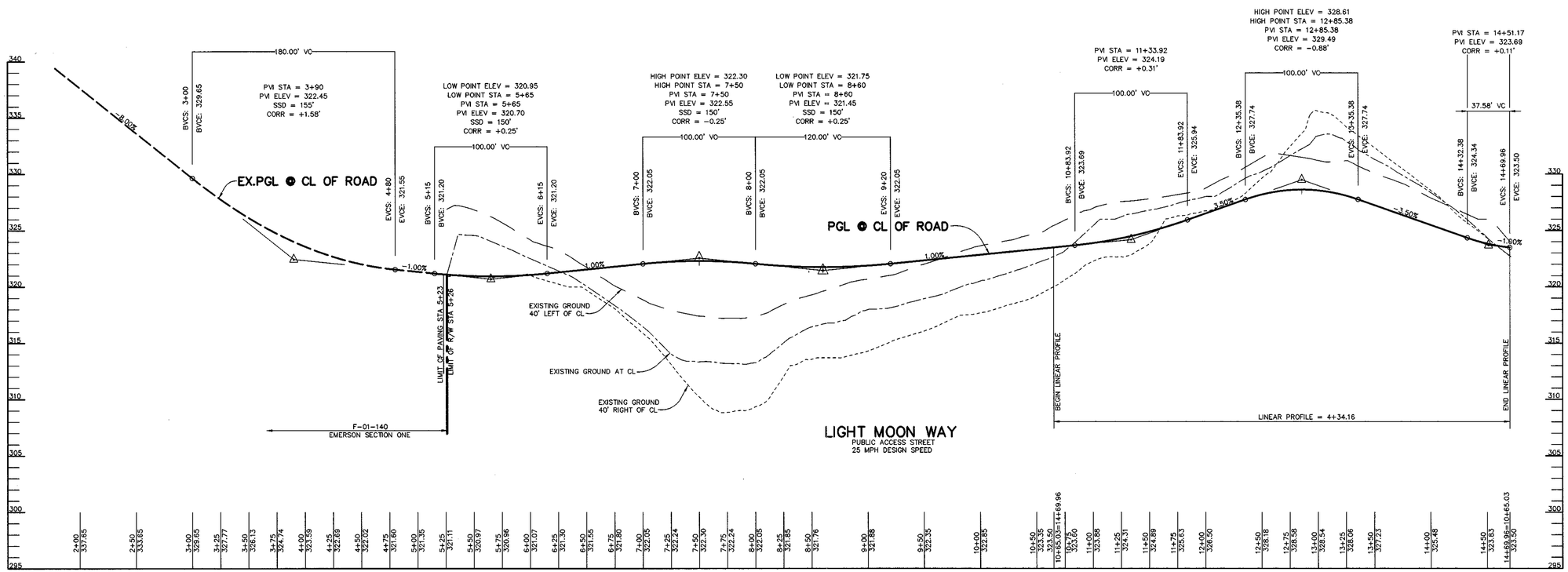
CL CURVE DATA
FROM CL STA11+20.21 TO STA 11+96.27
RADIUS = 60.00'
LENGTH = 76.07'
TANGENT = 44.11'
DELTA = 72°38'27"
CHORD = S 69°57'26"W 71.08'

CL CURVE DATA
FROM CL STA 12+53.49 TO STA 12+80.20
RADIUS = 17.00'
LENGTH = 26.70'
TANGENT = 17.00'
DELTA = 90°00'00"
CHORD = S 11°21'47"E 24.04"

CL CURVE DATA
FROM CL STA 13+01.18 TO STA 13+44.88
RADIUS = 32.00'
LENGTH = 43.71'
TANGENT = 26.03'
DELTA = 78°15'37"
CHORD = S 84°30'24"W 40.39'

STREET LIGHT CHART

LOCATION	TYPE
21' RIGHT OF STA 7+80 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
21' RIGHT OF STA 8+17 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
15' RIGHT OF STA 11+03 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE
15' LEFT OF STA 13+00 LIGHT MOON WAY	100 WATT HPS VAPOR COLONIAL POST TOP MOUNTED ON A 14' BLACK FIBERGLASS POLE



LIGHT MOON WAY
PUBLIC ACCESS STREET
25 MPH DESIGN SPEED

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS. DATE 11-15-01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11/20/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/19/01

DATE	NO.	REVISION
3-13-02	1	MODIFIED DRAINAGE FROM I-38 TO E-2A

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
410-730-7065

PROJECT
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
PLAN AND PROFILE OF LIGHT MOON WAY

Patton Harris Rust & Associates, pc
ENGINEERS ● SURVEYORS ● PLANNERS
LANDSCAPE ARCHITECTS ● ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 ● tel 410.997.8900 fax 410.997.9282

DATE

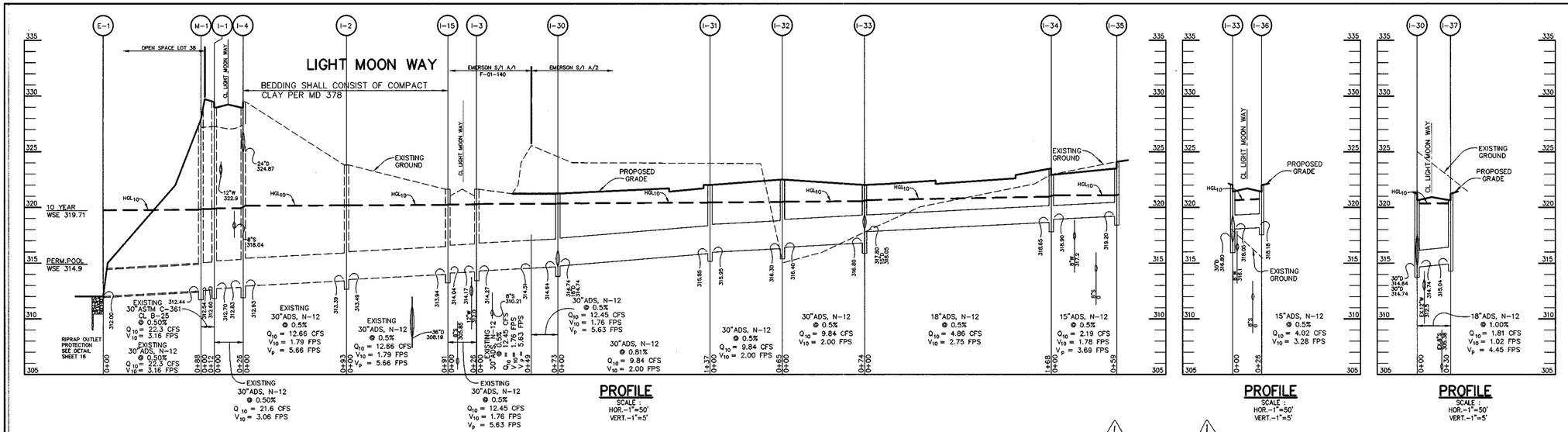
STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	01058 RD2.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	2 OF 5

F-02-15

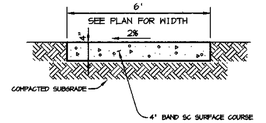
P:\projects\01058\Rd2.dwg Fri Oct 26 08:50:21 2001 PATTON HARRIS RUST & ASSOCIATES



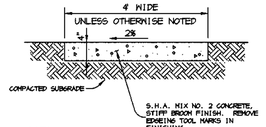
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



ASPHALT WALK DETAIL
NO SCALE



NOTES:
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

SIDEWALK DETAIL
NO SCALE

STRUCTURE SCHEDULE

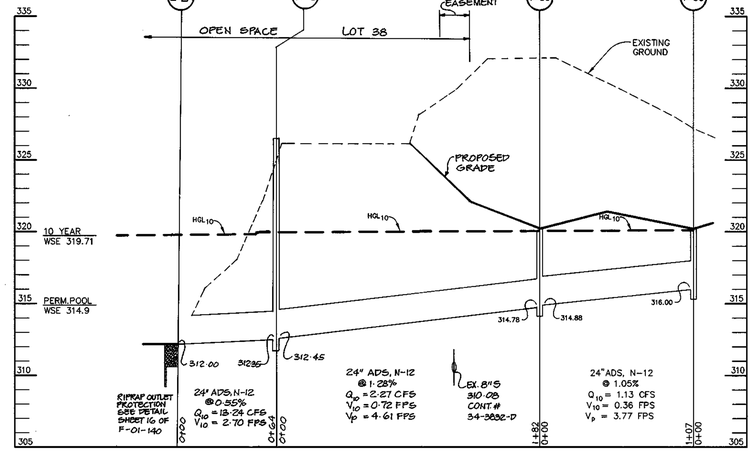
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-30	A-5 4.5'WIDE	12.52 LT OF CL STA 5+65 LIGHT MOON WAY	315.14 (30") 314.64 (18")	314.64 (30")	321.23	HOCO STD. DETAIL SD-4.40
I-31	A-5 4'WIDE	12.52 LT OF CL STA 7+01 LIGHT MOON WAY	315.95 (30")	315.85 (30")	322.30	HOCO STD. DETAIL SD-4.40
I-32	A-5 4'WIDE	12.52 LT OF CL STA 7+75 LIGHT MOON WAY	316.40 (30")	316.30 (30")	322.52	HOCO STD. DETAIL SD-4.40
I-33	A-5 4'WIDE	12.52 LT OF CL STA 8+60 LIGHT MOON WAY	317.80 (18") 318.05 (15")	316.80 (30")	322.03	HOCO STD. DETAIL SD-4.40
I-34	A-10 2.5'WIDE	12.52 LT OF CL STA 10+38 LIGHT MOON WAY	318.90 (15")	318.65 (18")	323.51	HOCO STD. DETAIL SD-4.41
I-35	A-5 2.5'WIDE	12.52 RT OF CL STA 10+90 LIGHT MOON WAY	–	319.20 (15")	324.05	HOCO STD. DETAIL SD-4.40
I-36	A-5 2.5'WIDE	12.52 RT OF CL STA 8+60 LIGHT MOON WAY	–	318.18 (15")	322.07	HOCO STD. DETAIL SD-4.40
I-37	A-5 2.5'WIDE	30.52 RT OF CL STA 5+67 LIGHT MOON WAY	–	314.94 (18")	321.23	HOCO STD. DETAIL SD-4.40
I-38	S	N 537085 E 1354639	–	316.00 (24")	320.2	HOCO STD. DETAIL SD-4.22
I-39	S	N 537001 E 1354572	314.88 (24")	314.78 (24")	320.2	HOCO STD. DETAIL SD-4.22
⚠1 M-6	4'-0" MANHOLE	N 536848 E 1354478	312.45 (24")	312.35 (24")	326.35	HOCO STD. DETAIL G 5.11

NOTES: ✳ LOCATION OF INLETS AND MANHOLES IS AT CENTER OF TOP COVER; FOR "A" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB;

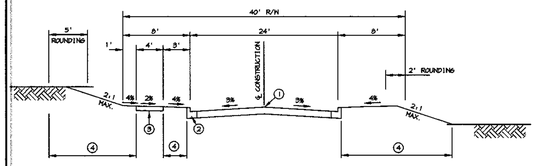
⚠1 E-2A	24" ASTM END SECTION	SEE PLAN	312.35	312.00	314.25	ADS, N-12

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
85	15"	ADS, N-12
198	18"	ADS, N-12
⚠1 341	24"	ADS, N-12
308	30"	ADS, N-12

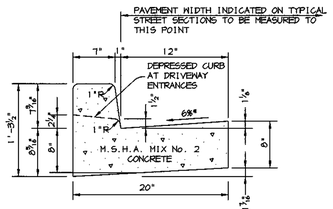


PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



TYPICAL SECTION ACCESS STREET
NO SCALE

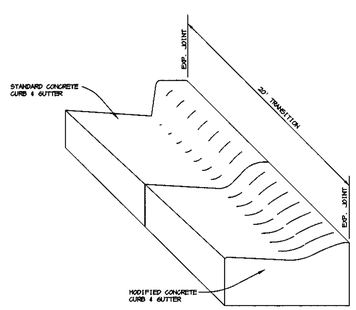
LIGHT MOON WAY FROM STA 5+26 TO STA 14+69 – 25 MPH DESIGN SPEED



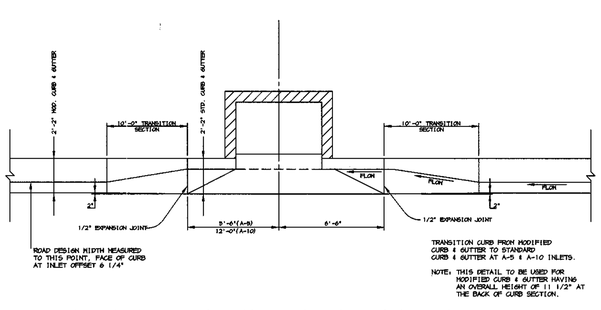
HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

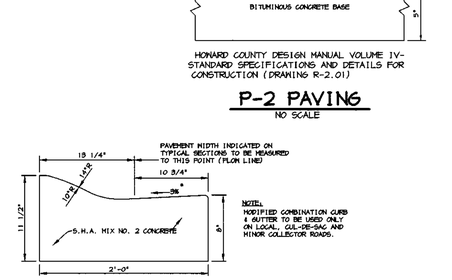
STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE



CONCRETE CURB AND GUTTER TRANSITION
NO SCALE

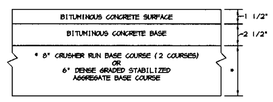


MODIFIED COMBINATION CURB AND GUTTER TRANSITION CURB SECTION AT "A" TYPE INLETS

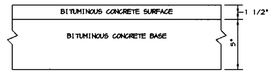


MODIFIED COMBINATION CURB AND GUTTER

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 5% FOR MODIFIED CURB AND GUTTER.



(ALTERNATE)



HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING
NO SCALE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 11-15-01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT JA — DATE 11/21/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/19/01

DATE	NO.	REVISION
8-13-02	⚠1	MODIFIED PROFILE, STRUCTURE & PIPE SCHEDULES.

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

DEVELOPER
TROUTMAN COMPANY
9030 RED BRANCH ROAD
SUITE 100
COLUMBIA, MARYLAND 21045
410-730-7065

PROJECT
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A

AREA
TAX MAP 47 BLOCK 3,8 & 9
ZONED: R-ED PARCEL: P/O 837
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
ROAD DETAILS AND STORM DRAIN PROFILES

Patton Harris Rust & Associates, pc
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
8818 Centre Park Drive, Columbia, MD 21045 • tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND CHRISTOPHER J. REID NO. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	01058 RD3.DWG
DATE :	OCTOBER 29, 2001
SCALE :	AS SHOWN
DRAWING NO.	3 OF 5

F-02-15

P:\project\01058\0d3.dwg Fri Oct 26 08:51:35 2001 PATTON HARRIS RUST & ASSOCIATES