

**CURVE DATA TABLE**

NUMBER	ROAD NAME	STA. TO STA.	RADIUS	LENGTH	DELTA	TANGENT	CHORD
1	CHARMED DAYS	0+07 TO 0+03.14	60.00'	76.14	72°42'40"	44.16	N 65°57'06" E 71.14
2	CHARMED DAYS	1+78.57 TO 3+37.20	125.00'	150.63	72°42'40"	92.01	N 65°57'06" E 148.20
3	CHARMED DAYS	3+77.20 TO 6+27.73	120.00'	250.53	119°37'07"	206.26	N 30°12'48" W 207.45
4	CHARMED DAYS	7+09.78 TO 8+67.85	150.00'	150.00	60°22'53"	87.27	S 59°47'12" W 150.00'
5	CHARMED DAYS	9+14.25 TO 10+34.93	100.00'	120.66	69°07'51"	68.90	S 04°58'01" E 113.47
6	PRIVATE ROAD	0+36.46 TO 0+74.25	42.00'	37.79'	51°32'55"	20.28'	N 52°58'01" E 36.53
7	PRIVATE ROAD	0+30.20 TO 0+90.62	300.00'	60.42'	11°32'20"	30.31'	N 03°07'35" E 60.32'

**REVISIONS**

NO.	DESCRIPTION	DATE
1	Changed all lot numbers to agree with lot numbers shown on recorded plots 18076-78	1/31/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chief, Division of Land Development* 1/31/02 DATE  
*Chief, Development Engineering Division* DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Chief, Bureau of Highways* 1-21-02 DATE

**EMERSON SECTION 2 PHASE 1 B**  
**PARCEL A-1**  
**LOTS 180 THRU 227**  
**AND OPEN SPACE LOTS 228 & 229**  
 ZONED PEC-MXD-3 AND RSC-MXD-3  
 TAX MAP 47 GRID B PARCEL 037 AND 3  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

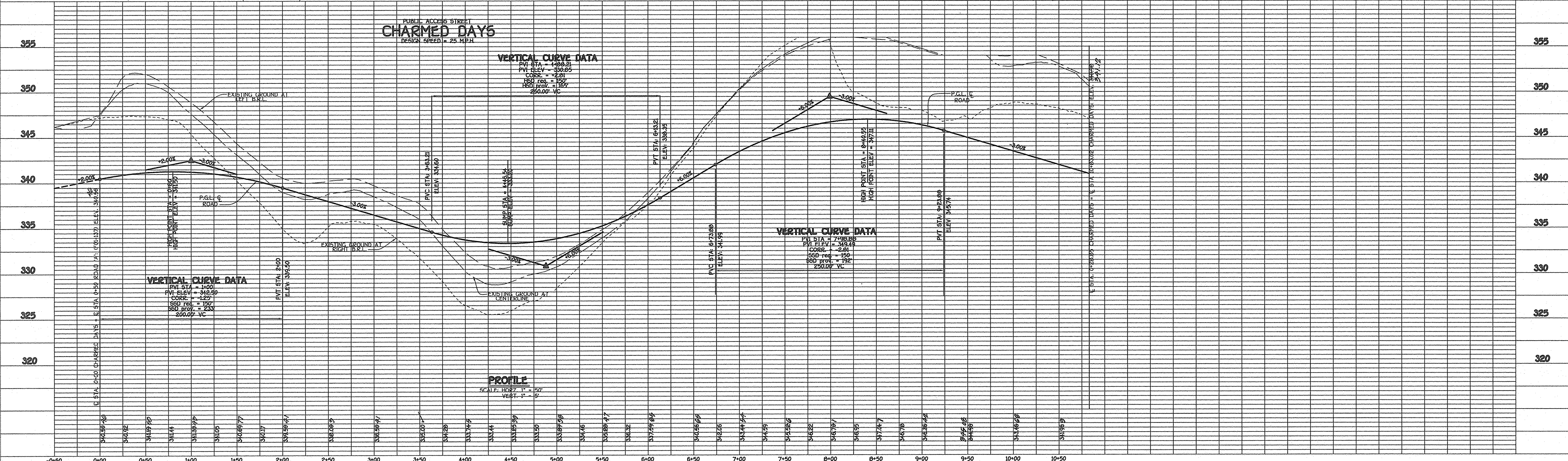
**CHARMED DAYS**  
 PLAN AND PROFILE

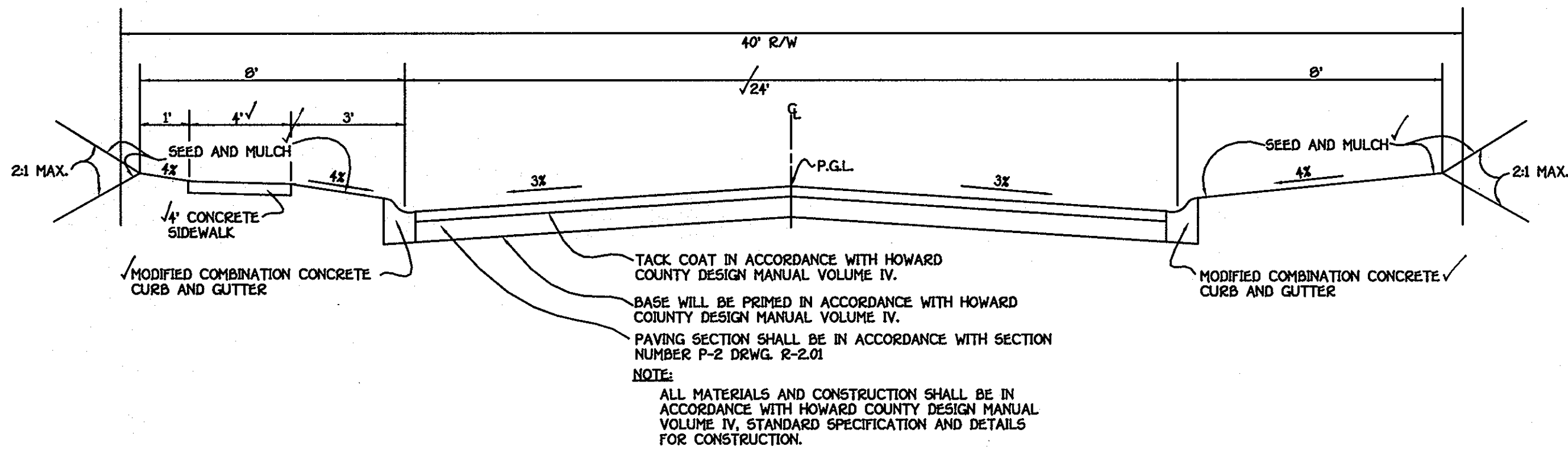
**DEVELOPER** COLUMBIA BUILDERS INC.  
 P.O. BOX 999  
 COLUMBIA, MARYLAND 21044  
 410-730-3940

**OWNER** Emerson Inc. c/o  
 Howard Research & Development Corp.  
 10275 Little Patuxent Parkway  
 Columbia, Md. 21044

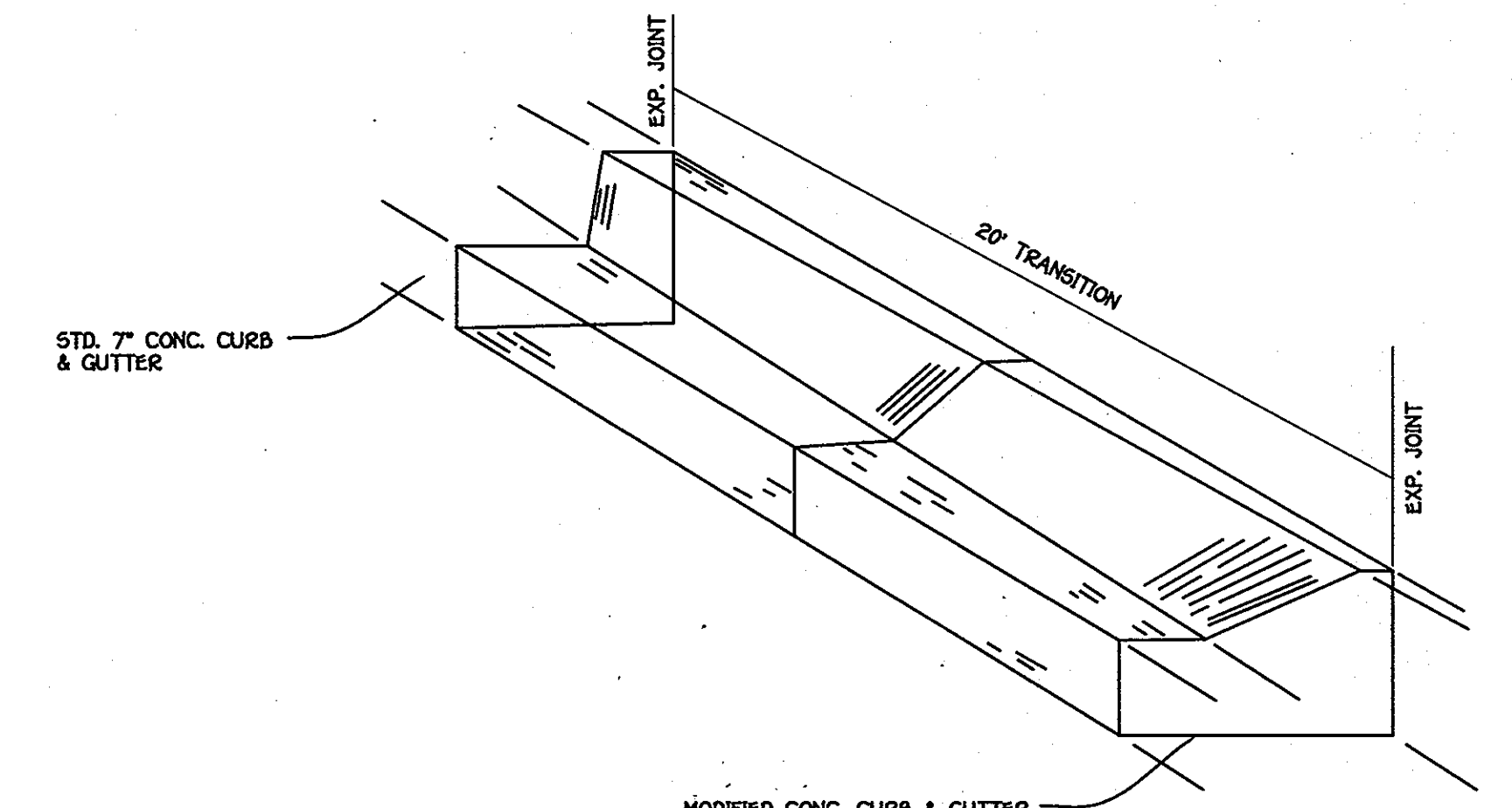
SCALE: AS SHOWN DATE: NOV. 15, 2002 DWG. NO. 2 OF 8  
 DES. DRN. CHK.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE  
 ELICOTT CITY, MARYLAND 21042  
 410.961.2292



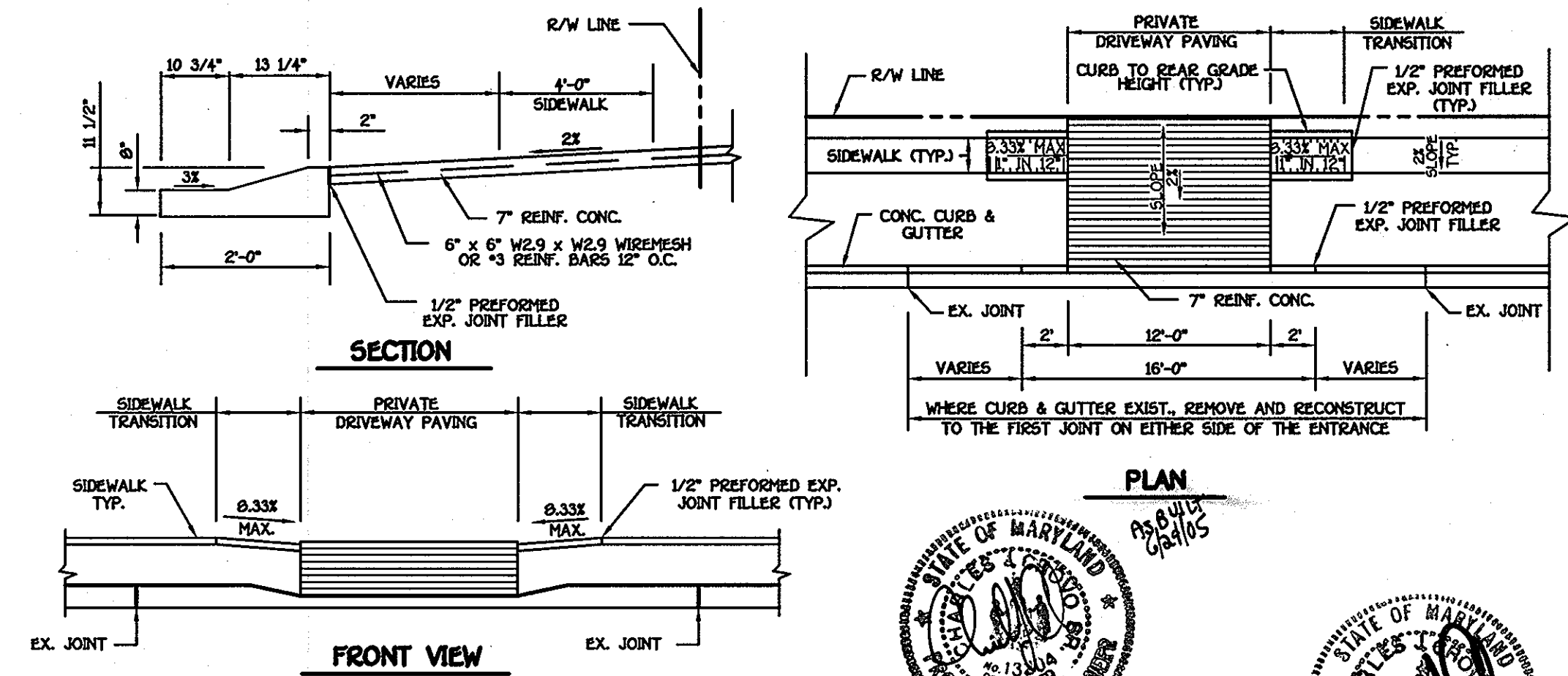


**TYPICAL ROADWAY SECTION**  
NO SCALE



**CONCRETE CURB & GUTTER TRANSITION**  
NO SCALE

ROADWAY INFORMATION CHART					
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
CHARMED DAYS	PUBLIC ACCESS PLACE	25 MPH.	PEC-MXD-3	0+00 TO 10+83.02	P-2



**RESIDENTIAL DRIVEWAY ENTRANCE CLOSED SECTION WITH MODIFIED COMBINATION CURB & GUTTER AND SIDEWALK**  
NO SCALE

**EMERSON SECTION 2 PHASE 1 B PARCEL A-1**  
**LOTS 190 THRU 227 AND OPEN SPACE LOTS 228 & 229**  
 ZONED PEC-MXD-3 AND RSC-MXD-3  
 TAX MAP 47 GRID B PARCEL 037 AND 3 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FILLET PROFILES AND DETAILS**

DEVELOPER	OWNER
COLUMBIA BUILDERS INC. P.O. BOX 999 COLUMBIA, MARYLAND 21044 410-730-3940	Emerson Inc. c/o Howard Research & Development Corp. 10275 Little Patuxent Parkway Columbia, Md. 21044

SCALE: AS SHOWN DATE: NOV. 15, 2002 DWG. NO. 3 OF 8  
 DES. DRN. CHK.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE  
 ELLETT CITY, MARYLAND 2042  
 (410) 461-2292

REVISIONS

NO.	DESCRIPTION	DATE
1	Changed lot numbers to agree with lot numbers shown on recorded plots 15976-78	3-12-04

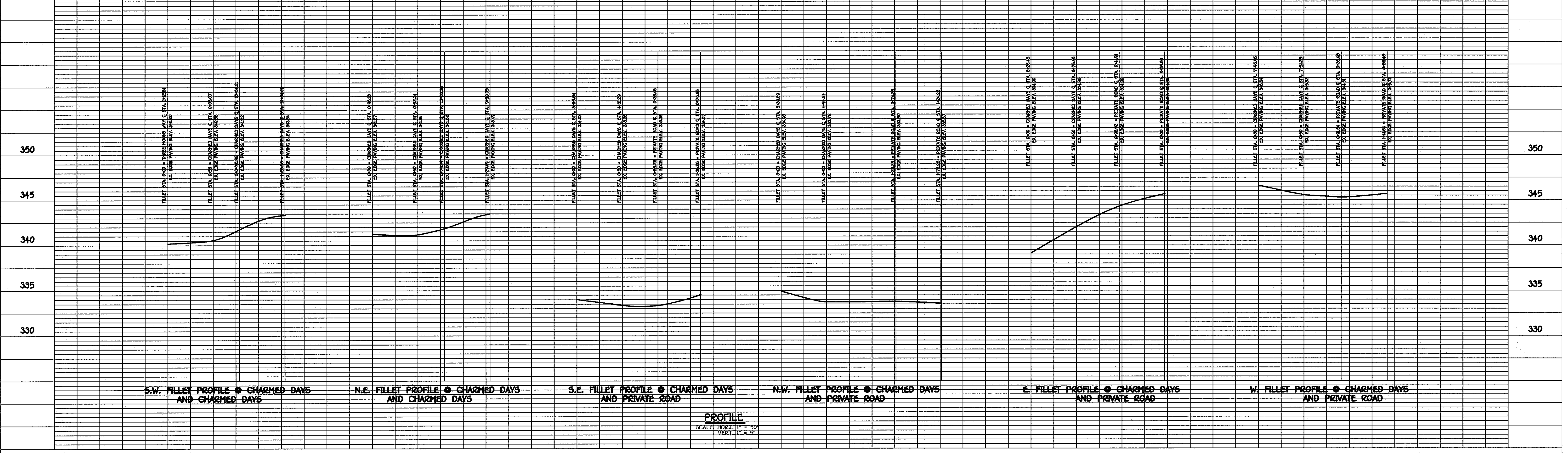
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Linda Hamrick* 1/31/04  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Mike Pannone* 1/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Stephen M. Sander* 1-21-03  
 CHIEF, BUREAU OF HIGHWAYS





**ENGINEER'S CERTIFICATE**

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer: *[Signature]* Date: 1/18/03

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**DEVELOPER'S CERTIFICATE**

"We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer: *[Signature]* Date: \_\_\_\_\_

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements: *[Signature]* Date: 1/16/03

U.S.D. Natural Resources Conservation Service: *[Signature]* Date: 1/16/03

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District: *[Signature]* Date: 1/16/03

District Howard Soil Conservation Dist.: *[Signature]* Date: 1/21/03

Approved: Department Of Planning And Zoning: *[Signature]* Date: 1/21/03

Chief, Division Of Land Development: *[Signature]* Date: 1/21/03

Chief, Development Engineering Division: *[Signature]* Date: 1/21/03

Approved: Howard County Department Of Public Works: *[Signature]* Date: 1-21-03

Chief, Bureau Of Highways: *[Signature]* Date: 1-21-03

No.	Revision	Date
1	Changed all lot numbers to agree with lot numbers shown on recorded plots 15976-79	9-29-02

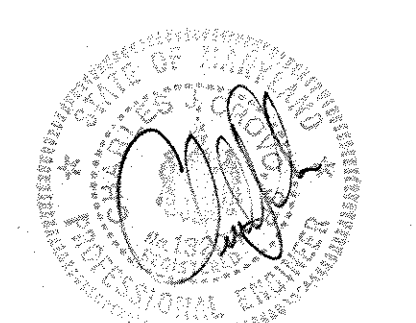
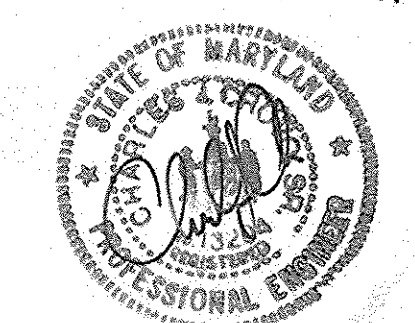
**LEGEND**

- LOD — LIMIT OF DISTURBANCE
- SSF — SUPER SILT FENCE
- SF — SILT FENCE
- → → TYPE 'A-2' EARTH DIKE

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410-461-2955

**DEVELOPER**  
 COLUMBIA BUILDERS INC.  
 P.O. BOX 999  
 COLUMBIA, MARYLAND 21044  
 410-730-3940

**OWNER**  
 Emerson Inc. c/o  
 Howard Research & Development Corp.  
 10275 Little Patuxent Parkway  
 Columbia, Md. 21044



**STREET TREE, GRADING AND SEDIMENT CONTROL PLAN**  
**EMERSON**  
 SECTION 2, PHASE 1 B  
 PARCEL A-1  
 LOTS 180 THRU 227,  
 OPEN SPACE LOTS 228 & 229  
 ZONED PEC-MXD-3  
 TAX MAP 47 PARCEL 837  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 50' NOVEMBER 15, 2002  
 SHEET 4 OF 8

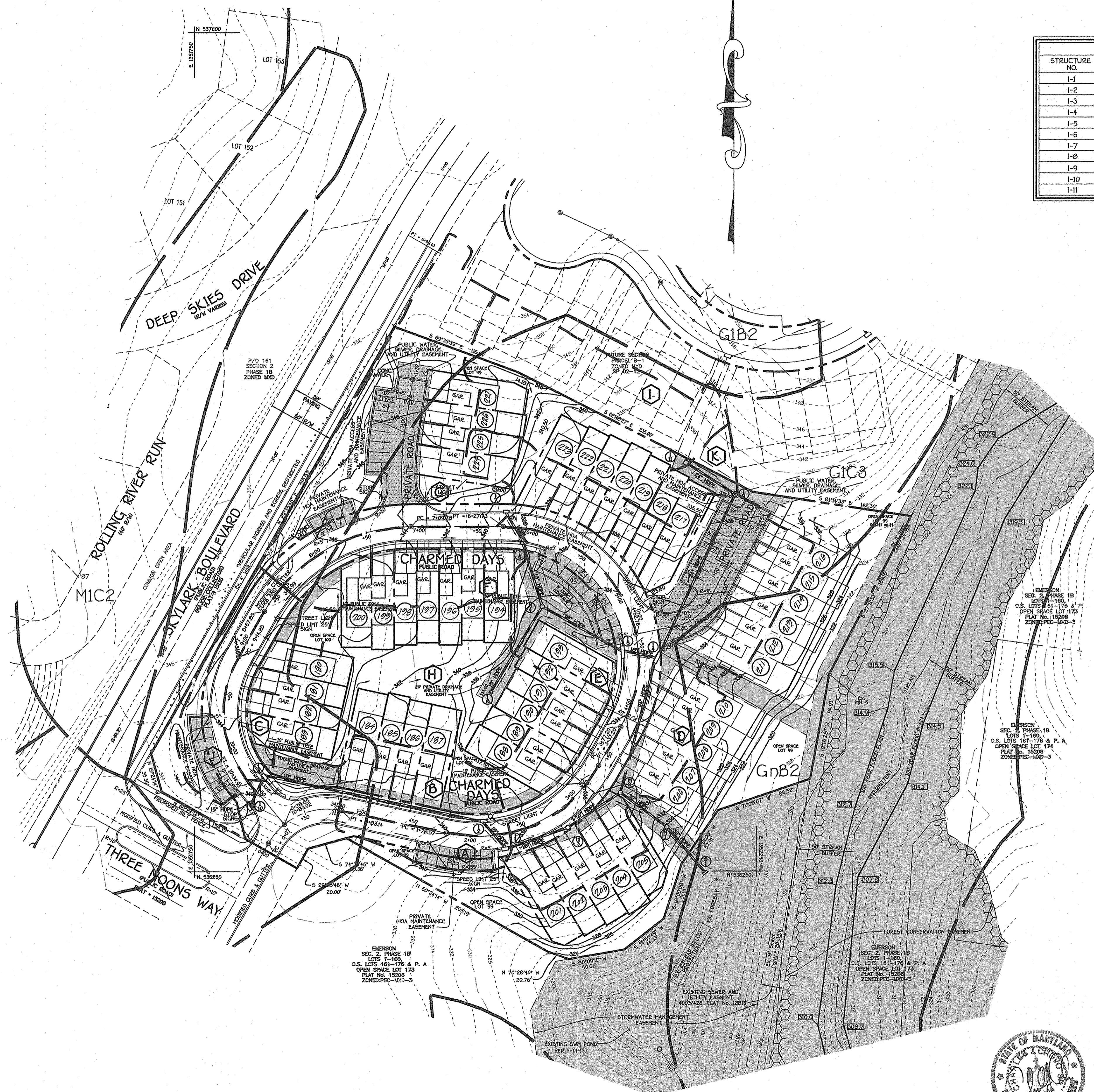




SOILS LEGEND		
SOIL	NAME	CLASS
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
GIC2	Glenelg loam, 8 to 15 percent slopes, moderately eroded	B
GIC3	Glenelg loam, 8 to 15 percent slopes, severely eroded	B
GID2	Glenelg loam, 15 to 25 percent slopes, moderately eroded	B
GID3	Glenelg loam, 15 to 25 percent slopes, severely eroded	B
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
**Ba	Balle silt loam	D
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MgC2	Manor gravelly loam, 8 to 15 percent slopes, moderately eroded	B
SIC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B
SIC2	Sassafras gravelly sandy loam, 5 to 10 percent slopes, moderately eroded	B
SfB2	Sassafras gravelly sandy loam, 1 to 5 percent slopes, moderately eroded	B
ScB	Sandy and clayey sand, gently sloping	?
MIA	Manor loam, 0 to 3 percent slopes	B

NOTES:  
 \* Hydric soils and/or contains hydric inclusions  
 \*\* May contain hydric inclusions  
 † Generally only within 100-year floodplain areas

DRAINAGE AREA DATA						
STRUCTURE NO.	DRAINAGE AREA	AREA	°C	ZONED	% IMP.	
1-1	A	0.10 AC.	0.70	PEC-MXD-3	74%	
1-2	B	0.22 AC.	0.60	PEC-MXD-3	67%	
1-3	C	0.23 AC.	0.63	PEC-MXD-3	63%	
1-4	D	1.02 AC.	0.63	PEC-MXD-3	65%	
1-5	E	0.48 AC.	0.62	PEC-MXD-3	63%	
1-6	F	0.29 AC.	0.66	PEC-MXD-3	69%	
1-7	G	0.66 AC.	0.46	PEC-MXD-3	38%	
1-8	H	0.58 AC.	0.44	PEC-MXD-3	35%	
1-9	I	0.53 AC.	0.41	PEC-MXD-3	30%	
1-10	J	0.17 AC.	0.57	PEC-MXD-3	54%	
1-11	K	0.09 AC.	0.37	PEC-MXD-3	24%	

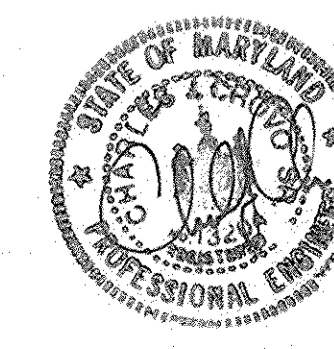


APPROVED: DEPARTMENT OF PUBLIC WORKS		
<i>Thomas M. Dwyer</i>	1-21-03	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>Conita H. Smith</i>	1/31/03	DATE
APPROVED: DEVELOPMENT ENGINEERING DIVISION MK		
<i>Mark M. M...</i>	1/30/03	DATE
No.	Revision	Date
1	Changed all lot numbers to agree with lot numbers shown on recorded plots 15976-70	8-2-04

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 MD 48 - 2005

DEVELOPER  
 COLUMBIA BUILDERS INC.  
 P.O. BOX 999  
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 10275 Little Patuxent Parkway  
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DRAINAGE AREA MAP  
 EMERSON  
 SECTION 2, PHASE 1 B  
 PARCEL A-1  
 LOTS 180 THRU 227,  
 OPEN SPACE LOTS 228 & 229  
 ZONED PEC-MXD-3  
 TAX MAP 47 PARCEL 837  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 50' NOVEMBER 15, 2002  
 SHEET 7 OF 8

AS-BUILT 6-24-05 F-03-34

Approved Department of Planning and Zoning  
*Cindy Hamata* 1/21/03  
 Date  
 Chief, Division of Land Development  
*William J. ...* 1/20/03  
 Date  
 Chief, Development Engineering Division  
*Robert M. ...* 1-21-03  
 Date  
 Approved Howard County Department of Public Works  
 Chief, Bureau of Highways

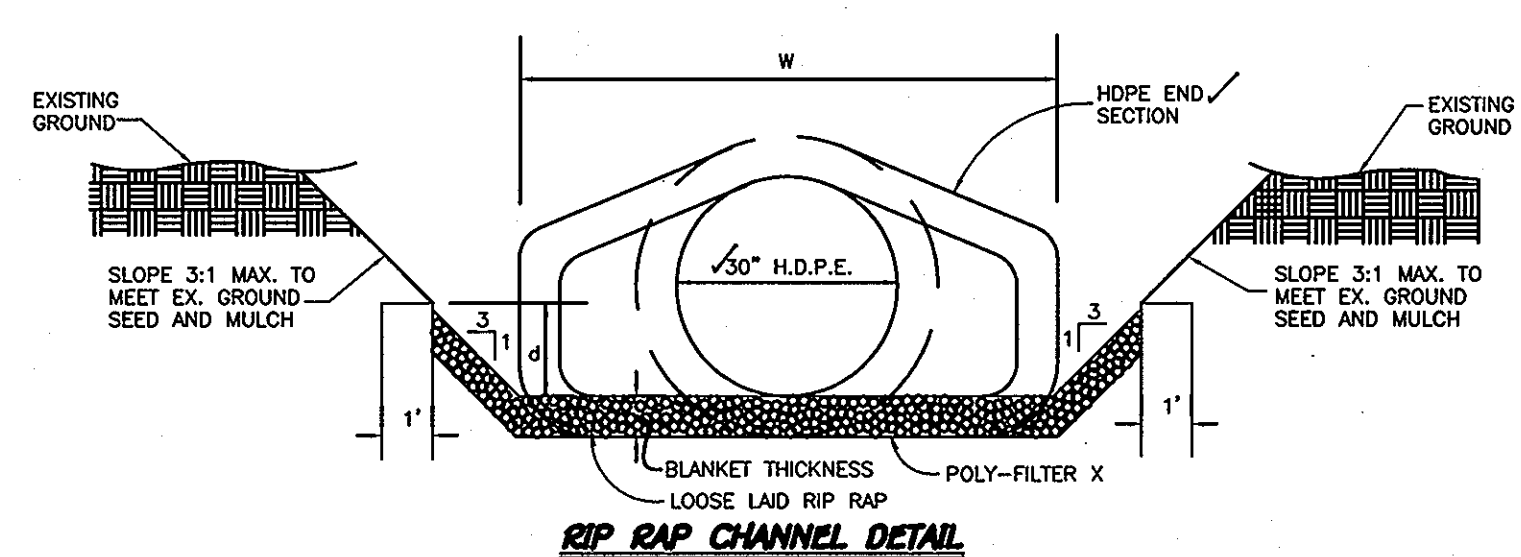
### STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	330.60 77	321.57 333.00	332.00 321.41	CHARMED DAYS	STA: 2+20.54 23.04	12' R	S.D. 4.40	A-5 INLET
I-2	339.00 20	322.00 333.79	333.59 322.07	CHARMED DAYS	STA: 2+12.60 11.50	12' L	S.D. 4.40	A-5 INLET
I-3	342.25 22	322.55 336.96 42	336.76 19	CHARMED DAYS	STA: 10+30.92 20	12' L	S.D. 4.40	A-5 INLET
I-4	333.16 28	327.41 327.57 28	326.94 20	CHARMED DAYS	STA: 4+41.00 0	12' R	S.D. 4.41	A-10 INLET (W=3.0')
I-5	333.16 51	322.58 327.90	327.73 322.38	CHARMED DAYS	STA: 4+46.84 20	12' L	S.D. 4.41	A-10 INLET
I-6	330.00 26	332.03 22	332.63 23	CHARMED DAYS	STA: 6+07.02 20	12' L	S.D. 4.41	A-10 INLET
I-7	339.00 44	---	333.05 25	CHARMED DAYS	STA: 6+25.49 20	12' R	S.D. 4.41	A-10 INLET
I-8	* 336.00 338.70	---	331.90 23	---	536410.27 33	---	S.D. 4.39	D INLET **
I-9	* 335.72 07	331.00 22	330.00 22	---	536615.23 21	---	S.D. 4.39	D INLET **
I-10	341.00 342.00	---	337.27 330.00	CHARMED DAYS	STA: 10+51.37 2.00	12' R	S.D. 4.40	A-5 INLET
I-11	* 336.25 13	331.72	331.52 03	---	536506.73 23	---	S.D. 4.39	D INLET **
M-1	329.00 332.00	327.50 317.01 20	317.31 316.00	---	536209.55	25.70	G. 5.13	5 STD. MANHOLE
M-2	336.15 20	325.45	325.66 22	CHARMED DAYS	STA: 3+27.06 20	29.20' R	G. 5.13	5 STD. MANHOLE
M-3	337.25 16	320.72 331.03 320.40	330.03 320.19	CHARMED DAYS	STA: 2+01.24 00 20	47.60' R	G. 5.12	4 STD. MANHOLE
M-4	335.00 326.57	330.34	330.09 320.00	---	536486.73 21	---	G. 5.12	4 STD. MANHOLE
S-1	340.00 317.00	315.50 30	---	---	535217.04	---	---	HDPE END SECTION

\* - DENOTES TOP SLAB ELEVATION  
 \*\* - DENOTES THROUGH OPENINGS TO BE ON ALL 4 SIDES

### PIPE SCHEDULE

SIZE	CLASS	LENGTH
15"	HDPE	154'
18"	HDPE	519'
24"	HDPE	339'
30"	HDPE	105'

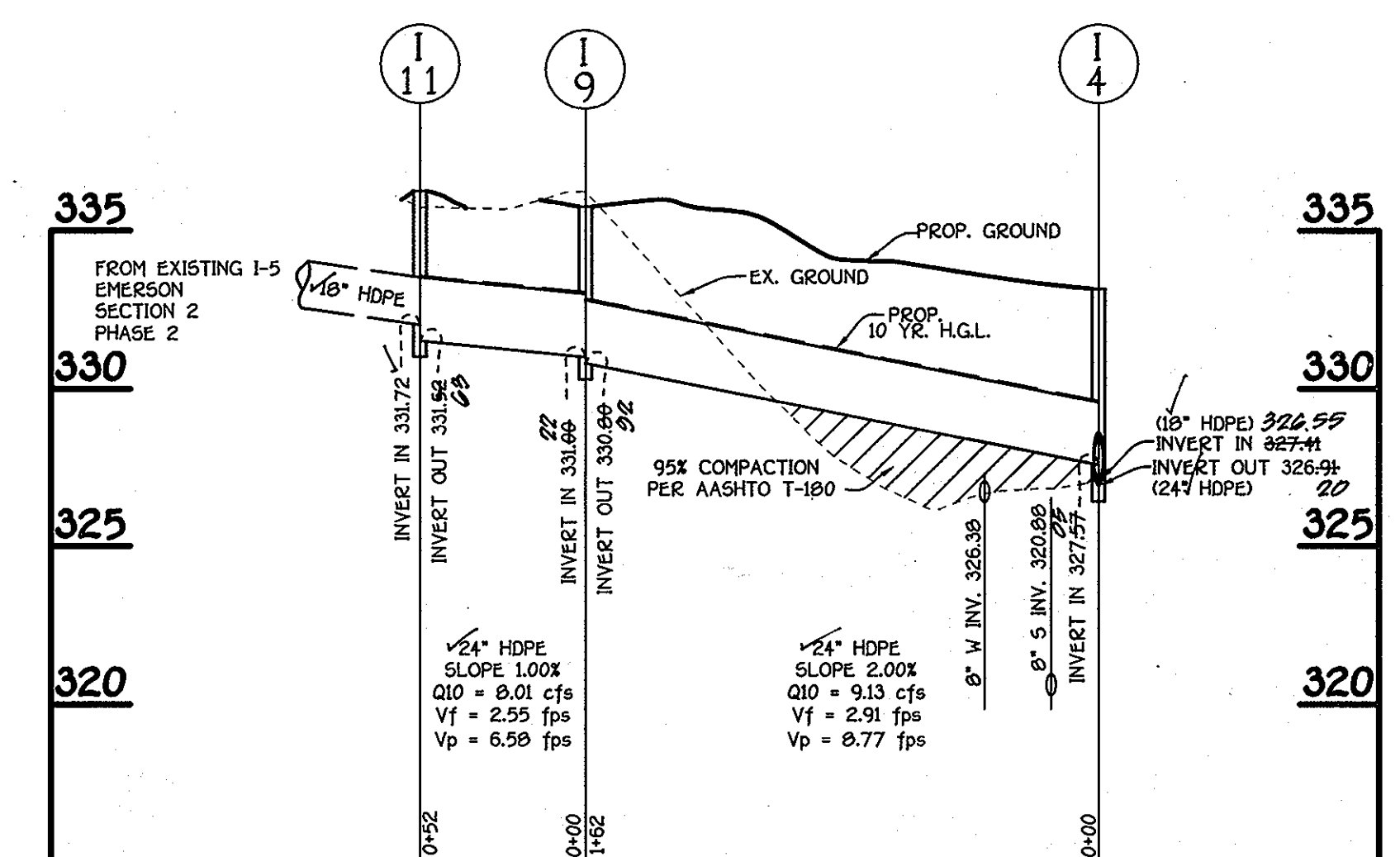


### RIP-RAP CHANNEL DESIGN DATA

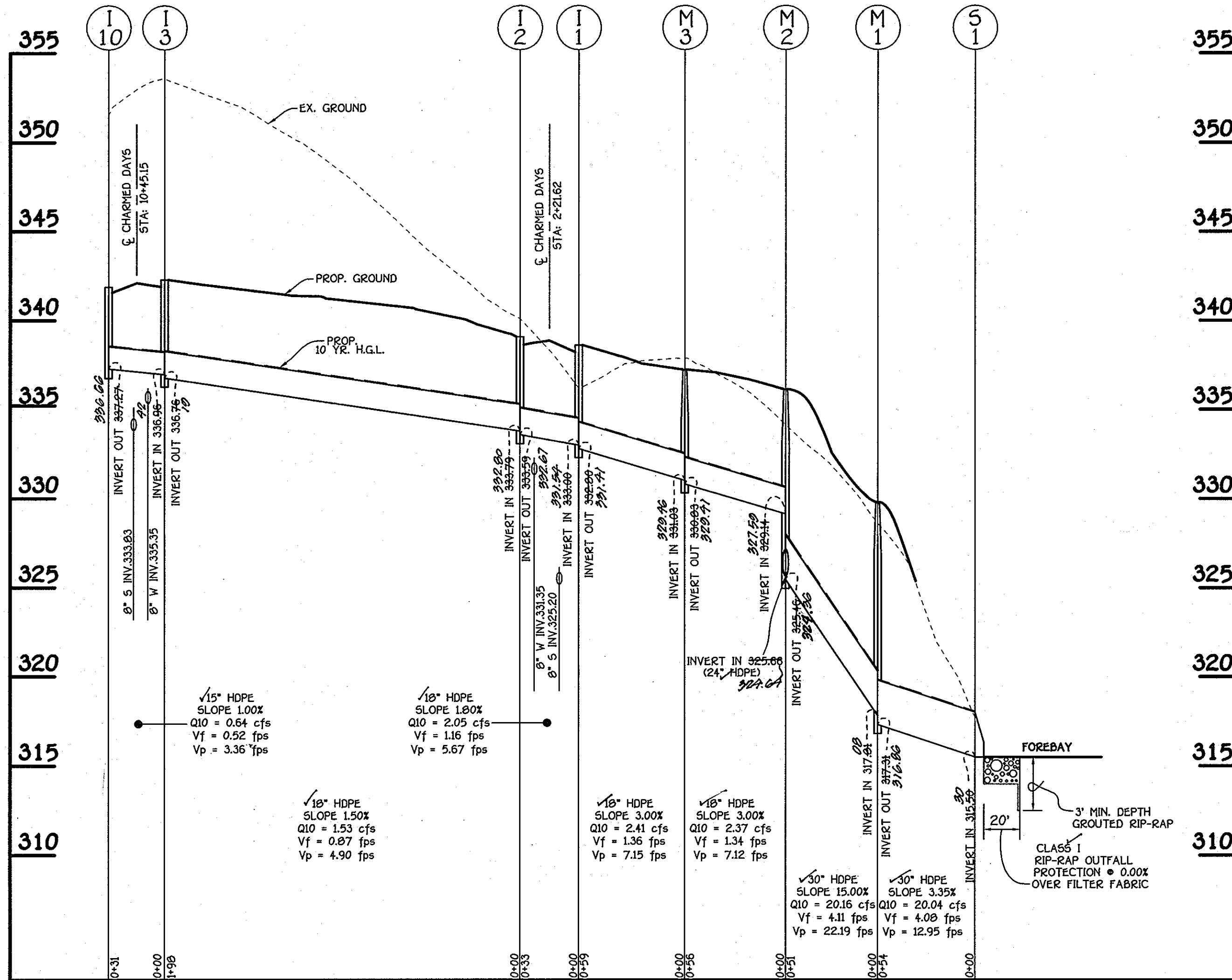
STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (F.P.S.)	Q (C.F.S.)	BLANKET THICKNESS	DIA.
S-1	9.13 S.F.	11.96'	0.7634'	0.8363'	0.0050	0.0707	5.0'	1.10'	0.04'	2.19	20.04	9.5"	15"

#### CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

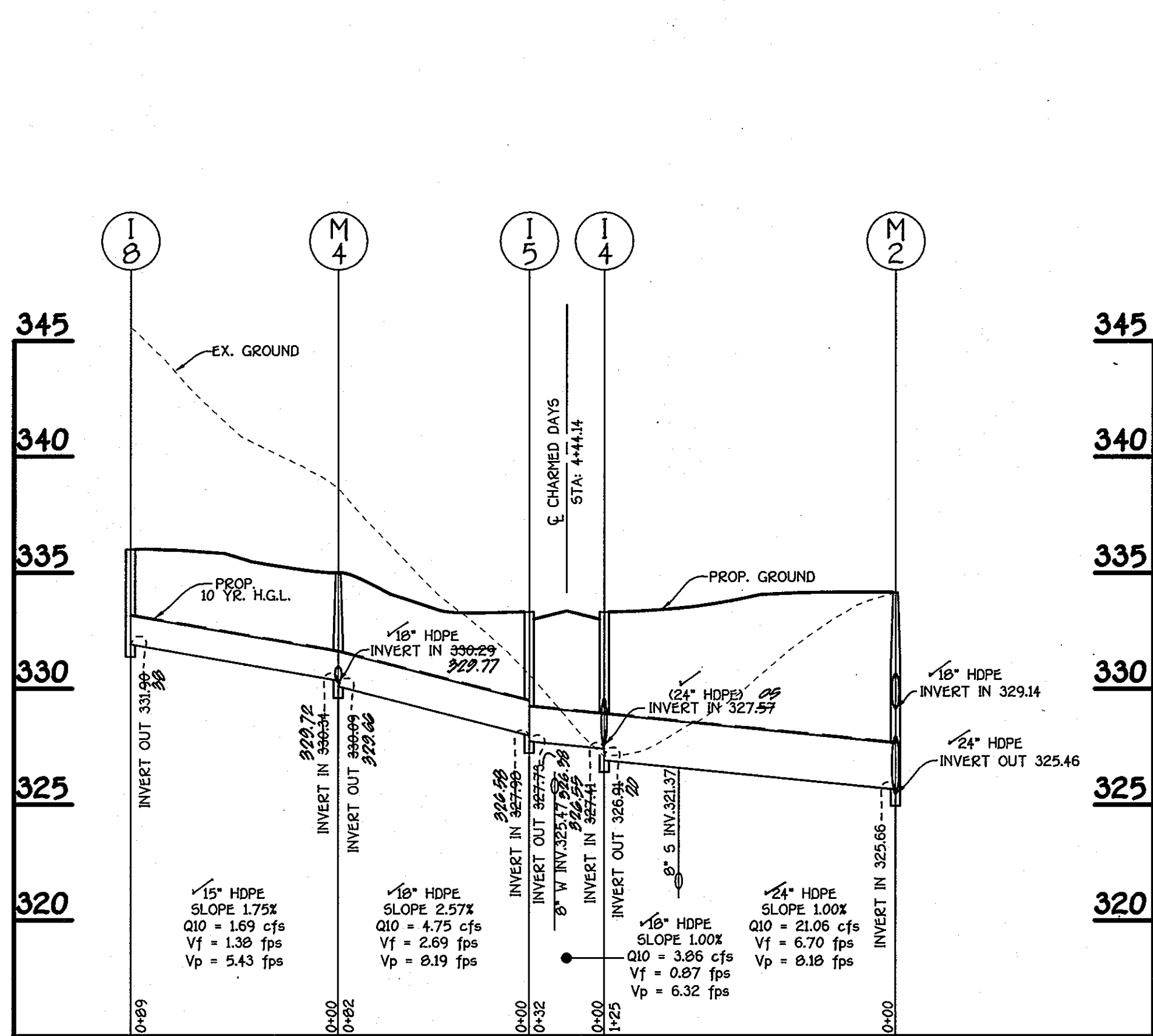
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



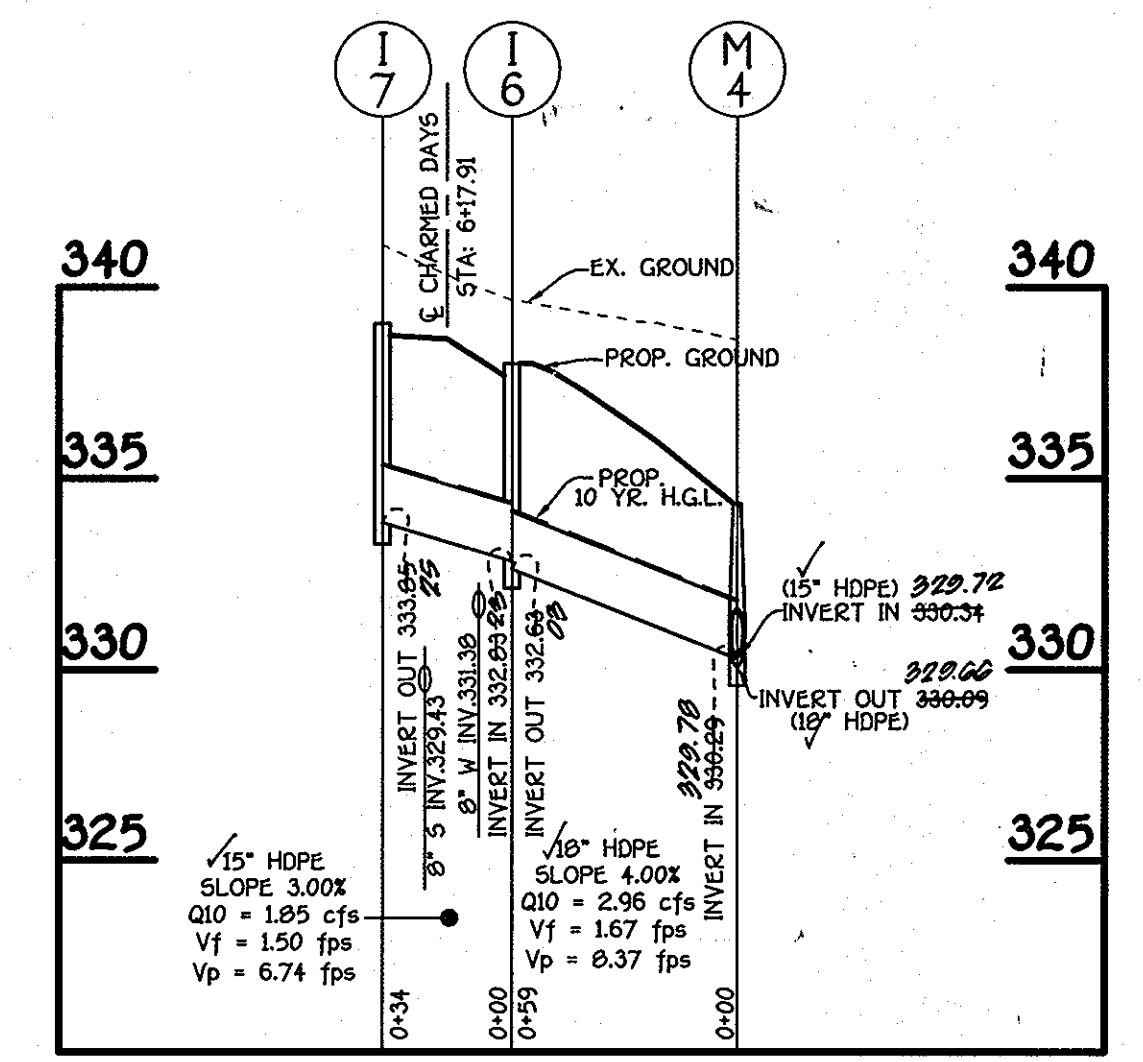
**PROFILE**  
 SCALE: HORIZ. 1" = 50'  
 VERT. 1" = 5'



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



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



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

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 10275 LITTLE PATENT PARKWAY  
 COLUMBIA, MARYLAND 21044

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 COLUMBIA, MARYLAND 21044  
 410-730-3940

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 Howard Research & Development Corp.  
 10275 Little Patent Parkway  
 Columbia, Md. 21044

No.	Revision	Date
1	Changed lot numbers to agree with lot numbers shown on recorded plots 15976-78	3-2-04



STORM DRAIN PROFILES  
 EMERSON  
 SECTION 2, PHASE 1 B  
 PARCEL A-1  
 LOTS 180 THRU 227,  
 OPEN SPACE LOTS 228 & 229  
 ZONED REC-MXD-3 5-99-12  
 TAX MAP 47 PARCEL B37 GRID 7 AND 8  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 50' NOVEMBER 15, 2002  
 SHEET 8 OF 8

AS-BUILT 6-24-05 F-03-34