

DCA-12-MR-009

**CSX Transportation Freight Train
Derailment with Non-railroad
Fatalities**

Ellicott City, MD

August 21, 2012

**CSX Track Geometry Car Data
from milepost 64.8 to 7.0
dated, August 6, 2012**

15 pages, including cover

EXCEPTION REPORT

65-1056 DIVISION BALTIMORE SUBDIVISION OLD MAIN LINE
 MP PREFIX BAC AREA POINT ROCKS-ST.DENIS
 MP FROM: 64.8 MP TO: 7.0
 RM NAME OWEN SMITH R/L CODE D40
 DATE 08/06/2012 HEADING EAST

#	TRK	--FROM-- MP FEET	--TO-- MP FEET	LENGTH FEET	PARAMETER	MAX. VALUE	EXCEPTION LOCATION	CLASS EX/SV	SPEED	SUB	EVT	OFFSET	T/C	LATITUDE	/	LONGITUDE	DATE	CORRECTED
59	4	64-1911	64-1980	69	LEFT RAIL CANT	0.43	64-1929	3 0	30/30	PR1	MP	1929	C	[39.282679]		77.519759]		
60	4	63-1973	63-1974	1	WARP 31ft	1.07	63-1973	3 2	40/40	PR1	ROAD	1726	C	[39.294670]		77.509265]		
61	4	63-3185	63-3287	102	LEFT RAIL CANT	0.44	63-3251	3 0	40/40	PR1	ROAD	3004	C	[39.296628]		77.505554]		
*66	3	63-48	63-51	3	WARP 31ft	0.88	63-50	4 3	45/45	PR1	MP	50	C	[39.291263]		77.513535]		
67	SGL	62-1460	62-1464	4	WARP 31ft	0.86	62-1462	4 3	45/45	PR1	MP	1462	C	[39.299912]		77.492641]		
*69	SGL	62-3212	62-3223	11	WARP 31ft	0.99	62-3218	4 3	45/45	PR1	MP	3218	C	[39.302698]		77.487608]		
71	SGL	60-5154	60-5156	2	PROFILE LEFT 62ft	-1.58	60-5155	4 3	45/45	PR1	MP	5155	T	[39.325927]		77.456535]		
*73	SGL	60-5184	60-5191	7	PROFILE LEFT 62ft	1.78	60-5187	4 3	45/45	PR1	MP	5187	T	[39.325989]		77.456453]		
*74	SGL	60-5181	60-5194	13	PROFILE RIGHT 62ft	1.95	60-5187	4 3	45/45	PR1	MP	5187	T	[39.325989]		77.456453]		
75	SGL	60-5218	60-5219	1	PROFILE LEFT 62ft	-1.60	60-5218	4 3	45/45	PR1	MP	5218	T	[39.326047]		77.456378]		
*76	SGL	60-5220	60-5226	6	PROFILE RIGHT 62ft	-1.75	60-5221	4 3	45/45	PR1	MP	5221	T	[39.326055]		77.456367]		
*77	SGL	60-8335	60-8342	7	PROFILE LEFT 62ft	-1.89	60-8338	4 3	45/45	PR1	MP	8338	C	[39.332043]		77.448532]		
*78	SGL	56-2116	56-2117	1	PROFILE LEFT 62ft	-1.67	56-2116	4 3	45/45	PR1	TURN		T	[39.362251]		77.413277]		
*80	SGL	56-3164	56-3177	13	WARP 31ft	1.06	56-3172	4 3	45/45	PR1	ROAD		C	[39.364502]		77.410937]		
107	SGL	49-1136	49-1168	32	RIGHT RAIL CANT	0.44	49-1160	2 0	25/25	PR1	MP	1160	C	[39.360109]		77.309830]		
110	SGL	49-1169	49-1199	31	RIGHT RAIL CANT	0.51	49-1187	3 0	30/30	PR1	MP	1187	C	[39.360126]		77.309743]		
112	SGL	49-1200	49-1643	444	RIGHT RAIL CANT	0.76	49-1542	3 0	30/30	PR1	MP	1542	C	[39.360571]		77.308636]		
114	SGL	49-1644	49-1936	292	RIGHT RAIL CANT	0.73	49-1644	3 0	30/30	PR1	MP	1644	C	[39.360781]		77.308395]		
*116	SGL	49-1988	49-2014	26	WARP 62ft	2.14	49-1995	3 1	30/30	PR1	MP	1995	T	[39.361603]		77.307774]		
*117	SGL	49-2021	49-2032	11	CROSSLEVEL	1.60	49-2025	3 2	30/30	PR1	MP	2025	T	[39.361676]		77.307726]		
118	SGL	49-2049	49-2052	4	CROSSLEVEL	1.42	49-2052	3 2	30/30	PR1	MP	2052	C	[39.361745]		77.307683]		
119	SGL	49-3093	49-3212	119	RIGHT RAIL CANT	0.40	49-3127	3 0	30/30	PR1	MP	3127	C	[39.364086]		77.305440]		
*130	SGL	48-3555	48-3565	10	CROSSLEVEL	1.50	48-3558	3 2	35/35	PR1	MP	3558	T	[39.370910]		77.290641]		
131	SGL	48-3597	48-3598	1	CROSSLEVEL	1.38	48-3597	3 2	35/35	PR1	MP	3597	T	[39.370892]		77.290501]		
132	SGL	47-3169	47-3407	238	LEFT RAIL CANT	0.46	47-3327	3 0	35/35	PR1	MP	3327	C	[39.372567]		77.272844]		
*136	SGL	47-4049	47-4057	8	WIDE GAGE	1.24	47-4051	3 1	35/35	PR1	ROAD	153	C	[39.372265]		77.270327]	RCL	0.488 RCR 0.473
137	SGL	47-4062	47-4063	1	WIDE GAGE	1.07	47-4062	3 2	35/35	PR1	ROAD	164	C	[39.372256]		77.270294]	RCL	0.531 RCR 0.492
146	SGL	47-4398	47-4403	5	WIDE GAGE	1.13	47-4400	3 1	35/35	PR1	ROAD	502	C	[39.371833]		77.269229]	RCL	0.598 RCR 0.496
151	SGL	47-3458	47-4544	1087	LEFT RAIL CANT	0.64	47-4257	3 0	35/35	PR1	ROAD	359	C	[39.372032]		77.269667]		
152	SGL	47-3610	47-4544	935	RIGHT RAIL CANT	0.55	47-4140	3 0	35/35	PR1	ROAD	242	C	[39.372168]		77.270038]		
156	SGL	47-4545	47-4766	221	RIGHT RAIL CANT	0.54	47-4580	3 0	35/35	PR1	ROAD	682	C	[39.371538]		77.268723]		
157	SGL	47-4545	47-4851	306	LEFT RAIL CANT	0.57	47-4685	3 0	35/35	PR1	SIGN	11	C	[39.371355]		77.268431]		
169	SGL	46-2057	46-2432	376	RIGHT RAIL CANT	0.44	46-2159	3 0	35/35	PR1	MP	2159	C	[39.371911]		77.259235]		
171	SGL	46-2433	46-2619	186	RIGHT RAIL CANT	0.41	46-2574	3 0	35/35	PR1	MP	2574	C	[39.372445]		77.257943]		
192	SGL	37-4894	37-4896	2	WARP 31ft	1.08	37-4894	3 2	35/35	PR1	ROAD	3050	C	[39.368200]		77.093287]		

TGC2_Curve_Analysis													
3	63- 1941	63- 1975	34	3.96	0.290	4.27	0.029	40	54	45	51	S	3
3	63- 2971	63- 3051	80	3.91	0.247	3.99	0.180	40	54	44	50	S	3
3	63- 4007	63- 4043	36	-2.62	0.524	-1.94	0.209	40	57	43	52	S	3
3	63- 5233	63- 5273	40	1.30	0.232	0.12	0.060	40	67	42	58	S	3
3	63- 5445	63- 5481	36	-1.63	0.657	-0.11	0.126	40	60	37	52	S	3
SGL	62- 773	62- 1228	455	-2.77	0.231	-2.02	0.230	45	55	42	51	S	4
SGL	62- 1858	62- 2008	150	2.02	0.141	1.68	0.054	45	63	47	57	S	4
SGL	62- 2675	62- 2721	46	-0.28	0.135	0.11	0.044	45	145	90	122	C1	4
SGL	62- 2996	62- 3078	82	-1.89	0.126	-1.00	0.128	45	61	43	55	C2	4
SGL	62- 4522	62- 4970	448	-0.67	0.160	-0.73	0.139	45	100	69	89	S	4
SGL	60-10347	59- 8	174	-1.28	0.132	-0.78	0.054	45	73	50	65	S	4
SGL	58- 5148	57- 142	260	1.89	0.229	1.84	0.058	45	66	50	60	S	4
SGL	57- 3589	57- 3781	192	-1.99	0.192	-1.74	0.075	45	64	48	58	S	4
SGL	56- 3380	56- 3658	278	2.47	0.156	2.89	0.047	45	63	50	58	S	4
SGL	55- 875	55- 915	40	3.81	0.149	3.28	0.049	45	52	42	48	S	3
SGL	55- 3760	55- 3801	41	-0.58	0.167	-0.73	0.068	35	108	74	96	S	3
SGL	55- 4455	54- 472	1566	2.59	0.289	1.60	0.370	35	55	41	50	S	3
SGL	54- 1499	54- 1701	202	-3.29	0.242	-1.80	0.085	35	50	37	45	S	3
SGL	54- 2395	54- 2661	266	0.62	0.249	1.40	0.136	35	112	82	101	S	3
SGL	54- 4151	54- 4230	79	4.72	0.226	2.92	0.087	35	45	36	42	S	3
SGL	53- 486	53- 554	68	4.88	0.195	3.70	0.057	35	47	39	44	S	3
SGL	53- 1939	53- 1977	38	-5.86	0.300	-3.47	0.132	35	42	34	39	S	3
SGL	53- 4155	53- 4371	216	-3.82	0.231	-1.71	0.058	35	46	34	42	C1	3
SGL	53- 4640	53- 4809	169	-1.30	0.198	-1.28	0.076	35	76	55	68	C2	3
SGL	53- 5318	52- 245	310	-6.32	0.266	-3.45	0.089	35	41	33	38	C3	3
SGL	52- 1172	52- 1246	74	4.83	0.265	2.90	0.107	35	45	36	41	S	3
SGL	52- 2279	52- 2660	381	-6.39	0.395	-3.19	0.166	35	40	32	37	S	3
SGL	52- 4396	52- 5070	674	7.30	0.273	2.90	0.157	35	36	29	34	S	3
SGL	51- 2926	51- 3788	862	3.42	0.250	1.33	0.183	25	47	34	42	C1	2
SGL	51- 3859	51- 3886	27	3.99	0.212	0.97	0.164	25	42	29	37	C2	2
SGL	50- 753	50- 1091	338	1.67	0.299	0.93	0.184	25	65	45	58	S	2
SGL	50- 1842	50- 1895	53	2.64	0.225	0.90	0.047	25	51	36	46	S	2
SGL	50- 2483	50- 2908	425	-3.87	0.337	-0.59	0.171	25	41	27	36	S	2
SGL	50- 4698	50- 4867	169	-9.21	0.502	-3.40	0.079	25	33	27	31	S	2
SGL	49- 88	49- 240	152	6.74	0.453	2.85	0.227	25	38	30	35	S	2
SGL	49- 1199	49- 1643	444	-6.90	0.391	-4.53	0.236	30	42	35	39	S	3
SGL	49- 2321	49- 2416	95	4.17	0.421	3.51	0.181	30	50	41	47	S	3
SGL	49- 2982	49- 3029	47	-5.35	0.249	-3.27	0.093	30	44	35	41	S	3

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CURVE ANALYSIS REPORT

48-766 DIVISION BALTIMORE SUBDIVISION OLD MAIN LINE
 MP PREFIX BAC AREA POINT ROCKS-ST.D
 MP FROM: 64.8 MP TO: 7.0

RM NAME OWEN SMITH
 DATE 08/06/2012

TGC2_Curve_Analysis
 R/L CODE D40
 HEADING EAST

TRACK	FULL BODY CURVE FROM MP/FT	TO MP/FT	LENGTH FEET	CURVATURE DEGREE	STD	CROSSLEVEL INCHES	STD	Vmax	FRA 4in.	CSX	FRA 3in.	TYPE	CLASS
SGL	49- 5230	48- 58	115	7.35	0.395	3.83	0.097	30	39	32	36	C1	3
SGL	48- 452	48- 529	77	2.10	0.400	0.89	0.127	30	57	40	51	C2	3
SGL	48- 1866	48- 2132	266	2.97	0.538	2.02	0.164	30	54	41	49	S	3
SGL	47- 372	47- 511	139	-4.41	0.351	-3.15	0.109	35	48	38	44	S	3
SGL	47- 3117	47- 4544	1427	3.04	0.286	2.42	0.297	35	55	43	50	S	3
SGL	46- 2025	46- 2432	407	2.21	0.269	1.16	0.116	35	57	41	52	S	3
SGL	46- 3586	46- 4058	472	-2.21	0.241	-2.33	0.168	35	64	49	58	S	3
SGL	46- 5012	45- 1497	1970	2.17	0.312	2.45	0.217	35	65	51	60	S	3
SGL	44- 1885	44- 2788	903	2.17	0.225	1.27	0.168	35	59	42	53	S	3
SGL	44- 3783	43- 822	1971	-2.67	0.246	-1.33	0.096	35	53	39	48	S	3
SGL	43- 2036	43- 4480	2444	1.90	0.281	0.94	0.140	35	61	43	54	S	3
SGL	43- 5271	42- 1316	1357	-3.09	0.219	-1.87	0.110	35	52	39	47	S	3
SGL	42- 1982	42- 3376	1394	2.12	0.188	0.91	0.095	35	57	40	51	S	3
SGL	42- 4589	42- 4633	44	-2.23	0.154	-1.84	0.127	35	61	46	55	S	3
SGL	42- 5254	42- 5828	574	-2.03	0.226	-0.81	0.088	35	58	40	51	S	3
SGL	41- 999	41- 1541	542	1.78	0.234	1.06	0.114	35	63	45	57	C1	3
SGL	41- 1759	41- 1797	38	0.06	0.179	0.03	0.043	35	173	106	150	C2	3
SGL	41- 2069	41- 2212	143	2.75	0.317	1.79	0.062	35	54	41	50	C3	3
SGL	41- 4393	40- 1816	2781	-1.13	0.255	-1.12	0.277	35	80	57	72	S	3
SGL	40- 3269	40- 4398	1129	1.72	0.199	0.96	0.076	35	64	45	57	S	3
SGL	39- 1930	39- 3716	1786	-1.79	0.218	-1.03	0.143	35	63	45	56	S	3
SGL	38- 2748	38- 3467	719	1.75	0.193	1.08	0.132	35	64	45	57	S	3
SGL	38- 5070	37- 1418	2009	-1.11	0.216	-1.12	0.117	35	81	58	73	S	3
SGL	37- 2288	37- 2830	542	3.55	0.221	2.43	0.088	35	51	39	46	S	3
SGL	37- 4298	37- 4857	559	-0.51	0.191	-0.96	0.132	35	118	83	106	S	3
SGL	36- 123	36- 635	512	-0.74	0.214	-1.07	0.134	35	99	70	89	S	3
SGL	36- 1988	36- 2031	43	5.51	0.301	4.08	0.198	35	45	38	42	S	3
SGL	36- 3247	36- 3328	81	-4.79	0.201	-3.49	0.062	35	47	38	44	S	3
SGL	36- 4448	36- 4626	178	5.90	0.195	3.91	0.046	35	43	36	41	S	3
SGL	35- 54	35- 432	378	-4.90	0.279	-3.30	0.081	35	46	37	43	S	3
SGL	35- 2679	35- 2714	35	5.36	0.282	4.24	0.043	35	46	39	44	S	3
SGL	35- 4594	35- 5263	669	-4.49	0.236	-2.89	0.116	35	46	37	43	S	3
SGL	34- 2326	34- 2859	533	5.74	0.232	3.86	0.106	35	44	36	41	S	3
SGL	34- 3687	34- 3719	32	-5.02	0.225	-3.23	0.050	35	45	36	42	S	3
SGL	33- 3800	33- 3836	36	-4.61	0.267	-2.85	0.036	35	46	36	42	S	3
SGL	32- 1353	32- 1394	41	4.30	0.153	1.84	0.065	35	44	33	40	S	3
SGL	32- 2076	32- 2115	39	-7.18	0.261	-3.61	0.040	30	39	31	36	S	3

TGC2_Curve_Analysis

SGL	27- 4218	27- 4283	65	-5.04	0.269	-1.34	0.072	25	39	28	35	S	2
SGL	26- 227	26- 269	42	8.70	0.340	2.82	0.036	25	33	26	31	S	2
SGL	26- 1205	26- 1244	39	-8.45	0.295	-3.44	0.060	25	35	28	33	S	2
SGL	26- 2646	26- 2831	185	4.25	0.262	1.97	0.116	25	44	34	40	S	2
SGL	26- 3665	26- 4272	607	-3.74	0.283	-0.96	0.333	25	43	30	39	S	2
SGL	25- 475	25- 518	43	3.96	0.242	1.19	0.062	25	43	31	39	S	2
SGL	25- 1736	25- 1986	250	8.62	0.349	2.97	0.099	25	34	27	31	S	2
SGL	25- 2903	25- 3529	626	-5.80	0.411	-1.21	0.163	25	35	25	32	S	2
SGL	24- 1843	24- 1914	71	-7.85	0.273	-3.25	0.053	25	36	29	33	S	2
SGL	24- 2452	24- 2510	58	7.77	0.600	2.88	0.111	25	35	28	32	C1	2
SGL	24- 2811	24- 2898	87	1.70	0.293	1.13	0.125	25	65	47	59	C2	2
SGL	24- 3109	24- 3502	393	3.53	0.268	1.46	0.236	25	47	34	42	C3	2
SGL	24- 4500	24- 4551	51	-4.31	0.366	-1.50	0.067	25	42	31	38	S	2
SGL	23- 373	23- 412	39	-6.10	0.336	-1.47	0.079	25	35	26	32	S	2
SGL	23- 949	23- 1055	106	9.03	0.323	3.28	0.057	25	34	27	31	C1	2
SGL	23- 1403	23- 1575	172	1.47	0.237	1.14	0.068	25	70	50	63	C2	2
SGL	23- 1847	23- 1885	38	7.49	0.298	2.55	0.037	25	35	27	32	C3	2
SGL	23- 2447	23- 2801	354	-9.22	0.298	-2.96	0.103	25	32	26	30	S	2
SGL	23- 3392	23- 3432	40	7.58	0.362	2.53	0.080	25	35	27	32	S	2
SGL	23- 4497	23- 4662	165	-7.67	0.413	-2.80	0.153	25	35	28	32	C1	2
SGL	23- 4804	23- 4840	36	-8.44	0.247	-2.76	0.120	25	33	26	31	C2	2

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CURVE ANALYSIS REPORT

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22-299	DIVISION	BALTIMORE	SUBDIVISION	OLD MAIN LINE
	MP PREFIX	BAC	AREA	POINT ROCKS-ST.D
	MP FROM:	64.8	MP TO:	7.0
	RM NAME	OWEN SMITH	R/L CODE	D40
	DATE	08/06/2012	HEADING	EAST

TRACK	FULL BODY FROM MP/FT	CURVE TO MP/FT	LENGTH FEET	CURVATURE DEGREE	STD	CROSSLEVEL INCHES	STD	Vmax	FRA 4in.	CSX	FRA 3in.	TYPE	CLASS
SGL	22- 81	22- 118	37	10.13	0.275	3.51	0.056	25	32	26	30	S	2
SGL	22- 605	22- 625	20	-8.86	0.411	-3.51	0.225	25	34	28	32	S	2
SGL	22- 1307	22- 1378	71	7.86	0.310	2.98	0.113	25	35	28	33	C1	2
SGL	22- 1714	22- 1749	35	-0.02	0.233	0.09	0.051	25	175	109	0	C2	2
SGL	22- 1962	22- 1999	37	5.21	0.224	1.05	0.022	25	37	26	33	C3	2
SGL	22- 4429	22- 4466	37	2.72	0.330	0.77	0.114	25	50	34	44	S	2
SGL	21- 934	21- 1245	311	4.67	0.349	1.03	0.193	25	39	27	35	S	2
SGL	21- 1849	21- 1913	64	-2.79	0.418	-1.22	0.152	25	51	37	46	C1	2
SGL	21- 2085	21- 2184	99	-1.63	0.284	-1.22	0.180	25	67	48	60	C2	2

TGC2_Curve_Analysis															
SGL	21-	2423	21-	2458	35	-4.16	0.307	-0.67	0.137	25	40	27	35	C3	2
SGL	21-	3469	21-	4377	908	-3.46	0.297	-0.70	0.161	25	44	30	39	C1	2
SGL	21-	4749	21-	5035	286	-5.53	0.310	-1.20	0.109	25	36	26	33	C2	2
SGL	20-	549	20-	578	29	3.59	0.249	2.17	0.046	25	49	38	45	C1	2
SGL	20-	656	20-	703	47	2.88	0.306	2.55	0.078	25	57	44	52	C2	2
SGL	20-	770	20-	810	40	3.68	0.230	1.71	0.181	25	47	35	42	C3	2
SGL	20-	4481	20-	5056	575	-4.68	0.415	-1.56	0.268	25	41	30	37	S	2
SGL	19-	1074	19-	2734	1660	4.06	0.339	1.56	0.244	25	44	32	40	S	2
SGL	19-	3539	19-	3662	123	-3.37	0.270	-0.80	0.082	25	45	31	40	C1	2
SGL	19-	3914	19-	4164	250	-4.83	0.426	-1.32	0.129	25	39	28	35	C2	2
SGL	19-	5648	19-	5810	162	5.06	0.322	1.28	0.253	25	38	28	34	S	2
SGL	19-	6716	18-	1715	390	-6.36	0.418	-2.36	0.206	25	37	29	34	S	2
SGL	18-	2831	18-	3188	357	6.04	0.348	2.11	0.134	25	38	29	34	S	2
SGL	18-	4382	18-	4525	143	-6.76	0.399	-2.91	0.164	25	38	30	35	S	2
SGL	17-	468	17-	534	66	7.05	0.336	2.44	0.044	25	36	28	33	C1	2
SGL	17-	1563	17-	1659	96	5.77	0.225	1.65	0.040	25	37	28	34	C2	2
SGL	17-	1914	17-	1955	41	8.27	0.436	3.31	0.110	25	35	28	33	C3	2
SGL	17-	2220	17-	2594	374	2.38	0.271	0.96	0.099	25	54	38	48	C4	2
SGL	17-	3528	17-	3624	96	4.92	0.242	0.85	0.113	25	37	26	33	S	2
SGL	17-	4583	17-	4691	108	-8.57	0.388	-3.38	0.074	25	35	28	32	C1	2
SGL	17-	4795	17-	4831	36	-9.10	0.265	-3.39	0.044	25	34	27	31	C2	2
SGL	17-	5142	17-	5386	244	-5.15	0.306	-1.51	0.112	25	39	28	35	C3	2
SGL	17-	5716	16-	88	91	-8.98	0.291	-3.46	0.038	25	34	28	32	C4	2
SGL	16-	897	16-	1028	131	8.09	0.281	3.06	0.075	25	35	28	32	C1	2
SGL	16-	1395	16-	1525	130	3.73	0.233	1.14	0.070	25	44	31	39	C2	2
SGL	16-	1714	16-	1941	227	2.34	0.258	1.15	0.087	25	56	40	50	C3	2
SGL	16-	2586	16-	2975	389	-5.36	0.314	-1.24	0.087	25	37	27	33	S	2
SGL	16-	3509	16-	3548	39	5.24	0.239	1.73	0.085	25	39	29	36	C1	2
SGL	16-	3786	16-	3917	131	1.35	0.245	1.10	0.084	25	73	52	65	C2	2
SGL	16-	4729	16-	5723	994	6.22	0.258	2.29	0.194	25	38	29	34	C1	2
SGL	16-	5779	15-	24	32	6.58	0.269	1.95	0.028	25	36	27	32	C2	2
SGL	15-	939	15-	1656	717	-4.55	0.340	-1.04	0.206	25	39	28	35	S	2
SGL	15-	3288	15-	3382	94	1.76	0.245	0.94	0.200	25	63	44	56	S	2
SGL	15-	4201	14-	41	580	0.81	0.246	0.83	0.104	25	92	64	82	C1	2
SGL	14-	311	14-	412	101	3.56	0.207	1.17	0.081	25	45	32	41	C2	2

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CURVE ANALYSIS REPORT

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14-2358	DIVISION	BALTIMORE	SUBDIVISION	OLD MAIN LINE
	MP PREFIX	BAC	AREA	POINT ROCKS-ST.D
	MP FROM:	64.8	MP TO:	7.0
	RM NAME	OWEN SMITH	R/L CODE	D40
	DATE	08/06/2012	HEADING	EAST

TGC2_Curve_Analysis

TRACK	FULL BODY CURVE		LENGTH FEET	CURVATURE		CROSSLEVEL		Vmax	FRA		FRA 3in.	TYPE	CLASS
	FROM MP/FT	TO MP/FT		DEGREE	STD	INCHES	STD		4in.	CSX			
SGL	14- 2036	14- 2099	63	-7.41	0.334	-2.09	0.139	25	34	26	31	S	2
SGL	14- 2513	14- 2549	36	4.45	0.217	1.30	0.099	25	41	30	37	S	2
SGL	14- 3262	14- 3302	40	5.99	0.262	2.35	0.067	25	39	30	35	S	2
SGL	14- 3902	14- 3945	43	2.00	0.277	1.36	0.096	25	62	45	56	S	2
SGL	14- 4476	14- 4544	68	6.47	0.301	2.58	0.046	25	38	30	35	S	2
SGL	14- 4963	14- 4996	33	-7.43	0.276	-2.31	0.057	25	34	27	32	C1	2
SGL	14- 5135	14- 5169	34	-5.36	0.287	-1.59	0.026	25	38	28	35	C2	2
SGL	14- 5424	13- 30	101	-9.25	0.490	-2.73	0.178	25	32	25	29	C3	2
SGL	13- 432	13- 469	37	7.18	0.876	2.13	0.557	25	35	26	32	S	2
SGL	13- 714	13- 746	32	-3.38	0.323	-0.99	0.062	25	46	32	41	S	2
SGL	13- 1467	13- 1500	33	-9.32	0.402	-2.74	0.044	25	32	25	29	S	2
SGL	13- 2757	13- 2969	212	2.64	0.358	1.58	0.195	30	55	40	49	S	3
SGL	13- 3483	13- 3584	101	-2.00	0.270	-0.56	0.167	30	57	38	50	S	3
SGL	13- 4439	13- 4541	102	3.18	0.288	1.51	0.129	30	49	36	45	S	3
SGL	12- 513	12- 1767	1254	-2.39	0.334	-0.82	0.179	30	53	37	47	C1	3
SGL	12- 1970	12- 2085	115	-3.29	0.306	-1.39	0.084	30	48	35	43	C2	3
SGL	12- 2791	12- 3354	563	3.46	0.237	1.02	0.317	30	45	32	40	S	3
SGL	12- 4731	12- 4828	97	-1.65	0.489	-0.94	0.150	30	65	46	58	C1	3
SGL	11- 17	11- 126	109	-5.84	0.297	-2.89	0.072	30	41	32	38	C2	3
SGL	11- 1171	11- 1264	93	2.08	0.252	1.24	0.084	30	60	43	54	S	3
SGL	11- 3666	11- 3713	47	-2.14	0.279	-0.57	0.088	30	55	37	49	S	3
SGL	11- 4174	11- 4214	40	4.15	0.187	2.32	0.041	30	46	36	42	S	3
SGL	10- 70	10- 113	43	6.75	0.188	2.93	0.036	30	38	30	35	S	3
SGL	10- 594	10- 625	31	-1.98	0.443	-0.53	0.080	30	57	38	50	C1	3
SGL	10- 817	10- 1122	305	-0.86	0.486	-0.93	0.283	30	90	63	80	C2	3
SGL	10- 1458	10- 1532	74	-3.06	0.568	-1.96	0.235	30	52	40	48	C3	3
SGL	10- 1933	10- 1969	36	3.39	0.187	1.69	0.056	30	49	36	44	S	3
SGL	10- 2971	10- 3006	35	-4.16	0.409	-2.48	0.144	30	47	37	43	S	3
SGL	10- 3517	10- 3551	34	5.35	0.236	2.65	0.082	30	42	33	38	S	3
SGL	10- 3966	10- 3997	31	-3.18	0.308	-1.28	0.079	30	48	35	43	S	3
SGL	10- 4309	10- 4348	39	2.74	0.286	1.18	0.098	30	52	37	46	C1	3
SGL	10- 4523	10- 4642	119	1.29	0.328	1.28	0.097	30	76	55	69	C2	3
SGL	9- 288	9- 323	35	-4.63	0.316	-2.53	0.066	30	45	35	41	C1	3
SGL	9- 556	9- 734	178	-3.06	0.278	-0.94	0.126	30	48	33	43	C2	3
SGL	9- 825	9- 885	60	-3.57	0.248	-1.72	0.070	30	48	36	43	C3	3
SGL	9- 1513	9- 1720	207	-1.38	0.414	-0.83	0.194	30	70	49	63	C4	3
SGL	9- 1895	9- 1929	34	-0.16	0.212	-0.03	0.115	30	173	106	0	C5	3
SGL	9- 2205	9- 2264	59	-2.00	0.355	-0.64	0.204	30	57	39	51	C6	3
SGL	9- 2840	9- 2872	32	1.91	0.280	0.72	0.055	30	59	40	52	S	3
SGL	9- 3965	9- 4019	54	2.95	0.372	2.06	0.156	30	54	41	49	S	3

TGC2_Curve_Analysis													
SGL	9- 4854	9- 4893	39	-5.42	0.304	-2.32	0.052	30	40	31	37	S	3
SGL	9- 5295	9- 5365	70	2.21	0.383	0.98	0.149	30	56	40	50	S	3
SGL	8- 673	8- 714	41	5.61	0.434	4.41	0.066	30	46	38	43	S	3
SGL	8- 1471	8- 1588	117	-4.01	0.286	-1.86	0.092	30	45	34	41	S	3

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CURVE ANALYSIS REPORT

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8-2471	DIVISION	BALTIMORE	SUBDIVISION	OLD MAIN LINE
	MP PREFIX	BAC	AREA	POINT ROCKS-ST.D
	MP FROM:	64.8	MP TO:	7.0
	RM NAME	OWEN SMITH	R/L CODE	D40
	DATE	08/06/2012	HEADING	EAST

TRACK	FULL BODY FROM MP/FT	CURVE TO MP/FT	LENGTH FEET	CURVATURE		CROSSLEVEL		Vmax	FRA 4in.	CSX	FRA 3in.	TYPE	CLASS
				DEGREE	STD	INCHES	STD						
SGL	8- 2154	8- 2203	49	6.09	0.291	2.97	0.231	25	40	32	37	S	2
SGL	8- 3211	8- 3287	76	-8.75	0.416	-3.05	0.052	25	34	27	31	C1	2
SGL	8- 3418	8- 3668	250	-9.59	0.393	-3.08	0.106	25	32	26	30	C2	2

