

Federal Railroad Administration Office of Safety Headquarters Assigned Accident Investigation Report HQ-2008-35

Long Island Railroad (LIR) Jamaica, NY March 27, 2008

Note that 49 U.S.C. §20903 provides that no part of an accident or incident report made by the Secretary of Transportation/Federal Railroad Administration under 49 U.S.C. §20902 may be used in a civil action for damages resulting from a matter mentioned in the report.

DEPARTMENT (FEDERAL RAILR	OF TRA ROAD A	ANSPORT DMINIST	TATIC RATI	ON ON	FRA F.	ACTU	AL RA	AILF	ROAD A	CCIE	DENT	REPO	ORT]	FRA F	ile #	<u>HQ-200</u>	<u>18-35</u>
1.Name of Railroad Operating Train #1 Long Island Rail Road [L1]									1a. Alphabetic Code				1b.	b. Railroad Accident/Incident No.				
2.Name of Railroad Operating Train #2 Long Island Rail Road [LI]								2a	2a. Alphabetic Code LI				2b.	b. Railroad Accident/Incident No. EQ20080302				
3.Name of Railroad C	Operating	g Train #3						3a	3a. Alphabetic Code				3b.	b. Railroad Accident/Incident No.				
4.Name of Railroad Responsible for Track Maintenance:									4a. Alphabetic Code				4b.	b. Railroad Accident/Incident No.				
Long Island Rail Road [L1] 5. U.S. DOT_AAR Grade Crossing Identification Number									6. Date of Accident/Incident				7.	EQ20080302 . Time of Accident/Incident				
Turn of Assidant/Indiants Derailment C								M	onth 03	Day	/ 27	Year 2	008	09:59	00:00	`	/ AM	PM
 Type of Accident/In (single entry in cod) 	ndicent de box)	2. Head o	nent on colli	sion	 Side c Rakin 	collision	on	8	. Hwy-rail c . RR grade o	crossing	g 10 g 11). Explo . Fire/v	sion-detoi iolent rup	nation 15. ture	(desc	ribe i	in	Code
	3. Rear end collision					n Train	collision	9	9. Obstruction 12. Other in			impacts	narrative)				01	
9. Cars Carrying HAZMAT		10. HAZMAT Cars Damaged/Derailed				11 H	. Cars Re	leasir	sing		12. People			13. Div		vision		
	0 Damaged/Derailed N/A					15 Milepost			N/A	N/A			20			System		
14. Nearest City/Town	n J	amaica				15. M	nearest	tenth) 9		16. Sta	te Abbi N/A	r Coo N	le 1 Y	7. County	Q	UEE	NS	
18. Temperature (F)		19. Visib	oility	(sing	gle entry)	Code	20.	Weath	Veather (single		entry) Coc		ode	21. Type of Track				Code
(specify if minus)	F	1. l 2. l	Dawn Day	3.D 4.I	usk Dark	1 2		1. Cle	lear 3. Rain 5.5		5.Sleet		2	1. Main 3. S 2 Yard 4 h			ng Istrv	1
22. Track Name/Nur	mber		-			23. FR	A Track	2. Cit	Code	24. An	inual Tra	l ack Den	sity	25. Tim	e Table	e Dire	ection	Code
	Jamaica Interlocking					Cl	ass (1-9,	X)	(gross tons in millions) N/			N/A	1. North 3. East 2. South 4. West 3			3		
							OPEI	RAT	ING TRA	IN #1	,				2. 500	ui 4.	west	
26. Type of Equipme	ent 1.	. Freight tra	uin	4. W	ork train 7	. Yard/s	witching	А	. Spec. MoV	W Equi	p. Code	e 27. V	Was Equi	pment (Code	28.	Train Nur	nber/Symbol
Consist (single en	try) 2.	Passenger	train	5. Sir	ngle car 8	. Light l	oco(s).					1	Attended?					4
29 Speed (recorded	3.	Commute	r train	6. Cu	t of cars 9	. Maint.	inspect.c	ar	$\frac{1}{r code(s)}$	that ar	$\frac{2}{n(v)}$		1. Yes	2. NO 31a Rem	I Intelv (Contro	olled Loco	4 motive?
R - Recorded (recorded speed, y available) Code 31. Method(s) of Operation									block	m.Spec	cial instr	uctions		0 = Not a remotely controlled				
E - Estimated 3 MPH R b. Auto train control h. Curre								nt of	traffic	n. Othe	er than n	nain trac	k	1 = Rem	ote con	trol p	ortable	
30. Trailing Tons (gross tonnage,								table/t warrai	train orders	o. Posi p. Oth	tive trai	n contro	arrative)	2 = Remote control tower) 3 = Remote control				
excluding power units) d. Cab J. I rack e. Traffic k. Direc								t traff	ic control		Code	e(s)		transmi	tter - m	nore th	han one	
		N/A		f.	Interlockin	g	l.Yard li	mits		f	N/A	N/A N	/A N/A	remote	control	trans	mitter	0
32. Principal Car/Unit	t	a. Initial a	and Nu	mber	b. Positi	on in Tra	un c.	Load	led(yes/no)	33. If	railroad	l employ	vee(s) test that wer	ed for drug e positive i	g/alcoho n	ol use	, Alcohol	Drugs
(1) First involved (derailed, struck, e	etc)	L	17628			5			yes the appropriate b)X.			0	0		
(2) Causing (if med	chanical	l	0			0]	N/A	34.	Was this	s consis	transpor	ting passen	gers? (Y/N)		Y
35. Locomotive Unit	ts	a. Head		Mid 7	Frain	I	Rear End		36. Cars				L	oaded	_	Emp	pty	
(1) Total in Train	<u> </u>	End	b. Ma	nual	c. Remote	d. Man	ial c. Re	emote	(1) Total	in Equi	nment (onsist	a. Freight	b. Pass.	c. Fre	ight	d. Pass.	e. Caboose
(2) Total Daraila	4	1		0	0	0			(2) Total	Doroilo			0	0			0	0
37. Equipment Dama	ige	0		0	0	0		0	(2) 10tai	Derane	u		0	1	(0	0	0
This Consist	\$	\$400,000.00) 3	38. Tra & Stri	ick, Signal, ` icture Dama	Way,	\$100,000	0.00	39. Prima Code	ry Cau	se	509	90	40. Cont	ributing	g Cau	ise	N/A
	1	Number	r of Cre	ew Me	embers								Length of	of Time on Duty				
41. Engineer/	42. Fir	emen		43. Conductors 44. Brakeme			Brakemen	l	45. Engineer/Operator				46. Con	ductor	T	F	Mi 50	
	Operators 1 0				1 0				Hrs 5 Mi 58			58	Hrs 5 Mil 58					
Casualties to:	47. Railr	road Emplo	yees 4	8. Train Passengers 49. Other			Other		50. EOT Device?				2	51. Was EOT Device Properly Armed? 1. Yes 2. No 1 N/A				
Fatal 0					0		0		52. Caboose Occupied by Crew?		?							
Nonfatal		1			1		0		1. Yes 2. 1			2. No					N/A	
						(OPERA	TIN	G TRAIN	#2								
53. Type of Equipment	nt = 1.	Freight tra	in train	4. Wo	ork train 7	. Yard/sv	vitching	A	. Spec. MoV	V Equip	o. Code	54. V	Vas Equip	oment C	Code	55.1	Frain Nun	nber/Symbol
Consist (single en	<i>try</i>) 2. 3.	Commuter	train	6. Cu	t of cars 9	. Maint./	inspect.ca	ar			2		1. Yes	2. No	1		16	18
56. Speed (recorded)	speed, if	available)	Code	58	Method(s)	of Opera	tion	(ente	er code(s)	that ap	oply)			58a. Rem	otely C	Contro	olled Loco	omotive?
R - Recorded a. ATCS g. Au E - Estimated 0 MPH R b. Auto train control h. Cu							g. Autor h. Curre	natic nt of	natic block m.Special instructions nt of traffic n. Other than main track				k	0 = Not a remotely controlled 1 = Remote control portable				

-	ROAD AI	DMINIST	TATIO TRATIO	ON ON	FRA FA	CTUAL	RAILR	OAD AC	CIDENT RE	PORT	F	FRA File	# <u>HQ-200</u>	<u>18-35</u>	
57. Trailing Tons (gross tonnage, excluding power units)					c. Auto train stop i. Time table/ d. Cab j.Track warra e. Traffic k. Direct traff				ain orders o. Positive train control t control p. Other (<i>Specify in narrative</i>) c control Code(s)				2 = Remote control tower 3 = Remote control transmitter - more than one		
		N/A		f. 1	Interlocking	1.Ya	ard limits		f N/A N/A	N/A N/A	remote control transmitter			0	
59. Principal Car/Un	it	a. Initial	and Nu	ımber	b. Positio	n in Train	c. Load	ed(yes/no)	60. If railroad er	nployee(s) tes	sted for drug/alcohol use,			'	
(1) First involved	atc)	L	17773		12			yes	enter the nu the appropri	e positive i	in	Alcohol	Drugs		
$\frac{(ueranea, sinack,}{(2) \text{ Causing } (if med)}$	chanical								61. Was this co	ting passengers? (Y/N)			N/A		
cause reported) 0				0		N						Y			
62. Locomotive Units a. Head End b. Ma		b. Ma	Mid Ti nual	rain c. Remote	Rear I. Manual	End c. Remote	63. Cars		Lo a. Freight	b. Pass.	I c. Freig	Empty ht d. Pass.	e. Caboose		
(1) Total in Train		1		0	0	0	0	(1) Total ir	Equipment Consist 0		11	0	0	0	
(2) Total Deraile	ed	0	0)	0	0		(2) Total D	erailed	0	0	0	0		
64. Equipment Dam	64. Equipment Damage			5. Track, Signal, Way,			\$0.00	66. Primary Cause			67. Contributing Cause				
This Consist	\$3	56,000.00 Numbe	r of Cre	& Structure Damage \$0.00				Code		S099 Length of	Time on D	Dutv		N/A	
68. Engineer/	69. Fire	men		70. Co	0. Conductors 71. Brakemen			72. Engine	eer/Operator		73. Con	ductor			
Operators 1		0			1		0		Hrs 3	Mi 26		Hrs	8 3	Mi 26	
Casualties to:	74. Railro	oad Emplo	oyees 7	5. Trai	n Passengers	76. Othe	r	77. EOT Device?			78. Was	Armed?			
Fatal		0			0		0	1. Yes 2. No N/A			1.	N/A			
Nonfatal		0		0			0	/9. Caboo	1. Yes	2. No				N/A	
				0			ERATIN	IG TRAIN #3							
80. Type of Equipme	nt 1. F	Freight tra	in	4. Wor	k train 7. Y	ard/switch	ing A.	Spec. MoW	Equip. Code 8	. Was Equip	nent C	ode 8	2. Train Nun	nber/Symbol	
Consist <i>(single entry)</i> 2. Passenger train 3. Commuter train					 Single car 8. Light loco(s). Cut of cars 9. Maint./inspect.car 				N/A 1. Yes 2. No N/A N/A						
83. Speed (recorded speed, if available) Code 85. Method(s) of Operation (enter state)							(enter	r code(s) th	at apply)		85a. Rem	otely Cor	ntrolled Loco	motive?	
R - Recorded a. ATCS g. Automatic l							Automatic b	olock n	 Special instruction Other than main 	ns track	0 = Not a 1 = Remo	remotely	y controlled		
E - Estimated N/A MPH N/A b. Aut						stop i. T	ime table/ti	ain orders	. Positive train co	ntrol	2 = Remo	ote contro	ol tower		
84. Irailing Ions excluding powe	nage,		d.	Cab Traffic	j.Tr	ack warran	a control p. Outer (Specify in narrative) 3 = Remote control c control Code(s) transmitter - more than one								
N/A					Interlocking	1.Ya	ard limits			N/A N/A	remote c	control tra	ansmitter		
86. Principal Car/Unit a. Initial and Nu					linternoening				N/A N/A N/A					N/A	
86. Principal Car/Un	it	a. Initial	and Nu	umber	b. Positio	n in Train	c. Load	ed(ves/no)	N/A N/A N/A 87. If railroad en	ployee(s) test	ed for drug	g/alcohol	use,	N/A	
86. Principal Car/Un (1) First involved	it	a. Initial	and Nu N/A	umber	b. Position	n in Train	c. Load	ed(yes/no) N/A	N/A N/A N/A 87. If railroad en enter the nu	ployee(s) test	ed for drug e positive i	g/alcohol in	use,	N/A Drugs	
86. Principal Car/Un (1) First involved (derailed, struck,	it etc)	a. Initial	and Nu N/A	ımber	b. Position	n in Train A	c. Load	ed _(yes/no) N/A	N/A N/A N/A 87. If railroad en enter the nu the appropri	ployee(s) test nber that wer ate box.	ed for drug e positive i	g/alcohol	use, Alcohol N/A	N/A Drugs N/A	
86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported	it etc) echanical l)	a. Initial	and Nu N/A N/A	umber	b. Position N/	n in Train A A	c. Load	ed(<i>yes/no</i>) N/A N/A	N/A N/A N/A 87. If railroad en enter the nutter the nutter the appropriate the approprist the appropriate the appropriate the appropriate the appropris	ployee(s) test nber that wer ate box.	ed for drug e positive i ting passen	g/alcohol in ngers? (Y	use, Alcohol N/A /N)	N/A Drugs N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported 89. Locomotive Uni 	it etc) chanical l) its	a. Initial a. Head End	and Nu N/A N/A	Mid Tinual	b. Positio N/ N/ rain c. Remote	n in Train A A Rear I. Manual	c. Load End c. Remote	ed(yes/no) N/A N/A 90. Cars	N/A N/A N/A 87. If railroad en enter the numer the appropri 88. Was this co	ployee(s) test nber that wer ate box. nsist transpor	ed for drug e positive i ting passen paded b. Pass.	g/alcohol in ngers? (Y L c. Freig	use, Alcohol N/A /N) Empty tht d. Pass.	N/A Drugs N/A N/A e. Caboose	
86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported 89. Locomotive Uni (1) Total in Trai	it etc) echanical l) its	a. Initial a. Head End N/A	and Nu N/A N/A b. Maa N/	Mid Ti nual	b. Positio N/ N/ c. Remote C N/A	n in Train A A Rear I. Manual N/A	c. Load End c. Remote	ed(yes/no) N/A N/A 90. Cars (1) Total in	N/A N/A N/A 87. If railroad enerter the number of the appropriate of the ap	ployee(s) test nber that wer ate box. nsist transpor a. Freight st N/A	ed for drug e positive i ting passen paded b. Pass. N/A	g/alcohol in ngers? (Y c. Freig N/A	use, Alcohol N/A /N) Empty tht d. Pass. N/A	N/A Drugs N/A N/A e. Caboose N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported 89. Locomotive Uni (1) Total in Trai (2) Total Deraile 	it etc) echanical l) n ed	a. Initial a. Head End N/A N/A	and Nu N/A N/A b. Maa N/	Mid Tr nual /A	b. Positio N/ N/ N/A N/A	A A Rear I. Manual N/A N/A	c. Load End c. Remote N/A	ed(<i>yes/no)</i> N/A N/A 90. Cars (1) Total in (2) Total D	N/A N/A N/A 87. If railroad en enter the nu the appropri 88. Was this co Equipment Considerated	ployee(s) test nber that wer ate box. nsist transport a. Freight st N/A N/A	ed for drug e positive i ting passen baded b. Pass. N/A N/A	g/alcohol in ngers? (Y c. Freig N/A N/A	use, Alcohol N/A /N) Empty tht d. Pass. N/A N/A	N/A Drugs N/A N/A e. Caboose N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if mecause reported) 89. Locomotive Uni (1) Total in Train (2) Total Deraile 91. Equipment Dam 	it etc) cchanical l ts n edd age	a. Initial a. Head End N/A N/A	and Nu N/A N/A b. Mar N/ N/ S	Mid Ti nual /A /A 22. Trac	b. Positio N/ c. Remote C N/A N/A X/A xk, Signal, W	n in Train A A Rear I. Manual N/A N/A N/A	C. Load End C. Remote N/A N/A	ed(yes/no) N/A 90. Cars (1) Total in (2) Total D 93. Primary	N/A N/A N/A 87. If railroad en enter the nut the appropri 88. Was this co Equipment Considerailed y Cause Code	ployee(s) test nber that were ate box. nsist transport a. Freight st N/A N/A	ed for drug e positive i ing passer vaded b. Pass. N/A N/A 94. Cont	g/alcohol in ngers? (Y c. Freig N/A N/A ributing (use, Alcohol N/A /N) Empty tht d. Pass. N/A N/A Cause	N/A Drugs N/A N/A e. Caboose N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported 89. Locomotive Uni (1) Total in Trai (2) Total Deraile 91. Equipment Dam This Consist 	it etc) etchanical l its n etc age	a. Initial a. Head End N/A N/A	and Nu N/A N/A b. Mar N/ 9	Mid Tranual /A /A /A /A /A /A /A /A /A /A /A /A //A //A //A //A //A //A //A //A //A	b. Positio N/ N/ N/A N/A N/A N/A k, Signal, W ucture Dama	n in Train A A Rear I. Manual N/A N/A ay, ge	End c. Remote N/A N/A	ed(<i>yes/no)</i> N/A 90. Cars (1) Total in (2) Total D 93. Primar	N/A N/A N/A 87. If railroad enerther the number of the appropriation of the approprese. The appropriation of the appropriating appropriation of the	ployee(s) test nber that wer ate box. nsist transpor a. Freight st N/A N/A	ed for drug e positive i ing passen paded b. Pass. N/A N/A 94. Cont Code	g/alcohol in nggers? (Y I c. Freig N/A N/A ributing (use, Alcohol N/A /N) Empty tht d. Pass. N/A N/A Cause	N/A Drugs N/A N/A e. Caboose N/A N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if mecause reported 89. Locomotive Uni (1) Total in Traii (2) Total Deraile 91. Equipment Dam This Consist 95. Engineer/ 	it etc) etchanical i) tts n ed age	a. Initial a. Head End N/A N/A N/A N/A	and Nu N/A N/A b. Maa N/ N/ S r of Cre	Mid Ti nual /A 22. Trac & Str ew Mer 97. C	b. Positio N/ N/ N/A N/A N/A N/A k, Signal, W ucture Dama nbers	n in Train A A NA N/A N/A iay, ge	c. Load End c. Remote N/A N/A N/A	ed(yes/no) N/A 90. Cars (1) Total in (2) Total D 93. Primar	N/A N/A N/A 87. If railroad enerther the number of the appropriation of the approprese. The appropriation of the appropriating appropriation of the	ployee(s) test nber that were ate box. nsist transport a. Freight st N/A N/A N/A Length of	ed for drug e positive i ing passen aded b. Pass. N/A N/A 94. Cont Code Time on D	g/alcohol in agers? (Y c. Freig N/A N/A ributing (Duty	use, Alcohol N/A /N) Empty tht d. Pass. N/A N/A Cause	N/A Drugs N/A N/A e. Caboose N/A N/A N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if mecause reported 89. Locomotive Uni (1) Total in Trai (2) Total Deraile 91. Equipment Dam This Consist 95. Engineer/ Operators N/A 	it etc) etchanical l) its n ed gee 96. Fire	a. Initial a. Head End N/A N/A N/A N/A Numbe men V/A	and Nu N/A b. Mai N/ N/ S r of Cre	Mid Tr nual /A A 22. Trac & Str ew Mer 97. Co	b. Positio N/ c. Remote C N/A N/A Sk, Signal, W ucture Dama nbers onductors N/A	n in Train A A Rear I. Manual N/A N/A ay, ge 98. Brak N	End c. Remote N/A N/A N/A emen	ed(yes/no) N/A 90. Cars (1) Total in (2) Total D 93. Primar 99. Engine	N/A N/A N/A 87. If railroad enerth enurthe appropri 88. Was this co 88. Was this co Equipment Consideration Detailed y Cause Code	ployee(s) test mber that wer ate box. nsist transpor a. Freight st N/A N/A N/A N/A Mi N/A	ed for drug e positive i maded b. Pass. N/A N/A 94. Cont Code Time on E 100. Con	g/alcohol in nggers? (Y I c. Freig N/A N/A ributing (Duty nductor Hrs	use, Alcohol N/A /N) Empty tht d. Pass. N/A N/A Cause	N/A Drugs N/A N/A e. Caboose N/A N/A N/A N/A N/A N/A	
 86. Principal Car/Un (1) First involved (derailed, struck, (2) Causing (if me cause reported) 89. Locomotive Uni (1) Total in Traii (2) Total Deraile 91. Equipment Dam This Consist 95. Engineer/ Operators N/A Casualties to: 	it etc) etchanical l) its n ed 96. Fire 1 101. Rail	a. Initial a. Head End N/A N/A N/A N/A N/A road Emp	and Nt N/A b. Mai N/ r of Cre loyees	Mid Tinual A A A A A A A A A A A A A A A A A A A	b. Positio N/ N/ N/A N/A N/A N/A k, Signal, W ucture Dama nbers onductors N/A	A A Rear I. Manual N/A N/A Say, ge 98. Brak N 103. Oth 103. Oth	c. Load End c. Remote N/A N/A N/A emen //A	ed(yes/no) N/A 90. Cars (1) Total in (2) Total D 93. Primar 99. Engine 104. EOT	N/A N/A N/A 87. If railroad enerther the nurther the nurther the appropriate approprise approprepriste approprepriste approprise appropriate approprise	ployee(s) test nber that were ate box. nsist transport a. Freight st N/A N/A N/A Length of Mi N/A	ed for drug e positive i ing passen aded b. Pass. N/A N/A 94. Cont Code Time on E 100. Con 105. Wa	g/alcohol in agers? (Y I c. Freig N/A N/A ributing (Duty nductor Hrs s EOT D	use, Alcohol N/A /N) Empty tht d. Pass. N/A Cause s N/A evice Proper	N/A Drugs N/A N/A e. Caboose N/A N/A N/A N/A N/A N/A	
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DEPARTM FEDERAL F	ENT OF TRA RAILROAD A	ANSPO DMINI	RTAT STRA	'ION TION	FRA F	FACTUA	AL RAILR	ROAD AC	CIDENT	REPORT	Ι	FRA File # <u>HQ-2008-</u>	35
110. Position Code 113. Circumstance													Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing N/A 1. Rail Equipment Struck Highway User 4. Trapped N/A 2. Rail Equipment Struck by Highway User												N/A	
114a. Was the	114a. Was the highway user and/or rail equipment involved Code 114b. Was there a hazardous materials release												Code
in the impact transporting hazardous materials? 1 Highway User 2 Rail Equipment 3 Both 4 Neither N/A 1. Highway User 2. Rail Equipment 3. Both 4. Neither											N/A		
1. Highway User 2. Kall Equipment 3. Both 4. Neither 1977 1977 1977 1977 1977 1977 1977 197											<u> </u>		
11 iei blate ne		u quunn	, or m	e naza		and refetabeta	N/A						
115. Type	1.Gates	4.V	Vig Wa	ıgs	7.Cro	ssbucks 1	0.Flagged by	crew	116. Signaled	Crossing	Code	117. Whistle Ban	Code
Crossing 2.Cantilever FLS 5.Hwy. traffic signals 8.Stop signs 11.Other (spec. in narr.) (See instructions for codes) 1. Yes													
Code(s)	N/A	N/A	N	[/A	N/A	N/A	N/A	N/A			N/A	3. Unknown	N/A
	of Worning	10/1	"		Code	119 Cro	ssing Warning	o 10/11	Coda	120 Crossin	 • Illuminated	by Street	Coda
1. Both Sid	les				Code	with	h Highway Si	gnals	Code	Lights o	Lights or Special Lights		
2. Side of Vehicle Approach 1. Yes 1. Yes													
3. Opposit	e Side of Vehic	le Appro	ach		N/A		2. No		N/A	2. No			N/A
101	100 D : 1	0 1	0.1	100		D 1 1	3. Unknown		124 Driv	3. Ui er	iknown		
121. Age	122. Drivers	Gender	Code	123.	and Struck o	r was Struc	r in Front of k by Second '	Code Train	ain 1. Drove around or thru the Gate 4. Stopped on Crossing				
1.80	2 Female	a .			1. Yes	2. No	3. Unknowi	1 .	2. Stop	ped and then Pr	oceeded	5. Other (specify in	
N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A								narrative)	N/A			
125. Driver Pa	ssed	Cod	e 12	6. Vie	w of Track C	bscured by	(primary ob	struction)					Code
Highway V	ehicle			1. P	ermanent Str	ucture	Passi	ng Train 5.	Vegetation	7. Other	(specify in	narrative)	1
1. Yes 2. No	3. Unknown	N/.	A	2. S	tanding Railı	oad Equipi	nent 4. Topo	graphy 6.	Highway Veh	icle 8. Not ob	structed		N/A
Casualties	to:		Kill	ed	Injured	127. Driv	ver		Cod	le 128. Wa	s Driver in th	ne Vehicle?	Code
						1. Kille	d 2.Injured 3.	Uninjured	Uninjured N/A		Yes	2. No	N/A
129. Highway-Rail Crossing Users N/A N/A						130. Hig (est.	130. Highway Vehicle Property Damage (est. dollar damage) N/A [131. Total Number of Highway- (include driver)]				f Highway-Rail Crossin N/A	g Users	
132. Locomot	ive Auxiliary L	ights?					Code	133. Locoi	notive Auxilia	ry Lights Oper	ational?		Code
1. Y	es	2.	No				N/A	1.	Yes	2. No			N/A
134. Locomot	ive Headlight I	lluminat	ed?				Code	135. Locoi	notive Audibl	e Warning Sour	ided?		Code
1. Y	es	2.	No				N/A	1.	Yes	2. No			N/A

136. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED.



137. SYNOPSIS OF THE ACCIDENT

On March 27, 2008 a derailment and subsequent sideswipe occurred on the Long Island Rail Road (LIRR). The accident occurred at 9:59 am at Jamaica Station. Jamaica Station is located within the confines of Jay Interlocking at milepost 9 on the Main Line of the Long Island Rail Road. Jay Interlocking is located in Jamaica, N.Y. Jamaica is a section of Queens, NY, one of the five boroughs of New York City.

The derailed and striking LIRR Commuter Train # 714 was eastbound. The train is a six car multiple unit train traversing onto Station Track Number 8 in Jamaica Station. The derailed car was car # 7628 located as the fifth car in the consist of LITT Commuter Train # 714. When car # 7628 derailed it struck the last car of LIRR Commuter Train # 1618.

LIRR Commuter Train # 1618 was an eastbound commuter train located at the platform on station track # 7 in Jamaica Station. LIRR Commuter Train # 1618 consisted of 12 multiple unit cars with car # 12 being struck by LIRR Commuter Train # 714. The car struck by LIRR Commuter Train # 714 was LIRR Passenger Car # 7773. LIRR Commuter Train # 1618 was not moving at the time of the collision.

The weather was cloudy and cold with an ambient temperature of 45 degrees F.

The accident was caused by the failure of a signal track repeating circuit. The repeating circuit inappropriately cleared, indicating by wayside train signal that there was no train on the track ahead. This allowed the switches within the route to be realigned and thrown under the wheels of LIRR Commuter Train # 714. The first four cars and the first truck of the fifth car were properly lined for station track # 8, however the switches were thrown under the fifth car. The second truck set then derailed and LIRR Passenger Car # 7628 struck the last car of LIRR Commuter Train # 1618 which was located on Station Track # 7. The remainder of LIRR Passenger Car # 7628 derailed as a result.

The damage to the track structure was \$ 100,000 and the total damage to the equipment was \$ 400,000.

The probable cause is an electrical failure allowing the track switches to re-align under the train.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

LIRR COMMUTER TRAIN # 714

The three member crew of LIRR Commuter Train # 714 reported for work at Jamaica, NY at 4:00 am EST on March 27, 2008 after receiving the required statutory off duty rest period. The three member crew consisted of an engineer, conductor, and brakeman. The job number for LIRR Commuter Train # 714 is assignment # 173.

The crew performed a brake test and an Automatic Speed Control (ASC) test on the 6 car Multiple Unit (MU) train prior to departing Flatbush Avenue located in Brooklyn, NY. The seal for the ASC was discovered by the crew to be broken so it was replaced by a transportation manager prior to departure. The train departed Flatbush Avenue at 9:35 a.m. en route east toward Jamaica Station. The train made stops at Nostrand Avenue and East New York prior to Jamaica Station. The crew took no exceptions to the train performance during the trip to Jamaica.

Upon arrival at Jay Interlocking LIRR Commuter Train # 714 was routed from Atlantic Track # 2 to Station Track # 8. The signal for this route is 80R utilizing switches 79 normal (N), 81 reverse (R), 93R, 95R, 97R, 99N, and 101N. The move for LIRR Commuter Train # 714 was made after the arrival of LIRR Commuter Train # 1618.

The consist of LIRR Commuter Train # 714 was (east to west) Passenger Car # 7824 (lead), # 7823, # 7346, # 7345, # 7628, and # 7627

The engineer was located in the cab. The conductor and brakeman were located in the 4th car at the time of

the accident. The crew members were preparing for the arrival of the LIRR Commuter Train at Jamaica Station.

LIRR COMMUTER TRAIN # 1618:

The three member crew of LIRR Commuter Train # 1618 reported for work on March 27, 2008 at 5:09 am EST at Port Jefferson, NY after receiving the required statutory off duty rest period. The three member crew consisted of an engineer, a conductor, and a brakeman. The job number for train #1618 is assignment # 38.

The crew performed a brake test on the 12 car multiple unit (MU) train prior to departing New York Penn Station at 9:36 am. The train headed east to Jamaica making station stops at Forrest Hills and Kew Gardens prior to arriving at Jamaica. The crew took no exceptions to the train performance during the trip to Jamaica.

Upon arrival at Jay Interlocking, LIRR Commuter Train # 1618 was routed from Mainline Track # 4 to Jamaica Station Track # 7. The signal for this route is 72R utilizing switches 69N, 73R, 95N, 93N, 85N, and 87R.

LIRR Commuter Train # 1618 arrived at Jamaica and was at the platform on Station Track # 7 when Train # 714 arrived. Track # 7 holds 10 cars. The rear two cars of LIRR Commuter Train # 1618 protruded into Jay Interlocking past 88L signal. This is normal procedure for this train.

The engineer was of Train LIRR # 1618 was located in the cab. The brakeman was located in the 8th car. The conductor was located in the 6th car. The crew had opened the train doors and was awaiting the arrival of connecting Train # 714.

The consist of LIRR Commuter Train # 1618 was (east to west) Passenger Car # 7816 (lead), # 7815, # 7786, # 7785, # 7755, # 7832, # 7831, # 7214, # 7213, # 7774, and car # 7773.

BLOCK OPERATORS:

The block operators for Jay Tower reported for work at 7:00 am on March 27, 2008 after receiving 16 hours rest, the required statutory off duty rest period. On the day of the accident the operator instructed the leverman to route LIRR Commuter Train # 1618 onto Track # 7 via the "big loop" so that the train would clear switches for the next train move to Track # 8. LIRR Commuter Train # 1618 was routed to Track # 7 and then the operator instructed the leverman to route LIRR Commuter Train # 714 to Track # 8. This route was established for LIRR Commuter Train # 714. The operator also told the leverman that the next move would be a westbound move from Station Track # 5 to the Hump Track. The leverman had to wait for LIRR Commuter Train # 714 to clear the interlocking onto Station Track # 8 before throwing the necessary switches to make the next move. The route from # 5 Station Track to the Hump Track required the leverman to normal three switches used in the routing of LIRR Commuter Train # 714 (-Switches = 93N, 95N, and 97N). The leverman was watching the apron light for these switches. The apron light is located below the switch lever on the interlocking machine. When the light illuminates, it indicates that the track is clear of trains and the switch can be thrown to a different position.

Traveling east from the interlocking signal, the grade of the railroad is practically level. There are no obstructions impeding the view of the engineer.

THE ACCIDENT

LIRR Commuter Train # 714 was traveling at approximately 13 mph as it approached the derailment site and slowed to 3.6 mph just prior to impact. The train was making a station stop at Jamaica Rail Station and had slowed prior to when the derailment and subsequent collision. This information was obtained by interviews with the crew and substantiated by the lack of damage to the trains following the derailment. The event recorder data analysis confirmed the speed at 3.6 mph at impact.

LIRR Commuter Train # 714 had reached the platform when the crew members felt a slight bump and heard a loud noise. The crew members were in the fourth car just ahead of the derailed car. The conductor looked out the window and saw that the fifth car had derailed. He pulled the dump cord on the train putting the train air brakes into emergency. The crew took no exceptions to the train, the tracks, or the physical characteristics right up until the time of the derailment. The ride was normal.

The second truck of the fifth car (7628) of train LIRR Commuter Train # 714 derailed north off Track # 8 and swung into the twelfth car (7773) of LIRR Commuter Train # 1618. The entire car then derailed but remained upright.

The crew of LIRR Commuter Train # 714 walked the approximately 80 passengers located in the first five cars off the train onto the platform at Jamaica Station. The sixth car of the traint remained upright and on the tracks but separated from the train when the derailment occurred. There were approximately 20 passengers on the car. These passengers could not walk through the separated train. They were evacuated from the 6th car approximately 30 minutes following the derailment by Long Island Rail Road management. There was 1 passenger and 1 employee injured as a result of the derailment. There were no fatalities. The crew of LIRR Commuter Train # 714 was taken for drug and alcohol testing. The results of the tests were negative.

The New York City Fire Department as well as the Metropolitan Transportation Authority (MTA) Police Department responded to the scene. The MTA Police assisted in removing passengers from the 6th car.

ANALYSIS AND CONCLUSION

ANALYSIS:

The Long Island Rail Road Signal Department conducted an investigation into the derailment. The investigation determined that LIRR Commuter Train # 714 was still in route when switches # 93, # 95, and # 97 were thrown normal under the train. These three switches were trailed through by LIRR Commuter Train # 714 and there were wheel markings over the frog area of # 97 switch indicating that passenger car # 7628 of LIRR Commuter Train # 714 derailed over the movable point frog of # 97 switch. All three switches would have been thrown normal for the next move requested by the train director, Five Station Track to the Hump Yard.

Additionally, analysis of the switch levers on the interlocking machine proved that the switches were thrown during the time that LIRR Commuter Train # 714 was traversing the switches. Switch levers for # 93, # 95, and # 97 Switches should have been completely to the right. This is the fully locked reverse position. However, # 93 lever was discovered to be to the left of center position. This is the indicating position for the switch thrown in the normal position. The lever for switch # 95 was discovered to be fully left. This is the fully locked normal position. The lever for switch # 97 was right of center. This is the indicating position for the switch thrown in the reverse position. Obtaining the route requested for LIRR Commuter Train # 714 required these levers to be in the fully locked reverse position. The train director could not have displayed the home signal without these three levers being in the complete reverse position. Also, once LIRR Commuter Train # 714 entered the interlocking, route locking circuits prevent the train director from changing the route or throwing the levers until the train has passed the switches and exited the track circuit.

Once they determined that the cause of the derailment was the switches being thrown under the train, the signal department began the investigation into why the switches were able to be thrown. The signal department performed preliminary tests at the time of the derailment on the track circuitry to affirm they were working properly. The derailed LIRR Commuter Train # 714 cleared switches # 93, # 95, and # 97, so shunt tests were performed on the # 93T and # 97T track circuits to ensure the circuits opened, thus recognizing the train on the tracks. Shunt tests are performed by placing a wire with a resistance of .06 ohms across the rails of the track. This simulates a train on the track. Both circuits shunted properly, indicating if there was a problem with the track circuits, it was no longer present. Track repeaters, grounds, and cable insulation resistance were also tested at this time. All testing results were within FRA requirements. No further testing could be performed until the trains were removed from the site.

On March 28, 2008 the Long Island Rail Road performed a re-enactment of the incident utilizing two equipment trains. The route and train positions were set up four different times without any failure of the signal system. The signal department performed extensive signal testing over the weekend. There were no exceptions taken to the integrity of the signal system. All testing was complete at this time.

With the integrity of the signal system intact the signal department began to look at circumstances that could have caused an isolated incident. A new Central Instrument Location (CIL) was being tested by a signal construction gang which will control a new Jay Interlocking. New Jay will be a microprocessor interlocking

and beginning in January 2008 the new system had been undergoing breakdown and indication testing. Four of six microprocessors were programmed and were working. They were isolated from the old Jay Tower with the exception of several indication circuits. These new microprocessors record indications internally in the form of data logs. On March 31, 2008 the LIRR with the FRA were able to obtain computer downloads of the data logs from the four processors. The data log recorded what the construction gang had been testing the past two days (March 27 and 28).

Signal policy dictates that when work is being performed on a new installation the battery and common buss are opened at the end of the day to prevent an undesirable feed from a buss back to the existing, working equipment. However, this policy actually contributed to the cause of the derailment. When the data log was analyzed it was determined that four indication wires were left closed at the end of the previous day. Additionally, the common energy buss was left open as per signal standards. This combination caused a back-feed of energy from the New Jay to the existing Jay Interlocking. Battery traveled through one of the indication wires, through the opened common buss, and back through the other indication wires. This back feed of energy caused the # 93TM and # 97TM relays to energize, thereby releasing the route locking circuits under LIRR Commuter Train # 714. When the lever-man for Jay Tower observed the apron light illuminate, he immediately threw the three switches needed for the next move. LIRR Commuter Train # 714 was not clear of the switches, and derailed over the # 97 switch.

The Signal Department and FRA recreated the events based on the information obtained by the data log. Seven volts of energy were recorded on the track repeaters, more than enough to energize the relays.

CONCLUSIONS:

The derailment was caused by the back feed of energy from the New Jay to the existing Jay Interlocking. This undesired energy caused the track repeaters to energize under the wheels of LIRR Commuter Train # 714, thereby releasing the route lock circuit, allowing the switches to be thrown under the train. LIRR Commuter Train # 714 derailed over the facing point of Switch # 97. Although the signal department followed normal signal procedures, the opening of the common buss in the New Jay Interlocking contributed to the cause of the derailment.

The cause was proved by the testing and recreating of the circumstances indicated by the data log.

When the derailment occurred the Long Island Signal Department halted all testing on the New Jay pending resolution of the derailment. They hired a consultant to assist in formulating procedures which would allow for the continuation of testing in the safest manner possible. Together they comprised a list of recommendations to implement and allow for safe testing. On July 7, 2008 the Long Island Rail Road continued testing New Jay with these recommendations in force.

The probable cause is an electrical failure allowing the track switches to re-align under the train.