Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2007-59

Northern Indiana Commuter Transportation District (NICD)
Michigan City, Indiana
October 13, 2007

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 OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2007-59

1.Name of Railroad Operating Train #1: Northern Indiana Commuter Transportation District	1a. Alphabetic Code: NICD	1b. Railroad Accident/Incident No.: N0700027
2.Name of Railroad Operating Train #2: N/A	2a. Alphabetic Code: N/A	2b. Railroad Accident/Incident No.: N/A
3.Name of Railroad Operating Train #3: N/A	3a. Alphabetic Code: N/A	3b. Railroad Accident/Incident No.: N/A
4.Name of Railroad Responsible for Track Maintenance: Northern Indiana Commuter Transportation District	4a. Alphabetic Code: NICD	4b. Railroad Accident/Incident No.: N0700027
5. U.S. DOT_AAR Grade Crossing Identification Number:	6. Date of Accident/Incident: Month 10 | Day 13 | Year 2007	7. Time of Accident/Incident: 09:08:00 ☑ AM ☐ PM

8. Type of Accident/Indicent (single entry in code box)	1. Derailment 2. Head on collision 3. Rear end collision	4. Side collision 5. Raking collision 6. Broken Train collision	7. Hwy-rail crossing 8. RR grade crossing 9. Obstruction	10. Explosion-detonation 11. Fire/violent rupture 12. Other impacts	13. Other (describe in narrative)	Code: 04

9. Cars Carrying HAZMAT	10. HAZMAT Cars Damaged/Derailed	11. Cars Releasing HAZMAT	12. People Evacuated	13. Division
0	N/A	N/A	0	SYSTEM

14. Nearest City/Town	15. Milepost (to nearest tenth)	16. State Abbr	16. State Code	17. County
MICHIGAN CITY	32.2	N/A	IN	LA PORTE

18. Temperature (F) (specify if minus)	19. Visibility (single entry) 1. Dawn 2. Day 3.Dusk 4.Dark	Code	20. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5.Sleet 6.Snow	Code	21. Type of Track 1. Main 2. Yard 3. Siding 4. Industry	Code
60 F		2		2		1

22. Track Name/Number	23. FRA Track Class (1-9, X)	Code	24. Annual Track Density (gross tons in millions)	25. Time Table Direction 1. North 2. South 3. East 4. West	Code
SINGLE MAIN TRACK		2	0.50		4

OPERATING TRAIN #1

26. Type of Equipment Consist (single entry)	1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car A. Spec. MoW Equip.	Code	27. Was Equipment Attended? 1. Yes 2. No	Code	28. Train Number/Symbol
		3	1. Yes	1	NICD 504

29. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	31. Method(s) of Operation (enter code(s) that apply)	31a. Remotely Controlled Locomotive?
14 MPH	R	a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other (Specify in narrative)	0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter: 0

30. Trailing Tons (gross tonnage, excluding power units): N/A

Code(s): l | m | N/A | N/A | N/A

32. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	NICD 12	1	yes
(2) Causing (if mechanical cause reported)	0	0	N/A

33. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
00	00

34. Was this consist transporting passengers? (Y/N): Y

35. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	1	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	3	0	0	0
(2) Total Derailed	0	0	0	0	0

37. Equipment Damage This Consist	38. Track, Signal, Way, & Structure Damage	39. Primary Cause Code	40. Contributing Cause Code
$100,000.00	$0.00	H607	N/A

Number of Crew Members

41. Engineer/ Operators	42. Firemen	43. Conductors	44. Brakemen
1	0	1	1

Length of Time on Duty

45. Engineer/Operator	46. Conductor
Hrs 2 Mi 50	Hrs 2 Mi 50

Casualties to:	47. Railroad Employees	48. Train Passengers	49. Other
Fatal	0	0	0
Nonfatal	0	0	0

50. EOT Device? 1. Yes 2. No: 2

51. Was EOT Device Properly Armed? 1. Yes 2. No: N/A

52. Caboose Occupied by Crew? 1. Yes 2. No: 2

OPERATING TRAIN #2

53. Type of Equipment Consist (single entry)	1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car A. Spec. MoW Equip.	Code	54. Was Equipment Attended? 1. Yes 2. No	Code	55. Train Number/Symbol
		6	1. Yes	1	N/A

56. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	58. Method(s) of Operation (enter code(s) that apply)	58a. Remotely Controlled Locomotive?
0 MPH	E	a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track	0 = Not a remotely controlled; 1 = Remote control portable

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57. Trailing Tons (gross tonnage, excluding power units): N/A

c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; o. Positive train control; p. Other (Specify in narrative)

Code(s): l | m | N/A | N/A | N/A

2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: 0

59. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	NICD22	1	yes
(2) Causing (if mechanical cause reported)	0	0	N/A

60. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

61. Was this consist transporting passengers? (Y/N): Y

62. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	1	0	0	0	0
(2) Total Derailed	1	0	0	0	0

63. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	30	0	0	0
(2) Total Derailed	0	0	0	0	0

64. Equipment Damage This Consist: $200,000.00

65. Track, Signal, Way, & Structure Damage: $0.00

66. Primary Cause Code: H607

67. Contributing Cause Code: N/A

Number of Crew Members

68. Engineer/ Operators	69. Firemen	70. Conductors	71. Brakemen
1	0	1	0

Length of Time on Duty

72. Engineer/Operator: Hrs 2 Mi 8

73. Conductor: Hrs 2 Mi 8

Casualties to:	74. Railroad Employees	75. Train Passengers	76. Other
Fatal	0	0	0
Nonfatal	0	1	0

77. EOT Device? 1. Yes 2. No: 2

78. Was EOT Device Properly Armed? 1. Yes 2. No: N/A

79. Caboose Occupied by Crew? 1. Yes 2. No: N/A

OPERATING TRAIN #3

80. Type of Equipment Consist (single entry): 1. Freight train; 2. Passenger train; 3. Commuter train; 4. Work train; 5. Single car; 6. Cut of cars; 7. Yard/switching; 8. Light loco(s).; 9. Maint./inspect.car; A. Spec. MoW Equip. Code: N/A

81. Was Equipment Attended? 1. Yes 2. No: N/A

82. Train Number/Symbol: N/A

83. Speed (recorded speed, if available) Code: R - Recorded; E - Estimated: N/A MPH: 0

84. Trailing Tons (gross tonnage, excluding power units): N/A

85. Method(s) of Operation (enter code(s) that apply)

a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other (Specify in narrative)

Code(s): N/A | N/A | N/A | N/A | N/A

85a. Remotely Controlled Locomotive?
0 = Not a remotely controlled
1 = Remote control portable
2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

86. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	0	0	N/A
(2) Causing (if mechanical cause reported)	0	0	N/A

87. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

88. Was this consist transporting passengers? (Y/N): N/A

89. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0

90. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0

91. Equipment Damage This Consist: $0.00

92. Track, Signal, Way, & Structure Damage: $0.00

93. Primary Cause Code: N/A

94. Contributing Cause Code: N/A

Number of Crew Members

95. Engineer/ Operators	96. Firemen	97. Conductors	98. Brakemen
0	0	0	0

Length of Time on Duty

99. Engineer/Operator: Hrs 0 Mi 0

100. Conductor: Hrs 0 Mi 0

Casualties to:	101. Railroad Employees	102. Train	103. Other
Fatal	0	0	0
Nonfatal	0	0	0

104. EOT 1. Yes 2. No: N/A

105. Was EOT Device Properly 1. Yes 2. No: N/A

106. Caboose Occupied by Crew? 1. Yes 2. No: N/A

Highway User Involved

107. A. Auto; B. Truck; C. Truck-Trailer.; D. Pick-Up Truck; E. Van; F. Bus; G. School Bus; H. Motorcycle; J. Other Motor Vehicle; K. Pedestrian; M. Other (spec. in narrative) Code: N/A

108. Vehicle Speed (est. MPH at impact): N/A

109. geographical) 1.North 2.South 3.East 4.West Code: N/A

Rail Equipment Involved

111. Equipment 1.Train(units pulling); 2.Train(units pushing); 3.Train (standing); 4.Car(s) (moving); 5.Car(s) (standing); 6.Light Loco(s) (moving); 7.Light(s) (standing); 8.Other (specify in narrative) Code: N/A

112. Position of Car Unit in: 0

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110. Position	Code	113. Circumstance	Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped	N/A	1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User	N/A
114a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither	N/A	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither	N/A

114c. State here the name and quantity of the hazardous materials released, if any.
N/A

115. Type Crossing Warning	1.Gates	2.Cantilever FLS	3.Standard FLS	4.Wig Wags	5.Hwy. traffic signals	6.Audible	7.Crossbucks	8.Stop signs	9.Watchman	10.Flagged by crew	11.Other (spec. in narr.)	12.None
Code(s)	N/A	N/A	N/A	N/A	N/A	N/A	N/A					

116. Signaled Crossing (See instructions for codes)	Code	117. Whistle 1. Yes 2. No 3. Unknown	Code
	N/A		N/A

118. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach	Code	119. Crossing Warning with Highway Signals 1. Yes 2. No 3. Unknown	Code	120. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown	Code
	N/A		N/A		N/A

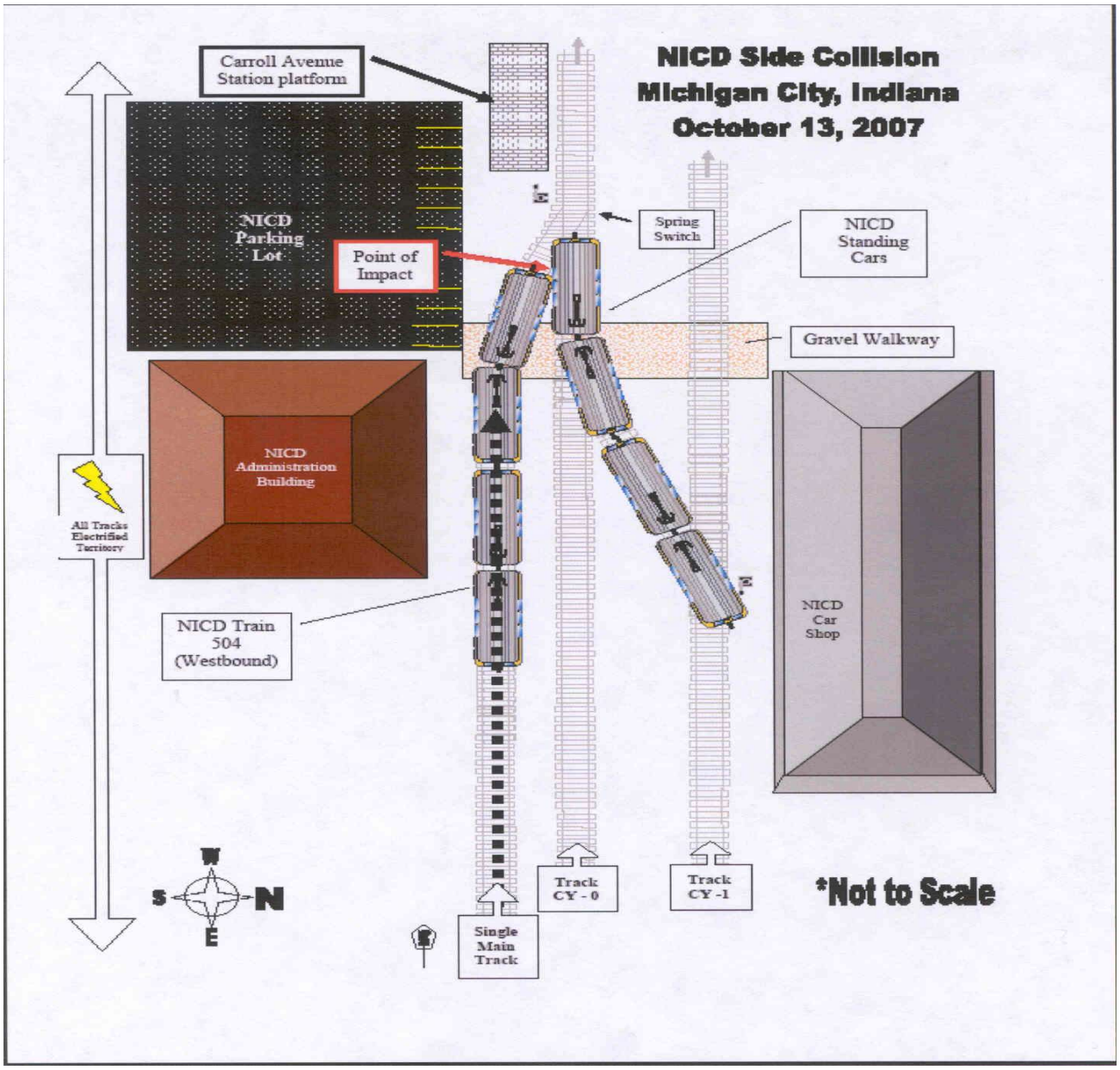
121. Age	122. Driver's Gender 1. Male 2. Female	Code	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown	Code	124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify in narrative)	Code
0		N/A		N/A		N/A

125. Driver Passed Highway Vehicle 1. Yes 2. No 3. Unknown	Code	126. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing Railroad Equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicle 7. Other (specify in narrative) 8. Not obstructed	Code
	N/A		N/A

Casualties to:	Killed	Injured	127. Driver 1. Killed 2.Injured 3. Uninjured	Code	128. Was Driver in the Vehicle? 1. Yes 2. No	Code
				N/A		N/A
129. Highway-Rail Crossing Users	0	0	130. Highway Vehicle Property Damage (est. dollar damage)	0	131. Total Number of Highway-Rail Crossing Users (include driver)	0

132. Locomotive Auxiliary Lights? 1. Yes 2. No	Code	133. Locomotive Auxiliary Lights Operational? 1. Yes 2. No	Code
	N/A		N/A
134. Locomotive Headlight Illuminated? 1. Yes 2. No	Code	135. Locomotive Audible Warning Sounded? 1. Yes 2. No	Code
	N/A		N/A

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



137. SYNOPSIS OF THE ACCIDENT

On October 13, 2007, at 9:08 a.m. c.d.t., Northern Indiana Commuter Transportation District (NICD) commuter Train 504 (Train 504), operating west on the single main track at milepost 32.2 collided with the side of a standing set of extra equipment that was fouling the main track. This equipment was preloading passengers, and was to be added to the westbound Train 504, after its arrival at Carroll Avenue Station. The accident occurred in Michigan City, Indiana, on NICD, an electrified commuter system.

At the time of the accident it was cloudy, with a temperature of 60 ºF.

There were no injuries to train crew members, but four passengers reported injuries. The accident caused the leading control car of the extra equipment to derail and sustain about $200,000 in damages. The lead control car on Train 504 sustained about $100,000 in damages.

The accident was caused by the engineer and conductor of Train 504 when they failed to comply with restricted speed in non signaled territory at milepost 32.2, resulting in a collision with standing extra equipment.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The crew of Train 504 included a locomotive engineer, conductor, and a collector. They first went on duty at 6:15 a.m., on October 13, 2007, at Carroll Avenue Yard (Shops) in Michigan City, the home terminal for the crew. Prior to reporting for duty, each crew member received the required statutory off-duty period. This crew operates Train No. 705 (Train 705) east to South Bend, Indiana, before returning west as Train 504.

Prior to departing Michigan City, the train crew had a job briefing discussing their timetable authority to proceed east to South Bend, Indiana, as NICD Train 705. A Class I air brake test was completed by mechanical department employees.

After arrival at South Bend, Train 705's locomotive engineer changed leading ends and prepared for the trip west as Train 504. The train crew had a job briefing and discussed their timetable authority to operate Train 504 west to Chicago, Illinois. The train crew on Train 504 performed a Class II air brake test prior to departure and at 8:40 a.m., left South Bend on schedule with a total of four cars.

Train 504 consisted of a lead control car, NICD 12, and three loaded commuter cars, NICD 207, 44, and 107. The train was 340 feet long, and was scheduled to operate from South Bend to Chicago.

At about 9:06 a.m., the conductor of Train 504 copied a "train order" near block station Davis. The instructions on this train order directed Train 504 to "meet" with eastbound NICD Train 505 at Sheridan, and an eastbound extra train at Tamarack. As Train 504 approached the accident area, the locomotive engineer was seated at the controls on the north side of the control car, NICD 12. The conductor was standing in the middle of the control compartment of the control car, and the collector was located near the east end of the third car, NICD 44. The conductor said she was busy writing car numbers for cars located in the yard that the "add" crew, was to couple to Train 504.

The method of operation is timetable instruction and yard limit operating rule. In this area of the railroad, the

single main track goes through a turn out to an adjacent track, and runs through Shops Yard. The railroad timetable and geographic directions are west; geographic directions are used throughout this report. The main track is non-signal territory beginning at milepost 31.75 and ending at milepost 32.4. The last westbound block signal (before entering non-signaled territory) is located at milepost 31.4.

THE ACCIDENT

TRAIN NICD 504:

Train 504 was operating west at a recorded speed of 17 mph approaching the accident area; the maximum authorized speed is restricted speed, not to exceed 20 mph. Prior to the arrival of Train 504, the terminal carman called via the radio to attach to Train 504 for the purpose of making an addition of four commuter cars to Train 504 at the Carroll Avenue Station.

The conductor and locomotive engineer called out clear train order signal and clear block signal in the control compartment as they approached Shops. This block signal is located west of where the equipment to be added fouled the main track. The locomotive engineer noticed a ticket collector, standing near the main track at the gravel walkway just east of Carroll Avenue Station and placed the train in emergency. The locomotive engineer looked back to see if the collector had been struck by the train. When the engineer turned to look westward again, it was identified the extra equipment was in the foul. The engineer braced for impact as Train 504 struck the extra equipment causing the lead car of the extra equipment, NICD 22, to derail.

No crew members of Train 504 were injured; however, one passenger on the extra equipment immediately reported an injury. An ambulance was dispatched to the scene and transported the injured passenger for treatment.

TERMINAL CARMAN, EXTRA EQUIPMENT:

The terminal carmen on the extra equipment made up a four car set of equipment to add to the rear of Train 504, and performed a Class 1 air brake test on the equipment. At 9 a.m. they requested permission from the dispatcher to foul the single main track at Shops for the purpose of preloading passengers on the extra equipment. The equipment was stopped foul of the main track at Shops. After hearing Train 504 request train orders from the dispatcher, the certified mechanical engineer of the extra equipment called the crew of Train 504. The engineer on the extra equipment attached1. to Train 504 for the purpose of assisting in adding the additional equipment at the Carroll Avenue Station. The conductor of the extra equipment took a position at the east end of the equipment to provide point protection for a subsequent shove eastward.

The locomotive engineer of the extra equipment is a mechanical department employee that is qualified to operate equipment on the main track. The extra equipment engineer observed Train 504 approaching on the main track and identified that the approaching train was not stopping. The extra equipment engineer attempted to signal the engineer of Train 504 by hand to stop but was unsuccessful. The engineer of the extra equipment jumped from the north side of the lead car as Train 504 struck the standing extra equipment. The conductor, also noting Train 504 was not going to stop, proceeded to run eastward to get clear of the impending impact.

The collision caused the lead, or west truck, of the extra equipment, NICD 22, to derail. It also caused a severe rip on the south side of the car from the center door to the head end. In addition the collision damaged the control car on Train 504.

ANALYSIS AND CONCLUSIONS:

ANALYSIS – TOXICOLOGICAL TESTING:

NICD transported the train crew members of Train 504 to La Porte Hospital, in La Port, Indiana for FRA post accident toxicological testing. The crew of the extra equipment did not undergo toxicological testing under FRA or company authority.

CONCLUSION:

Results for all employees tested in connection with this accident were negative.

ANALYSIS - LOCOMOTIVE SAFETY DEVICES:

The lead control car of Train 504 was NICD 12, and was equipped with a headlight, auxiliary lights, and an audible warning device as required by Federal regulation. According to the locomotive engineer, these devices were functioning as intended prior to the accident. Additionally, NICD 12 was equipped with an operating speed indicator and event recorder. NICD's Mechanical Department downloaded the event recorder data from, NICD 12, and the analysis of the data showed Train 504 traveling at 15.88 mph when a emergency air brake application occurred. The analysis further showed Train 504 operating at 14.12 mph when it collided with the extra equipment. FRA reviewed the results of this analysis and concurred with the findings of NICD.

CONCLUSION:

The locomotive safety devices of Train 504 were in compliance with Federal regulations.

ANALYSIS - LOCOMOTIVE ENGINEER OPERATING PERFORMANCE:

The locomotive engineer of Train 504, was a certified locomotive engineer who possessed a valid certification card at the time of the accident. The locomotive engineer was first promoted to locomotive engineer in 2003. The locomotive engineer had operated over the territory where the accident occurred on numerous occasions. The locomotive engineer, distracted by the ticket collector near the main track, did not observe the equipment in the foul of the main track, and failed to control the speed of the equipment to enable Train 504 to stop before striking the standing equipment.

ANALYSIS:

CONDUCTOR AND TICKET COLLECTOR:

The conductor of Train 504 entered service for NICD in 1995, and was promoted to the position of conductor in 1996. The conductor was familiar with the territory of the accident site and qualified on the operating rules of the railroad. The conductor failed to notice the extra equipment in the foul of the main track and took no action to inform the locomotive engineer or to stop Train 504 before striking the standing equipment.

The collector entered service for NICD in 1978. The collector was familiar with the territory operated and qualified on the operating rules of the railroad. The collector was not in a position to observe the equipment fouling the main track at Shops.

CONCLUSION:

The Engineer and Conductor of NICD Train 504 failed to comply with restricted speed, which caused the side collision with the extra equipment. NICD removed the locomotive engineer and the conductor from service pending a formal hearing and the locomotive engineer's certification was suspended. NICD later terminated from service the conductor and engineer.

ANALYSIS: FATIGUE

FRA obtained fatigue related information, including a 10-day work history, for all of the employees involved in this incident.

CONCLUSION:

FRA concluded that fatigue was not probable for any of these employees.

OVERALL CONCLUSION:

The accident was caused by the engineer and conductor of Train 504 when they failed to comply with restricted speed in non signaled territory at milepost 32.2, resulting in a collision with standing extra

equipment.

1. 49 CFR §218.22 requires an employee of the railroad, when becoming a temporary member of a train crew, to assign themselves to that train crew and perform work as if they were originally called to work with that crew. Attaching is the act of notifying the designated member of the train crew that there will be a temporary member working with that crew.