

HIGHWAY-RAIL CROSSING REPORTS, 1969-2006

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION

Ordering Information:

Reports having an NTIS Order Number may be ordered from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. Telephone Numbers: (703) 605-6000 or 1-800-553-6847. Prices on last page are effective as of August 2004 and are subject to change thereafter. There is a \$5.00 per order Handling Charge or a \$25.00 per document for Rush Orders. Document prices may change depending on the document. For other reports, a more comprehensive listing may be found in Bibliographies 57 and 58, available from the Transportation Research Board, Washington, D.C. 20418.

Reports that indicate that they are available from the "FRA Safety Website" can be found at <http://safetydata.fra.dot.gov/officeofsafety/>, click on the "Forms and Publications" tab.

Additional crossing safety issues, information, rulemaking, references, and reports, can be found on FRA's Website at www.fra.dot.gov, click on "Safety" and "Publications", or "Safety" and then "Highway-Rail Grade Crossing and Trespassing Prevention Division."

Published FRA Reports:

	NTIS <u>ORDER NO.</u>	PRICE <u>CODE*</u>
1. <u>A Program Definition Study for Rail-Highway Grade Crossing Improvement.</u> Prepared by Alan M. Voorhees and Associates, Inc., Report No. FRA-RP-70-2, October 1969.	PB 190401	A08
2. <u>The Visibility and Audibility of Trains Approaching Rail-Highway Grade Crossings.</u> Prepared by Systems Consultants, Inc. Report FRA-RP-71-1, May 1971.	PB 202668	A08
3. <u>Technological Innovation in Grade Crossing Protective Systems.</u> Prepared by TSC for FRA, Report DOT-TSC-71-3, June 1971.	PB 201624	A05

****See last page for prices.***

4. Report to Congress: Railroad-Highway Safety
Part I: A Comprehensive Statement of the Problem. PB 206792 A07
Part II: Recommendations for Resolving the Problem. PB 213115 A06
Prepared jointly by the Staffs of FRA and FHWA.
November 1971 and August 1972.
5. Human Factors Countermeasures to
Improve Highway-Railway Intersection Safety. PB 223416 A11
Prepared by Bio Technology, Inc. for FRA and NHTSA.
Report No. DOT-HS-800888, July 1973, 235 pp.
6. Enhancement of Train Visibility. PB 223899 A05
Prepared by TSC for FRA,
Report FRA-ORD&D-74-15, September 1973.
7. Grade Crossing Protection in High-Speed
High-Density, Passenger-Service Rail Corridors. PB 223738 A03
Prepared by TSC for FRA,
Report No. FRA-ORD&D-74-14, September 1973.
8. Proceedings 1974 National Conference
on Railroad-Highway Crossing Safety. PB 245231 A06
Sponsored by U.S. Department of Transportation.
U.S. Air Force Academy, August 19-22, 1974.
9. State Grade Crossing Programs: A Case Study. PB 244175 A04
Prepared for FRA/TSC by CONSAD Research Corp.
Report No. FRA-ORD&D-75-8, September 1974.
10. Feasibility Study of In-Vehicle Warning Systems. PB 242462 A07
Prepared by Tracor-Jitco for NHTSA/FRA,
Report DOT-HS-256-3-752, May 1975.
11. Field Evaluation of Locomotive Conspicuity Lights. PB 244532 A04
Prepared by TSC for FRA,
Report FRA-ORD&D-75-54, May 1975.
12. Guidelines for Enhancement of Visual Conspicuity
of Trains at Grade Crossings. PB 244551 A04
Prepared by TSC for FRA,
Report No. FRA-ORD&D-75-71, May 1975.
13. A Communication-Link Approach to Actuation of
Grade Crossing Motorist Warning Systems. PB 244584 A06
Prepared by TSC for FRA,
Report FRA-ORD&D-75-80, July 1975.

14. A Methodology for Determination of Grade Crossing Resource Allocation Guidelines. PB 259005 A04
Prepared by TSC for FRA,
Report FRA-ORD&D-76-04, August 1975.
15. Locomotive to Automobile Baseline Crash Tests. PB 250564 A07
Prepared by Ultra Systems for FRA,
Report FRA-ORD&D-76-03, August 1975.
16. Lightning and Its Effects on Railroad Signal Circuits PB 250621 A06
Prepared by University of Lowell for FRA/TSC,
Report No. FRA-ORD&D-76-129, December 1975.
17. Standby Power for Railroad-Highway Grade Crossing Warning Systems. PB 263592 A03
Prepared by University of Lowell for FRA/TSC,
Report No. FRA-ORD&D 76-286, September 1976.
18. Improvement of the Effectiveness of Motorist Warnings at Railroad-Highway Grade Crossings. PB 266784 A05
Prepared by TSC for FRA,
Report No. FRA/ORD-77-07, February 1977.
19. Potential Means at Cost Reduction in Grade Crossing Automatic Gate Systems. PB 265724 A05
PB 265725 A04
Prepared by MB Assoc., et al for TSC/FRA,
Reports FRA/ORD-77-06.I and 77/06.II, February 1977.
20. Summary Statistics of the National Railroad-Highway Crossing Inventory for Public At-Grade Crossings. PB 271334 A08
Prepared by TSC for FRA,
Report No. OOPD-77-8, June 1977.
21. Proceedings 1977 National Conference on Railroad-Highway Crossing Safety. PB 293071 A07
Sponsored by U.S. Department of Transportation,
University of Utah, August 23-25, 1977.
22. Innovative Concepts and Technology for Railroad-Highway Grade Crossing Motorist-Warning Systems. PB 273354 A10
PB 273355 A05
Prepared by Cincinnati Electronics et. al
for TSC/FRA, Report Nos. FRA/ORD-77/37.I
and 77/37.II, September 1977.

23. Potential Means of Cost Reduction in Grade Crossing Motorist-Warning Control Equipment. PB 277946 A09
PB 277947 A03
Prepared by Storch Engrs. et. al for TSC/FRA
Reports FRA/ORD-77/45.I and 77/45.II, December 1977.
24. Analysis of NPRM Strobe Lights on Locomotives. PB 293483 A04
Prepared by IOCS, Inc. for FRA,
Report No. FRA/OPPD-79-4, May 1978.
25. A Study of State Programs for Rail-Highway Grade Crossing Improvements. PB 279774 A08
Prepared by TSC for FRA,
Report No. FRA-OPPD-78-7, June 1978.
26. Summary Statistics of the National Crossing Inventory for Public At-Grade Crossings, Second Edition. PB 293070 A08
Prepared by TSC for FRA,
Report FRA-OPPD-78-20, September 1978.
27. Legal Effects of Use of Innovative Equipment at Railroad-Highway Grade Crossings on Railroad's Accident Liability. PB80-137888 A04
Prepared by TSC for FRA,
Report No. FRA-RRS-80-01, October 1979.
28. Rail-Highway Crossing Accident/Incident and Inventory Bulletin (No. 1 Calendar Year 1978). Available from FRA.
Prepared by Office of Safety, FRA, October, 1979.
29. Rail-Highway Crossing Hazard Prediction Research Results. PB80-170749 A11
Prepared by TSC for
FRA, Report FRA-RRS-80-02, March 1980.
30. Identification and Evaluation of Off-Track Detection Systems for Grade Crossing Applications. PB 80-186430 A06
Prepared by GARD, Inc.
Report No. FRA/ORD-80-32, April 1980.
31. Operational Testing of Locomotive-Mounted Strobe Lights. PB 80-224348 A03
Prepared by TSC for FRA,
Report DOT-TSC-FRA/ORD 80-48, June 1980.
32. The Effectiveness of Flashing Lights and Flashing Lights with Gates in Reducing Accident Frequency at Public Rail-Highway Crossings, 1975-1978. PB 81-133886 A03
Prepared by Input Output Computer Services, Inc.
for TSC/FRA/FHWA, Report FRA-RRS-80-005, April 1980.

33. Rail-Highway Crossing Warning Device Life Cycle Cost Analysis. Prepared by Input Output Computer Services, Inc. for TSC/FRA/FHWA, Report No. FRA-RRS-80-003, September 1980. PB 81-133894 A05
34. Rail-Highway Crossing Accident/Incident Bulletin (No. 2 Calendar Year 1979). Prepared by FRA Office of Safety, September 1980. Available from FRA.
35. Grade Crossing Accident Injury Minimization Study. Prepared by Aerospace Design Company, Inc., Report No. FRA/ORD-80-87, December 1980. PB 81-155236 A09
36. Proceedings, 1980 National Rail-Highway Crossing Safety Conference. Sponsored by U.S. Department of Transportation, University of Tennessee, June 17-19, 1980. PB 81-196982 A06
37. Investigation of Anomalous Rail-Highway Crossings. Available from FRA Paper Presentation at 60th Annual Meeting of TRB. Prepared by FRA Office of Safety, FRA, January 1981.
38. Rail-Highway Crossing Resource Allocation Model. Prepared by TSC for FRA/FHWA, Report No. FRA-RRS-81-001, April 1981. PB 81-212540 A05
39. Constant Warning Time Concept Development for Motorist Warning at Grade Crossings. Prepared by Systems Technology Laboratory, Inc., Report No. FRA/ORD-81/07, May 1981. PB 81-205684 A09
40. Rail-Highway Crossing Accident/Incident and Inventory Bulletin (No. 3 Calendar Year 1980). Prepared by FRA Office of Safety, June 1981. Available from FRA.
41. Operation Lifesaver National Symposium, (Aug. 27-29, 1981, Chicago, IL). Prepared by FRA/Office of Safety and National Safety Council, August 1981. PB 83-117234 A03
42. Rail-Highway Crossing Accident/Incident and Inventory Bulletin (No. 4 Calendar Year 1981). Prepared by FRA Office of Safety, June 1982. Available from FRA See Item #56

43. Summary of the Department of Transportation Rail-Highway Crossing Accident Prediction Formulas and Resource Allocation Model. PB 83-119057 A03
Prepared by FRA Office of Safety, June 1982
44. Freight Car Reflectorization. PB 84-131283 A06
Prepared by TSC for FRA, Report No. FRA-RRS-83-1, December 1982.
45. Rail-Highway Crossing Resource Allocation Procedure, User's Guide, No longer available
Prepared by TSC for FHWA and FRA, See FRA Item #57
Report No, FHWA-IP-82-7,
December 1982.
46. Compilation of State Laws and Regulations On Matters Affecting Rail-Highway Crossings, No longer available
Prepared by KSU See Item #108
for AAR, FRA and FHWA, Report No. FHWA-TS-83-203, April 1983.
47. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin (No. 5 Calendar Year 1982). Available from FRA
Prepared by Office of Safety, FRA
June 1983. No report number.
48. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin (No. 6 Calendar Year 1983). Available from FRA
Prepared by FRA Office of Safety
June 1984. No report number.
49. Accident Severity Prediction Formula for Rail-Highway Crossings, PB 85-107167 A03
Prepared by TSC for FRA and FHWA, Report No. FHWA-RD-83/092, July 1984.
50. Rail-Highway Crossing Safety Report. Available from FRA.
Prepared by FRA, July 1985.
51. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin (No. 7 Calendar Year 1984). Available from FRA.
Prepared by Office of Safety, FRA
June 1985.

52. Effectiveness of Motorist Warning Devices at Rail-Highway Crossings. PB 882259901 A05
Prepared by FHWA and FRA, Report No. DOT-TSC-FHWA-85-1, April 1985 Final Report.
53. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin (No. 8 Calendar Year 1985). Available from FRA.
Prepared by Office of Safety, FRA FRA, June 1986.
54. Rail-Highway Crossing Resource Allocation Procedure - User's Guide, Second Edition. No longer available
Prepared by TSC for FRA and FHWA, Report No. FHWA-IP-86-11, July 1986. See FRA Item #57,
55. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin No. 9 Calendar Year 1986). Available from FRA.
Prepared by Office of Safety, FRA June 1987.
56. Summary of the DOT Rail-Highway Crossing Resource Allocation Procedure - Revised. PB 88-226287 A03
Prepared by TSC for FRA, Report No. DOT-TSC-FRA-86-2, June 1987. FRA Safety Website
57. Rail-Highway Crossing Resource Allocation Procedure User's Guide, Third Edition. PB 88-225206/AS A06
Prepared by TSC for FRA, Report No. DOT-TSC-FRA-87-1, August 1987. FRA Safety Website
58. Rail-Highway Crossing Accident/ Incident and Inventory Bulletin (No. 10 Calendar Year 1987). Available from FRA.
Prepared by Office of Safety, FRA, August, 1988.
59. Updated Compilation of States' Laws and Regulations Affecting Driver Behavior At Rail-Highway Crossings. No longer available
Prepared by COMSIS Corp., for FRA, FHWA Project No. DTFH61-88-Z-00145, February 1989. See FRA Item #108

60. Rail-Highway Crossing Accident/
Incident and Inventory Bulletin
(No. 11 Calendar Year 1988).
Prepared by Office of Safety, FRA, June 1989. Available from FRA.
61. An Evaluation of the TEXAS 1-800
Program. Prepared by TTI and Richards
and Associates for FRA, June 1989. Available from FRA.
62. Florida's Train Whistle Ban. Prepared
Prepared by FRA Office of Safety, July 1990. Available from FRA.
63. Rail-Highway Crossing Accident/
Incident and Inventory Bulletin
(No. 12 Calendar Year 1989).
Prepared by FRA Office of Safety, June 1990. Available from FRA.
64. Rail-Highway Crossing Accident/
Incident and Inventory Bulletin
(No. 13 Calendar Year 1990).
Prepared by FRA Office of Safety, July 1991. Available from FRA
65. Rail-Highway Crossing Accident/
Incident and Inventory Bulletin
(No. 14 Calendar Year 1991).
Prepared by FRA Office of Safety, July 1992. Available from FRA
66. Florida's Train Whistle Ban, Second Edition,
September 1992. Prepared by FRA Office of Safety. Available from FRA
67. Trespasser Bulletin Volume I, Calendar
Year 1991. Prepared by FRA Office of Safety,
RRS-23, March 1993. Available from FRA
68. Highway-Rail Crossing Accident/
Incident and Inventory Bulletin
(No. 15, Calendar Year 1992).
Prepared by FRA Office of Safety, August 1993. Available from FRA
69. Trespasser Bulletin, Volume II.
Calendar Year 1992. Prepared by
FRA Office of Safety, RRS-23, November 1993. Available from FRA

70. The Safety of Highway-Railroad Grade Crossings: Study of Acoustic Characteristics of Railroad Horn Systems. DOT/FRA/ORD - 93/25 and DOT-VNTSC-FRA-93-1, July 1993. Prepared by the FRA Office of Research and Development. Not available
71. Highway-Rail Crossing Safety Demonstrations - Final Report (9/30/92). Prepared by the FRA Office of Safety, RRS-23, September 1993. Available from FRA
72. Rail-Highway Crossing Safety Action Plan Support Proposals. Prepared by FRA, June 1994. Available from FRA
73. Rail-Highway Crossing Safety Action Plan Summary. Prepared by FRA, June 1994. Available from FRA
74. Highway-Rail Crossing Accident/ Incident And Inventory Bulletin (No.16 Calendar Year 1993). Prepared by FRA Office of Safety, July 1994. Available from FRA
75. Highway-Railroad Grade Crossings: A Guide To Crossing Consolidation and Closure. Prepared by FRA and FHWA, July 1994. FRA Safety Website
76. Railroad Communications and Train Control: Report to Congress. Prepared by FRA, Office of Safety, July 1994. Available from FRA
77. Trespasser Bulletin Volume III, Calendar Year 1993. Prepared by FRA . Office of Safety, RRS-23, September 1994. Available from FRA
78. The Use of Illumination at RR Grade Crossings to Reduce Collision Risks (Guidelines for Crossing Illumination). Prepared by FRA, Research and Special Programs Administration, Report No. DOT-VNTSC-FRA-294-50, October 14, 1994. Available from FRA
79. Focus Group Study of Consumer Attitudes Toward Highway-Rail Grade Crossings. Prepared for FHWA, FRA, FTA, and NHTSA by Global Exchange, Inc., November 1994. Available from FRA

80. Nationwide Study of Train Whistle Bans. Available from FRA
Prepared by FRA, Office of Safety, April 1995.
81. Highway-Rail Crossing Accident/Incident and Inventory Bulletin (No. 17 Calendar Year 1994). FRA Safety Website
Prepared by FRA, Office of Safety, July 1995.
82. Safety of Highway-Railroad Grade Crossings Use of Auxiliary External Alerting Devices to Improve Locomotive Conspicuity. Available from FRA
Office of R&D
Prepared by DOT Special Programs Administration for FRA, Office of Research and Development, Report No. DOT-VNTSC-FRA-95-10, July 1995
83. Highway-Railroad Grade Crossing Safety Research Needs Workshop (Summary of Results) Available from FRA
Prepared by FRA, July 1995.
84. Compilation of State Laws and Regulations Affecting Highway-Rail Grade Crossings. Not Available
See FRA Item #108
Prepared by FRA Office of Safety, August 1995.
85. Florida's Train Whistle Ban. Available from FRA
Prepared by FRA Office of Safety, October 1995,
86. Safety of Highway-Railroad Grade Crossings (Research Needs Workshop -Volume I). Available from FRA
Office of R&D
Prepared by DOT, Research and Special Programs Administration for FRA, Office of Research and Development, Report No. DOT-VNTSC-FRA-95-12.1, January 1996
87. Safety of Highway-Railroad Grade Crossings (Research Needs Workshop -Volume II - Appendices). PB 96183256 A20
Prepared by DOT, Research and Special Programs Administration for FRA, Office of Research and Development, Report No. DOT-VNTSC-FRA-95-12.2, January 1996,
88. Highway-Rail Crossing Accident/Incident and Inventory Bulletin (No. 18 Calendar Year 1995). FRA Safety Website
Prepared by FRA Office of Safety, RRS-23, September 1996.
89. Enhancing Rail Safety Now and Into the 21st Century: The Federal Railroad Administration's Safety Program and Initiatives - A Report to Congress. Available from FRA
Prepared by FRA, October 1996.

90. Highway-Rail Crossing Inventory Instructions and Procedure Manual
Prepared by FRA, December 1996. FRA Safety Website
91. Highway-Rail Crossing Accident/Incident and Inventory Bulletin, (No. 19 Calendar Year 1996)
Prepared by FRA Office of Safety, August 1997 FRA Safety Website
92. Model Legislation for Railroad Trespass and Railroad Vandalism, Prepared by FRA, April 1998. FRA Safety Website
93. Field Evaluation of a Wayside Horn at a Highway-Railroad Grade Crossing
Prepared by Volpe Center for FRA, June 1998 Available from FRA
94. Railroad Safety Statistics/Annual Report 1997.
Prepared by FRA, September 1998 FRA Safety Website
95. Railroad Horn Systems Research Final Report
Prepared by FRA, January 1999 Available from FRA
96. Freight Car Reflectorization Final Report
Prepared by FRA, January 1999 Available from FRA
97. Railroad Safety Statistics Annual Report 1998
by FRA, August,1999 FRA Safety Website
98. Improving Railroad Safety and Rail Passenger Technology through Targeted Research and Demonstrations
Prepared by FRA, 1992-1997, Dec 1999 Available from FRA
99. Compilation Of State Laws and Regulations Affecting Highway-Rail Crossings, Third Edition
by L. Stephen Jennings and Applied System Technologies
January 6,2000 Not available
See Item #108
100. Railroad Safety Statistics Annual Report 1999
by FRA Office of Safety, August, 2000 PB 2002104298
FRA Safety Website
101. Report On High Risk Crossing and Mitigation Efforts by State, Report H.R.2084,Office of Safety
FRA and FHWA, September 2000 FRA Safety Website
102. Project Plan 1-800 Toll-Free Emergency Notification System for Shortline Railroad Highway-Rail Crossings in the Commonwealth of Pennsylvania
A Joint Partnership; September 20,2000 FRA Safety Website

103. Railroad Safety Statistics Annual Report 2000
by FRA Office of Safety, July 2001 FRA Safety Website
104. Recommended Traffic Control Devices
for Railroad-Highway Grade Crossings, TRB Report,
Prepared by Lerner & Lianeras, Westat
and McGee & Stephens, BMI, November 2001 Available from TRB
105. Intelligent Transportation Systems at Highway-Rail
Intersections, A Cross-Cutting Study
by DOT, December 2001 FHWA-OP-01-149
EDL# 13587
106. Five-Year Strategic Plan for Railroad
Research, Development, and Demonstrations
by FRA, Report No. FRA/RDV-02/02, March 2002 PB 2002108029
107. Railroad Safety Statistics Annual Report 2001
by FRA Office of Safety, July, 2002 FRA Safety Website
108. Compilation Of State Laws and Regulations Affecting
Highway-Rail Crossings, Fourth Edition
by L. Stephen Jennings and Applied System Technologies
December 2002 FRA Safety Website
109. Safety of Highway-Railroad Grade Crossings
by FRA Office of Research and Development,
February 2003 Available from FRA
Office of Safety
110. Railroad Safety Statistics Annual Report 2002
by FRA Office of Safety, April, 2004 FRA Safety Website
111. Final Environmental Impact Statement
"Interim Final Rule for the Use of Locomotive Horns
at Highway-Rail Grade Crossings", FRA
December 5, 2003 Available from FRA
Office of Safety
112. FRA Guide for Preparing Accident/Incident Reports 2003
Effective May 1, 2003, FRA FRA Safety Website
113. Guidelines for Submitting Accident/Incident Reports
by Alternative Methods, FRA FRA Safety Website
114. Railroad Safety Statistics Annual Report 2003
by FRA Office of Safety, October, 2005 FRA Safety Website

115. Secretary's Action Plan for Highway-Rail Crossing Safety and Trespass Prevention, June 7, 2004
Available from FRA Office of Safety
FRA Safety Website
116. Evaluation of Alternative Detection Technologies for Trains and Highway Vehicles at Highway Rail Intersection DOT/FRA/ORD-03/04
Available from FRA Office of R&D
117. North Carolina DOT Traffic Separation Studies, Volume I - Assessment, by Volpe, September 2004 DOT/FRA/ORD-04/15.I, 52 pages.
Available from NTIS and FRA Office of R&D
118. North Carolina DOT Traffic Separation Studies, Volume II - Findings by Community, by Volpe, September 2004, DOT/FRA/ORD-04/15.II, 44 pages.
Available from NTIS and FRA Office of R&D
119. Rails-with-Trails: Lessons Learned FRA/FHWA/NHTSA/FTA, by Volpe, August 2002, FTA-MA-26-0052-04-1, 190 pages
Available from FRA, FTA, NTIS and the FRA Website
120. Preemption of Traffic Signals Near Railroad Crossings ITE Committee TENC-99-06, Final Draft August 1, 2004
Available from ITE
121. Railroad Safety Statistics Annual Report 2004 by FRA Office of Safety, November, 2005
FRA Safety Website
122. Railroad Safety Statistics Annual Report 2005 (Prelim) by FRA Office of Safety, July, 2006
FRA Safety Website
123. Pilot Programs for Emergency Notification Systems at Highway-Rail Grade Crossings - A Report to Congress by FRA Office of Safety, May 31, 2006
Available from FRA

Published FHWA Reports:

**Federal Highway Administration
Office of Research and Development
Turner Fairbank Highway Research Center
6300 Georgetown Pike, McLean, VA 22101**

- | | | | |
|-----|---|--------------------------------|------------|
| 1. | <u>Motorists' Requirements for Active Grade Crossing Warning Devices/ FHWA-RD-77-167.</u> | PB 296183 | A12 |
| 2. | <u>Railroad Grade Crossing Passive Signing Study - Final Report/ FHWA-RD-78-34.</u> | PB 286528 | A04 |
| 3. | <u>Safety Features of Stop Signs at Rail-Highway Grade Crossings</u>
Vol. 1 <u>Executive Summary/FHWA-RD -78-40.</u>
Vol. 2 - <u>Technical Report/FHWA-RD-78-41.</u> | PB 295422
PB 295423 | A02
A08 |
| 4. | <u>Experimental Design for Active Grade Crossing Warning Devices/FHWA-RD-77-167.</u> | PB 80-145089 | A04 |
| 5. | <u>Railroad-Highway Grade Crossing Handbook/FHWA-TS-78-214.</u> | PB 86-127644
(See Item #19) | A12 |
| 6. | <u>Rail-Highway Crossing Accident Causation Study, Vol. I, Executive Summary/FHWA/RD-81-082.</u> | PB 83-158725 | A03 |
| 7. | <u>Rail-Highway Crossing Accident Causation Study, Vol. II, Technical Report/FHWA/RD-81-083.</u> | PB 83-158733 | A07 |
| 8. | <u>Activated Advance Warning for Railroad Crossings FHWA/RD-80-003.</u> | PB 83-161869 | A09 |
| 9. | <u>Report to Congress. Railroad-Highway Safety.</u>
Part I: A Comprehensive Statement of the Problem.
Part II: Recommendations for Resolving the Problem.
Prepared jointly by the Staffs of FRA and FHWA.
November 1971 and August 1972. | PB 206792
PB 213115 | A07
A06 |
| 10. | <u>The Effectiveness of Automatic Protection in Reducing Accident Frequency and Severity at Public Grade Crossings in California.</u>
Prepared by the California Public Utilities Commission Transportation Division, June 1974.
Reprinted for the FHWA, August 1975. | Available from FHWA | |

11. The Effectiveness of Flashing Lights and Flashing Lights with Gates in Reducing Accident Frequency at Public Rail-Highway Crossings, 1975-1978. Prepared by Input Output Computer Services, Inc. for TSC/FRA/FHWA, Report No. FRA-RRS-80-005, April 1980. PB 81-133886 A03
12. Rail-Highway Crossing Warning Device Life Cycle Cost Analysis. Prepared by Input Output Computer Services Inc. for TSC/FRA/FHWA, Report FRA-RRS-80-003, September 1980. PB 81-133894 A05
13. Rail-Highway Crossing Resource Allocation Model. Prepared by TSC for FRA/FHWA, Report No. FRA-RRS-81-001, April 1981. PB 81-212540 A05
14. Proceedings 1982 Railroad-Highway Safety National Conference, Kansas City, MO, August 31-September 2, 1982. PB 83-163501 A10
15. Rail-Highway Crossing Resource Allocation Procedure User's Guide, Prepared by TSC for FHWA and FRA, Report No. FHWA-IP-82-7, December 1982. Not available
See FRA Item #57
16. Compilation of State Laws and Regulations On Matters Affecting Rail-Highway Crossings, Prepared by KSU for AAR, FRA and FHWA, Report No. FHWA-TS-83-203, April 1983. Not available
See FRA Item # 108
17. Accident Severity Prediction Formula for Rail-Highway Crossings, Prepared by TSC for FRA and FHWA, Report No. FHWA-RD-83/092, July 1984. PB 85-107167 A03
18. Proceedings 1985 National Conference on Highway-Rail Safety, Kansas City, MO, July 16-18, 1985. PB 86-148731 A10
19. Constant Warning Time Devices for Railroad-Highway Crossings, Prepared by Goodell-Grivas, Inc., Report No. FHWA/RD-86/156, December 1985. PB 86-209715 A06
20. Consequences of Mandatory Stops at Railroad-Highway Crossings, Prepared by Goodell-Grivas, Inc., Report No. FHWA/RD-86/014, December 1985. PB 86-179579 A09
21. Effectiveness of Motorist Warning Devices at Rail-Highway Crossings, Prepared by TSC for FRA and FHWA, Report No. FHWA/RD-85/015, April 1985. PB 88-225990/AS A05

22. Rail-Highway Crossing Resource Allocation Procedure - User's Guide - Second Edition. No longer available
Prepared by TSC for See FRA Item #57,
FRA and FHWA, Report No. FHWA-IP-86-11, July 1986.
23. Railroad Crossing Corridor Improvements PB 87-119673/AS A05
A Model Program Based on Field Reviews in Six States,
Report No. FHWA-DP-70-1, June 1986.
24. Railroad-Highway Grade Crossing Handbook, PB 87-137527 A10
Second Edition, Report No. FHWA-TS-86-215,
September 1986. FRA Safety Website
25. Evaluation of Methods for Predicting PB 86-213808 A03
Rail-Highway Crossing Hazards, Prepared by
Virginia Highway and Transportation Research Council,
Report No. FHWA/VA-86/32, March 1986.
26. Railroad-Highway Grade Crossing Signal Visibility Improvement Program
Vol. 1 - Final Report/FHWA-RD-86-186, July 1987 PB 88-130216/AS A05
Vol. 2 - Hardware User's Guide/FHWA-RD-86-188, July 1987 PB 88-130224/AS A05
Vol. 3 - Data and Hardware Details/FHWA-RD-86-187 PB 88-130232/AS A05
27. Field Evaluation of Innovative Active Warning Devices PB 89-163141 A13
for Use at Railroad-Highway Grade Crossings,
Prepared by University of Tennessee for FHWA,
Publication No. FHWA-RD-88-135, August 1988.
28. Updated Compilation Of States' Laws and Regulations Not Available
Affecting Driver Behavior at Rail-Highway Crossings. See FRA Item #108
Prepared by COMSIS Corp., for FRA, FHWA
Project No. DTFH61-88-Z-00145, February 1989.
29. Rail-Highway Crossing Study, PB 90-125212/AS A08
Report of the Secretary of Transportation to the
U.S. Congress, Publication No. FHWA-SA-89-001, April 1989.
30. Driver Behavior at Rail-Highway Crossings, PB 90-241118/ABS
Prepared by Comsis Corp.,
Report No. FHWA-82-90-008, June 1990.
31. Warning Time Requirements At Railroad-Highway PB 91-218289/AS
Grade Crossings With Active Traffic Control, A06* *on paper
Prepared by University of Tennessee for FHWA, A01♦ ♦on microfiche
Report No. FHWA-SA-91-007, February 1991.

32. Part VI: Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations. Available from FHWA.
Part VI of the Manual On Uniform Traffic Control Devices (MUTCD).
1988 Edition of MUTCD, Revision 3, September 3, 1993.
33. A Preliminary Laboratory Investigation of Passive Railroad Crossing Signs. Prepared by Office of Safety and Traffic Operations R&D for FHWA. PB 94-184215
Report No. FHWA-RD-93-153, December 1993.
34. Highway-Railroad Grade Crossing: A Guide To Crossing Consolidation and Closure. FRA Safety Website
Prepared by FRA and FHWA, FHWA-TS-86-2, July 1994.
35. Guidance On Traffic Control Devices at Highway-Rail Grade Crossings, FHWA Website
Technical Working Group, USDOT, FHWA, November 2002 FRA Safety Website
<http://safety.fhwa.dot.gov/media/twgreport.htm>

Published NHTSA Reports:

- | | | | |
|----|--|--------------|-----|
| 1. | <u>Human Factors Countermeasures to Improve Highway-Railway Intersection Safety.</u>
Prepared by Bio Technology Inc. for FRA and NHTSA.
Report No. DOT-HS-800888, July 1973, 235 pp. | PB 223416 | A11 |
| 2. | <u>Feasibility Study of In-Vehicle Warning Systems.</u>
Prepared by Tracor-Jitco for NHTSA/FRA,
Report DOT-HS-256-3-752, May 1975. | PB 242462 | A07 |
| 3. | <u>Rail-Highway Crossing Safety: Fatal Crash and Demographic Descriptors.</u> Report No. DOT HS 808-196,
Nov. 1994. | PB 95-188884 | A04 |

Published OST Reports:

- | | | |
|----|--|---------------------|
| 1. | <u>Accidents That Shouldn't Happen.</u>
<u>A Report of the Grade Crossing Safety Task Force to Secretary Federico Pena.</u>
Prepared by DOT Task Force, March 1996. | Available from FRA. |
| 2. | <u>Implementation Report of the US DOT Grade Crossing Safety Task Force.</u>
Publication No. FHWA-SA-97-085,
HAS-20/7-97-97(1M)E,
Prepared by DOT Task Force, June 1997 | Available from FRA |

Published OIG Reports:

U.S. Department of Transportation
Office of Inspector General
400 Seventh Street, S.W., Room 9126
Washington, DC 20590
(O) 202-366-5630

1. Rail-Highway Grade Crossing Safety. Available Website:
Report No. RT-1999-140 www.oig.dot.gov
Prepared by DOT OIG, September 30, 1999.
2. Audit of the Highway-Rail Grade Crossing Safety Program. Available Website:
Report No. MH-2004-065 www.oig.dot.gov
Prepared by DOT OIG, June 16, 2004.
3. Highway-Railroad Grade Crossing Safety Issues. Available Website:
Testimony No. CC-2005-060 www.oig.dot.gov
Prepared by DOT OIG, July 21, 2005
4. Audit of Oversight of Highway-Rail Grade Crossing
Accident Reporting, Investigations, and Safety Regulations Available Website:
Report No. MH-2006-016 www.oig.dot.gov
Prepared by DOT OIG, November 28, 2005

PRICE CODE for Documents "In Print"

For full list and Price Coding please refer to
<http://www.ntis.gov/pdf/pricode.pdf>

NTIS Price Schedules

NTIS frequently uses price codes to indicate the cost of items sold. The following schedules convert these codes into actual prices.

For Customers within the U.S., Canada, and Mexico Microfiche & Paper Copy Reports

Standard Prices

A01*	\$ 9.50
A02*	\$ 14.00
A03	\$ 26.50
A04	\$ 29.50
A05	\$ 31.50
A06	\$ 34.00
A06	\$ 34.00
A07	\$ 38.00
A08	\$ 41.50
A09	\$ 47.50
A10	\$ 51.00
A11	\$ 54.50
A12	\$ 59.00
A13	\$ 62.50

Archival Prices

.....	\$ 12.00
.....	\$ 17.50
.....	\$ 33.50
.....	\$ 37.00
.....	\$ 39.50
.....	\$ 42.50
.....	\$ 42.50
.....	\$ 47.50
.....	\$ 52.00
.....	\$ 59.50
.....	\$ 64.00
.....	\$ 68.50
.....	\$ 74.00
.....	\$ 78.50

Exception Prices

E01.....	\$ 18.50
E02	\$ 23.00
E03	\$ 25.50
E04	\$ 30.00
E05	\$ 33.50
E06	\$ 37.00
E06	\$ 37.00
E07	\$ 41.50
E08	\$ 46.00
E09	\$ 51.00
E10	\$ 55.50
E11	\$ 60.00
E12	\$ 66.00
E13	\$ 70.50

* A01 for standard microfiche is \$14.00; \$17.50 for out-of-print microfiche.

* A02 for standard microfiche is \$20.00; \$25.00 for out-of-print microfiche.

**This list prepared by RRS-23, Office of Safety,
Federal Railroad Administration
July 2005**