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REPORT NO. FRA-OPPD-78-20

SUMMARY STATISTICS OF THE NATIONAL RAILROAD - HIGHWAY CROSSING INVENTORY FOR PUBLIC AT-GRADE CROSSINGS SECOND EDITION INVENTORY STATUS AS OF MAY 1978

SEPTEMBER 1978

FINAL REPORT

DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
Office of Policy and Program Development
Washington DC 20590

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16. Abstract

In response to the Federal Railroad Safety Act of 1970, a joint government/industry effort to compile a national inventory of railroad-highway crossings was initiated in 1972 and completed in 1976. The inventory contains data on the physical and operational characteristics of all 402,000 railroad-highway crossings in the United States of which approximately 219,000 are public at-grade, 142,000 are private, 37,500 are public grade separated and 3,500 are pedestrian. This report presents comprehensive statistical summaries of the characteristics for all public at-grade crossings reported in the inventory as of May 1978. This information will be useful at the Federal, state and local levels for determining effective allocation of crossing improvement funds and developing R&D, legislative, information and education programs aimed at improving safety at crossings.

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Office of Systems Analysis and
Information (RPD-20)
Federal Railroad Administration
400 Seventh St., S.W.
Washington, D.C., 20590

PREFACE

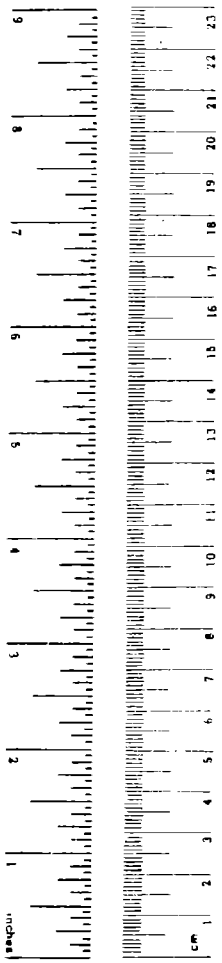
This report presents information intended to help improve safety at railroad-highway crossings. It was prepared by the Transporatation Systems Center under the sponsorship of the Federal Railroad Administration, Office of Systems Analysis and Information. This is the 2nd edition of this report. Information presented in this report will continue to be updated periodically to reflect changes in the inventory and the expressed needs of its users.

This report has been prepared by John S. Hitz (editor) of the Transportation Systems Center. Appreciation is expressed to Mr. Bruce F. George and Dr. Richard E. Snow of the Federal Railroad Administration and to Mr. James Guarente of Kentron Hawaii, Ltd. for their advice and assistance in this work.

METRIC CONVERSION FACTORS

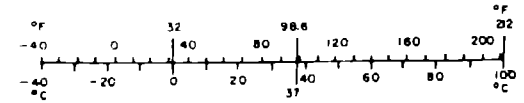
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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1. INTRODUCTION

1.1 Purpose

This report represents a comprehensive statistical summary of the characteristics for all public at-grade railroad crossings reported in the joint government/industry National Inventory of Railroad Highway Crossings as of May 1978. The information in this report will be useful at the Federal, state, local and railroad levels for determining effective allocation of crossing improvement funds and developing R&D, legislative, information, and education programs aimed at improving crossing safety. This is the second edition of the report. It will be further updated and expanded in the future to reflect additional changes in the inventory and the expressed information needs of its users. This edition reflects some 25,000 changes to the inventory since the first edition inventory status as of August 1976. Two thirds of the changes were initiated by States and one third by railroads.

1.2 Background

The Federal Railroad Safety Act of 1970 required the Secretary of Transportation to investigate and recommend solutions to the problems of safety at railroad-highway crossings. In response to this mandate, the U.S. Department of Transportation submitted a report to Congress, in 1972, entitled: Railway-Highway Safety Part II: Recommendations for Resolving the Problem. At that time, the extent, reliability and accessibility of information on railroad-highway crossings varied widely among local, state, and Federal jurisdictions. The report recommended that an adequate overall information system be developed to assist in systematic planning and evaluation of programs for improving safety at crossings. This information system included:

(1) A national inventory of railroad-highway crossings
(2) A uniform national numbering system for railroad-highway crossings

(3) An expansion of the current railroad-highway crossing accident reporting to include all train-involved public and private crossing accidents.

Acting on these recommendations, the Federal Railroad Administration, the Federal Highway Administration, and the Association of American Railroads, jointly funded the development of a comprehensive national railroad highway crossing information and numbering system, the so called National Inventory of Railroad Highway Crossings. With assistance from the American Short Line Railroad Association and the nation's railroads, a site-specific inventory of all railroad-highway crossings was conducted, and a unique identifying number installed at each crossing. The railroads and states are responsible for updating the inventory as changes are made, and maintaining the identifying number.

The state highway departments, in cooperation with the Federal Highway Administration, assisted in the inventory by providing site-specific highway location and use data. A sample railroad-highway crossing inventory form used by both the railroads and the state highway departments to provide data is presented in Appendix A.

Development of the national railroad-highway crossing inventory was started in June of 1972 and completed in January of 1976. The inventory is currently maintained by the Federal Railroad Administration and contains information on a total of over 402,000 crossings of which 219,000 are public at-grade, 142,000 are private, 37,500 are public grade separated, and 3,500 are pedestrian.

1.3 Uses of the Railroad-Highway Crossing Inventory Data

The national inventory file and its summary for public, at-grade crossings as presented in this document provide basic railroad-highway crossing information for users at the Federal, state, and local levels. At the Federal level, the inventory file is being merged with the accident reporting system to:

- determine accident causes and prediction methods,

- determine the effectiveness of warning devices,
- establish programs and procedures for allocation of improvement funds,
- study rail line relocation and abandonment proposals,
- investigate accident costs and,
- develop public awareness and driver training programs.

State and local governments and the railroad industry can use the inventory data for purposes similar to the above and also to:

- prepare statistical reports and public information documents,
- plan crossing improvement programs,
- plan legislative programs,
- develop education and safety programs,
- respond to the inventory reporting requirements of the Federal Highway Act of 1973 (Section 203), and
- perform market analyses and develop crossing warning equipment requirements.

1.4 Content of Report

This report contains summary statistics of the physical and operational characteristics of all public at-grade, railroad-highway crossings in the United States. The statistics reflect the status of the national inventory as of May 1978. The physical characteristics presented describe crossings in terms of their location, surroundings, trackage, associated highway, warning devices, crossing angle, and surface. The operational characteristics describe the railroad and highway traffic over the crossing in terms of the number of trains per day, the speed of trains and the number of highway vehicles. Section 2. of the report describes in more detail the organization, interpretation and updating of the statistics presented. Sections 3., 4., and 5. contain the statistical summaries which are presented using a variety of tables, charts and maps.

2. ORGANIZATION, INTERPRETATION AND UPDATING OF STATISTICS

2.1 Organization of Statistics

The statistical summaries of public at-grade crossings are organized under the general categories of physical and operational characteristics and are presented in Sections 3.0 and 4.0 respectively. Summaries of responses received to miscellaneous yes/no questions on the DOT-AAR Inventory Form are presented in Section 5.0. Table 2-1 lists the various crossing characteristics in the order they are presented, by report section.

2.2 Interpretation of Statistics

The crossing characteristics listed in Table 2-1 are, in general, presented using one-dimensional distributions which simply describe the number of crossings having a certain characteristic, e.g., the number of crossings in each state or state equivalent. For some characteristics, multi-dimensional distributions are given. The multi-dimensional distributions describe the number of crossings having a certain primary characteristic and, at the same time, possess certain other characteristics, e.g., the number of crossings in each state that have active warning devices. In most cases, the multi-dimensional distributions are two-dimensional, the secondary characteristics being either state, warning device class/warning device group*, or average annual daily highway traffic. Three-dimensional distributions are used to further describe crossings that are on either Federal aid or non-Federal aid highway systems.

*See Glossary

TABLE 2-1 REPORT LOCATION OF CROSSING CHARACTERISTIC CATEGORIES

Category of Characteristics	Report Section
Physical Characteristics	3.0
o Location State Railroad Urban/Rural	3.1
o Surroundings Type of Development	3.2
o Trackage Number of Tracks Single/Multiple	3.3
o Highway Highway System Federal Aid/Non-Federal Aid Functional Class Number of Traffic Lanes	3.4
o Warning Devices Warning device Warning device class/group Pavement markings Advance warning	3.5
o Crossing Smallest crossing angle Crossing surface	3.6
Operational Characteristics	4.0
o Train Traffic Number of trains per day	4.1
o Train Speed Maximum timetable speed Typical minimum & maximum speed Typical maximum minus typical minimum speed	4.2
o Highway Traffic Annual average daily traffic (AADT) Percent trucks	4.3
Miscellaneous Data Requested on DOT-AAR Inventory form	5.0

The statistics for each crossing characteristic presented are first displayed in a tabular format immediately followed by a graphical format. The tables are used to present the data in a form which can be interpreted accurately. The graphs, either bar charts, pie charts or maps, cannot always be interpreted as accurately as the tables but permit quick visual comparisons of data to determine trends and correlations. In a few cases, where a small quantity of data is presented, only tables are used.

Information and instructions required for interpretation of specific displays are included with the presentations. For example, highway system codes are included with the table of crossings by highway system. The definitions of terminology used in the presentations are given in Appendix B. A list of railroad companies and their abbreviated codes is presented in Appendix C.

It should be generally noted that this document simply reports the contents of the inventory. While the Federal Railroad Administration is continuously editing and updating the inventory, some inconsistencies still exist and are reflected in the statistics. For example, there are minor discrepancies between various presentations in the total number of crossings listed. Errors such as these are usually due to the omission of data or insertion of incorrect data when filling out the DOT-AAR Inventory Form; e.g., leaving an item blank rather than inserting a zero.

2.3 Updating of Statistics

The statistics presented in Sections 3., 4. and 5. include over 100 tables and graphical displays. The statistics and methods of presentation were those judged to be most useful. Additional statistics and presentation techniques can and will be developed, however, to meet expressed needs of the users of this data and to reflect future changes in the inventory. Any suggestions for changes to the report in terms of additional data or methods of presentation should be forwarded to:

Office of Systems Analysis and Information (RPD-20)
Federal Railroad Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

3. PRESENTATIONS OF PHYSICAL CHARACTERISTICS

3.1 LOCATION CHARACTERISTICS

TABLE 3-1. CROSSINGS BY STATE

ALABAMA	4808	MONTANA	2293
ALASKA	224	NEBRASKA	5673
ARIZONA	1063	NEVADA	363
ARKANSAS	4107	NEW HAMPSHIRE	719
CALIFORNIA	9462	NEW JERSEY	2212
COLORADO	2364	NEW MEXICO	875
CONNECTICUT	570	NEW YORK	4420
DELAWARE	263	NORTH CAROLINA	5475
DIST. COLUMBIA	70	NORTH DAKOTA	5749
FLORIDA	5904	OHIO	9968
GEORGIA	6937	OKLAHOMA	5783
HAWAII	6	OREGON	2960
IDAHO	2211	PENNSYLVANIA	6780
ILLINOIS	13845	RHODE ISLAND	142
INDIANA	10140	SOUTH CAROLINA	4456
IOWA	8851	SOUTH DAKOTA	3382
KANSAS	9847	TENNESSEE	4163
KENTUCKY	3673	TEXAS	14667
LOUISIANA	5008	UTAH	1362
MAINE	1114	VERMONT	594
MARYLAND	1069	VIRGINIA	2865
MASSACHUSETTS	1230	WASHINGTON	4290
MICHIGAN	8464	WEST VIRGINIA	2382
MINNESOTA	8123	WISCONSIN	7290
MISSISSIPPI	3581	WYOMING	619
MISSOURI	6647	PUERTO RICO	55

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TABLE 3-2. CROSSINGS BY RAILROAD (1 of 2)

AA	393	BXN	5	CWF	8	GRN	27
ABB	57	CACV	13	DC	9	GRR	7
ABL	36	CAD	9	DH	547	GSW	43
ACY	222	CARP	28	DKS	33	GTW	1419
ADN	83	CASP	6	DM	258	GU	29
AHW	19	CASS	2	DMIR	251	GWF	8
AL	4	CBC	1	DMM	10	GWE	67
ALM	68	CBL	6	DMU	13	HB	14
ALS	26	CCO	144	DNE	8	HBS	9
AMC	6	CCR	10	DOD	168	HBT	281
AMIN	4	CCT	89	DQE	39	HE	39
AMR	12	CDT	123	DR	14	HIR	24
AN	21	CFE	17	DRGW	1115	HLNE	8
ANR	14	CHTT	24	DRI	66	HN	5
APA	22	CHV	50	DS	93	HPTD	85
AR	63	CHW	73	DT	69	HRT	23
ARA	16	CI	19	DTI	531	HS	29
ARC	44	CIC	41	DTS	75	HSW	2
ARE	220	CIM	116	DUT	2	ICG	10018
APW	34	CIND	128	DVS	2	IHB	114
ASAB	138	CIP	57	DWP	95	IRN	13
ASPI	19	CIRR	5	EBT	3	ITC	196
ATK*	51	CKSO	8	ECH	20	ITF	54
ATSF	12096	CLC	11	EDW	5	ITTR	3
ATW	11	CLCO	44	EEC	5	IU	29
AUG	9	CLG	234	EJE	263	JSC	4
AVI	36	CLIF	11	EJS	2	KC	4
AWP	152	CLJ	6	EI	2368	KCNW	8
AWW	11	CLP	13	ELS	30	KCS	1033
AZUC	55	CN	164	EM	1	KCT	45
BAP	56	CNJ	403	ERIE	8	KENC	2
BAR	211	CNL	135	FSLJ	1	KIT	74
BCK	4	CNW	11144	ETWN	36	KM	18
BCRR	12	CNYR	27	EV	6	KNOR	2
BEDT	7	CO	4592	FW	25	KT	2
BEDM	2	COP	20	FCIN	7	LA	735
BFC	15	CP	108	FDDM	124	LAJ	80
BH	10	CPF	12	FEC	861	LAL	12
BLA	36	CPLC	3	FJG	46	LBR	46
BLE	167	CR**	297	FOR	5	LC	35
BM	1254	CRI	59	FP	4	LCHD	31
BMH	19	CRP	2	FRDN	10	LEPC	18
BML	28	CS	423	FSV	27	LHR	52
BMLP	35	CSL	2	FWD	940	LI	280
BN	20719	CSP	111	GA	407	LKP	6
BO	5443	CSS	136	GBW	319	LMR	36
BOCT	150	CTN	32	GCW	17	LN	7958
BRC	38	CTSI	11	GHH	113	LNAC	16
BRFD	5	CUST	1	GJ	15	LNE	35
BRP	5	CV	224	GM	79	LNO	3
BRW	8	CW	12	GMRC	38	LNW	82
BS	41	CWI	27	GNA	40	LPB	3
BVS	9	CWP	17	GNWE	15	LPN	43

* - ATK (AMTRAK) also operates over 15,839 crossings owned by other railroads.

** - Most CR(CONRAIL) crossings are shown by previously owning railroad.

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TABLE 3-2. CROSSINGS BY RAILROAD (2 of 2)

LRS	64	NPB	51	PT	6964	TRRA	171
LSBC	7	NTL	15	RP	12	TSE	21
LSI	88	NBS	8	RSP	39	TSR	23
LSTI	29	NW	7838	RT	7	TSRC	141
LT	2	NWP	181	RV	26	TSU	30
LUN	7	NYO	28	SAN	19	TT	70
LV	683	NYLB	102	SB	2	UMP	5
LW	4	NYSW	78	SBK	32	UNI	1
LWV	9	OCE	39	SC	2	UO	8
MAA	12	OCW	8	SCL	11946	UP	7805
MAYW	4	OKGF	15	SCY	8	URR	17
MB	41	OIR	9	SDAE	159	USSC	18
MBRC	28	ONW	17	SERA	39	UT	18
MBRR	45	OPE	22	SH	3	UTAH	8
MCR	33	OTF	41	SIND	12	VALR	17
MCSR	6	OUPY	23	SIRC	11	VAMD	62
MDW	12	PAA	17	SJB	8	VBR	2
ME	15	PAM	1	SJI	91	VC	4
MEC	661	PANN	4	SJT	-6	VCY	32
MET	49	PBCC	17	SIC	13	VE	41
METW	3	PBR	5	SLGW	8	VS	27
MGA	96	PC	19162	SLSF	5560	VSO	9
MHCO	6	PCN	8	SM	25	VTR	98
MIM	5	PCY	26	SMA	9	WA	121
MI	166	PG	1	SMV	39	WAG	33
MILW	9307	PHD	59	SN	227	WAKS	5
MISS	25	PI	8	SOO	4335	WAR	7
MJ	1	PICK	23	SOU	13072	WBC	4
MKT	2248	PLE	112	SP	11828	WCTU	16
MNJ	22	PNW	36	SRC	6	WEYC	41
MNS	122	POCA	15	SRN	14	WIM	23
MOV	5	POTB	9	SPTC	9	WLO	156
MP	12438	PP	13	SS	62	WM	508
MPA	58	PPU	38	SSL	8	WNF	5
MRS	60	PPSL	592	SSLV	5	WNFR	11
MSE	82	PRT	3	SSW	1424	WNB	4
MSV	4	PRTD	73	ST	9	WOV	20
MTPF	107	PRV	11	STC	39	WP	659
MTR	21	PS	38	STF	40	WRC	9
MTW	18	PSF	57	TASD	1	WRWK	2
MWR	4	PT	6	TAW	7	WS	8
NALE	10	PTM	99	TB	2	WSR	13
NAP	8	PTO	98	TCC	8	WSS	62
NB	4	PTRA	58	TCG	7	WSYP	7
NEZP	17	PTRP	10	TCT	12	WVN	15
NFD	173	PUCC	25	TEXC	29	WW	19
NFG	88	PVS	33	TM	217	WYS	1
NHIR	22	PW	84	TMBI	40	WYT	8
NJII	6	QRR	1	TN	5	XCTA	25
NLG	24	RBID	1	TOE	30	YAN	15
NN	28	RDG	1312	TOV	19	YDC	10
NOPB	117	RESV	8	TPW	364	YS	66
NOR	15	RFP	118	TRC	4	YW	10

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TABLE 3-3. CROSSINGS BY LOCATION (URBAN/RURAL) VS. STATE

	LOCATION		
	URBAN	RURAL	TOTAL
ALABAMA	2388	2420	4808
ALASKA	88	136	224
ARIZONA	565	498	1063
ARKANSAS	1981	2126	4107
CALIFORNIA	6727	2735	9462
COLORADO	1078	1286	2364
CONNECTICUT	421	149	570
DELAWARE	87	176	263
DIST. COLUMBIA	70	0	70
FLORIDA	3124	2780	5904
GEORGIA	3588	3349	6937
HAWAII	4	2	6
IDAHO	677	1534	2211
ILLINOIS	6455	7390	13845
INDIANA	4588	5552	10140
IOWA	2180	6671	8851
KANSAS	2922	6925	9847
KENTUCKY	1077	2596	3673
LOUISIANA	2648	2360	5008
MAINE	487	627	1114
MARYLAND	464	605	1069
MASSACHUSETTS	867	363	1230
MICHIGAN	3888	4576	8464
MINNESOTA	3299	4824	8123
MISSISSIPPI	1556	2025	3581
MISSOURI	2045	4602	6647
MONTANA	382	1911	2293
NEBRASKA	1663	4010	5673
NEVADA	119	244	363
NEW HAMPSHIRE	417	302	719
NEW JERSEY	1572	640	2212
NEW MEXICO	323	552	875
NEW YORK	1898	2522	4420
NORTH CAROLINA	2592	2883	5475
NORTH DAKOTA	824	4925	5749
OHIO	3800	6168	9968
OKLAHOMA	1880	3903	5783
OREGON	1571	1389	2960
PENNSYLVANIA	3277	3503	6780
RHODE ISLAND	129	13	142
SOUTH CAROLINA	1828	2628	4456
SOUTH DAKOTA	800	2582	3382
TENNESSEE	2167	2001	4168
TEXAS	8280	6387	14667
UTAH	701	661	1362
VERMONT	117	477	594
VIRGINIA	1293	1572	2865
WASHINGTON	2145	2145	4290
WEST VIRGINIA	723	1659	2382
WISCONSIN	3602	3688	7290
WYOMING	161	458	619
PUERTO RICO	14	41	55
TOTAL	95552	123571	219123

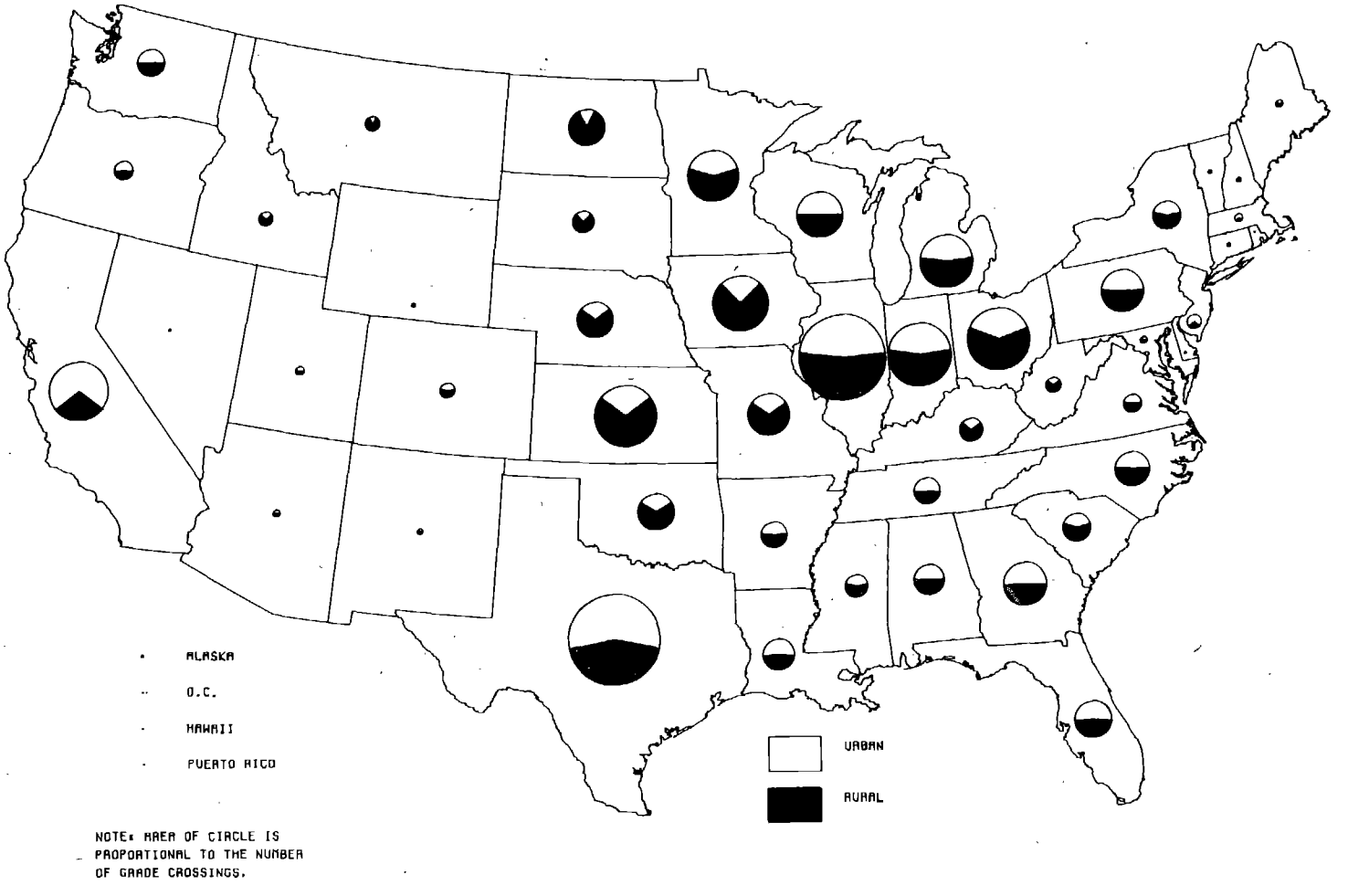

FIGURE 3-1. CROSSINGS BY LOCATION (URBAN/RURAL) VS. STATE

TABLE 3-4. CROSSINGS BY LOCATION (URBAN/RURAL) VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

LOCATION	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
URBAN	30257	65295	95552
RURAL	19953	103618	123571
TOTAL	50210	168913	219123

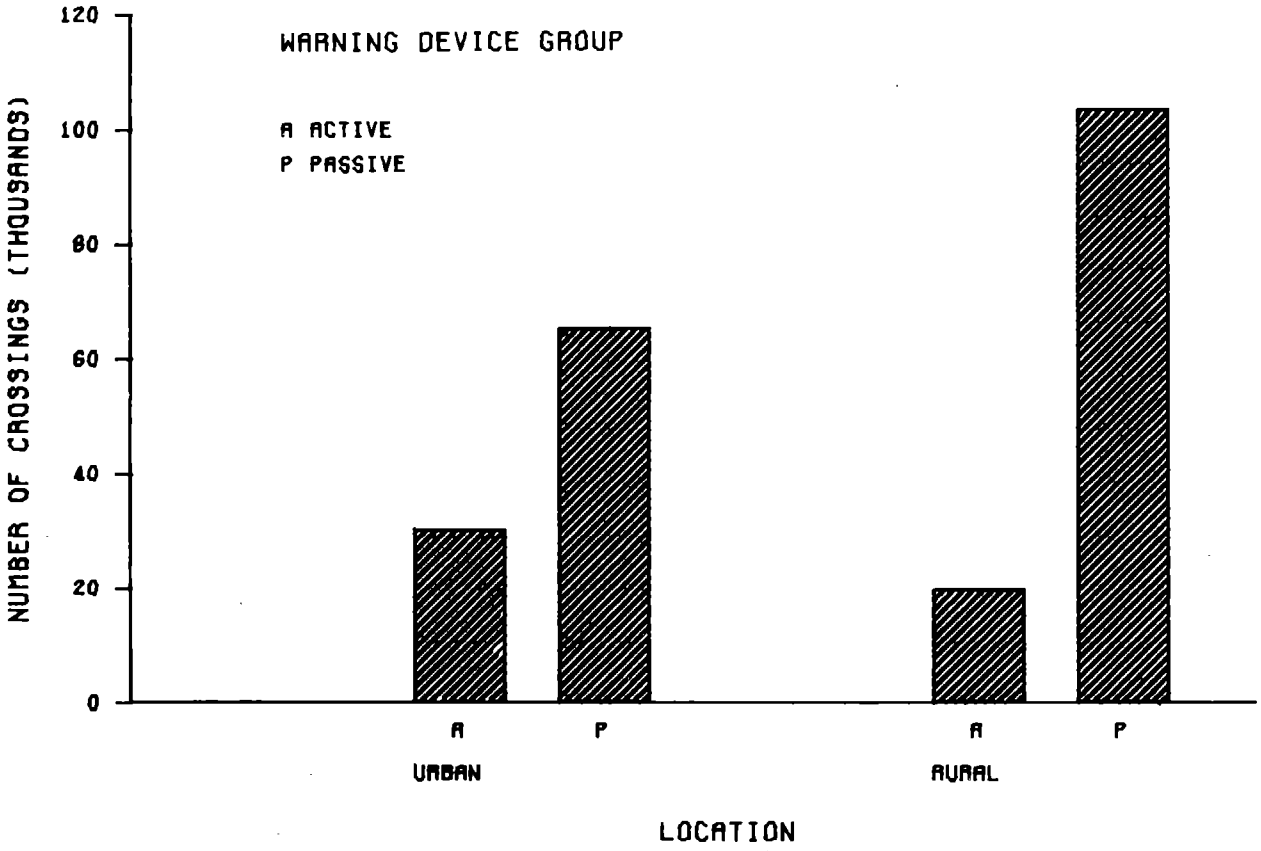

FIGURE 3-2. CROSSINGS BY LOCATION (URBAN/RURAL) VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

TABLE 3-5. CROSSINGS BY LOCATION (URBAN/RURAL) VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	LOCATION URBAN	RURAL	TOTAL
GATES	8850	3849	12699
FLASHING LIGHTS	19295	14886	34181
HWY. SIGNALS, WIGWAGS, BELLS	2112	1218	3330
SPECIAL WARNING DEVICES	6019	1613	7632
CROSSBUCKS	46825	94546	141371
STOP SIGNS	1716	1828	3544
OTHER SIGNS	431	628	1059
NO SIGNS OR SIGNALS	10304	5003	15307
TOTAL	95552	123571	219123

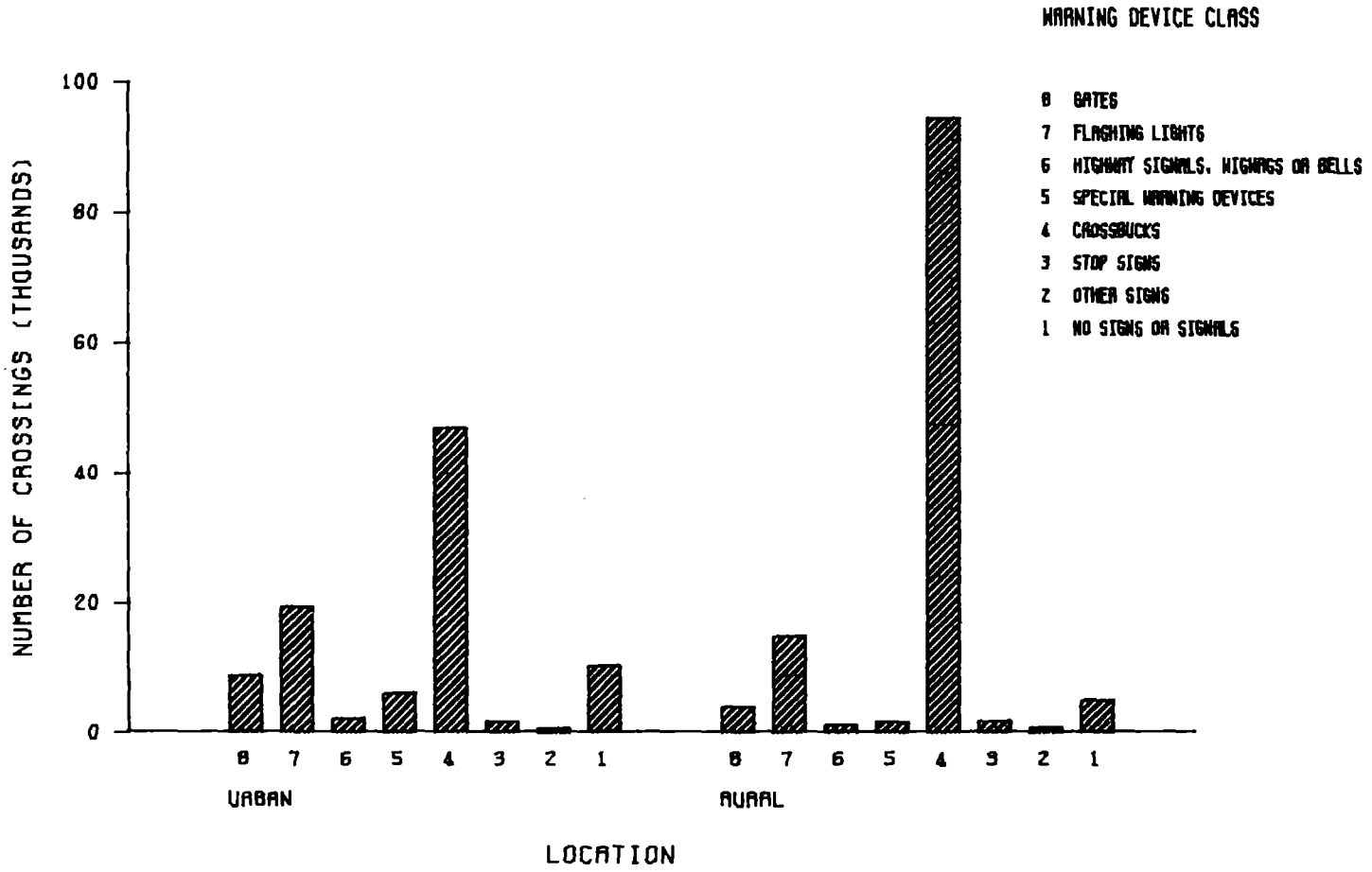

FIGURE 3-3. CROSSINGS BY LOCATION (URBAN/RURAL) VS. WARNING DEVICE CLASS

TABLE 3-6. CROSSINGS BY LOCATION (URBAN/RURAL) VS. ANNUAL AVERAGE DAILY TRAFFIC

LOCATION	AADT 1-250	251-500	501-1K	1K-5K	5K-10K	>10K	TOTAL
URBAN	28390	12278	12323	26029	9523	6688	95231
RURAL	86770	11808	9831	12987	1664	370	123430
TOTAL	115160	24086	22154	39016	11187	7058	218661

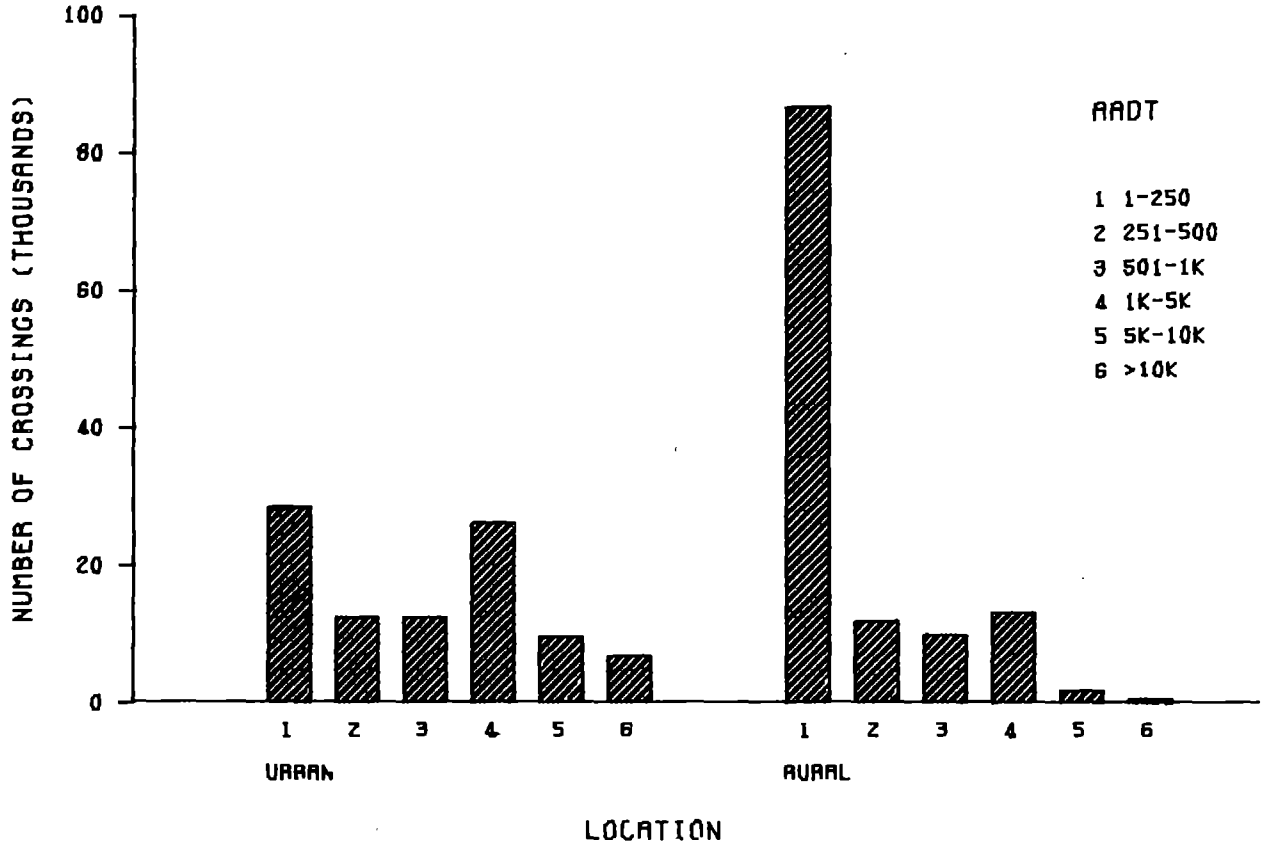

FIGURE 3-4. CROSSINGS BY LOCATION (URBAN/RURAL) VS. ANNUAL AVERAGE DAILY TRAFFIC

3.2 SURROUNDING CHARACTERISTICS

TABLE 3-7. CROSSINGS BY TYPE OF DEVELOPMENT

DEVELOPMENT	NO. XINGS
OPEN SPACE	87977
RESIDENTIAL	49952
COMMERCIAL	44710
INDUSTRIAL	33342
INSTITUTIONAL	3061

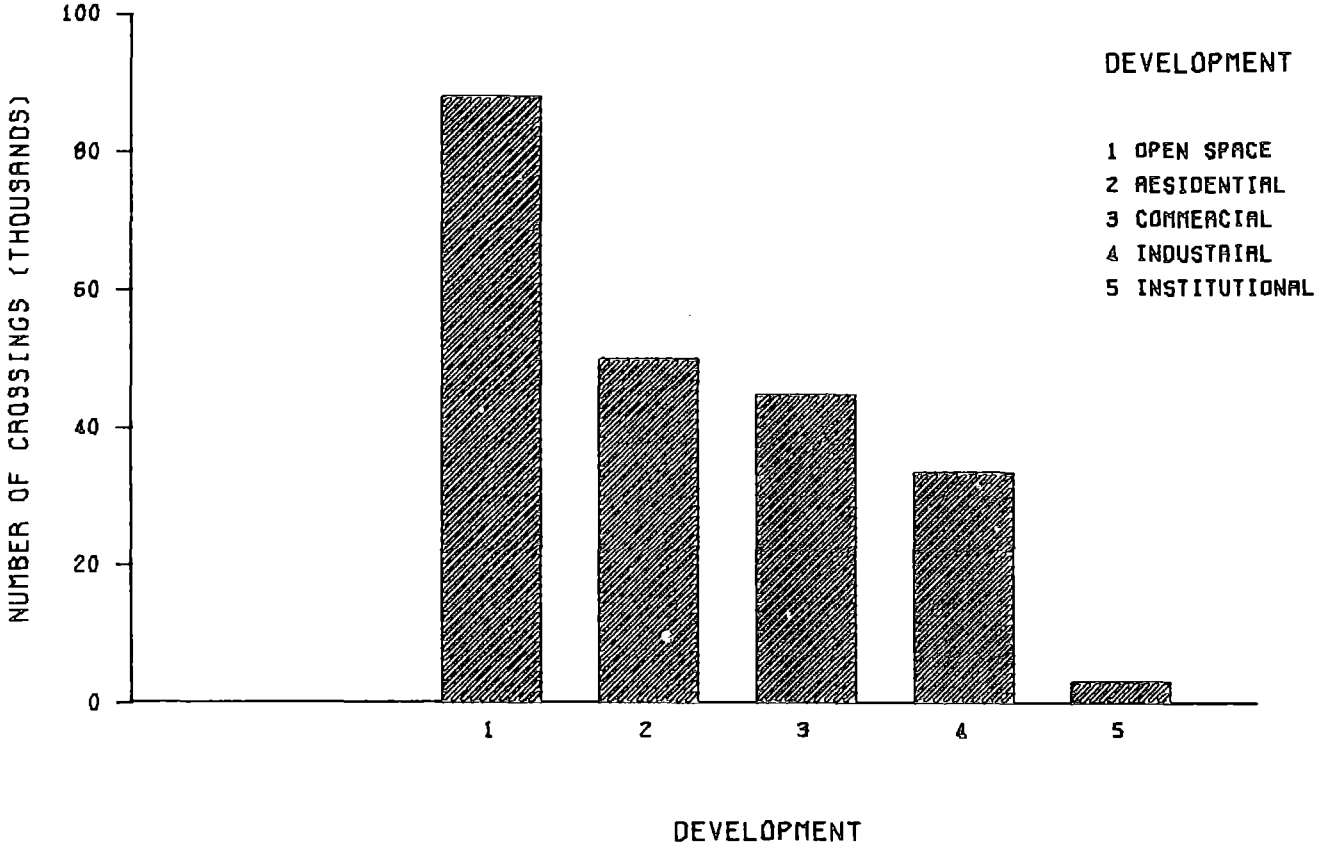

FIGURE 3-5. CROSSINGS BY TYPE OF DEVELOPMENT

3.3 TRACKAGE CHARACTERISTICS

TABLE 3-8. CROSSINGS BY NUMBER OF MAIN VS. OTHER TRACKS AND TOTAL TRACKS

NO. OF OTHER TRACKS	NO. OF MAIN TRACKS							
	0	1	2	3	4	5	>5	TOTAL
0	364	129883	10305	332	88	12	3	140987
1	24107	26701	2899	98	19	2	1	53827
2	5534	9356	1313	42	15	1	0	16259
3	1705	2819	443	21	8	0	0	4996
4	482	961	220	13	8	0	0	1684
5	178	378	115	7	2	0	0	680
>5	195	366	117	2	7	3	0	690
TOTAL	32565	170464	15412	515	145	18	4	219123

TOTAL TRACKS (MAIN TRACKS PLUS OTHER TRACKS)

NO. TRACK	NO. XINGS
1	153990
2	42540
3	14292
4	4800
5	1655
>5	1482

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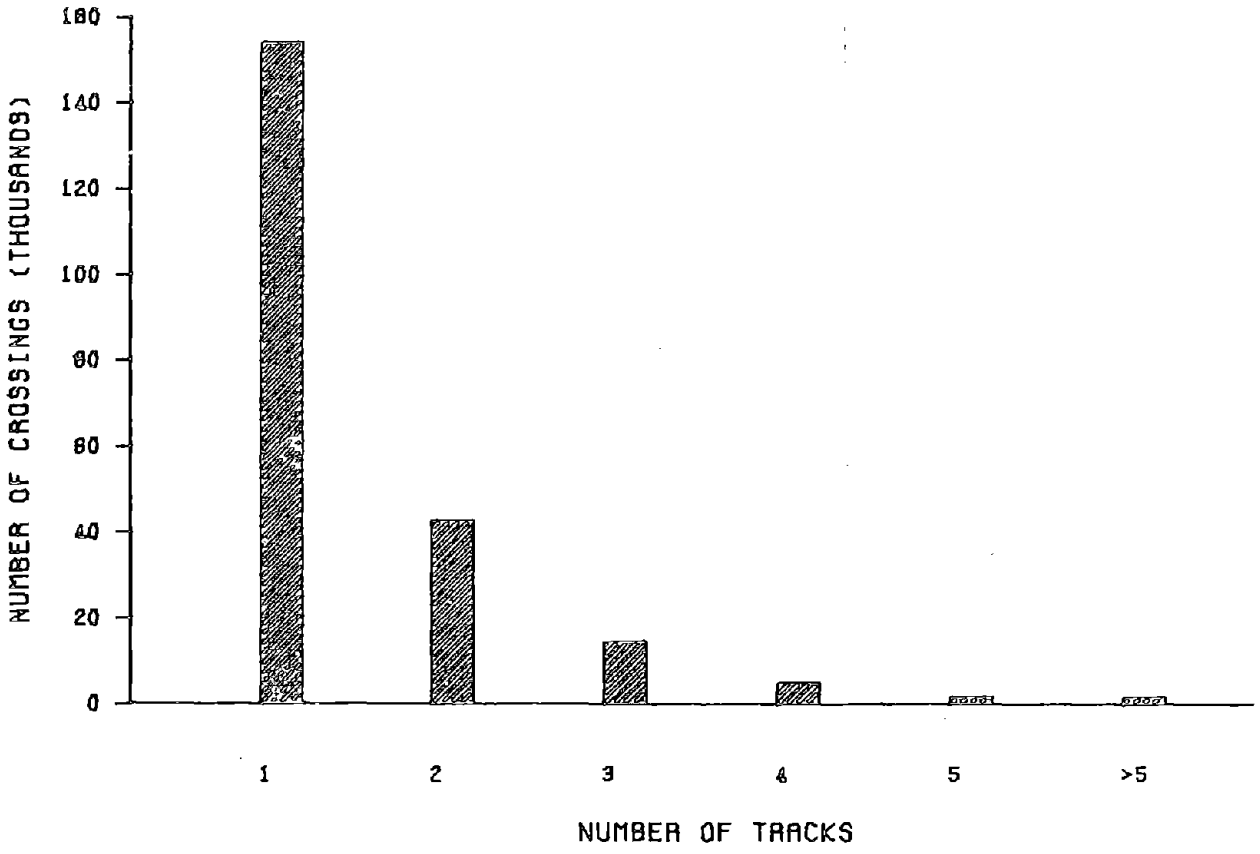

FIGURE 3-6. CROSSINGS BY TOTAL NUMBER OF TRACKS

TABLE 3-9. CROSSINGS BY NUMBER OF TRACKS (MULTIPLE/SINGLE) VS. STATE

	TRACKS		
	SINGLE	MULTIPLE	TOTAL
ALABAMA	3505	1303	4808
ALASKA	181	43	224
ARIZONA	763	300	1063
ARKANSAS	2897	1210	4107
CALIFORNIA	6642	2820	9462
COLORADO	1647	717	2364
CONNECTICUT	438	132	570
DELAWARE	213	50	263
DIST. COLUMBIA	54	16	70
FLORIDA	4023	1881	5904
GEORGIA	5135	1802	6937
HAWAII	6	0	6
IDAHO	1584	627	2211
ILLINOIS	8533	5312	13845
INDIANA	6728	3412	10140
IOWA	6301	2550	8851
KANSAS	7215	2632	9847
KENTUCKY	2446	1227	3673
LOUISIANA	3645	1363	5008
MAINE	858	256	1114
MARYLAND	751	318	1069
MASSACHUSETTS	953	277	1230
MICHIGAN	6096	2368	8464
MINNESOTA	5824	2299	8123
MISSISSIPPI	2414	1167	3581
MISSOURI	4505	2142	6647
MONTANA	1679	614	2293
NEBRASKA	4091	1582	5673
NEVADA	243	120	363
NEW HAMPSHIRE	611	108	719
NEW JERSEY	1578	634	2212
NEW MEXICO	617	258	875
NEW YORK	3179	1241	4420
NORTH CAROLINA	4002	1473	5475
NORTH DAKOTA	4670	1079	5749
OHIO	5821	4147	9968
OKLAHOMA	4361	1422	5783
OREGON	2168	792	2960
PENNSYLVANIA	4546	2234	6780
RHODE ISLAND	89	53	142
SOUTH CAROLINA	3368	1088	4456
SOUTH DAKOTA	2756	626	3382
TENNESSEE	2856	1312	4168
TEXAS	10488	4179	14667
UTAH	968	394	1362
VERMONT	483	111	594
VIRGINIA	1893	972	2865
WASHINGTON	3030	1260	4290
WEST VIRGINIA	1671	711	2382
WISCONSIN	5345	1945	7290
WYOMING	431	188	619
PUERTO RICO	53	2	55
TOTAL	154354	64769	219123

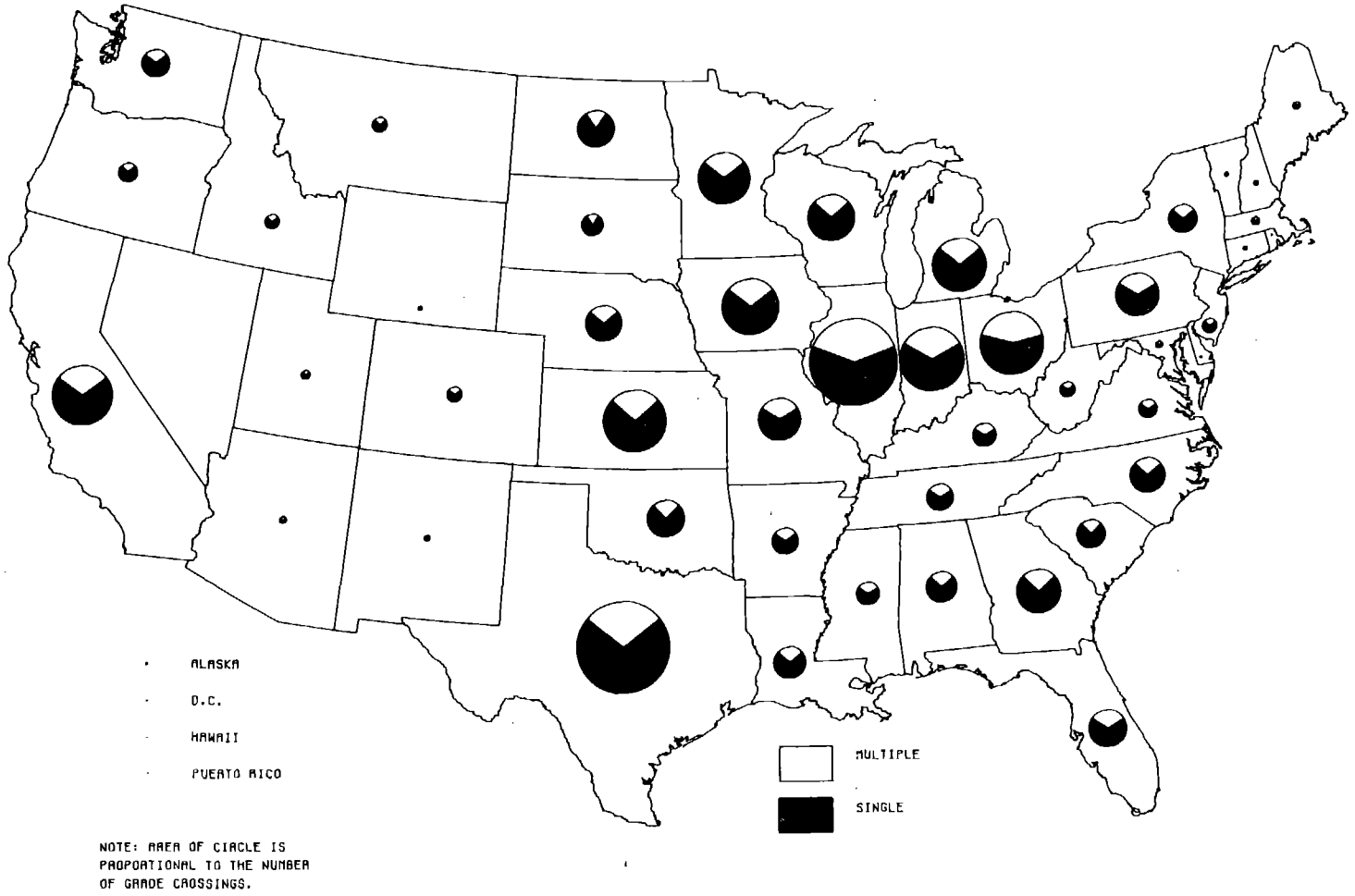

FIGURE 3-7. CROSSINGS BY NUMBER OF TRACKS (MULTIPLE/SINGLE) VS. STATE

TABLE 3-10. CROSSINGS BY NUMBER OF TRACKS VS. STATE

	NO. OF TRACKS						
	1	2	3	4	5	>5	TOTAL
ALABAMA	3504	831	312	88	37	35	4807
ALASKA	181	34	6	1	1	1	224
ARIZONA	762	195	68	24	6	7	1062
ARKANSAS	2894	821	263	74	32	20	4104
CALIFORNIA	6627	1738	644	221	114	103	9447
COLORADO	1634	441	164	51	29	32	2351
CONNECTICUT	438	95	25	8	4	0	570
DELAWARE	213	32	10	4	4	0	263
DIST. COLUMBIA	54	12	4	0	0	0	70
FLORIDA	3992	1297	397	120	42	25	5873
GEORGIA	5116	1204	372	145	39	42	6918
HAWAII	6	0	0	0	0	0	6
IDAHO	1562	372	143	68	21	23	2189
ILLINOIS	8511	3562	1135	378	124	113	13823
INDIANA	6718	2406	634	237	83	52	10130
IOWA	6276	1571	631	211	70	67	8826
KANSAS	7211	1568	686	234	78	66	9843
KENTUCKY	2443	879	235	75	15	23	3670
LOUISIANA	3619	907	288	97	33	38	4982
MAINE	857	190	46	16	3	1	1113
MARYLAND	749	214	70	22	3	9	1067
MASSACHUSETTS	952	210	41	15	7	4	1229
MICHIGAN	6092	1602	473	169	61	63	8460
MINNESOTA	5816	1459	546	174	51	69	8115
MISSISSIPPI	2413	750	249	104	33	31	3580
MISSOURI	4504	1301	566	168	53	54	6646
MONTANA	1677	390	158	33	14	19	2291
NEBRASKA	4086	994	381	114	43	50	5668
NEVADA	238	85	23	5	3	4	358
NEW HAMPSHIRE	611	88	13	3	4	0	719
NEW JERSEY	1576	464	128	22	12	8	2210
NEW MEXICO	617	167	56	21	4	10	875
NEW YORK	3179	908	227	71	16	19	4420
NORTH CAROLINA	3996	982	311	114	35	31	5469
NORTH DAKOTA	4613	728	262	62	20	7	5692
OHIO	5814	2768	861	340	114	64	9961
OKLAHOMA	4356	805	386	138	45	48	5778
OREGON	2165	508	201	58	15	10	2957
PENNSYLVANIA	4524	1547	435	161	46	45	6758
RHODE ISLAND	89	43	8	2	0	0	142
SOUTH CAROLINA	3364	763	230	52	27	16	4452
SOUTH DAKOTA	2754	406	145	45	17	13	3380
TENNESSEE	2855	887	273	87	30	35	4167
TEXAS	10483	2658	942	340	122	117	14662
UTAH	960	255	86	22	21	10	1354
VERMONT	483	76	25	4	1	5	594
VIRGINIA	1887	650	212	75	22	13	2859
WASHINGTON	3027	777	304	119	30	30	4287
WEST VIRGINIA	1670	504	159	33	5	10	2381
WISCONSIN	5338	1285	410	152	59	39	7283
WYOMING	431	109	48	23	7	1	619
PUERTO RICO	53	2	0	0	0	0	55
TOTAL	153990	42540	14292	4800	1655	1482	218759

TABLE 3-11. CROSSINGS BY NUMBER OF TRACKS VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

NO. OF TRACKS	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
1	26992	126998	153990
2	13699	28841	42540
3	5701	8591	14292
4	2209	2591	4800
5	805	850	1655
>5	742	740	1482
TOTAL	50148	168611	218759

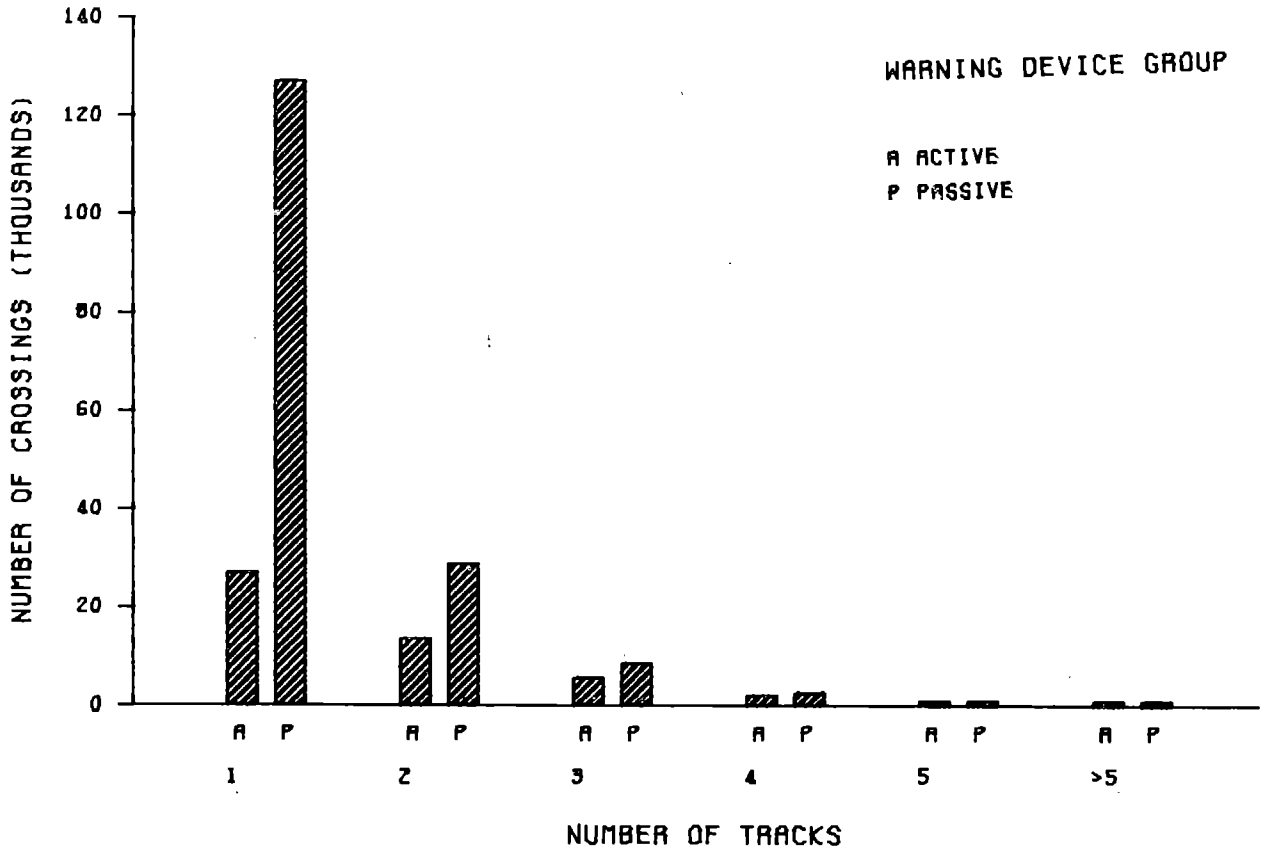

FIGURE 3-8. CROSSINGS BY NUMBER OF TRACKS VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

TABLE 3-12. CROSSINGS BY NUMBER OF TRACKS VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	NO. OF TRACKS						
	1	2	3	4	5	>5	TOTAL
GATES	3904	5050	2171	903	317	340	12685
FLASHING LIGHTS	21131	7837	3187	1178	430	375	34138
HWY. SIGNALS, WIGWAGS, BELLS	1957	812	343	128	58	27	3325
SPECIAL WARNING DEVICES	5403	1372	505	185	74	84	7623
CROSSBUCKS	106657	24076	7079	2091	672	542	141117
STOP SIGNS	2479	698	239	87	23	25	3541
OTHER SIGNS	798	179	38	18	13	8	1054
NO SIGNS OR SIGNALS	11661	2526	730	210	68	81	15276
TOTAL	153990	42540	14292	4800	1655	1482	218759

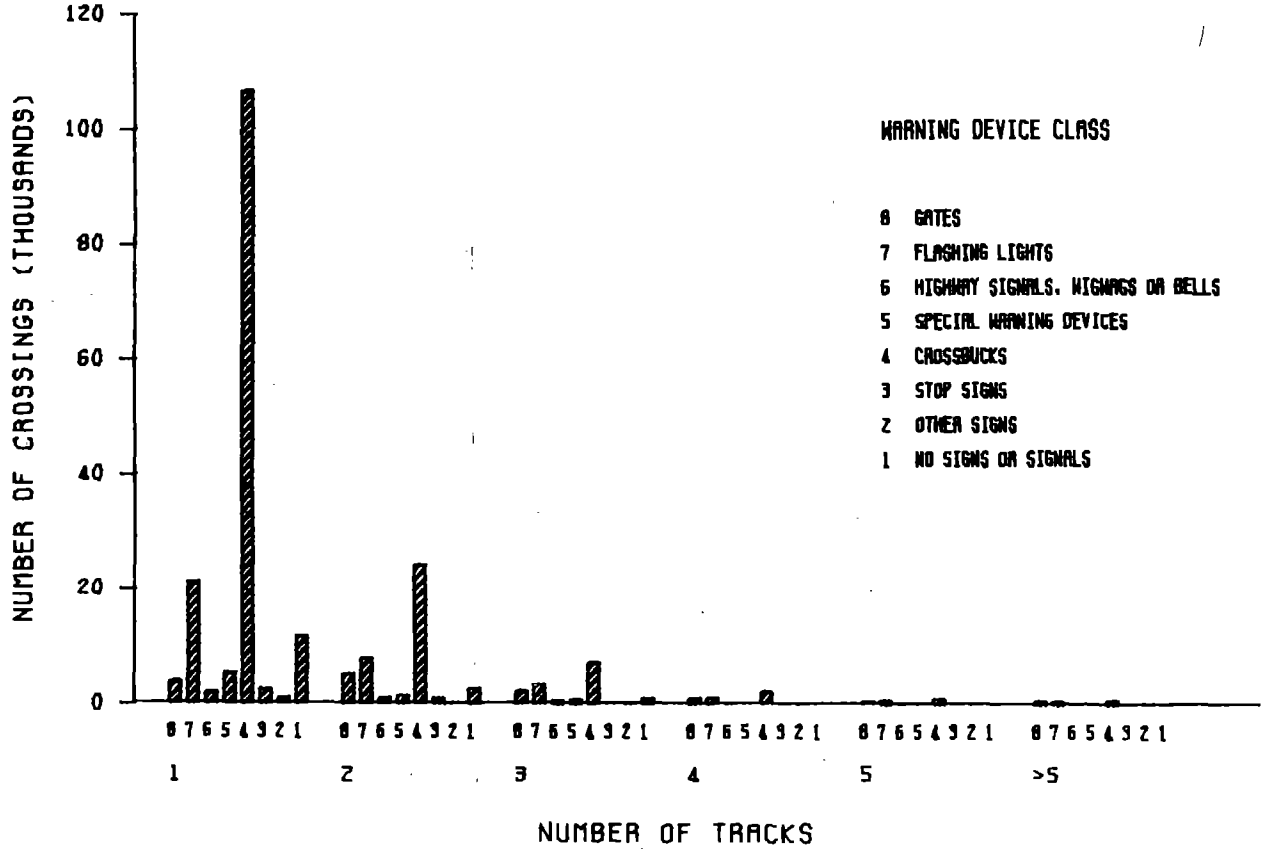

FIGURE 3-9. CROSSINGS BY NUMBER OF TRACKS VS. WARNING DEVICE CLASS

TABLE 3-13. CROSSINGS BY NUMBER OF TRACKS VS. ANNUAL AVERAGE DAILY TRAFFIC

NO. OF TRACKS	AADT 1- 250	251- 500	501- 1K	1K- 5K	5K- 10K	>10K	TOTAL
1	89128	15537	13820	23570	6955	4673	153683
2	18846	5458	5040	9020	2542	1534	42440
3	4948	1965	2059	3774	995	515	14256
4	1359	659	721	1475	375	203	4792
5	388	224	254	575	146	62	1649
>5	281	203	234	547	152	61	1478
TOTAL	114950	24046	22128	38961	11165	7048	218298

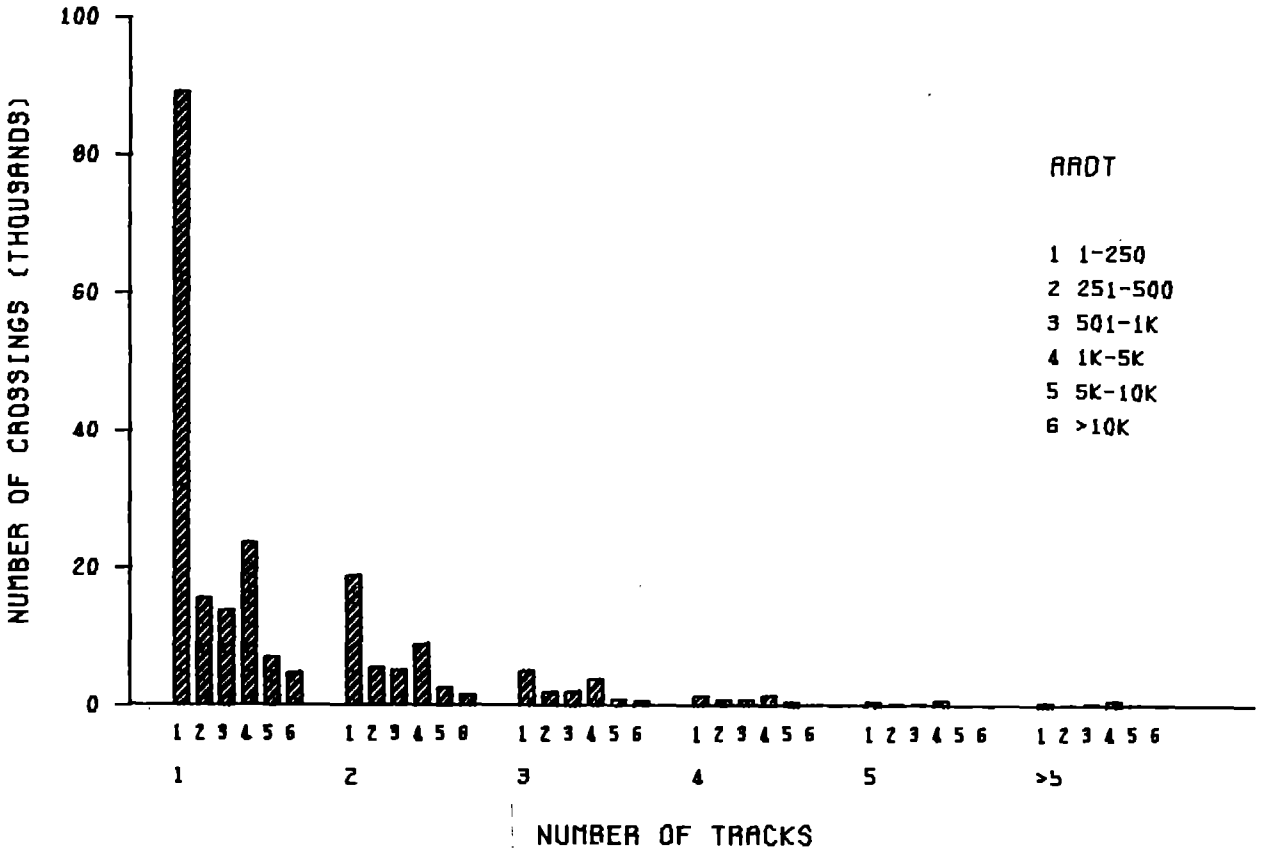

FIGURE 3-10. CROSSINGS BY NUMBER OF TRACKS VS. ANNUAL AVERAGE DAILY TRAFFIC

3.4 HIGHWAY CHARACTERISTICS

TABLE 3-14. CROSSINGS BY HIGHWAY SYSTEM

HWY SYS	NO. XINGS	HWY SYS	NO. XINGS	HWY SYS	NO. XINGS	HWY SYS	NO. XINGS
01	60	21	1	61	0	81	0
02	133	22	0	62	0	82	0
03	5242	23	1	63	1	83	0
04	5893	24	1	64	0	84	0
05	10829	25	0	65	0	85	0
06	3643	26	3	66	0	86	0
07	13866	27	1	67	0	87	0
08	2615	28	0	68	0	88	0
09	6293	29	0	69	0	89	0
10	1858	30	0	70	0	90	0
11	87270	31	0	71	0	91	0
12	73730	32	3	72	0	92	0
14	7601	34	0	74	0	94	0

HIGHWAY SYSTEM CODES

CODE	SYSTEM
01	INTERSTATE, RURAL, OPEN TO TRAFFIC
02	INTERSTATE, URBAN, OPEN TO TRAFFIC
03	OTHER FA* PRIMARY, RURAL
04	OTHER FA PRIMARY, URBAN
05	FA SECONDARY RURAL, STATE JURISDICTION
06	FA SECONDARY URBAN, STATE JURISDICTION
07	FA SECONDARY RURAL, LOCAL JURISDICTION
08	FA SECONDARY URBAN, LOCAL JURISDICTION
09	OTHER STATE HIGHWAYS, RURAL (NON-FA)
10	OTHER STATE HIGHWAYS, URBAN (NON-FA)
11	LOCAL RURAL ROADS (NON-FA)
12	LOCAL URBAN ROADS (NON-FA)
14	FEDERAL-AID URBAN

FOR TOLL ROADS ON WHICH TRUCKS ARE PERMITTED, ADD 20 TO THE APPROPRIATE SYSTEM CODE. FOR EXAMPLE, CODE 24 WOULD BE A TOLL FACILITY ON THE FEDERAL-AID PRIMARY URBAN SYSTEM.

FOR TOLL PARKWAYS ON WHICH TRUCKS ARE NOT PERMITTED, 60 SHOULD BE ADDED TO THE APPROPRIATE SYSTEM CODE.

FOR NON-TOLL ROADS ON WHICH TRUCKS ARE NOT PERMITTED, ADD 80 TO THE APPROPRIATE SYSTEM CODE.

* FA - FEDERAL AID

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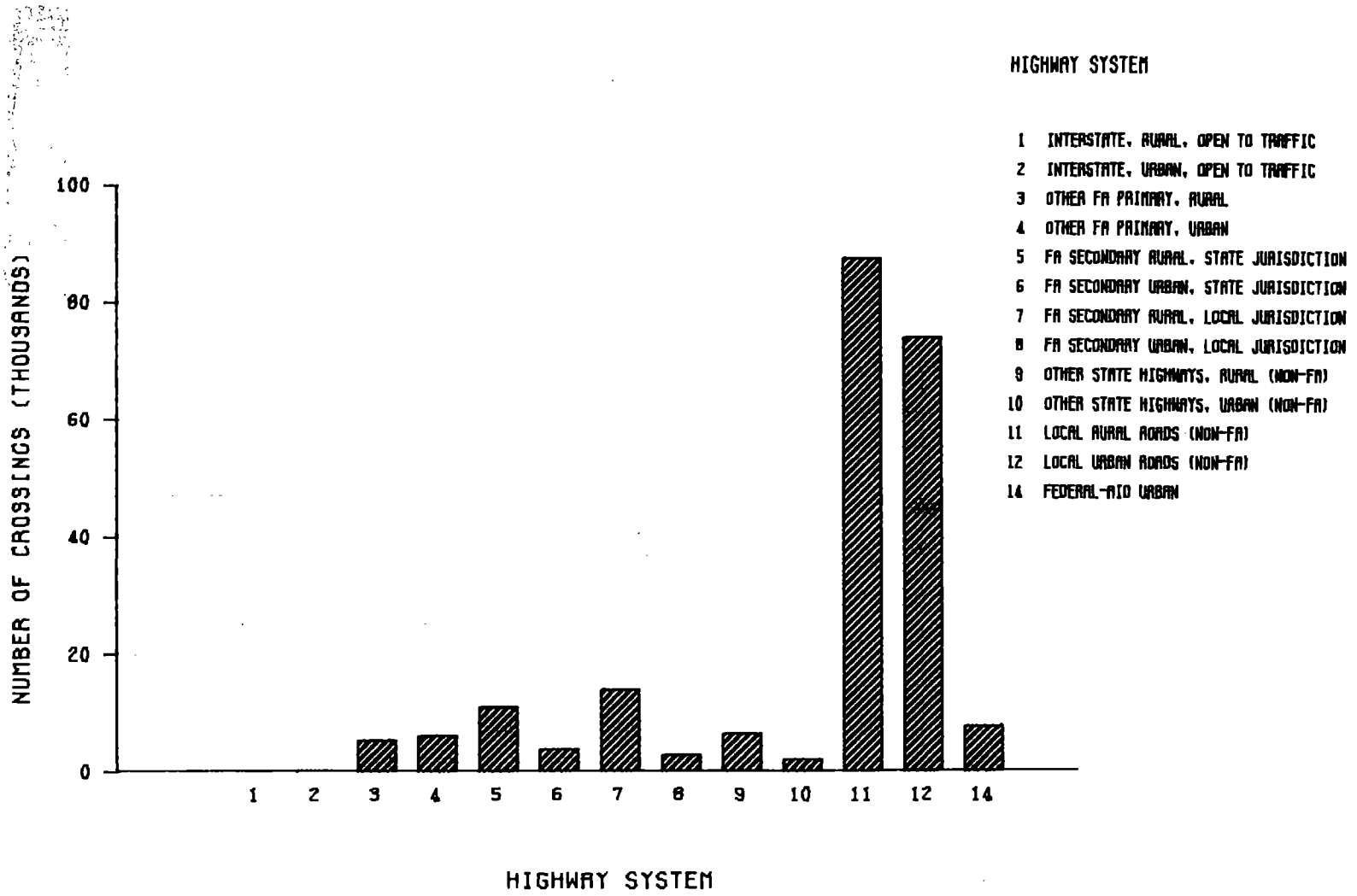

FIGURE 3-11. CROSSINGS BY HIGHWAY SYSTEM

TABLE 3-15. CROSSING BY HIGHWAY SYSTEM VS. STATE

	HIGHWAY SYSTEM													
	01	02	03	04	05	06	07	08	09	10	11	12	14	TOTAL
ALABAMA	0	0	73	289	95	44	386	71	8	6	1857	1945	33	4807
ALASKA	0	0	19	6	15	17	10	3	18	0	74	55	7	224
ARIZONA	2	6	21	22	11	2	53	28	3	3	406	387	117	1061
ARKANSAS	0	4	75	84	325	76	118	24	60	23	1548	1521	149	4107
CALIFORNIA	1	3	87	1130	108	62	314	272	18	6	2207	4391	863	9462
COLORADO	6	5	45	48	128	23	1	0	1	3	1105	905	68	2338
CONNECTICUT	0	0	9	19	18	18	4	1	12	15	106	304	61	567
DELAWARE	0	0	22	16	77	46	0	0	73	12	4	2	11	263
DIST. COLUMBIA	0	0	0	10	0	3	0	8	0	0	0	49	0	70
FLORIDA	1	3	90	90	479	228	98	17	84	80	2028	2584	81	5863
GEORGIA	2	1	103	272	185	192	336	197	11	24	2712	2881	21	6937
HAWAII	0	0	0	0	0	0	0	0	0	0	2	4	0	6
IDAHO	0	0	56	25	67	12	181	16	0	0	1230	616	8	2211
ILLINOIS	1	2	482	461	195	72	970	175	123	216	5619	5495	34	13845
INDIANA	0	0	158	240	486	293	889	180	13	10	4006	3318	547	10140
IOWA	2	1	399	132	1	0	1662	59	5	3	4601	1786	199	8850
KANSAS	0	0	306	97	123	1	1165	41	5	0	5325	2424	359	9846
KENTUCKY	0	0	108	80	493	59	33	9	232	53	1730	847	29	3673
LOUISIANA	1	1	58	104	407	128	7	1	237	124	1650	2284	6	5008
MAINE	1	0	53	54	77	21	5	1	211	60	280	328	23	1114
MARYLAND	0	0	40	29	53	8	73	39	35	6	404	218	164	1069
MASSACHUSETTS	1	1	14	112	8	4	33	92	0	0	307	381	277	1230
MICHIGAN	0	11	192	201	97	42	1152	19	0	0	3135	2722	893	8464
MINNESOTA	1	0	194	125	122	23	1119	147	1	4	3397	2960	40	8123
MISSISSIPPI	0	1	108	56	139	26	356	44	1	1	1421	1226	202	3581
MISSOURI	0	1	106	49	736	64	2	5	7	1	3751	1617	308	6647
MONTANA	4	1	81	29	0	0	188	4	0	0	1638	282	66	2293
NEBRASKA	0	0	188	59	186	6	586	50	2	0	3048	1458	90	5673
NEVADA	1	0	18	6	20	1	14	2	4	0	187	104	5	362
NEW HAMPSHIRE	0	1	47	29	46	1	0	0	42	17	166	248	121	718
NEW JERSEY	0	0	28	41	9	15	76	96	2	11	525	1195	214	2212
NEW MEXICO	0	0	11	21	76	18	4	0	19	17	442	234	33	875
NEW YORK	0	0	166	108	107	46	430	233	27	25	1792	1486	0	4420
NORTH CAROLINA	0	1	61	92	1041	277	4	5	1732	361	45	1840	16	5475
NORTH DAKOTA	0	0	173	25	88	1	631	16	0	0	4033	680	102	5749
OHIO	1	16	212	217	651	214	708	437	28	8	4568	2799	109	9968
OKLAHOMA	3	0	116	80	181	0	326	1	7	0	3270	1546	253	5783
OREGON	0	0	71	99	56	12	216	15	1	0	1045	1119	326	2960
PENNSYLVANIA	2	3	237	231	457	141	2	0	801	157	2004	2327	418	6780
RHODE ISLAND	0	0	0	7	2	5	1	16	2	10	8	64	27	142
SOUTH CAROLINA	0	1	125	175	835	859	182	5	577	289	909	495	4	4456
SOUTH DAKOTA	0	0	137	25	64	3	362	4	6	3	2013	662	103	3382
TENNESSEE	0	0	64	116	78	33	225	41	0	0	1634	1975	2	4168
TEXAS	24	66	136	314	986	380	0	0	280	172	4961	7348	0	14667
UTAH	1	0	15	12	64	46	34	17	0	10	547	615	1	1362
VERMONT	0	0	55	8	27	4	40	9	17	3	338	93	0	594
VIRGINIA	1	0	38	127	596	54	6	87	916	75	14	899	40	2853
WASHINGTON	4	1	55	36	116	30	372	126	27	1	1571	1735	216	4290
WEST VIRGINIA	0	0	111	35	547	30	32	2	623	45	346	611	0	2382
WISCONSIN	0	1	251	230	101	0	459	0	3	1	2874	2426	944	7290
WYOMING	1	2	27	10	47	6	2	0	1	0	380	132	11	619
PUERTO RICO	0	0	13	1	3	0	0	0	18	3	7	10	0	55
TOTAL	61	133	5244	5884	10829	3646	13867	2615	6293	1858	87270	73733	7601	219034

HIGHWAY SYSTEM CODES

CODE	SYSTEM	CODE	SYSTEM
01	INTERSTATE, RURAL, OPEN TO TRAFFIC	02	INTERSTATE, URBAN, OPEN TO TRAFFIC
03	OTHER FA* PRIMARY, RURAL	04	OTHER FA PRIMARY, URBAN
05	FA SECONDARY RURAL, STATE JURISDICTION	06	FA SECONDARY URBAN, STATE JURISDICTION
07	FA SECONDARY RURAL, LOCAL JURISDICTION	08	FA SECONDARY URBAN, LOCAL JURISDICTION
09	OTHER STATE HIGHWAYS, RURAL (NON-FA)	10	OTHER STATE HIGHWAYS, URBAN (NON-FA)
11	LOCAL RURAL ROADS (NON-FA)	12	LOCAL URBAN ROADS (NON-FA)
		14	FEDERAL-AID URBAN

*FEDERAL-AID

TABLE 3-16. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID/NON-FEDERAL AID) VS. STATE

	HIGHWAY SYSTEM		
	FEDERAL AID	NON FEDERAL AID	TOTAL
ALABAMA	992	3816	4808
ALASKA	77	147	224
ARIZONA	264	799	1063
ARKANSAS	855	3252	4107
CALIFORNIA	2840	6622	9462
COLORADO	350	2014	2364
CONNECTICUT	133	437	570
DELAWARE	172	91	263
DIST. COLUMBIA	21	49	70
FLORIDA	1128	4776	5904
GEORGIA	1309	5628	6937
HAWAII	0	6	6
IDAHO	365	1846	2211
ILLINOIS	2392	11453	13845
INDIANA	2793	7347	10140
IOWA	2456	6395	8851
KANSAS	2093	7754	9847
KENTUCKY	811	2862	3673
LOUISIANA	713	4295	5008
MAINE	235	879	1114
MARYLAND	406	663	1069
MASSACHUSETTS	542	688	1230
MICHIGAN	2607	5857	8464
MINNESOTA	1761	6362	8123
MISSISSIPPI	932	2649	3581
MISSOURI	1271	5376	6647
MONTANA	373	1920	2293
NEBRASKA	1165	4508	5673
NEVADA	68	295	363
NEW HAMPSHIRE	246	473	719
NEW JERSEY	479	1733	2212
NEW MEXICO	163	712	875
NEW YORK	1090	3330	4420
NORTH CAROLINA	1497	3978	5475
NORTH DAKOTA	1036	4713	5749
OHIO	2565	7403	9968
OKLAHOMA	960	4823	5783
OREGON	795	2165	2960
PENNSYLVANIA	1491	5289	6780
RHODE ISLAND	58	84	142
SOUTH CAROLINA	2186	2270	4456
SOUTH DAKOTA	698	2684	3382
TENNESSEE	559	3609	4168
TEXAS	1906	12761	14667
UTAH	190	1172	1362
VERMONT	143	451	594
VIRGINIA	961	1904	2865
WASHINGTON	956	3334	4290
WEST VIRGINIA	757	1625	2382
WISCONSIN	1986	5304	7290
WYOMING	106	513	619
PUERTO RICO	17	38	55
TOTAL	49969	169154	219123

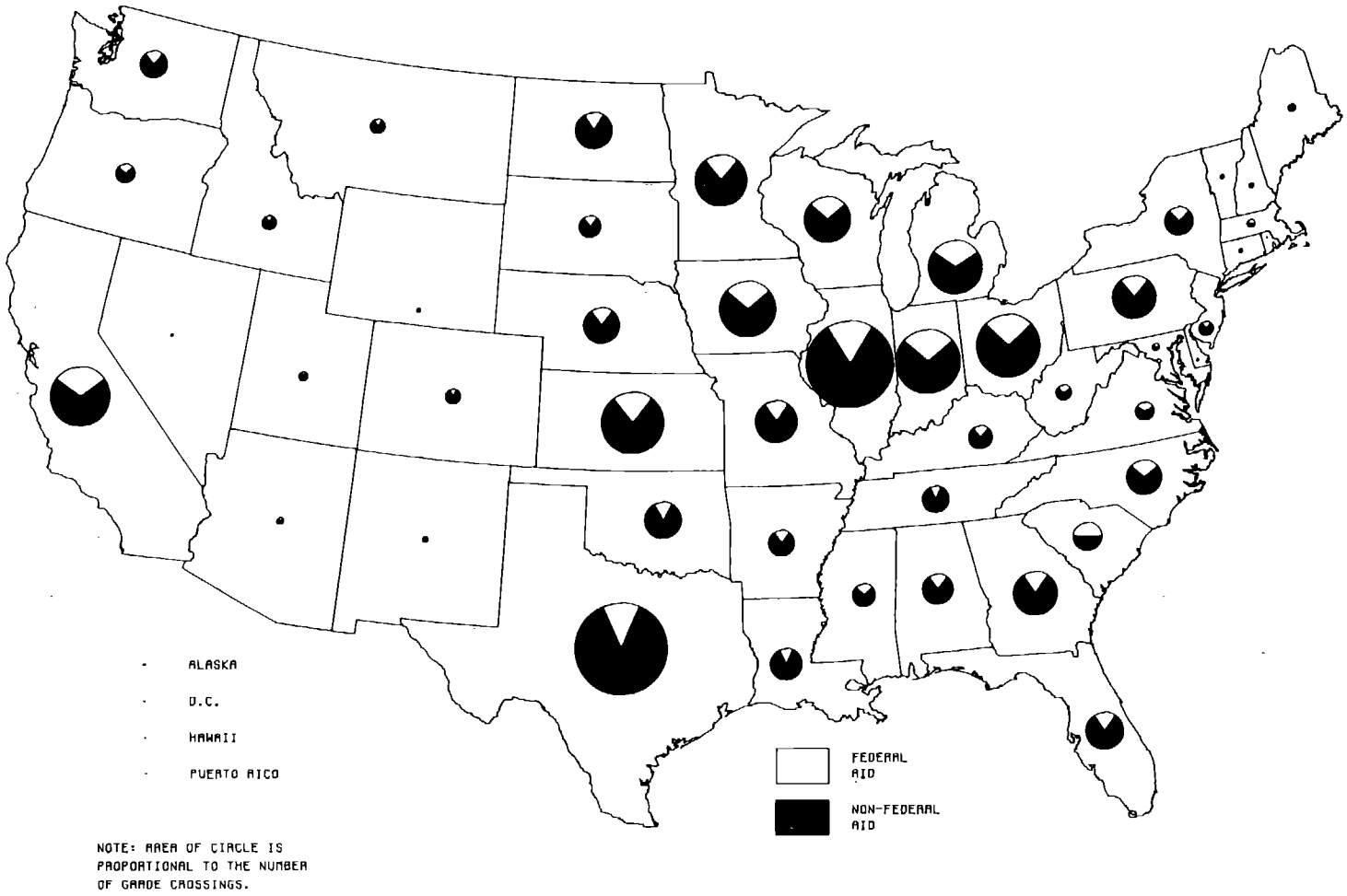

FIGURE 3-12. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID/NON-FEDERAL AID) VS. STATE

TABLE 3-17a. CROSSINGS BY HIGHWAY SYSTEM GROUP (FA & STATE, FA & NON-STATE, NON-FA AND STATE, NON-FA & NON-STATE) VS. STATE

	HIGHWAY SYSTEM GROUP				
	FA & STATE	FA & NON-STATE	NON-FA & STATE	NON-FA & NON-STAIE	TOTAL
ALABAMA	308	684	15	3801	4808
ALASKA	76	1	23	124	224
ARIZONA	61	203	7	792	1063
ARKANSAS	538	317	88	3164	4107
CALIFORNIA	390	2450	32	6590	9462
COLORADO	242	108	9	2005	2364
CONNECTICUT	77	56	25	412	570
DELAWARE	172	0	85	6	263
DIST. COLUMBIA	21	0	39	10	70
FLORIDA	938	190	173	4603	5904
GEORGIA	758	551	39	5589	6937
HAWAII	0	0	0	6	6
IDAHO	158	207	0	1846	2211
ILLINOIS	1213	1179	335	11118	13845
INDIANA	932	1861	23	7324	10140
IOWA	519	1937	10	6385	8851
KANSAS	543	1550	9	7745	9847
KENTUCKY	748	63	288	2574	3673
LOUISIANA	703	10	362	3933	5008
MAINE	203	32	20	859	1114
MARYLAND	129	277	41	622	1069
MASSACHUSETTS	43	499	1	687	1230
MICHIGAN	518	2089	1	5856	8464
MINNESOTA	452	1309	6	6356	8123
MISSISSIPPI	333	599	4	2645	3581
MISSOURI	952	319	9	5367	6647

TABLE 3-17b. CROSSINGS BY HIGHWAY SYSTEM GROUP (FA & STATE, FA & NON-STATE, NON-FA AND STATE, NON-FA & NON-STATE) VS. STATE

	HIGHWAY SYSTEM GROUP				
	FA & STATE	FA & NON-STATE	NON-FA & STATE	NON-FA & NON-STATE	TOTAL
MONTANA	361	12	3	1917	2293
NEBRASKA	444	721	3	4505	5673
NEVADA	67	1	3	292	363
NEW HAMPSHIRE	146	100	60	413	719
NEW JERSEY	182	297	24	1709	2212
NEW MEXICO	146	17	36	676	875
NEW YORK	392	698	73	3257	4420
NORTH CAROLINA	1479	18	2104	1874	5475
NORTH DAKOTA	286	750	0	4713	5749
OHIO	1278	1287	54	7349	9968
OKLAHOMA	417	543	16	4807	5783
OREGON	180	615	25	2140	2960
PENNSYLVANIA	1410	81	959	4330	6780
RHODE ISLAND	18	40	12	72	142
SOUTH CAROLINA	2153	33	893	1377	4456
SOUTH DAKOTA	231	467	10	2674	3382
TENNESSEE	271	288	0	3609	4168
TEXAS	1893	13	456	12305	14667
UTAH	136	54	10	1162	1362
VERMONT	132	11	40	411	594
VIRGINIA	823	138	870	1034	2865
WASHINGTON	248	708	2	3332	4290
WEST VIRGINIA	756	1	683	942	2382
WISCONSIN	638	1348	4	5300	7290
WYOMING	96	10	1	512	619
PUERTO RICO	17	0	21	17	55
TOTAL	25227	24742	8006	161148	219123

NOTE: FA - FEDERAL AID HIGHWAY SYSTEM
STATE - STATE HIGHWAY SYSTEM

TABLE 3-18. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID/NON-FEDERAL AID) VS. STATE AND WARNING DEVICE GROUP (ACTIVE/PASSIVE)

	FEDERAL AID HWYS			NON-FEDERAL AID HWYS		
	WARNING DEVICE GROUP			WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL	ACTIVE	PASSIVE	TOTAL
ALABAMA	395	597	992	308	3508	3816
ALASKA	40	37	77	5	142	147
ARIZONA	152	112	264	123	676	799
ARKANSAS	349	506	855	219	3033	3252
CALIFORNIA	2091	749	2840	2226	4396	6622
COLORADO	179	171	350	313	1701	2014
CONNECTICUT	81	52	133	160	277	437
DELAWARE	97	75	172	18	73	91
DIST. COLUMBIA	3	18	21	0	49	49
FLORIDA	717	411	1128	1023	3753	4776
GEORGIA	520	789	1309	344	5284	5628
HAWAII	0	0	0	0	6	6
IDAHO	150	215	365	97	1749	1846
ILLINOIS	1667	725	2392	2988	8465	11453
INDIANA	1545	1248	2793	1609	5738	7347
IOWA	860	1596	2456	655	5740	6395
KANSAS	718	1375	2093	454	7300	7754
KENTUCKY	410	401	811	482	2380	2862
LOUISIANA	383	330	713	453	3842	4295
MAINE	141	94	235	283	596	879
MARYLAND	150	256	406	136	527	663
MASSACHUSETTS	309	233	542	340	348	688
MICHIGAN	1503	1104	2607	1038	4819	5857
MINNESOTA	591	1170	1761	550	5812	6362
MISSISSIPPI	260	672	932	137	2512	2649
MISSOURI	698	573	1271	678	4698	5376
MONTANA	148	225	373	131	1789	1920
NEBRASKA	498	667	1165	286	4222	4508
NEVADA	51	17	68	45	250	295
NEW HAMPSHIRE	108	138	246	87	386	473
NEW JERSEY	323	156	479	703	1030	1733
NEW MEXICO	105	58	163	92	620	712
NEW YORK	740	350	1090	1308	2022	3330
NORTH CAROLINA	593	904	1497	443	3535	3978
NORTH DAKOTA	229	807	1036	55	4658	4713
OHIO	1500	1065	2565	1585	5818	7403
OKLAHOMA	458	502	960	395	4428	4823
OREGON	304	491	795	214	1951	2165
PENNSYLVANIA	784	707	1491	1219	4070	5289
RHODE ISLAND	21	37	58	32	52	84
SOUTH CAROLINA	367	1819	2186	85	2185	2270
SOUTH DAKOTA	150	548	698	49	2635	2684
TENNESSEE	196	363	559	414	3195	3609
TEXAS	1291	615	1906	2218	10543	12761
UTAH	103	87	190	173	999	1172
VERMONT	78	65	143	86	365	451
VIRGINIA	441	520	961	328	1576	1904
WASHINGTON	377	579	956	324	3010	3334
WEST VIRGINIA	186	571	757	182	1443	1625
WISCONSIN	1125	861	1986	799	4505	5304
WYOMING	58	48	106	68	445	513
PUERTO RICO	4	13	17	3	35	38
TOTAL	24247	25722	49969	25963	143191	169154

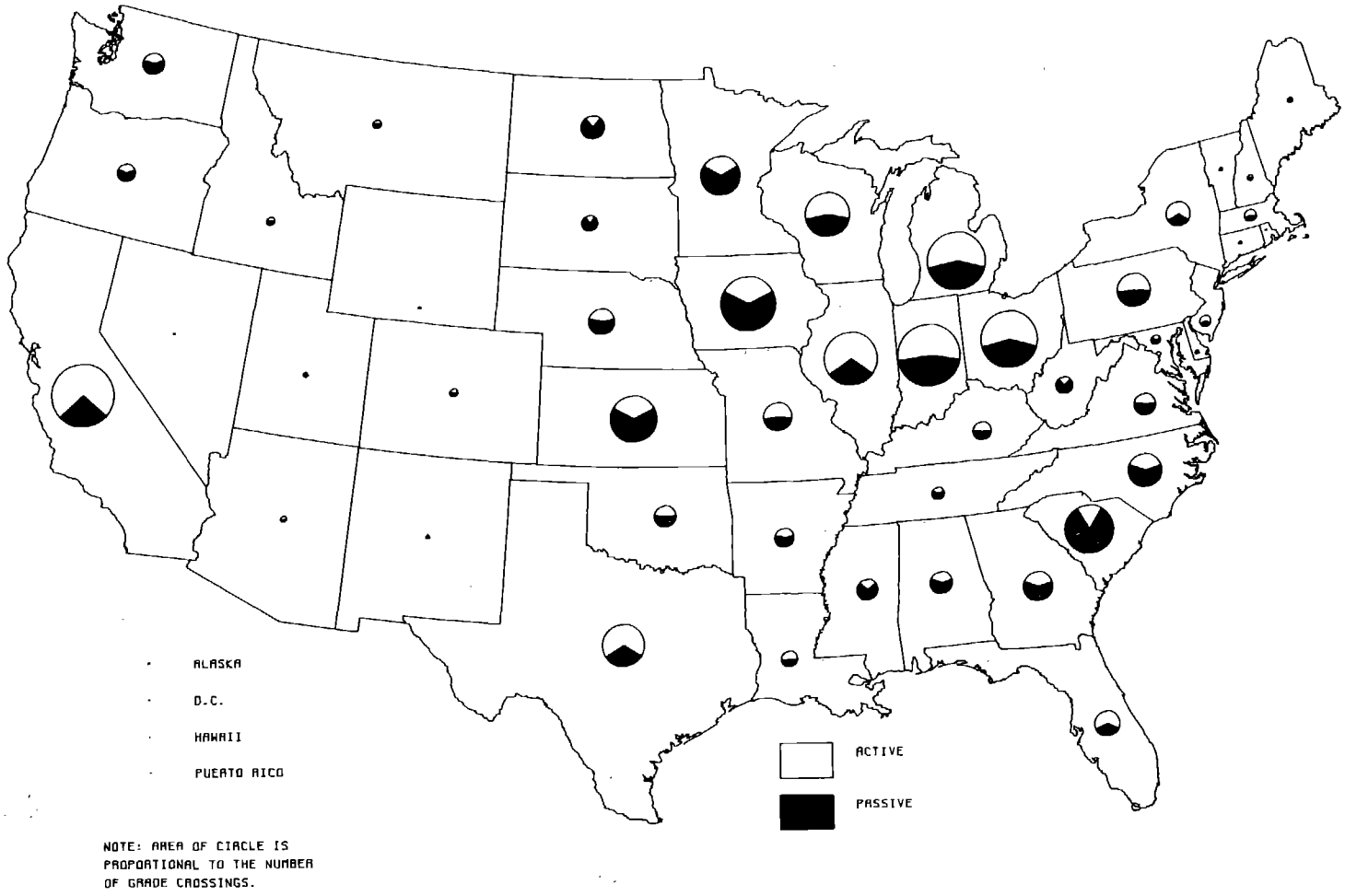

FIGURE 3-13. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID) VS. STATE AND WARNING DEVICE GROUP (ACTIVE/PASSIVE)

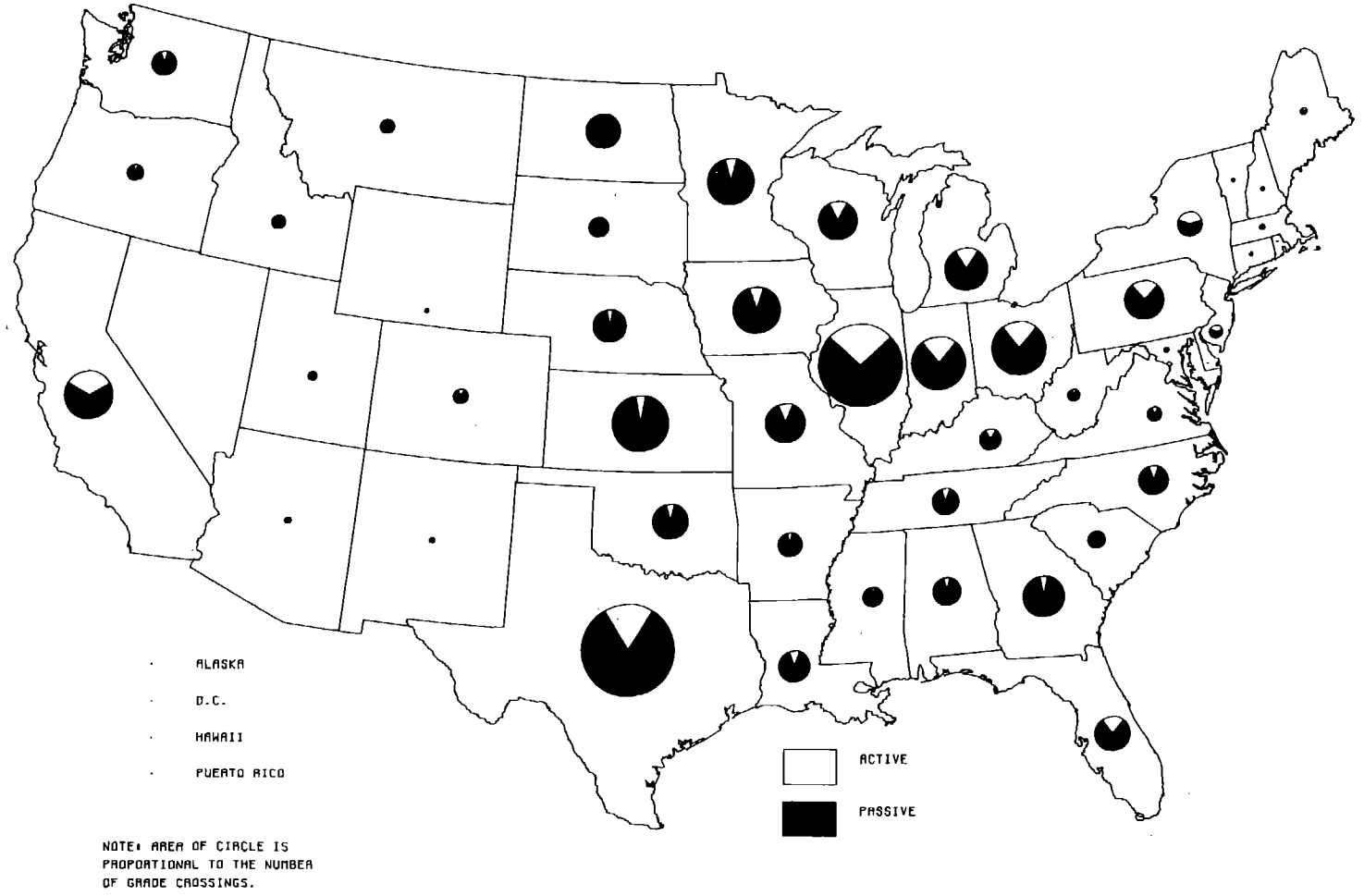

FIGURE 3-14. CROSSINGS BY HIGHWAY SYSTEM (NON-FEDERAL AID) VS. STATE AND WARNING DEVICE GROUP (ACTIVE/PASSIVE)

TABLE 3-19. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID) VS. STATE AND WARNING DEVICE CLASS

FEDERAL AID HIGHWAYS

	WARNING DEVICE CLASS								
	WDC 8	WDC 7	WDC 6	WDC 5	WDC 4	WDC 3	WDC 2	WDC 1	TOTAL
ALABAMA	51	328	16	28	498	8	1	62	992
ALASKA	1	39	0	8	26	0	0	3	77
ARIZONA	69	79	4	31	74	0	0	7	264
ARKANSAS	71	274	4	23	425	0	1	57	855
CALIFORNIA	1166	720	205	42	630	24	4	49	2840
COLORADO	40	122	17	12	141	1	0	17	350
CONNECTICUT	27	52	2	29	11	1	0	11	133
DELAWARE	28	69	0	27	35	1	0	12	172
DIST. COLUMBIA	0	3	0	7	8	0	0	3	21
FLORIDA	219	494	4	42	309	3	6	51	1128
GEORGIA	138	373	9	32	689	1	2	65	1309
HAWAII	0	0	0	0	0	0	0	0	0
IDAHO	14	134	2	1	209	0	2	3	365
ILLINOIS	408	1224	35	51	637	2	0	35	2392
INDIANA	297	1192	56	81	1040	7	2	118	2793
IOWA	163	644	53	22	1538	2	1	33	2456
KANSAS	179	495	44	61	1291	1	0	22	2093
KENTUCKY	79	315	16	27	340	0	0	34	811
LOUISIANA	55	323	5	11	258	11	0	50	713
MAINE	24	116	1	66	25	0	0	3	235
MARYLAND	35	94	21	35	131	2	5	83	406
MASSACHUSETTS	104	187	18	133	89	0	0	11	542
MICHIGAN	300	1179	24	89	972	0	6	37	2607
MINNESOTA	96	491	4	14	1133	1	0	22	1761
MISSISSIPPI	20	233	7	11	108	503	6	44	932
MISSOURI	85	589	24	28	500	1	2	42	1271
MONTANA	36	111	1	4	201	0	0	20	373
NEBRASKA	128	349	21	3	638	0	0	26	1165
NEVADA	21	28	2	0	15	0	0	2	68
NEW HAMPSHIRE	14	86	8	87	44	2	0	5	246
NEW JERSEY	130	187	6	81	64	0	0	11	479
NEW MEXICO	44	60	1	3	51	0	2	2	163
NEW YORK	188	531	21	97	227	0	4	22	1090
NORTH CAROLINA	84	500	9	50	786	1	2	65	1497
NORTH DAKOTA	46	182	1	0	779	0	0	28	1036
OHIO	391	1095	14	27	987	1	1	49	2565
OKLAHOMA	48	394	16	26	456	0	2	18	960
OREGON	162	106	36	26	393	19	1	52	795
PENNSYLVANIA	170	583	31	224	386	5	28	64	1491
RHODE ISLAND	2	9	10	16	7	3	0	11	58
SOUTH CAROLINA	102	261	4	221	1531	0	3	64	2186
SOUTH DAKOTA	0	150	0	0	541	0	0	7	698
TENNESSEE	28	162	6	60	275	3	0	25	559
TEXAS	162	1121	8	12	588	0	0	15	1906
UTAH	15	86	2	11	71	0	0	5	190
VERMONT	5	70	3	14	45	0	2	4	143
VIRGINIA	155	260	26	56	417	0	5	42	961
WASHINGTON	57	296	24	18	488	0	1	72	956
WEST VIRGINIA	30	148	8	32	506	0	0	33	757
WISCONSIN	136	817	172	88	719	0	0	54	1986
WYOMING	8	43	7	0	46	1	0	1	106
PUERTO RICO	1	1	2	13	0	0	0	0	17
TOTAL	5832.	17405	1010	2080	21378	604	89	1571	49969

WARNING DEVICE CLASS CODES

WDC 8 GATES
WDC 7 FLASHING LIGHTS
WDC 6 HIGHWAY SIGNALS, WIGWAGS OR BELLS
WDC 5 SPECIAL WARNING DEVICES
WDC 4 CROSSBUCKS
WDC 3 STOP SIGNS
WDC 2 OTHER SIGNS
WDC 1 NO SIGNS OR SIGNALS

TABLE 3-20. CROSSINGS BY HIGHWAY SYSTEM (NON-FEDERAL AID) VS. STATE AND WARNING DEVICE CLASS

NON-FEDERAL AID HIGHWAYS

	WARNING DEVICE CLASS								
	WDC 8	WDC 7	WDC 6	WDC 5	WDC 4	WDC 3	WDC 2	WDC 1	TOTAL
ALABAMA	38	262	8	28	3011	67	9	393	3816
ALASKA	0	5	0	10	119	2	1	10	147
ARIZONA	68	43	12	64	533	8	0	71	799
ARKANSAS	42	151	26	73	2517	21	0	422	3252
CALIFORNIA	1085	747	394	173	3749	73	17	384	6622
COLORADO	36	250	27	57	1507	21	2	114	2014
CONNECTICUT	21	133	6	76	74	9	3	115	437
DELAWARE	2	16	0	21	46	1	0	5	91
DIST. COLUMBIA	0	0	0	5	17	6	0	21	49
FLORIDA	519	494	10	144	3137	39	82	351	4776
GEORGIA	64	265	15	134	4687	17	9	437	5628
HAWAII	0	0	0	0	6	0	0	0	6
IDAHO	20	67	10	20	1629	7	0	93	1846
ILLINOIS	1133	1655	200	297	7573	10	2	583	11453
INDIANA	326	1159	124	203	4830	90	13	602	7347
IOWA	127	419	109	60	5390	4	0	286	6395
KANSAS	60	321	73	209	6807	1	1	282	7754
KENTUCKY	114	346	22	111	1703	8	1	557	2862
LOUISIANA	66	372	15	75	2639	316	29	783	4295
MAINE	33	216	34	104	475	0	4	13	879
MARYLAND	31	90	15	50	328	11	35	103	663
MASSACHUSETTS	60	255	25	114	194	2	2	36	688
MICHIGAN	250	728	60	195	4365	20	40	199	5857
MINNESOTA	77	457	16	31	5497	21	2	261	6362
MISSISSIPPI	3	122	12	48	287	1858	19	300	2649
MISSOURI	110	434	134	132	4105	7	1	453	5376
MONTANA	26	96	9	17	1564	4	1	203	1920
NEBRASKA	67	173	46	13	3936	4	23	246	4508
NEVADA	9	35	1	6	203	0	7	34	295
NEW HAMPSHIRE	11	68	8	93	261	7	4	21	473
NEW JERSEY	227	450	26	333	579	6	3	109	1733
NEW MEXICO	26	56	10	10	579	0	4	27	712
NEW YORK	473	752	83	422	1333	3	52	212	3330
NORTH CAROLINA	114	311	18	210	2822	16	22	465	3978
NORTH DAKOTA	12	42	1	0	4292	2	0	364	4713
OHIO	291	1211	83	88	5250	14	16	450	7403
OKLAHOMA	39	313	43	147	4083	4	9	185	4823
OREGON	94	77	43	87	1466	81	11	306	2165
PENNSYLVANIA	332	807	80	578	2446	74	423	549	5289
RHODE ISLAND	7	16	9	18	21	2	2	9	84
SOUTH CAROLINA	18	66	1	163	1789	1	15	217	2270
SOUTH DAKOTA	1	43	5	0	2522	0	1	112	2684
TENNESSEE	77	325	12	245	2148	33	2	767	3609
TEXAS	435	1639	144	96	9278	32	17	1120	12761
UTAH	27	134	12	105	746	5	50	93	1172
VERMONT	7	75	4	43	299	1	5	17	451
VIRGINIA	107	201	20	188	1068	2	10	308	1904
WASHINGTON	37	251	36	45	2487	21	11	446	3334
WEST VIRGINIA	22	148	12	20	1106	8	6	303	1625
WISCONSIN	112	421	266	155	4107	1	3	239	5304
WYOMING	8	59	1	1	383	0	1	60	513
PUERTO RICO	3	0	0	35	0	0	0	0	38
TOTAL	6867	16776	2320	5552	119993	2940	970	13736	169154

WARNING DEVICE CLASS CODES

WDC 8 GATES
WDC 7 FLASHING LIGHTS
WDC 6 HIGHWAY SIGNALS, WIGWAGS OR BELLS
WDC 5 SPECIAL WARNING DEVICES
WDC 4 CROSSBUCKS
WDC 3 STOP SIGNS
WDC 2 OTHER SIGNS
WDC 1 NO SIGNS OR SIGNALS

TABLE 3-21. CROSSINGS BY HIGHWAY SYSTEM (FEDERAL AID) VS. STATE AND ANNUAL AVERAGE DAILY TRAFFIC

	FEDERAL AID HIGHWAYS						
	AADT						
	1-250	251-500	501-1K	1K-5K	5K-10K	>10K	TOTAL
ALABAMA	178	132	134	302	129	117	992
ALASKA	10	12	20	16	12	7	77
ARIZONA	14	15	30	84	57	64	264
ARKANSAS	139	88	128	316	131	53	855
CALIFORNIA	108	100	199	883	620	929	2839
COLORADO	26	27	51	136	42	49	331
CONNECTICUT	3	3	5	52	41	26	130
DELAWARE	11	16	21	76	24	24	172
DIST. COLUMBIA	1	0	3	3	3	11	21
FLORIDA	120	105	119	347	180	216	1087
GEORGIA	166	129	175	514	223	102	1309
HAWAII	0	0	0	0	0	0	0
IDAHO	74	76	57	109	31	18	365
ILLINOIS	312	306	373	841	298	262	2392
INDIANA	641	256	521	853	299	222	2792
IOWA	1036	342	328	546	140	63	2455
KANSAS	699	310	322	563	137	62	2093
KENTUCKY	69	98	143	342	89	68	809
LOUISIANA	44	55	105	299	135	74	712
MAINE	3	12	27	118	32	42	234
MARYLAND	19	32	24	128	104	99	406
MASSACHUSETTS	4	10	27	233	142	126	542
MICHIGAN	270	275	342	934	397	389	2607
MINNESOTA	593	328	279	396	109	56	1761
MISSISSIPPI	217	118	139	318	91	46	929
MISSOURI	258	201	223	379	129	81	1271
MONTANA	85	69	60	120	20	19	373
NEBRASKA	410	204	178	260	72	41	1165
NEVADA	23	8	6	18	4	9	68
NEW HAMPSHIRE	8	16	19	133	50	20	246
NEW JERSEY	0	8	15	113	165	178	479
NEW MEXICO	31	21	25	49	23	14	163
NEW YORK	190	30	251	400	130	82	1083
NORTH CAROLINA	173	206	242	582	205	87	1495
NORTH DAKOTA	488	169	157	170	37	15	1036
OHIO	344	245	339	1073	381	182	2564
OKLAHOMA	254	135	118	282	89	82	960
OREGON	104	84	109	328	116	54	795
PENNSYLVANIA	28	65	120	622	371	284	1490
RHODE ISLAND	11	1	3	15	14	14	58
SOUTH CAROLINA	780	324	273	506	192	110	2185
SOUTH DAKOTA	285	116	105	129	37	26	698
TENNESSEE	60	74	69	182	93	81	559
TEXAS	238	242	279	687	288	172	1906
UTAH	31	30	26	67	18	18	190
VERMONT	19	6	25	67	15	10	142
VIRGINIA	161	126	148	278	128	101	942
WASHINGTON	159	104	108	345	134	106	956
WEST VIRGINIA	144	108	121	315	52	17	757
WISCONSIN	115	194	263	861	330	223	1986
WYOMING	30	16	21	21	10	8	106
PUERTO RICO	0	0	0	5	7	5	17
TOTAL	9186	5647	6875	16416	6576	5164	49864

TABLE 3-22. CROSSINGS BY HIGHWAY SYSTEM (NON-FEDERAL AID) VS. STATE AND ANNUAL AVERAGE DAILY TRAFFIC

	NON-FEDERAL AID HIGHWAYS						
	AADT						
	1-250	251-500	501-1K	1K-5K	5K-10K	>10K	TOTAL
ALABAMA	2175	549	400	600	82	9	3815
ALASKA	108	22	11	4	2	0	147
ARIZONA	452	100	112	113	17	5	799
ARKANSAS	2122	346	320	407	43	14	3252
CALIFORNIA	2030	1140	1060	1762	444	182	6618
COLORADO	1242	198	170	299	77	26	2012
CONNECTICUT	90	75	88	155	22	7	437
DELAWARE	48	18	7	9	3	0	85
DIST. COLUMBIA	0	5	24	19	1	0	49
FLORIDA	1905	681	502	1160	312	214	4774
GEORGIA	3631	618	410	735	163	63	5620
HAWAII	6	0	0	0	0	0	6
IDAHO	1411	199	92	123	14	7	1846
ILLINOIS	7534	1499	761	1127	308	221	11450
INDIANA	5911	85	960	329	46	16	7347
IOWA	4350	582	430	824	142	41	6369
KANSAS	6308	546	332	429	85	30	7730
KENTUCKY	1836	335	211	380	74	24	2860
LOUISIANA	2099	981	483	513	134	77	4287
MAINE	463	134	122	140	7	2	868
MARYLAND	181	137	128	178	17	21	662
MASSACHUSEITS	205	243	90	133	14	3	688
MICHIGAN	3534	665	576	834	164	83	5856
MINNESOTA	5493	189	180	373	96	30	6361
MISSISSIPPI	1804	331	188	275	39	8	2645
MISSOURI	3996	507	309	467	70	26	5375
MONTANA	1655	96	57	96	12	0	1916
NEBRASKA	3856	245	170	205	29	3	4508
NEVADA	215	22	21	22	6	5	291
NEW HAMPSHIRE	308	64	46	51	3	1	473
NEW JERSEY	29	354	290	828	207	24	1732
NEW MEXICO	541	58	42	62	5	4	712
NEW YORK	1673	30	802	555	168	81	3309
NORTH CAROLINA	1447	846	678	854	128	24	3977
NORTH DAKOTA	4360	145	86	97	14	0	4702
OHIO	4211	931	770	1132	267	81	7392
OKLAHOMA	3513	464	277	447	77	42	4820
OREGON	1201	373	250	280	48	13	2165
PENNSYLVANIA	1991	897	782	1330	243	42	5285
RHODE ISLAND	23	15	9	18	16	3	84
SOUTH CAROLINA	1573	189	170	281	50	7	2270
SOUTH DAKOTA	2424	97	61	84	14	4	2684
TENNESSEE	1938	393	435	615	154	74	3609
TEXAS	6987	1374	1181	2422	522	275	12761
UTAH	599	183	121	201	42	26	1172
VERMONT	287	53	40	54	8	5	447
VIRGINIA	878	261	192	332	80	38	1781
WASHINGTON	2116	349	278	478	88	25	3334
WEST VIRGINIA	1145	190	98	102	21	4	1560
WISCONSIN	3636	601	429	609	25	4	5304
WYOMING	421	21	20	43	8	0	513
PUERTO RICO	13	3	8	14	0	0	38
TOTAL	105974	18439	15279	22600	4611	1894	168797

TABLE 3-23. CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD OVER CROSSING

CL*	XINGS	CL	XINGS	CL	XINGS	CL	XINGS	CL	XINGS
01	29	11	16	21	1	31	7	41	36
02	1586	12	110	22	111	32	68	42	377
03	5364	13	1190	23	1384	33	785	43	4831
04	12943	14	1661	24	2131	34	1211	44	7935
05	15399	15	1767	25	1972	35	1158	45	6267
06	103747	16	6417	26	7955	36	4847	46	27648

*FUNCTIONAL CLASSIFICATION (CL) CODES

RURAL CODES		URBAN CODES				
			URBAN POPULATION (THOUSANDS)			
			05-10	10-25	25-50	>50
INTERSTATE	01	INTERSTATE	11	21	31	41
OTHER PRINCIPAL ARTERIAL	02	OTHER FREEWAY AND EXPRESSWAY	12	22	32	42
MINOR ARTERIAL	03	OTHER PRINCIPAL ARTERIAL	13	23	33	43
MAJOR COLLECTOR	04	MINOR ARTERIAL	14	24	34	44
MINOR COLLECTOR	05	COLLECTOR	15	25	35	45
LOCAL	06	LOCAL	16	26	36	46

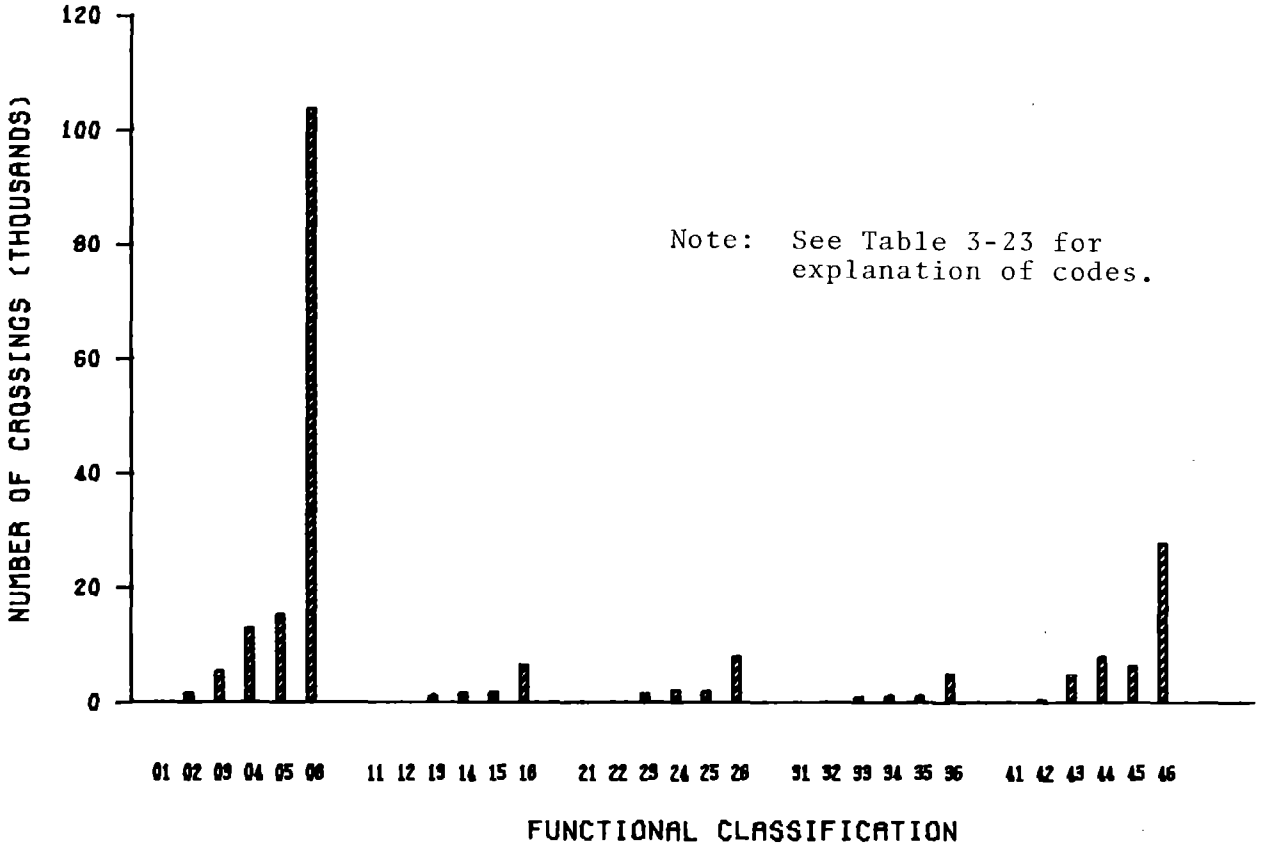

FIGURE 3-15. CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD OVER CROSSING

TABLE 3-24. CROSSINGS BY NUMBER OF TRAFFIC LANES

NO. LANES	NO. XINGS
1	38355
2	168164
3	1208
4	10142
5	441
>5	708

NOTE: TOTAL OF LANES IN BOTH DIRECTIONS

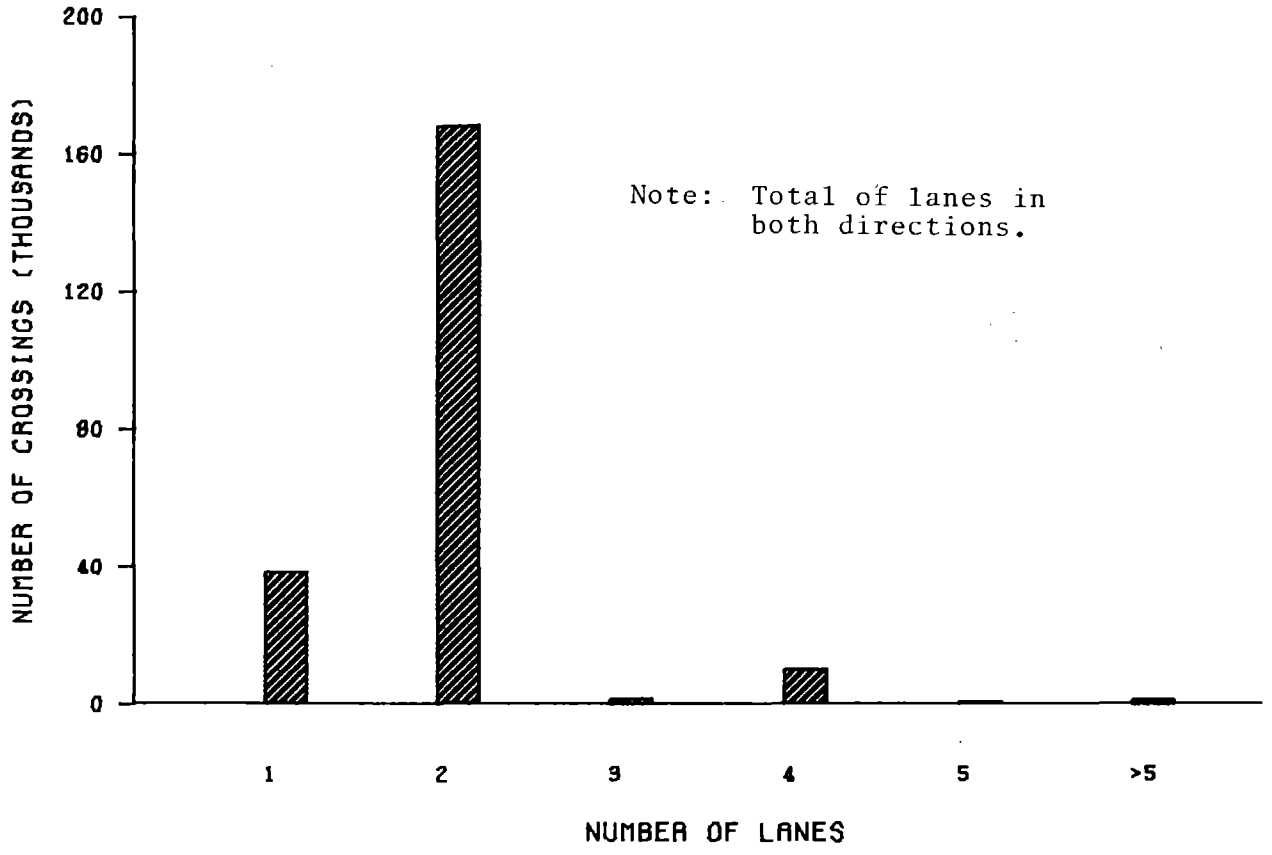

FIGURE 3-16. CROSSINGS BY NUMBER OF TRAFFIC LANES

TABLE 3-25. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. STATE

	NO. OF LANES						
	1	2	3	4	5	>5	TOTAL
ALABAMA	999	3548	25	217	8	11	4808
ALASKA	29	186	1	7	1	0	224
ARIZONA	164	769	6	95	9	20	1063
ARKANSAS	1113	2929	14	50	0	1	4107
CALIFORNIA	525	6673	192	1647	178	247	9462
COLORADO	177	1997	18	148	4	6	2350
CONNECTICUT	53	487	5	24	0	0	569
DELAWARE	4	237	3	18	0	1	263
DIST. COLUMBIA	5	56	0	6	0	3	70
FLORIDA	337	4888	68	466	33	47	5839
GEORGIA	1425	5265	29	211	0	7	6937
HAWAII	0	6	0	0	0	0	6
IDAHO	644	1480	8	74	2	3	2211
ILLINOIS	2643	10422	49	700	13	18	13845
INDIANA	2075	7586	47	414	6	12	10140
IOWA	1992	6623	22	205	2	7	8851
KANSAS	2403	7127	7	306	0	4	9847
KENTUCKY	1143	2456	7	66	1	0	3673
LOUISIANA	736	4034	15	198	7	18	5008
MAINE	70	1027	3	14	0	0	1114
MARYLAND	168	820	10	65	1	5	1069
MASSACHUSETTS	49	1113	7	60	1	0	1230
MICHIGAN	679	7021	67	624	28	45	8464
MINNESOTA	1403	6450	15	253	2	0	8123
MISSISSIPPI	489	2971	8	106	2	5	3581
MISSOURI	1848	4642	8	142	2	5	6647
MONTANA	317	1945	5	25	1	0	2293
NEBRASKA	1539	4030	4	95	2	3	5673
NEVADA	142	187	0	26	0	1	356
NEW HAMPSHIRE	45	643	4	24	2	1	719
NEW JERSEY	135	1915	11	144	2	5	2212
NEW MEXICO	313	526	2	28	3	3	875
NEW YORK	431	3820	24	135	4	6	4420
NORTH CAROLINA	356	4864	36	199	9	11	5475
NORTH DAKOTA	1302	4410	0	37	0	0	5749
OHIO	1468	8069	74	330	14	13	9968
OKLAHOMA	1030	4464	6	275	6	2	5783
OREGON	366	2442	48	98	3	3	2960
PENNSYLVANIA	1059	5358	127	206	2	28	6780
RHODE ISLAND	6	115	0	21	0	0	142
SOUTH CAROLINA	774	3492	15	158	8	9	4456
SOUTH DAKOTA	918	2391	5	64	1	3	3382
TENNESSEE	778	3152	22	197	14	5	4168
TEXAS	2716	10586	72	1160	35	98	14667
UTAH	260	1007	0	84	1	10	1362
VERMONT	135	447	4	8	0	0	594
VIRGINIA	610	2138	16	69	6	8	2847
WASHINGTON	445	3385	70	351	24	15	4290
WEST VIRGINIA	1224	1139	8	10	0	1	2382
WISCONSIN	651	6342	19	257	3	18	7290
WYOMING	160	431	2	25	1	0	619
PUERTO RICO	2	53	0	0	0	0	55
TOTAL	38355	168164	1208	10142	441	708	219018

NOTE: TOTAL OF LANES IN BOTH DIRECTIONS

TABLE 3-26. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

NO. OF LANES	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
1	1268	37087	38355
2	41008	127156	168164
3	646	562	1208
4	6382	3760	10142
5	354	87	441
>5	527	181	708
TOTAL	50185	168833	219018

NOTE: TOTAL OF LANES IN BOTH DIRECTIONS

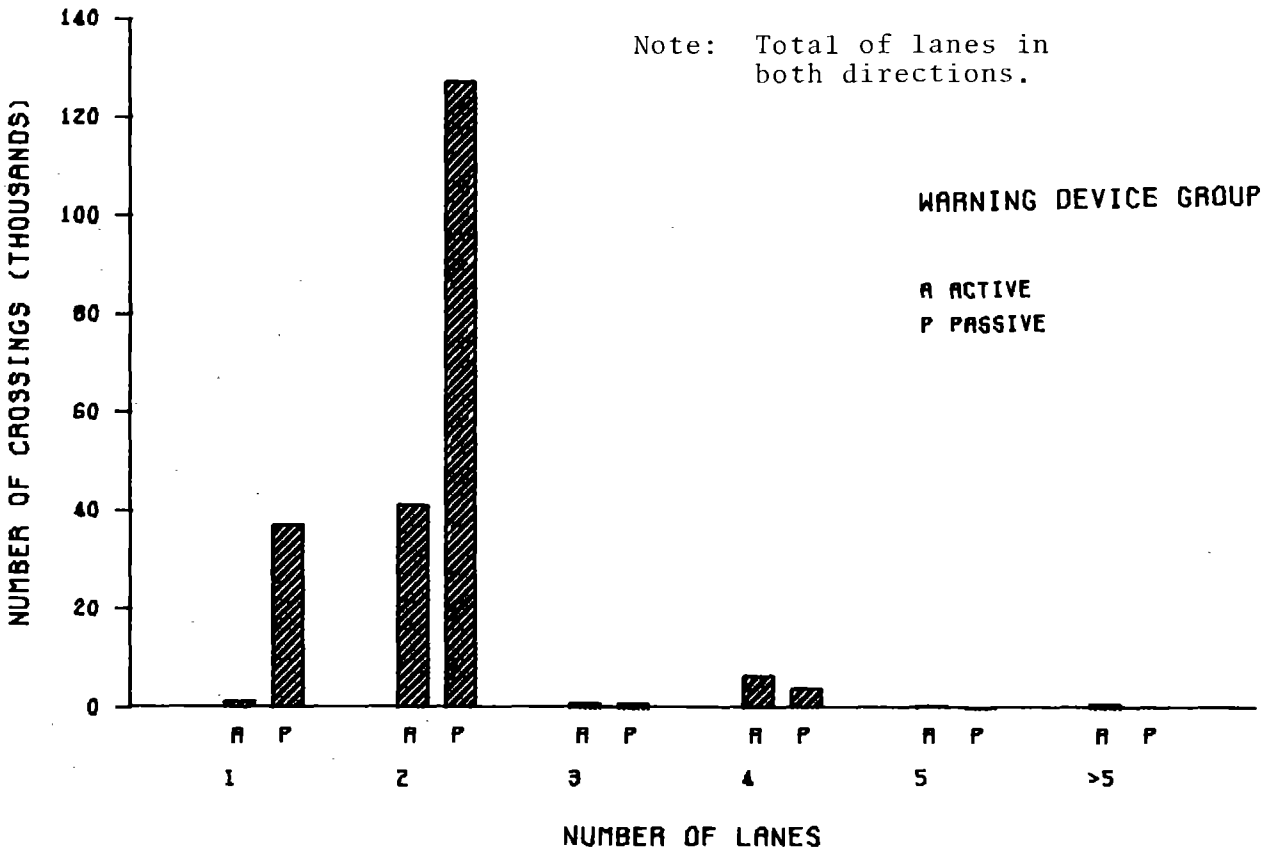

FIGURE 3-17. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. WARNING DEVICE GROUP (ACTIVE/ PASSIVE)

TABLE 3-27. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	NO. OF LANES 1	2	3	4	5	>5	TOTAL
GATES	174	9825	216	2108	150	217	12692
FLASHING LIGHTS	783	28557	386	4001	176	261	34164
HWY. SIGNALS, WIGWAGS, BELLS	311	2626	42	273	28	49	3329
SPECIAL WARNING DEVICES	535	6169	130	717	21	38	7610
CROSSBUCKS	31650	106885	306	2336	48	108	141333
STOP SIGNS	553	2908	11	64	1	7	3544
OTHER SIGNS	243	786	7	19	0	2	1057
NO SIGNS OR SIGNALS	4106	10408	108	624	17	26	15289
TOTAL	38355	168164	1208	10142	441	708	219018

NOTE: TOTAL OF LANES IN BOTH DIRECTIONS

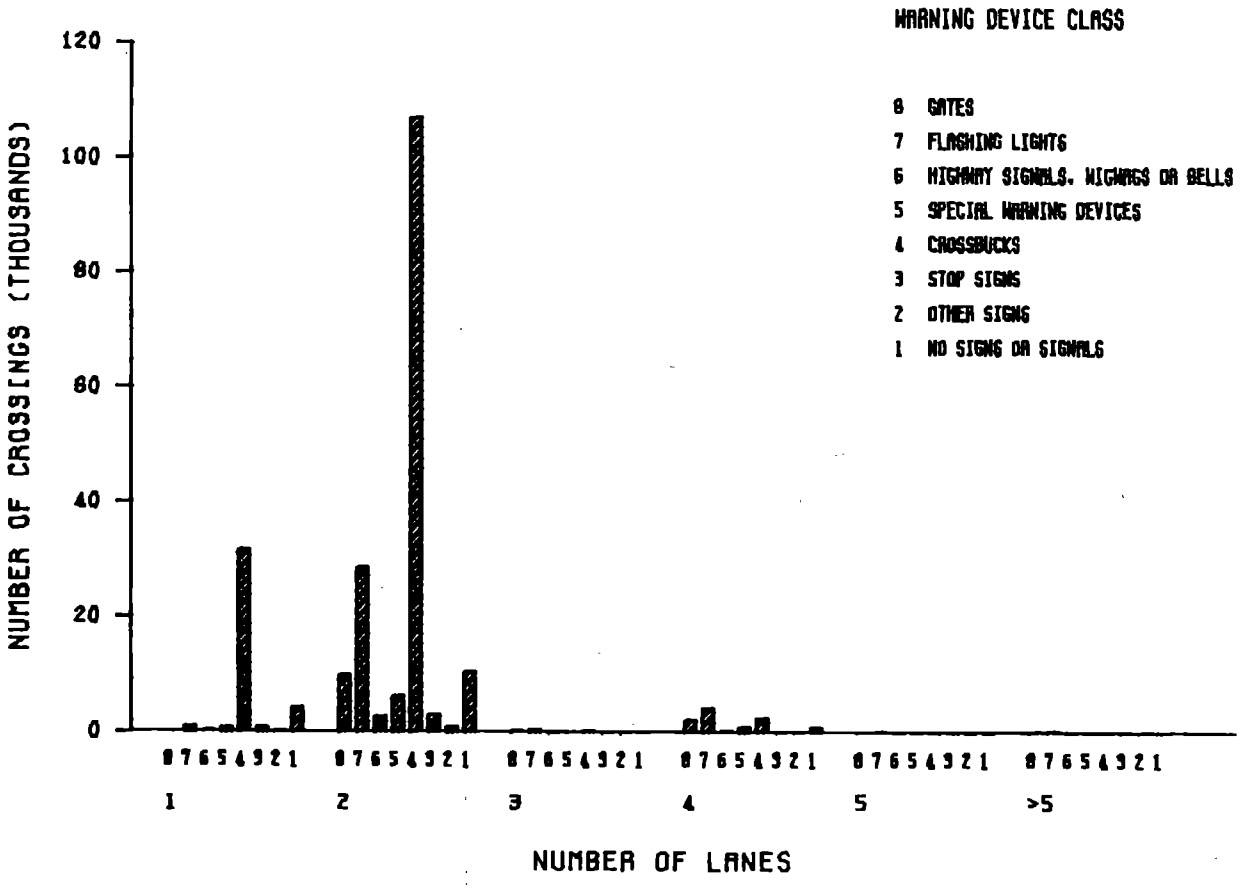

FIGURE 3-18. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. WARNING DEVICE CLASS

TABLE 3-28. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. ANNUAL AVERAGE DAILY TRAFFIC

NO. OF LANES	AADT 1- 250	251- 500	501- 1K	1K- 5K	5K- 10K	>10K	TOTAL
1	34099	1823	1015	969	207	92	38205
2	80278	21856	20535	34959	7752	2483	167863
3	117	54	82	360	346	247	1206
4	599	328	482	2570	2676	3479	10134
5	9	3	10	47	91	281	441
>5	28	7	20	72	105	476	708
TOTAL	115130	24071	22144	38977	11177	7058	218557

NOTE: TOTAL OF LANES IN BOTH DIRECTIONS

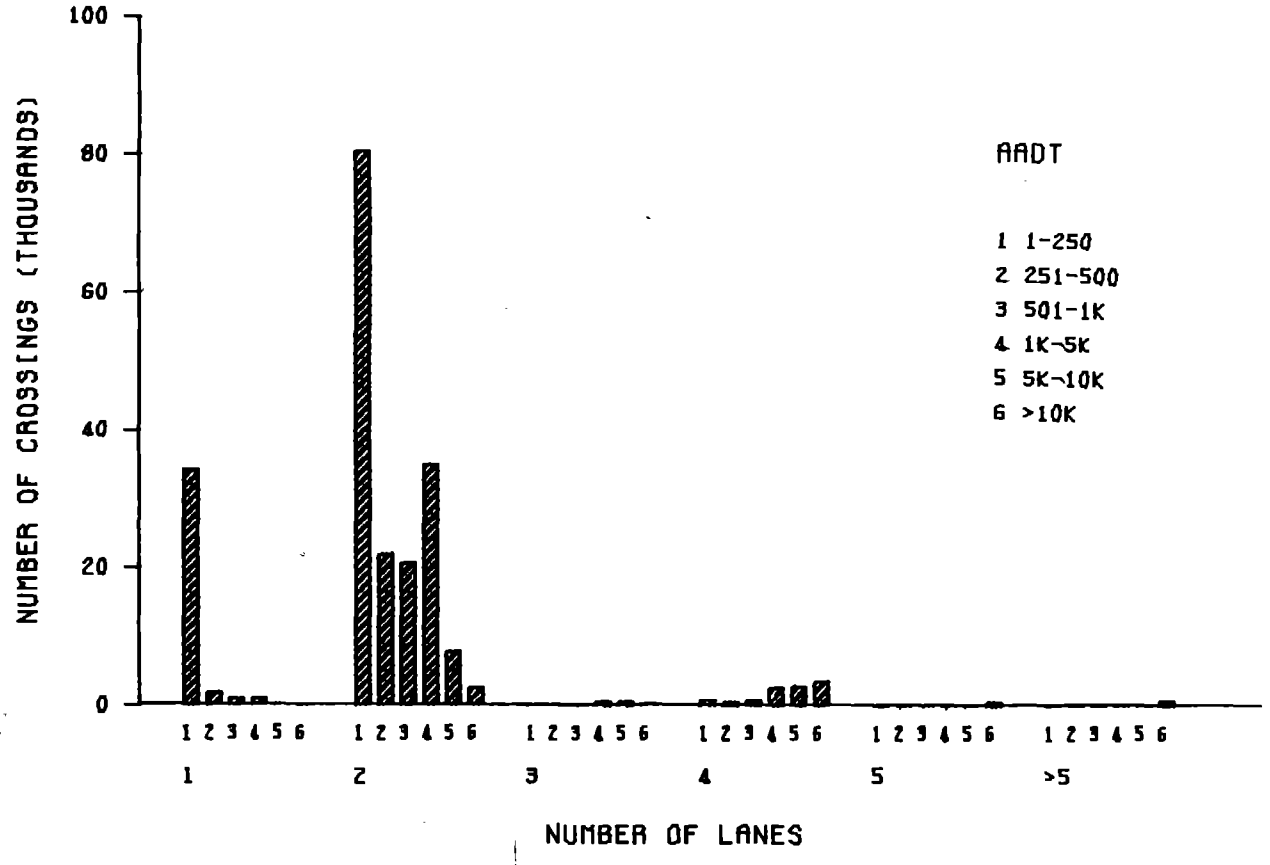

FIGURE 3-19. CROSSINGS BY NUMBER OF TRAFFIC LANES VS. ANNUAL AVERAGE DAILY TRAFFIC

3.5 CHARACTERISTICS OF WARNING DEVICES

TABLE 3-29. CROSSINGS BY WARNING DEVICE VS. HIGHEST WARNING DEVICE CLASS

WARNING DEVICES PRESENT*	HIGHEST WARNING DEVICE CLASS								
	WDC 8	WDC 7	WDC 6	WDC 5	WDC 4	WDC 3	WDC 2	WDC 1	TOTAL
REFLECTORIZED CROSSBUCKS	2529	8091	1806	3376	110033	0	0	0	125835
NON-REFLECTORIZED CROSSBUCKS	432	1717	706	1709	35433	0	0	0	39997
STANDARD HIGHWAY STOP SIGNS	252	858	181	289	9271	954	0	0	11805
OTHER STOP SIGNS	324	1044	41	106	1641	2666	0	0	5822
OTHER SIGNS	1076	2436	215	447	6003	285	1081	0	11543
RED AND WHITE REFLECTORIZED GATES	7377	0	0	0	0	0	0	0	7377
OTHER COLORED GATES	6249	0	0	0	0	0	0	0	6249
CANTILEVERED FLASHING LIGHTS OVER TRAFFIC LANES .	1331	4494	0	0	0	0	0	0	5825
CANTILEVERED FLASHING LIGHTS NOT OVER TRAFFIC LANES	260	949	0	0	0	0	0	0	1209
MAST MOUNTED FLASHING LIGHTS	10459	31733	0	0	0	0	0	0	42192
OTHER FLASHING LIGHTS	667	1160	0	0	0	0	0	0	1827
HIGHWAY TRAFFIC SIGNALS	193	292	492	0	0	0	0	0	977
WIGWAGS	22	138	1950	0	0	0	0	0	2110
BELLS	10325	18552	2643	0	0	0	0	0	31520
SPECIAL WARNING DEVICES	0	0	0	7632	0	0	0	0	7632
NO WARNING DEVICES PRESENT	0	0	0	0	0	0	0	15307	15307

WARNING DEVICE CLASS CODES

WDC 8 GATES
WDC 7 FLASHING LIGHTS
WDC 6 HIGHWAY SIGNALS, WIGWAGS OR BELLS
WDC 5 SPECIAL WARNING DEVICES
WDC 4 CROSSBUCKS
WDC 3 STOP SIGNS
WDC 2 OTHER SIGNS
WDC 1 NO SIGNS OR SIGNALS

*INDICATES AT LEAST ONE DEVICE PRESENT

TABLE 3-30. CROSSINGS BY WARNING DEVICE CLASS

CLASS CODE	WARNING DEVICE CLASS	NO. XINGS
8	GATES	12699
7	FLASHING LIGHTS	34181
6	HIGHWAY SIGNALS, WIGWAGS OR BELLS	3330
5	SPECIAL WARNING DEVICES	7632
4	CROSSBUCKS	141371
3	STOP SIGNS	3544
2	OTHER SIGNS	1059
1	NO SIGNS OR SIGNALS	15307

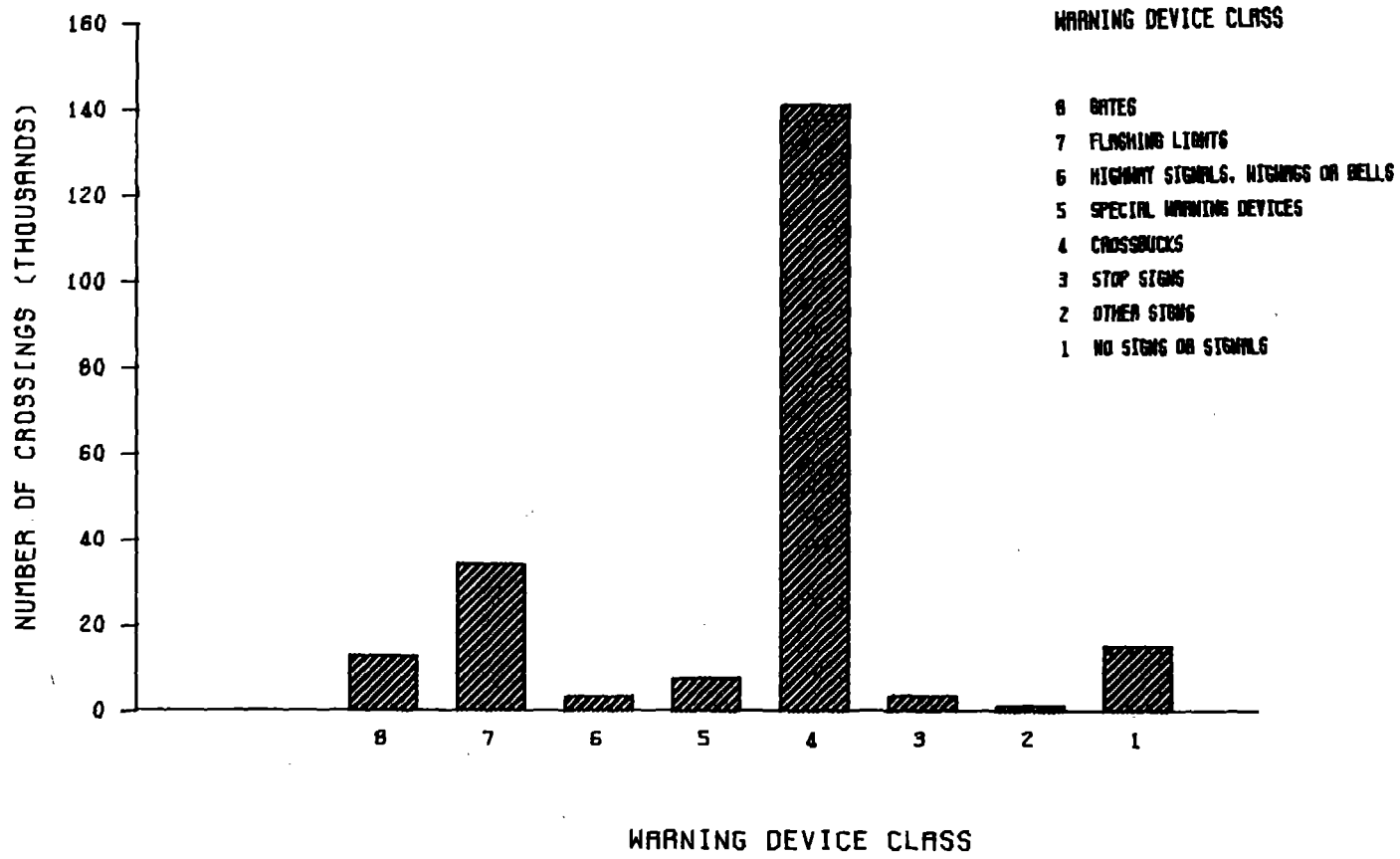

FIGURE 3-20. CROSSINGS BY WARNING DEVICE CLASS

TABLE 3-31. CROSSINGS BY WARNING DEVICE GROUP (ACTIVE/PASSIVE) VS. STATE

	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
ALABAMA	703	4105	4808
ALASKA	45	179	224
ARIZONA	275	788	1063
ARKANSAS	568	3539	4107
CALIFORNIA	4317	5145	9462
COLORADO	492	1872	2364
CONNECTICUT	241	329	570
DELAWARE	115	148	263
DIST. COLUMBIA	3	67	70
FLORIDA	1740	4164	5904
GEORGIA	864	6073	6937
HAWAII	0	6	6
IDAHO	247	1964	2211
ILLINOIS	4655	9190	13845
INDIANA	3154	6986	10140
IOWA	1515	7336	8851
KANSAS	1172	8675	9847
KENTUCKY	892	2781	3673
LOUISIANA	836	4172	5008
MAINE	424	690	1114
MARYLAND	286	783	1069
MASSACHUSETTS	649	581	1230
MICHIGAN	2541	5923	8464
MINNESOTA	1141	6982	8123
MISSISSIPPI	397	3184	3581
MISSOURI	1376	5271	6647
MONTANA	279	2014	2293
NEBRASKA	784	4889	5673
NEVADA	96	267	363
NEW HAMPSHIRE	195	524	719
NEW JERSEY	1026	1186	2212
NEW MEXICO	197	678	875
NEW YORK	2048	2372	4420
NORTH CAROLINA	1036	4439	5475
NORTH DAKOTA	284	5465	5749
OHIO	3085	6883	9968
OKLAHOMA	853	4930	5783
OREGON	518	2442	2960
PENNSYLVANIA	2003	4777	6780
RHODE ISLAND	53	89	142
SOUTH CAROLINA	452	4004	4456
SOUTH DAKOTA	199	3183	3382
TENNESSEE	610	3558	4168
TEXAS	3509	11158	14667
UTAH	276	1086	1362
VERMONT	164	430	594
VIRGINIA	769	2096	2865
WASHINGTON	701	3589	4290
WEST VIRGINIA	368	2014	2382
WISCONSIN	1924	5366	7290
WYOMING	126	493	619
PUERTO RICO	7	48	55
TOTAL	50210	168913	219123

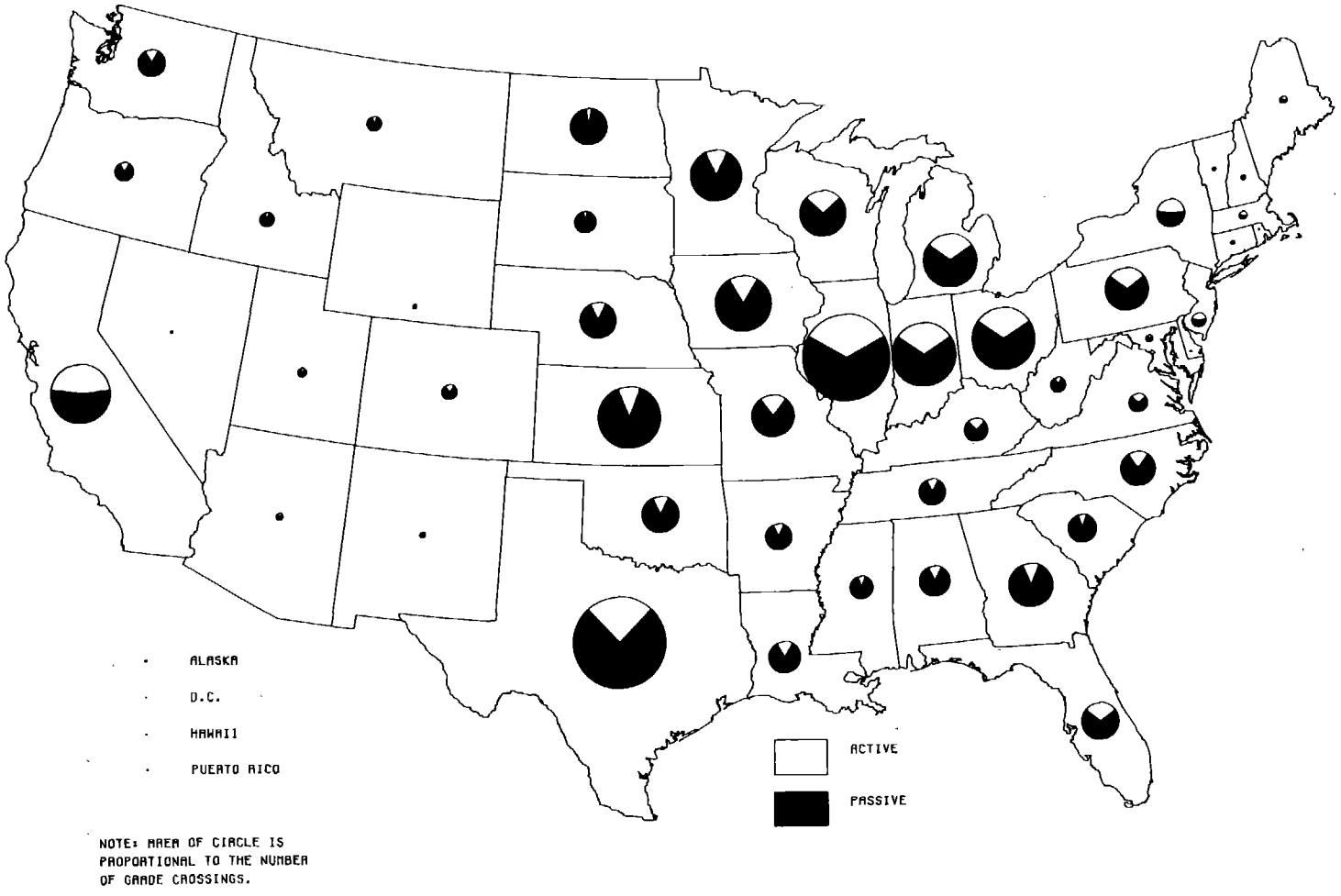

FIGURE 3-21. CROSSINGS BY WARNING DEVICE GROUP (ACTIVE/PASSIVE) VS. STATE

TABLE 3-32. CROSSINGS BY WARNING DEVICE CLASS VS. STATE

	WARNING DEVICE CLASS								
	WDC 8	WDC 7	WDC 6	WDC 5	WDC 4	WDC 3	WDC 2	WDC 1	TOTAL
ALABAMA	89	590	24	56	3509	75	10	455	4809
ALASKA	1	44	0	18	145	2	1	13	224
ARIZONA	137	122	16	95	607	8	0	78	1063
ARKANSAS	113	425	30	96	2942	21	1	479	4107
CALIFORNIA	2251	1467	599	215	4379	97	21	433	9462
COLORADO	76	372	44	69	1648	22	2	131	2364
CONNECTICUT	48	185	8	105	85	10	3	126	570
DELAWARE	30	85	0	48	81	2	0	17	263
DIST. COLUMBIA	0	3	0	12	25	6	0	24	70
FLORIDA	738	988	14	186	3446	42	88	402	5904
GEORGIA	202	638	24	166	5376	18	11	502	6937
HAWAII	0	0	0	0	6	0	0	0	6
IDAHO	34	201	12	21	1838	7	2	96	2211
ILLINOIS	1541	2879	235	348	8210	12	2	618	13845
INDIANA	623	2351	180	284	5870	97	15	720	10140
IOWA	290	1063	162	82	6928	6	1	319	8851
KANSAS	239	816	117	270	8098	2	1	304	9847
KENTUCKY	193	661	38	138	2243	8	1	591	3673
LOUISIANA	121	695	20	86	2897	327	29	833	5008
MAINE	57	332	35	170	500	0	4	16	1114
MARYLAND	66	184	36	85	459	13	40	186	1069
MASSACHUSETTS	164	442	43	247	283	2	2	47	1230
MICHIGAN	550	1907	84	284	5337	20	46	236	8464
MINNESOTA	172	948	20	45	6630	22	2	283	8123
MISSISSIPPI	23	355	19	59	395	2361	25	344	3581
MISSOURI	195	1023	158	160	4605	8	3	495	6647
MONTANA	62	207	10	21	1765	4	1	223	2293
NEBRASKA	195	522	67	16	4574	4	23	272	5673
NEVADA	30	63	3	6	218	0	7	36	363
NEW HAMPSHIRE	25	154	16	180	305	9	4	26	719
NEW JERSEY	257	637	32	414	643	6	3	120	2212
NEW MEXICO	70	116	11	13	630	0	6	29	875
NEW YORK	661	1283	104	519	1560	3	56	234	4420
NORTH CAROLINA	198	811	27	260	3608	17	24	530	5475
NORTH DAKOTA	58	224	2	0	5071	2	0	392	5749
OHIO	662	2306	97	115	6237	15	17	499	9968
OKLAHOMA	87	707	59	173	4529	4	11	203	5783
OREGON	256	183	79	113	1859	100	12	358	2960
PENNSYLVANIA	502	1390	111	802	2832	79	451	613	6780
RHODE ISLAND	9	25	19	34	28	5	2	20	142
SOUTH CAROLINA	120	327	5	384	3320	1	18	281	4456
SOUTH DAKOTA	1	193	5	0	3063	0	1	119	3382
TENNESSEE	105	487	18	305	2423	36	2	792	4168
TEXAS	597	2760	152	108	9866	32	17	1135	14667
UTAH	42	220	14	116	817	5	50	98	1362
VERMONT	12	145	7	57	344	1	7	21	594
VIRGINIA	262	461	46	244	1485	2	15	350	2865
WASHINGTON	94	547	60	63	2975	21	12	518	4290
WEST VIRGINIA	52	296	20	52	1612	8	6	336	2382
WISCONSIN	248	1239	439	243	4826	1	3	293	7290
WYOMING	16	102	8	1	429	1	1	61	619
PUERTO RICO	4	1	2	48	0	0	0	0	55
TOTAL	12699	34181	3330	7632	141371	3544	1059	15307	219123

WARNING DEVICE CLASS CODES

WDC 8 GATES
WDC 7 FLASHING LIGHTS
WDC 6 HIGHWAY SIGNALS, WIGWAGS OR BELLS
WDC 5 SPECIAL WARNING DEVICES
WDC 4 CROSSBUCKS
WDC 3 STOP SIGNS
WDC 2 OTHER SIGNS
WDC 1 NO SIGNS OR SIGNALS

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TABLE 3-33. CROSSINGS BY PAVEMENT MARKINGS

MARKING	NO. XINGS
STOPLINE	4948
RR XING SYMBOL	4886
BOTH	23145
NONE, PAVED ROAD	115270
NONE, UNPAVED	70874

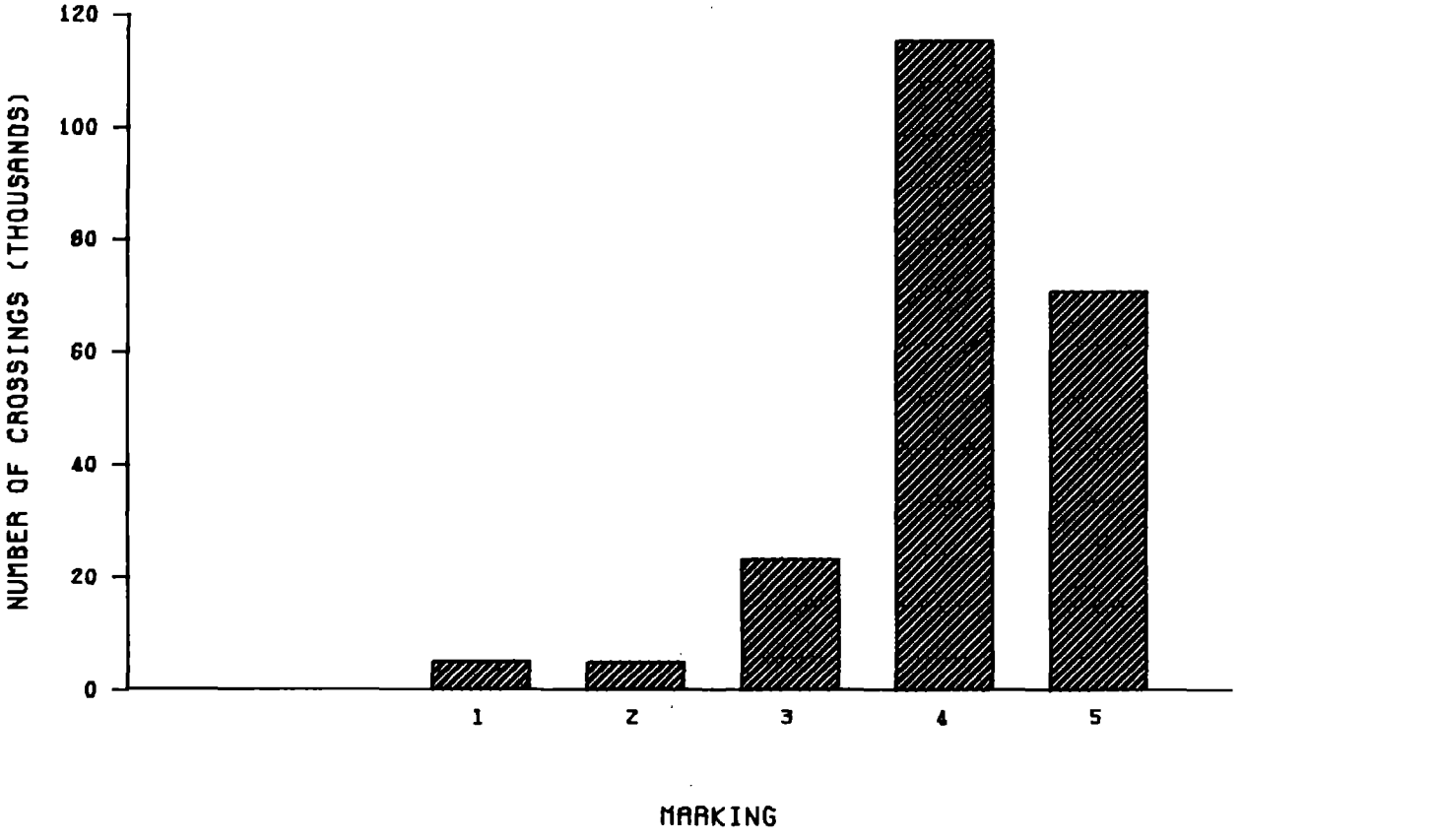

FIGURE 3-22. CROSSINGS BY PAVEMENT MARKINGS

TABLE 3-34. CROSSINGS BY PAVEMENT MARKINGS VS. STATE

	MARKING					
	STOP LINES	RR XING SYMBOL	BOTH	NONE PAVED	NONE UNPAVED	TOTAL
ALABAMA	33	102	109	3371	1193	4808
ALASKA	3	1	13	93	114	224
ARIZONA	49	11	180	485	338	1063
ARKANSAS	54	88	107	2086	1772	4107
CALIFORNIA	1141	248	5332	2355	386	9462
COLORADO	18	30	47	1290	979	2364
CONNECTICUT	21	6	56	471	16	570
DELAWARE	2	17	15	221	8	263
DIST. COLUMBIA	1	0	0	68	1	70
FLORIDA	317	119	1343	2982	1143	5904
GEORGIA	47	143	260	4277	2210	6937
HAWAII	2	0	0	4	0	6
IDAHO	33	4	68	1071	1035	2211
ILLINOIS	115	259	500	8756	4215	13845
INDIANA	95	173	1128	6782	1962	10140
IOWA	82	110	613	3058	4988	8851
KANSAS	31	84	260	3161	6311	9847
KENTUCKY	96	101	294	2234	948	3673
LOUISIANA	8	27	82	3633	1258	5008
MAINE	9	15	93	834	163	1114
MARYLAND	46	24	74	842	83	1069
MASSACHUSETTS	46	14	31	1099	40	1230
MICHIGAN	81	138	596	5159	2490	8464
MINNESOTA	123	122	437	3157	4284	8123
MISSISSIPPI	15	21	10	2376	1159	3581
MISSOURI	88	144	593	2747	3075	6647
MONTANA	10	28	26	667	1562	2293
NEBRASKA	51	54	294	1391	3883	5673
NEVADA	9	1	40	146	167	363
NEW HAMPSHIRE	22	7	15	593	82	719
NEW JERSEY	50	85	86	1856	135	2212
NEW MEXICO	4	15	39	364	453	875
NEW YORK	128	232	292	3360	408	4420
NORTH CAROLINA	342	163	994	3076	900	5475
NORTH DAKOTA	14	11	185	759	4780	5749
OHIO	741	792	4788	2769	878	9968
OKLAHOMA	19	17	45	2951	2751	5783
OREGON	151	321	463	1366	659	2960
PENNSYLVANIA	67	346	165	5410	792	6780
RHODE ISLAND	13	0	4	125	0	142
SOUTH CAROLINA	102	130	474	2908	842	4456
SOUTH DAKOTA	20	4	108	887	2363	3382
TENNESSEE	11	23	59	3097	978	4168
TEXAS	225	434	1193	8147	4668	14667
UTAH	15	14	94	869	370	1362
VERMONT	13	17	23	349	192	594
VIRGINIA	110	115	749	1499	392	2865
WASHINGTON	164	30	580	2538	978	4290
WEST VIRGINIA	23	11	88	1452	808	2382
WISCONSIN	73	17	63	5876	1261	7290
WYOMING	15	4	37	167	396	619
PUERTO RICO	0	14	0	36	5	55
TOTAL	4948	4886	23145	115270	70874	219123

TABLE 3-35. CROSSINGS BY PAVEMENT MARKINGS VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

MARKING	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
STOPLINE	2439	2509	4948
RR XING SYMBOL	2603	2283	4886
BOTH	12178	10967	23145
NONE,PAVED ROAD	31085	84185	115270
NONE, UNPAVED	1905	68969	70874
TOTAL	50210	168913	219123

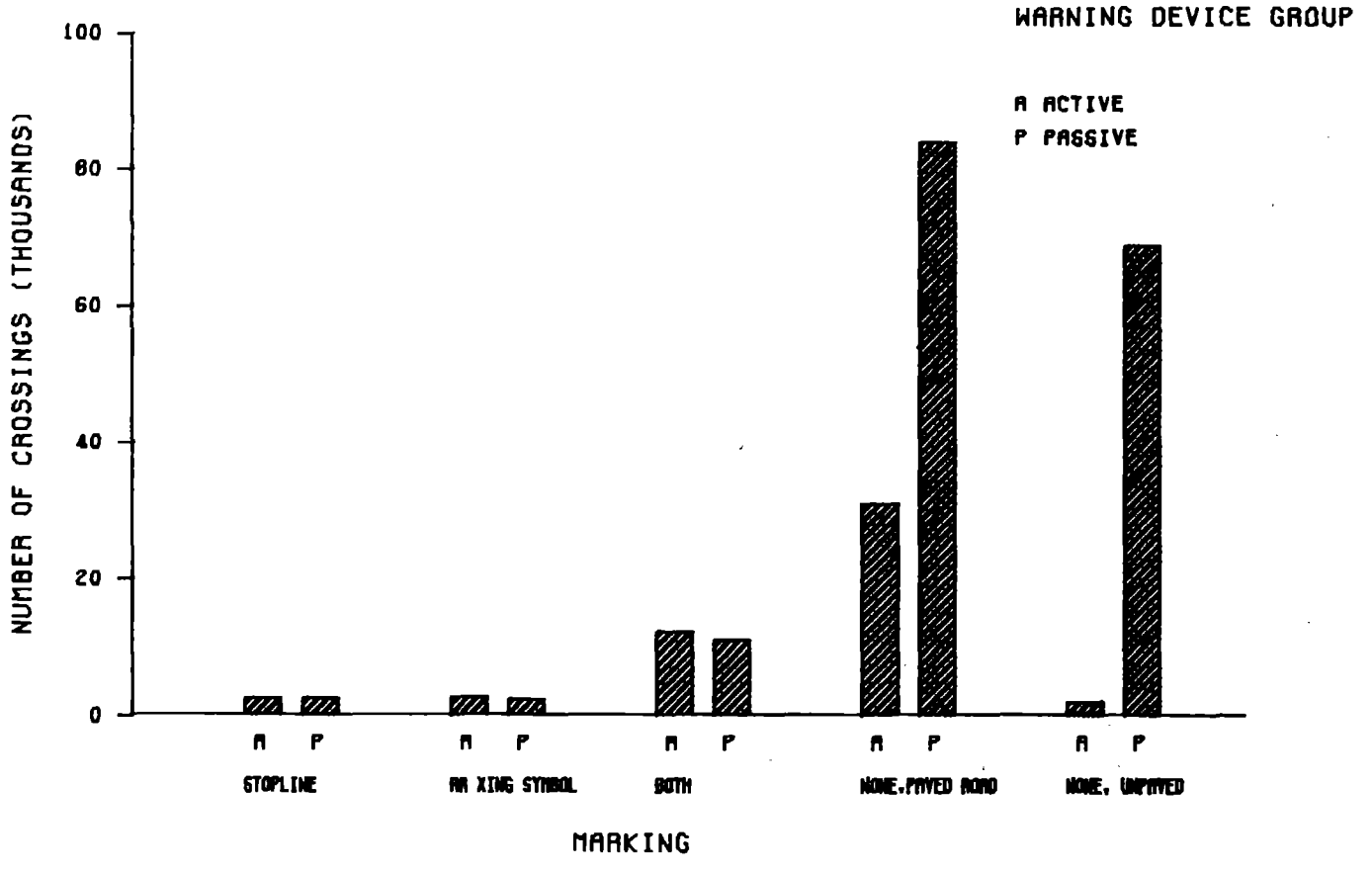

FIGURE 3-23. CROSSINGS BY PAVEMENT MARKINGS VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

TABLE 3-36. CROSSINGS BY PAVEMENT MARKINGS VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	MARKING					
	STOP LINES	RR XING SYMBOL	BOTH	NONE PAVED	NONE UNPAVED	TOTAL
GATES	742	661	3770	7176	350	12699
FLASHING LIGHTS	1525	1833	7852	21825	1146	34181
HWY. SIGNALS, WIGWAGS, BELLS	172	109	556	2084	409	3330
SPECIAL WARNING DEVICES	128	122	415	6291	676	7632
CROSSBUCKS	2249	2056	10225	65267	61574	141371
STOP SIGNS	51	23	22	2341	1107	3544
OTHER SIGNS	13	16	36	718	276	1059
NO SIGNS OR SIGNALS	68	66	269	9568	5336	15307
TOTAL	4948	4886	23145	115270	70874	219123

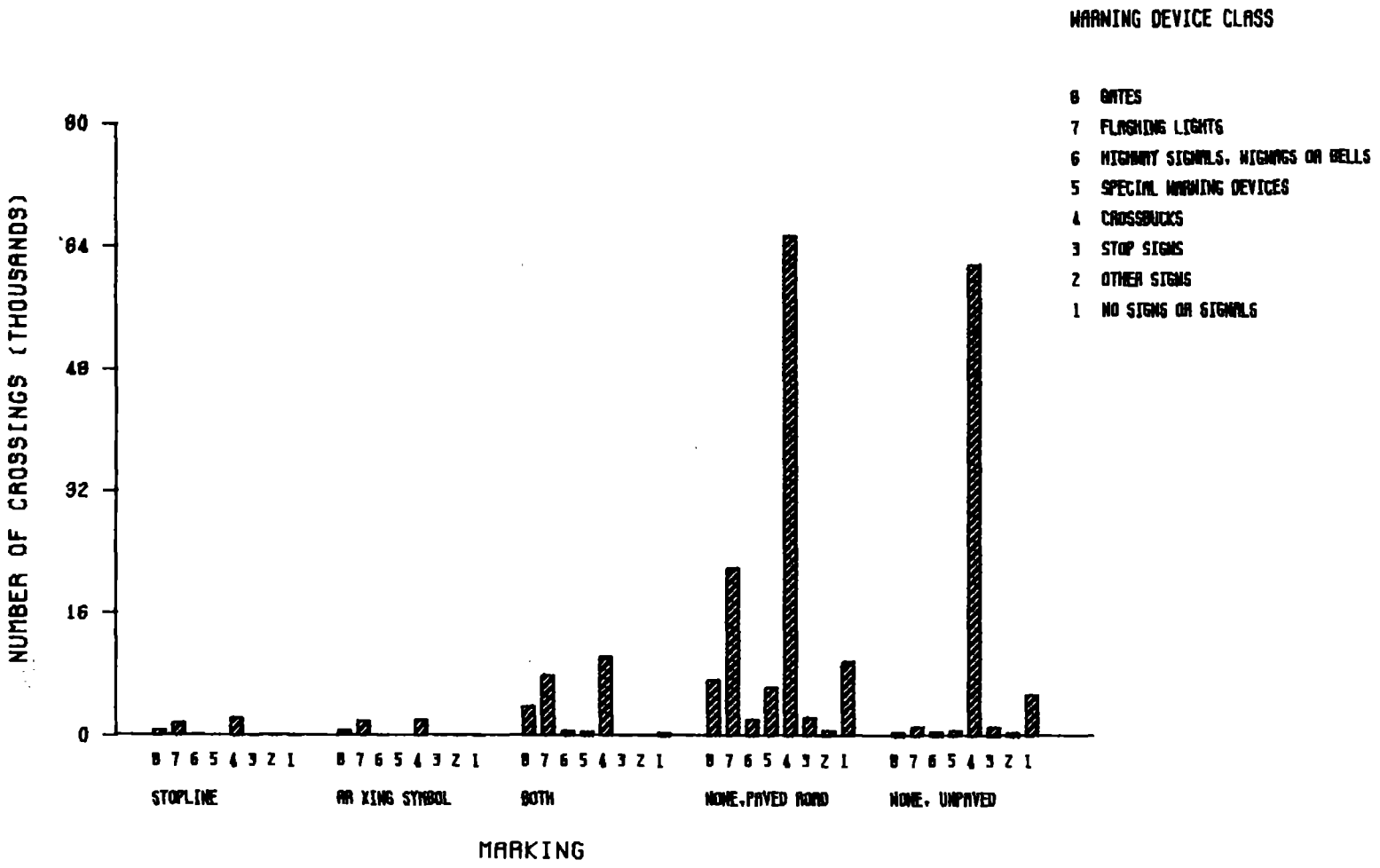

FIGURE 3-24. CROSSINGS BY PAVEMENT MARKING VS. WARNING DEVICE CLASS

TABLE 3-37. CROSSINGS BY PAVEMENT MARKINGS VS. ANNUAL AVERAGE DAILY TRAFFIC

MARKING	AADT 1- 250	251- 500	501- 1K	1K- 5K	5K- 10K	>10K	TOTAL
STOPLINE	1004	676	678	1505	582	498	4943
RR XING SYMBOL	1035	591	727	1651	537	336	4877
BOTH	4986	2934	3459	7451	2468	1828	23126
NONE, PAVED ROAD	42879	17096	15966	27306	7442	4325	115014
NONE, UNPAVED	65256	2789	1324	1103	158	71	70701
TOTAL	115160	24086	22154	39016	11187	7058	218661

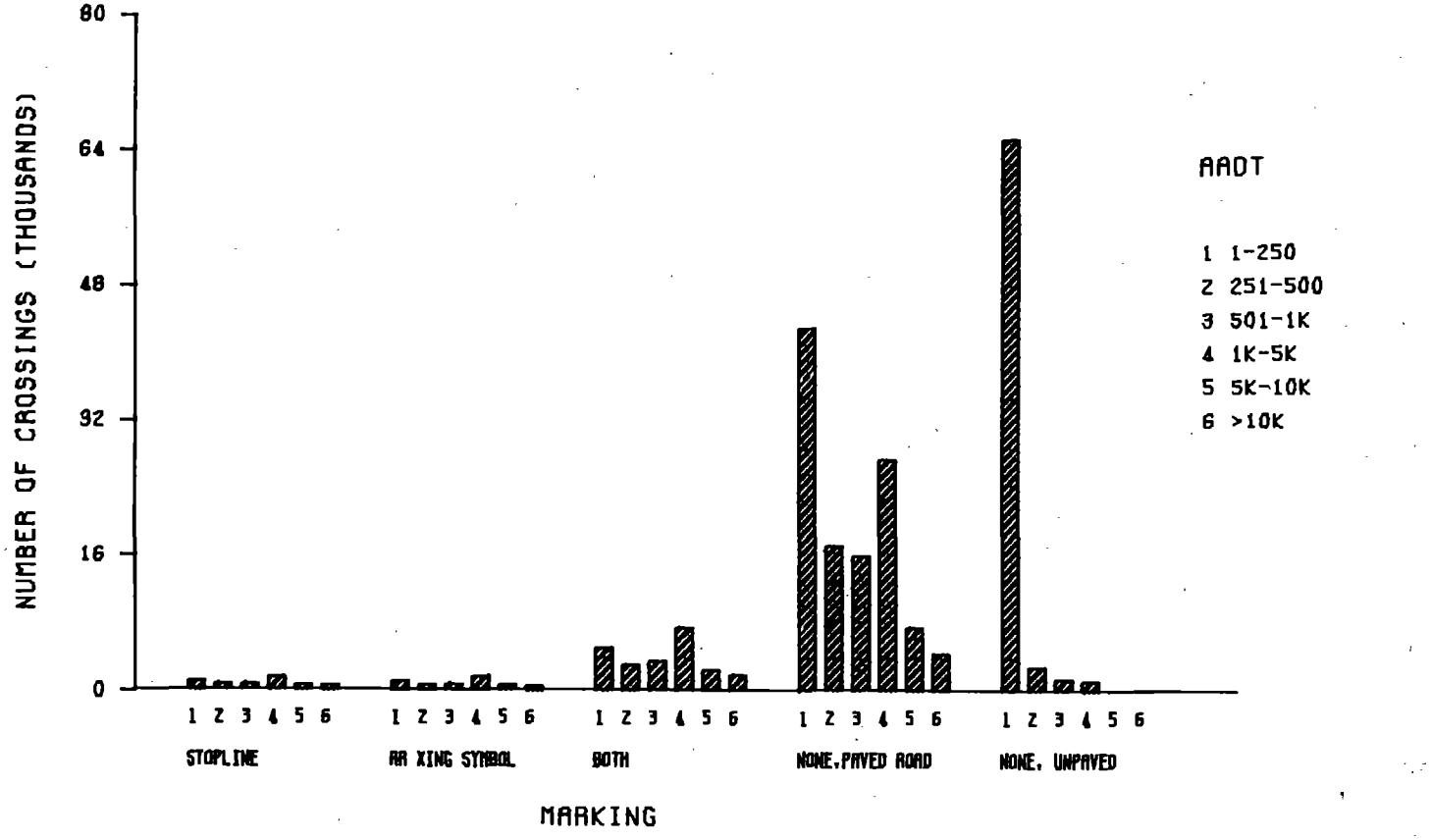

FIGURE 3-25. CROSSINGS BY PAVEMENT MARKINGS VS. ANNUAL AVERAGE DAILY TRAFFIC

TABLE 3-38. CROSSINGS BY RR ADVANCE WARNINGS VS. STATE

	RR ADVANCE WARNING		
	YES	NO	TOTAL
ALABAMA	875	3933	4808
ALASKA	67	157	224
ARIZONA	452	611	1063
ARKANSAS	566	3541	4107
CALIFORNIA	7419	2043	9462
COLORADO	777	1570	2347
CONNECTICUT	238	331	569
DELAWARE	223	40	263
DIST. COLUMBIA	30	40	70
FLORIDA	2364	3515	5879
GEORGIA	1054	5883	6937
HAWAII	1	5	6
IDAHO	436	1775	2211
ILLINOIS	4890	8955	13845
INDIANA	5825	4315	10140
IOWA	4644	4207	8851
KANSAS	3559	6288	9847
KENTUCKY	756	2917	3673
LOUISIANA	1262	3746	5008
MAINE	890	224	1114
MARYLAND	391	678	1069
MASSACHUSETTS	888	342	1230
MICHIGAN	5463	3001	8464
MINNESOTA	3254	4869	8123
MISSISSIPPI	361	3220	3581
MISSOURI	1239	5408	6647
MONTANA	335	1958	2293
NEBRASKA	1847	3826	5673
NEVADA	96	267	363
NEW HAMPSHIRE	514	205	719
NEW JERSEY	780	1432	2212
NEW MEXICO	167	708	875
NEW YORK	3248	1172	4420
NORTH CAROLINA	3516	1959	5475
NORTH DAKOTA	922	4827	5749
OHIO	6179	3789	9968
OKLAHOMA	1005	4778	5783
OREGON	1716	1244	2960
PENNSYLVANIA	2471	4309	6780
RHODE ISLAND	18	124	142
SOUTH CAROLINA	2230	2226	4456
SOUTH DAKOTA	910	2472	3382
TENNESSEE	540	3628	4168
TEXAS	3193	11474	14667
UTAH	390	972	1362
VERMONT	202	392	594
VIRGINIA	1778	1071	2849
WASHINGTON	2852	1438	4290
WEST VIRGINIA	471	1911	2382
WISCONSIN	3166	4124	7290
WYOMING	106	513	619
PUERTO RICO	32	23	55
TOTAL	86608	132456	219064

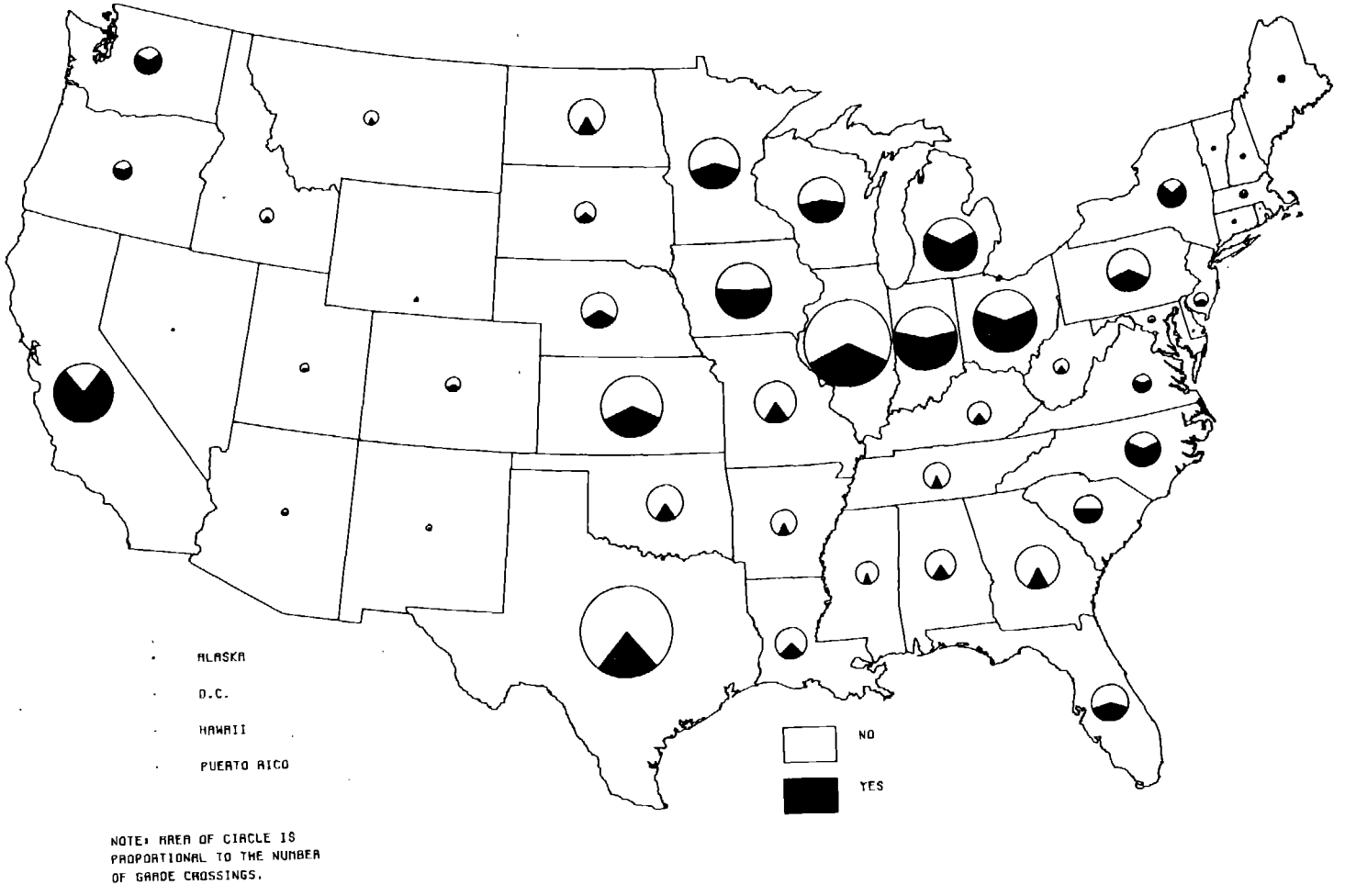

FIGURE 3-26. CROSSINGS BY RR ADVANCE WARNINGS VS. STATE

3.6 CROSSING CHARACTERISTICS

TABLE 3-39. CROSSINGS BY SMALLEST CROSSING ANGLE

ANGLE	NO. XINGS
0-29 DEGREES	9111
30-59 DEGREES	35800
60-90 DEGREES	174186

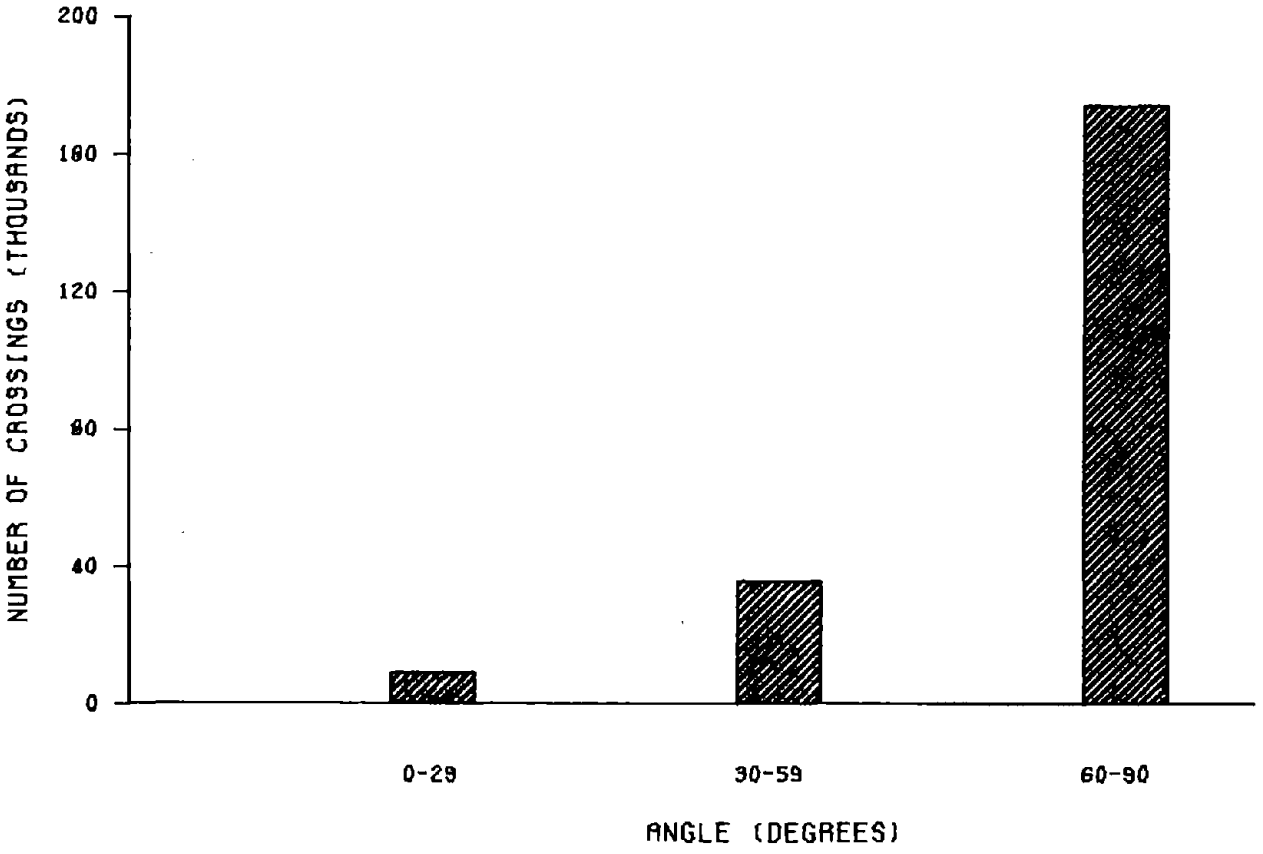

FIGURE 3-27. CROSSINGS BY SMALLEST CROSSING ANGLE

TABLE 3-40. CROSSINGS BY CROSSING SURFACE

SURFACE	NO. XINGS	SURFACE	NO. XINGS
SECTION TIMBER	30149	RUBBER	332
FULL WOOD PLANK	35100	METAL SECTIONS	254
ASPHALT	118583	OTHER METAL	203
CONCRETE SLAB	814	UNCONSOLIDATED	32565
CONCRETE PAVE.	935	OTHER	188

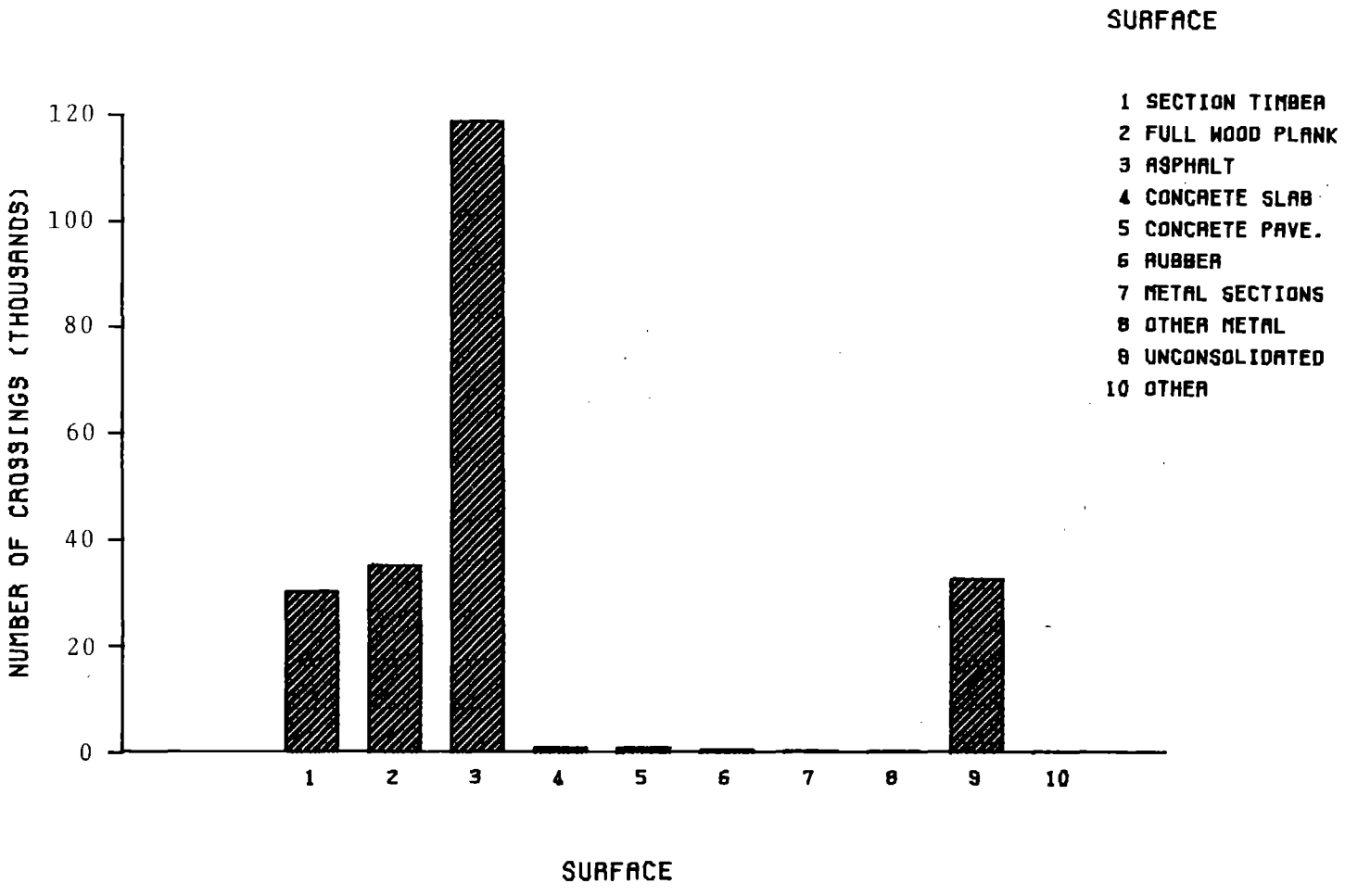

FIGURE 3-28. CROSSINGS BY CROSSING SURFACE

4. PRESENTATIONS OF OPERATIONAL CHARACTERISTICS

4.1 TRAIN TRAFFIC CHARACTERISTICS

TABLE 4-1. CROSSINGS BY NUMBER OF DAYLIGHT THRU TRAINS PER DAY

NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS
<1	87859	01-05	95097	51-55	115
1	29669	06-10	23125	56-60	69
2	33110	11-15	7401	61-65	79
3	13178	16-20	3281	66-70	0
4	13583	21-25	884	71-75	7
5	5557	26-30	625	76-80	47
6	8028	31-35	232	81-85	0
7	3150	36-40	129	86-90	8
8	4303	41-45	68	91-95	5
9	2712	46-50	66	96-99	26
>9	17974				

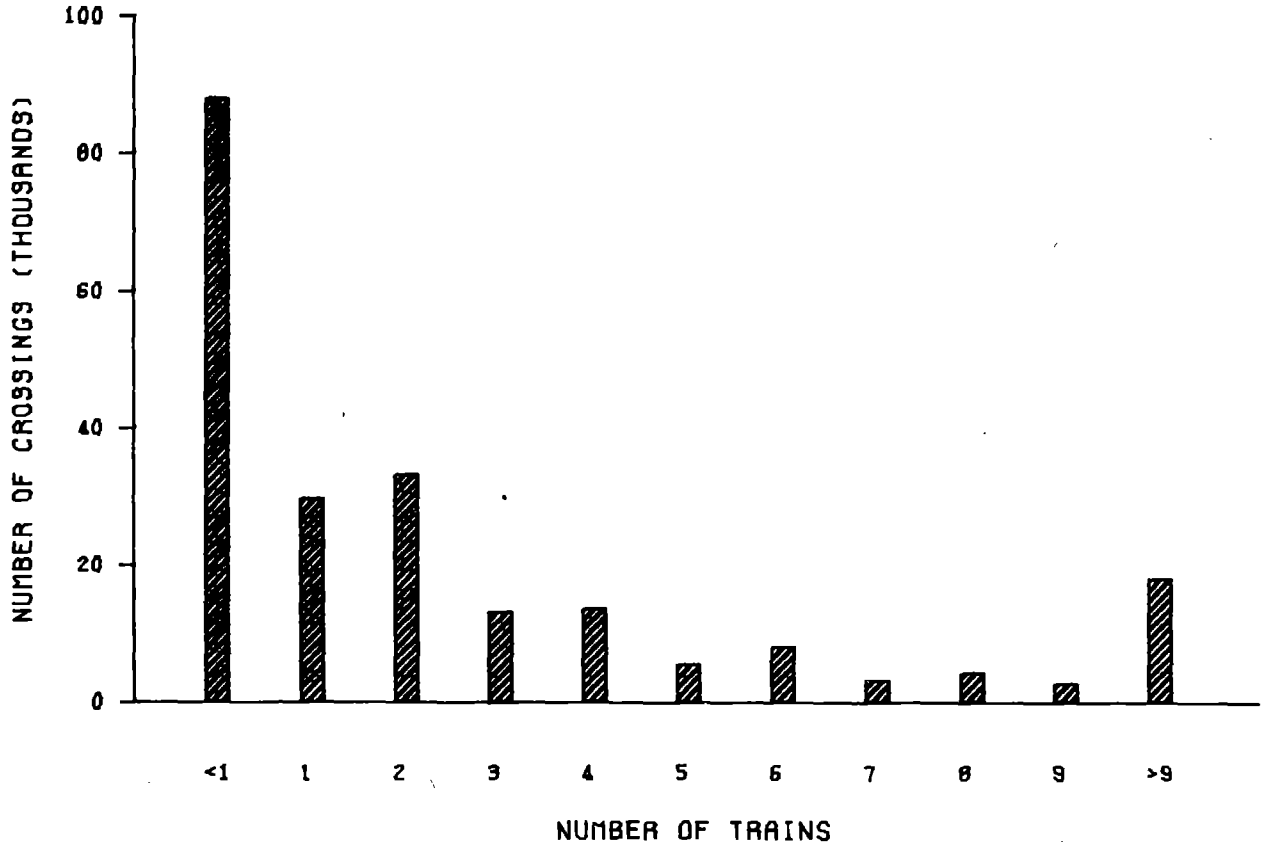

FIGURE 4-1. CROSSINGS BY NUMBER OF DAYLIGHT THRU TRAINS PER DAY

TABLE 4-2. CROSSINGS BY NUMBER OF DAYLIGHT SWITCH TRAINS PER DAY

NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS
<1	133638	01-05	77238	51-55	3
1	30165	06-10	6106	56-60	10
2	34693	11-15	933	61-65	2
3	3187	16-20	608	66-70	4
4	8039	21-25	197	71-75	5
5	1154	26-30	178	76-80	3
6	2854	31-35	28	81-85	2
7	275	36-40	84	86-90	3
8	1370	41-45	4	91-95	2
9	89	46-50	52	96-99	23
>9	3659				

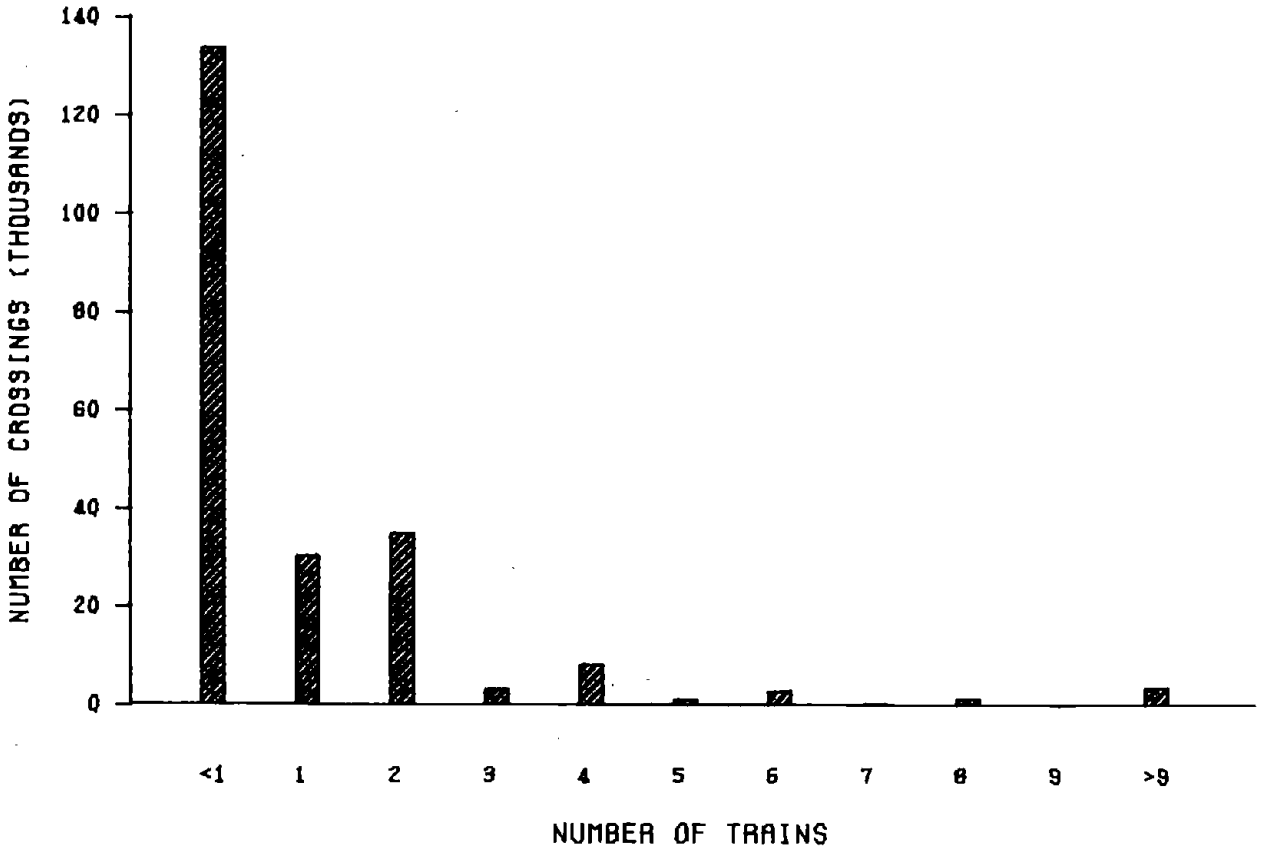

FIGURE 4-2. CROSSINGS BY NUMBER OF DAYLIGHT SWITCH TRAINS PER DAY

TABLE 4-3. CROSSINGS BY NUMBER OF NIGHT THRU TRAINS PER DAY

NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS
<1	108757	01-05	78397	51-55	0
1	23783	06-10	19488	56-60	1
2	27156	11-15	7965	61-65	1
3	11586	16-20	2802	66-70	0
4	10850	21-25	810	71-75	0
5	5022	26-30	620	76-80	0
6	6289	31-35	141	81-85	0
7	2074	36-40	105	86-90	0
8	3761	41-45	7	91-95	0
9	2931	46-50	11	96-99	18
>9	16914				

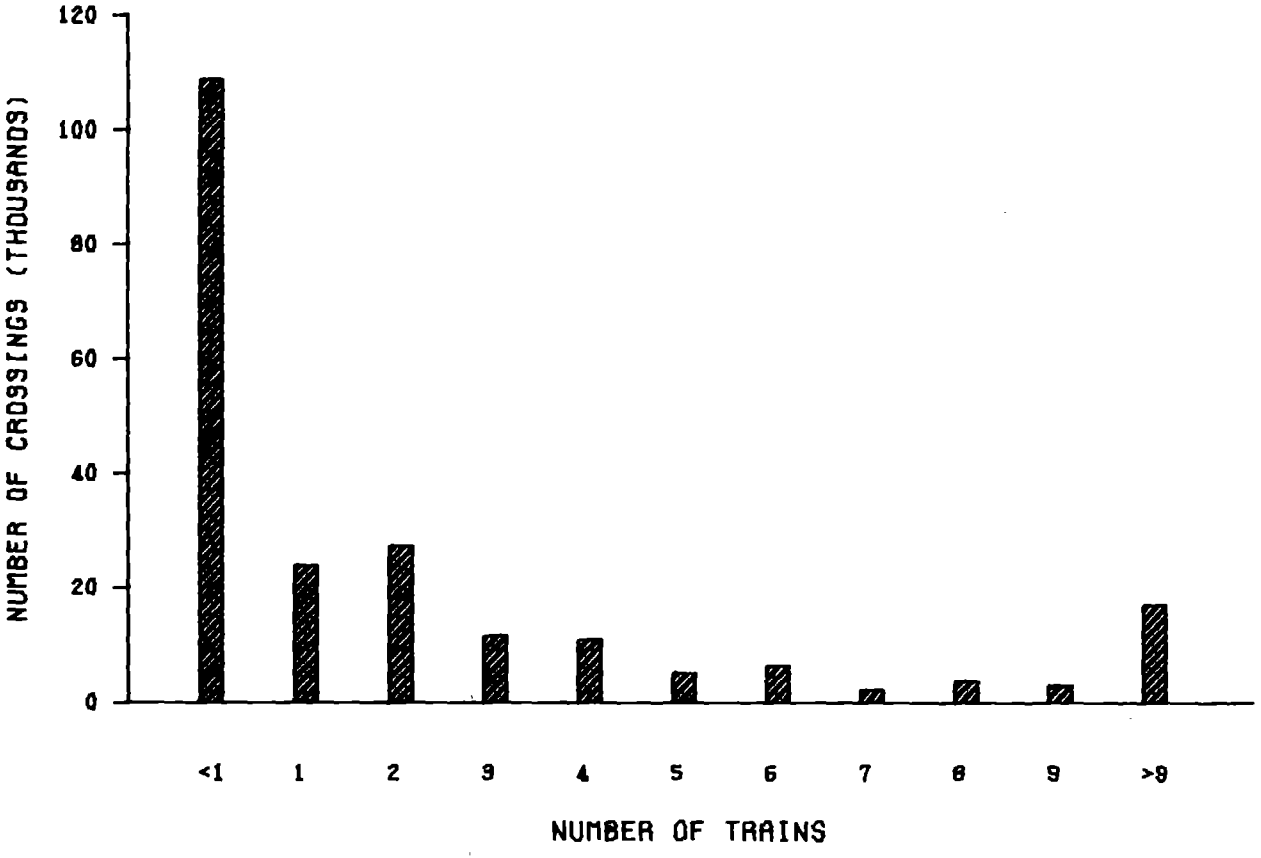

FIGURE 4-3. CROSSINGS BY NUMBER OF NIGHT THRU TRAINS PER DAY

TABLE 4-4. CROSSINGS BY NUMBER OF NIGHT SWITCH TRAINS PER DAY

NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS	NO. TRAIN	NO. XINGS
<1	174632	01-05	39976	51-55	1
1	18515	06-10	3083	56-60	8
2	15029	11-15	624	61-65	3
3	2071	16-20	408	66-70	3
4	3712	21-25	148	71-75	2
5	649	26-30	88	76-80	6
6	1313	31-35	17	81-85	1
7	142	36-40	42	86-90	1
8	621	41-45	3	91-95	2
9	65	46-50	60	96-99	15
>9	2374				

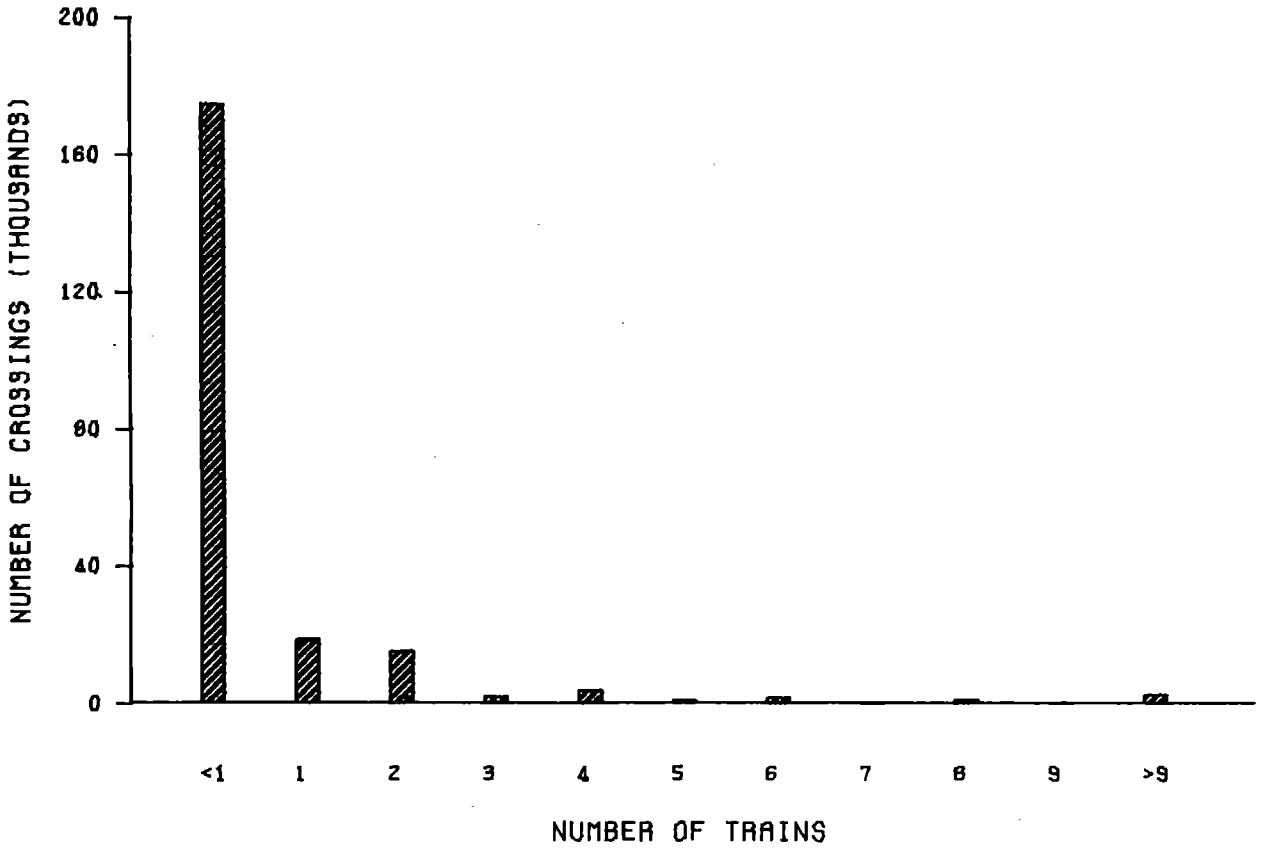

FIGURE 4-4. CROSSINGS BY NUMBER OF NIGHT SWITCH TRAINS PER DAY

TABLE 4-5. CROSSINGS BY TOTAL NUMBER OF TRAIN MOVEMENTS PER DAY

NO. TRAINS	NO. XINGS
<1	38296
1-2	66920
3-5	34386
6-10	36604
11-15	12734
16-20	12691
21-25	5529
>25	11963

NO. TRAINS	NO. XINGS	NO. TRAINS	NO. XINGS
01-05	101306	101-105	25
06-10	36604	106-110	60
11-15	12734	111-115	4
16-20	12691	116-120	11
21-25	5529	121-125	13
26-30	4555	126-130	5
31-35	2155	131-135	6
36-40	1715	136-140	12
41-45	538	141-145	8
46-50	1132	146-150	3
51-55	256	151-155	2
56-60	451	156-160	4
61-65	265	161-165	2
66-70	144	166-170	5
71-75	117	171-175	0
76-80	189	176-180	3
81-85	41	181-185	0
86-90	42	186-190	2
91-95	75	191-195	2
96-100	87	196-200	24
<1	38296	>200	10

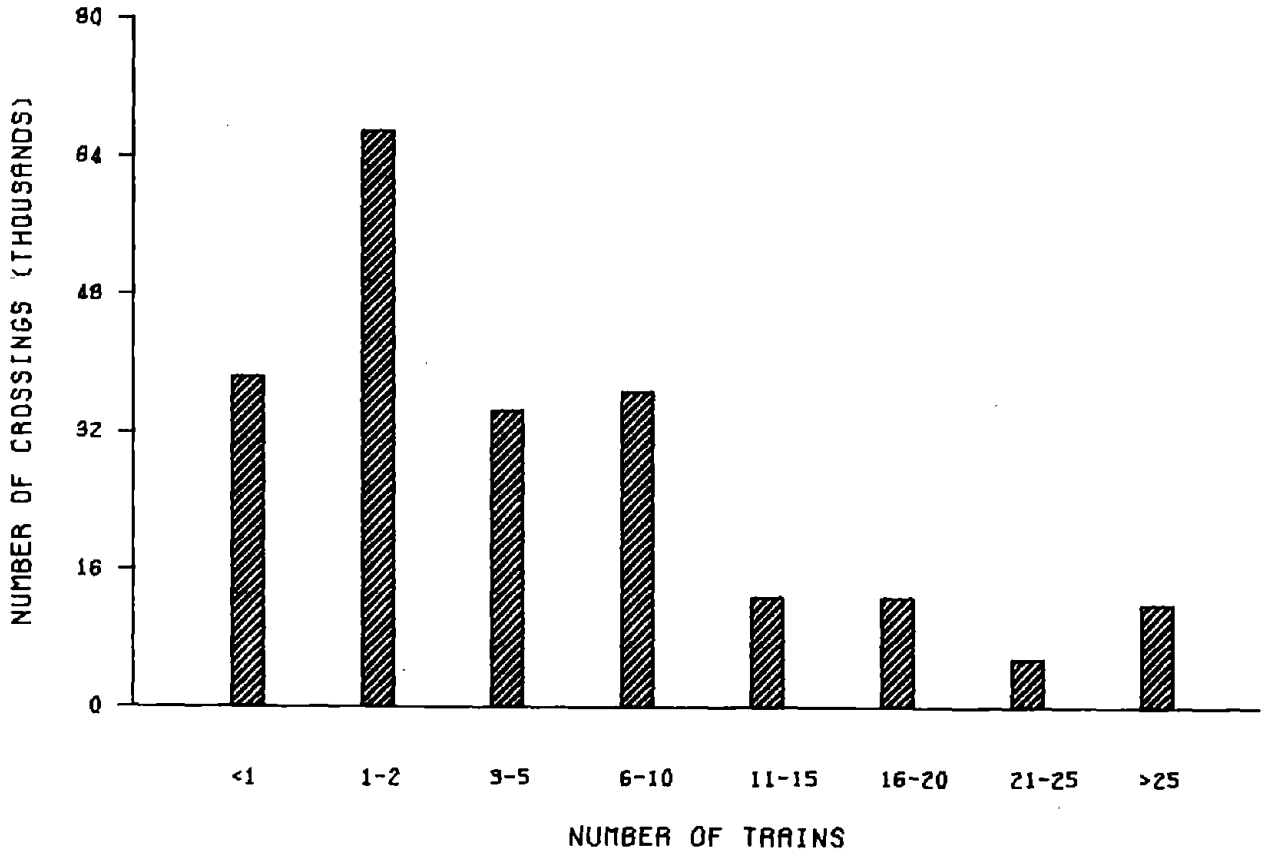

FIGURE 4-5. CROSSINGS BY TOTAL NUMBER OF TRAIN MOVEMENTS PER DAY

TABLE 4-6. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. STATE

	NO. OF TRAINS								
	<1	1-2	3-5	6-10	11-15	16-20	21-25	>25	TOTAL
ALABAMA	359	1393	734	1186	499	501	36	100	4808
ALASKA	39	28	95	33	14	4	1	10	224
ARIZONA	116	392	164	214	41	47	12	77	1063
ARKANSAS	488	1390	568	812	88	324	178	259	4107
CALIFORNIA	1437	2591	1664	1213	542	798	403	814	9462
COLORADO	100	1008	384	440	217	178	22	15	2364
CONNECTICUT	147	165	121	48	14	27	0	48	570
DELAWARE	63	89	14	90	0	4	0	3	263
DIST. COLUMBIA	16	45	1	8	0	0	0	0	70
FLORIDA	687	1819	848	907	569	755	155	164	5904
GEORGIA	363	2726	1328	1141	231	677	167	304	6937
HAWAII	0	0	0	6	0	0	0	0	6
IDAHO	585	659	371	227	68	47	78	176	2211
ILLINOIS	2333	3075	1885	2801	1153	558	350	1690	13845
INDIANA	1698	2294	1463	1611	994	603	696	781	10140
IOWA	2206	3063	1258	1439	251	237	152	245	8851
KANSAS	981	4163	1582	1849	356	294	161	461	9847
KENTUCKY	372	1003	556	690	249	354	142	307	3673
LOUISIANA	784	1615	757	957	465	264	69	97	5008
MAINE	145	472	269	183	28	10	6	1	1114
MARYLAND	346	280	145	131	84	38	10	35	1069
MASSACHUSETTS	397	409	116	140	57	11	18	82	1230
MICHIGAN	1913	2257	1667	1101	371	692	238	225	8464
MINNESOTA	2136	2430	1398	1422	281	111	132	213	8123
MISSISSIPPI	118	1124	889	700	332	255	42	121	3581
MISSOURI	1018	1807	1075	1703	184	333	212	315	6647
MONTANA	903	442	178	334	125	230	67	14	2293
NEBRASKA	1395	1930	765	536	274	253	122	398	5673
NEVADA	77	115	17	22	13	59	33	27	363
NEW HAMPSHIRE	363	119	138	61	23	12	0	3	719
NEW JERSEY	505	768	211	412	91	28	2	195	2212
NEW MEXICO	94	218	172	201	45	16	15	114	875
NEW YORK	1125	1075	543	614	357	210	70	426	4420
NORTH CAROLINA	778	1918	970	884	202	395	203	125	5475
NORTH DAKOTA	1462	2576	847	397	338	91	9	29	5749
OHIO	1522	2178	1021	1371	659	1134	419	1664	9968
OKLAHOMA	876	1950	893	1191	474	63	135	201	5783
OREGON	332	922	585	554	205	122	98	142	2960
PENNSYLVANIA	2040	1580	927	868	306	427	262	370	6780
RHODE ISLAND	22	75	7	12	12	1	0	13	142
SOUTH CAROLINA	517	1786	696	1044	77	135	178	23	4456
SOUTH DAKOTA	1328	1410	369	245	25	3	0	2	3382
TENNESSEE	480	1314	514	668	462	316	120	294	4168
TEXAS	1919	3988	2585	3167	1036	1138	269	565	14667
UTAH	388	386	133	212	65	115	2	61	1362
VERMONT	40	297	138	82	14	19	1	3	594
VIRGINIA	473	778	567	465	165	112	123	182	2865
WASHINGTON	896	1549	748	553	100	242	20	182	4290
WEST VIRGINIA	355	740	497	400	139	113	40	98	2382
WISCONSIN	1457	2291	1364	1168	395	317	60	238	7290
WYOMING	102	216	120	74	38	18	0	51	619
PUERTO RICO	0	2	29	17	6	0	1	0	55
TOTAL	38296	66920	34386	36604	12734	12691	5529	11963	219123

TABLE 4-7. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

NO. OF TRAINS	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
<1	3343	34953	38296
1-2	9023	57897	66920
3-5	7464	26922	34386
6-10	10595	26009	36604
11-15	4978	7756	12734
16-20	5383	7308	12691
21-25	2594	2935	5529
>25	6830	5133	11963
TOTAL	50210	168913	219123

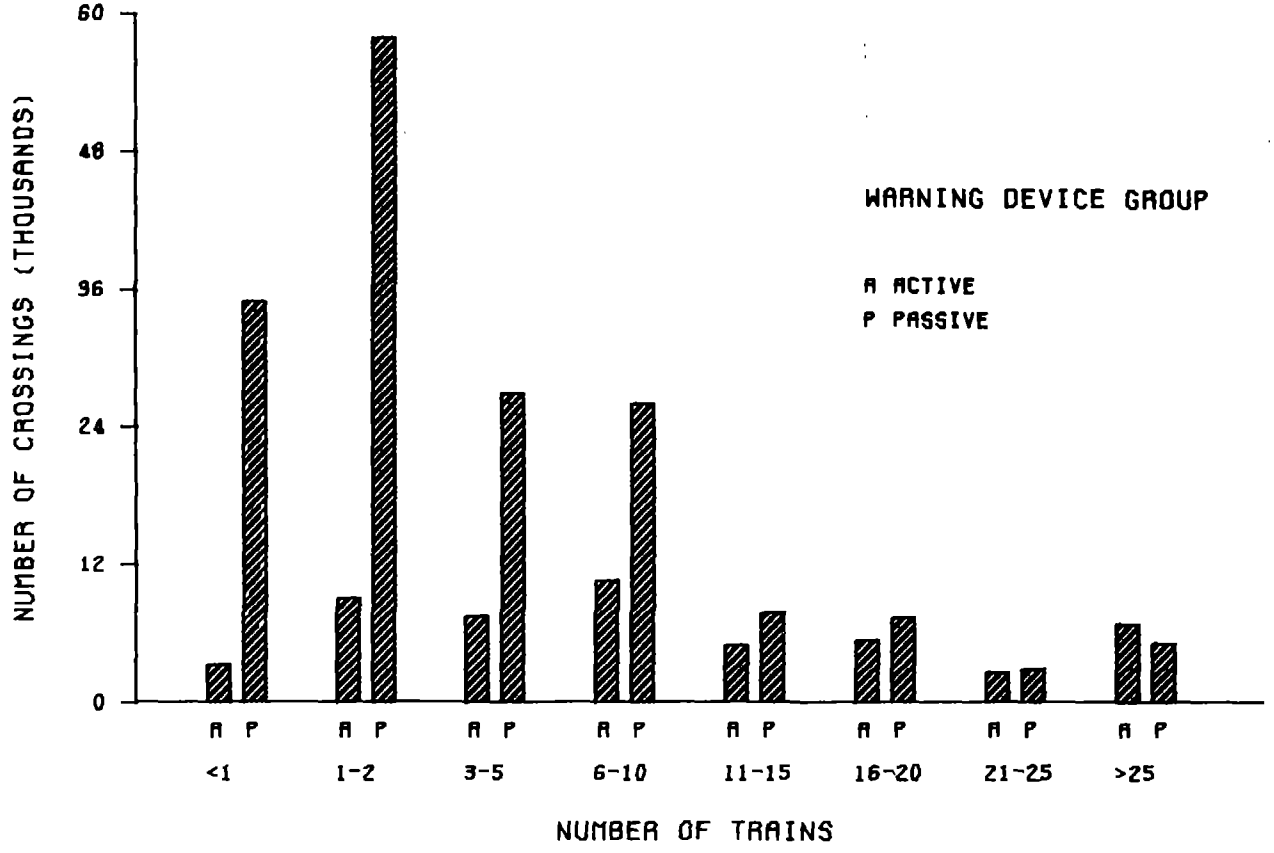

FIGURE 4-6. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

TABLE 4-8. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	NO. OF TRAINS								
	<1	1-2	3-5	6-10	11-15	16-20	21-25	>25	TOTAL
GATES	251	819	912	2011	1527	2184	1124	3871	12699
FLASHING LIGHTS	2780	7290	5909	7927	3183	2976	1364	2752	34181
HWY. SIGNALS, WIGWAGS, BELLS	312	914	643	657	268	223	106	207	3330
SPECIAL WARNING DEVICES	2856	2568	949	610	250	197	41	161	7632
CROSSBUCKS	25366	48672	23327	23220	6817	6576	2741	4652	141371
STOP SIGNS	322	1169	855	708	188	150	46	106	3544
OTHER SIGNS	401	284	148	133	33	36	2	22	1059
NO SIGNS OR SIGNALS	6008	5204	1643	1338	468	349	105	192	15307
TOTAL	38296	66920	34386	36604	12734	12691	5529	11963	219123

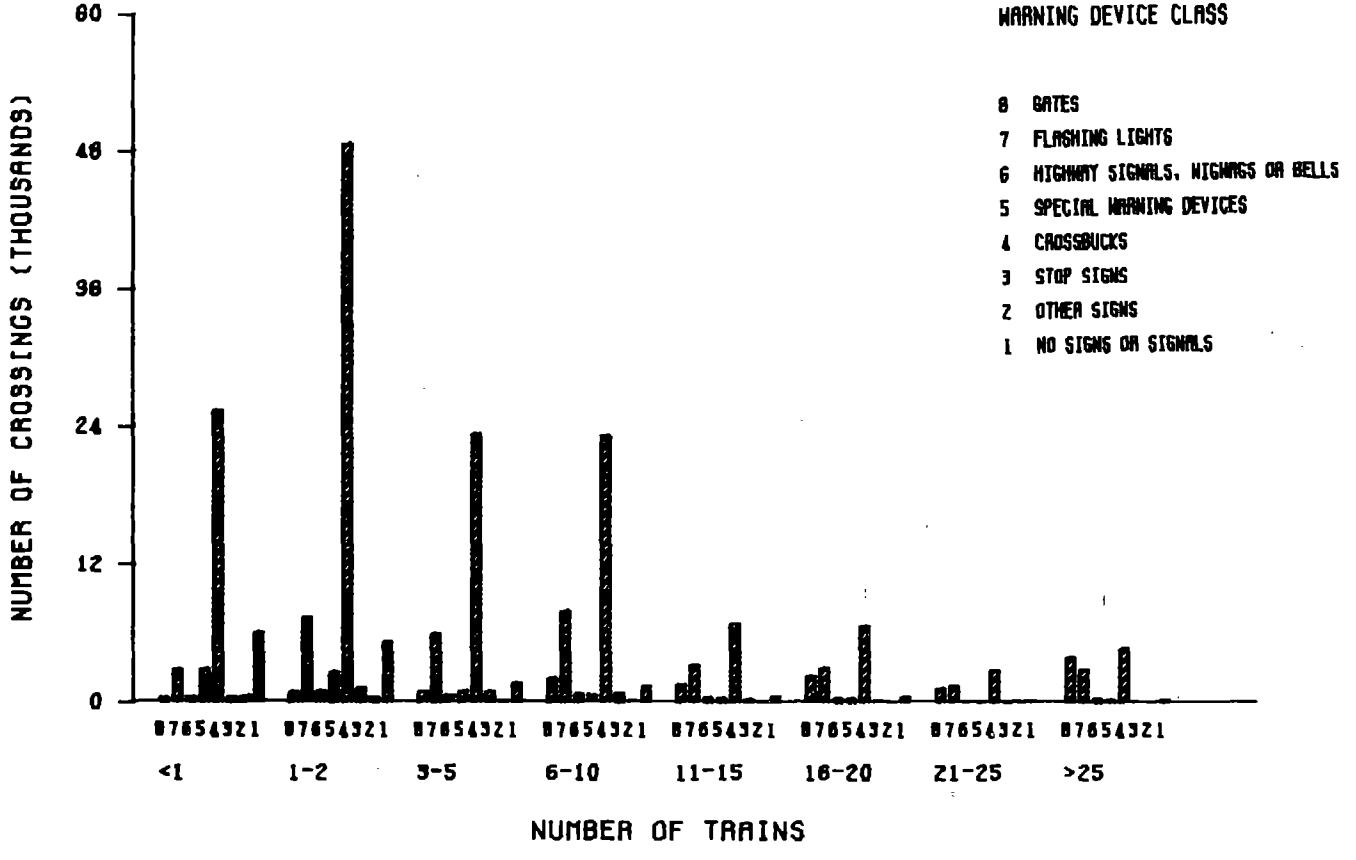

FIGURE 4-7. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. WARNING DEVICE CLASS

TABLE 4-9. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. ANNUAL AVERAGE DAILY TRAFFIC

NO. OF TRAINS	AADT 1-250	251-500	501-1K	1K-5K	5K-10K	>10K	TOTAL
<1	19631	4267	3895	7104	2079	1223	38199
1-2	38029	7166	6303	10609	2875	1807	66789
3-5	18324	3855	3522	5964	1612	1056	34333
6-10	19683	4207	3628	6163	1742	1104	36527
11-15	6094	1282	1374	2639	791	542	12722
16-20	6032	1412	1427	2534	759	487	12651
21-25	2578	647	662	1141	297	191	5516
>25	4789	1250	1343	2862	1032	648	11924
TOTAL	115160	24086	22154	39016	11187	7058	218661

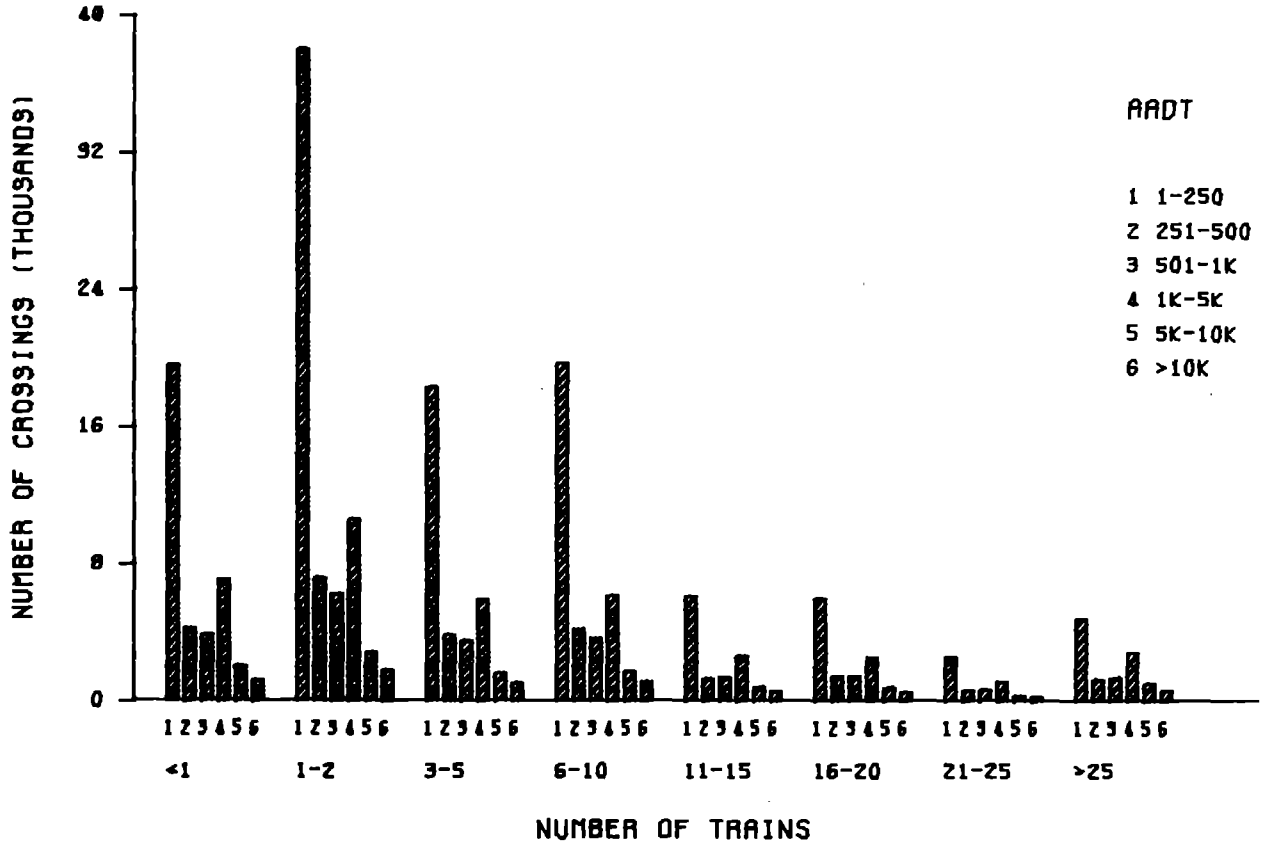

FIGURE 4-8. CROSSINGS BY NUMBER OF TRAINS PER DAY VS. ANNUAL AVERAGE DAILY TRAFFIC

4.2 TRAIN SPEED CHARACTERISTICS

TABLE 4-10. CROSSINGS BY MAXIMUM TIMETABLE SPEED

SPEED	NO. XINGS	SPEED	NO. XINGS	SPEED	NO. XINGS
01-05	10087	36-40	20334	71-75	868
06-10	31575	41-45	5637	76-80	5273
11-15	17393	46-50	18284	81-85	11
16-20	17958	51-55	2690	86-90	853
21-25	25669	56-60	11788	91-95	0
26-30	28330	61-65	1165	96-100	5
31-35	16127	66-70	4558	>100	6

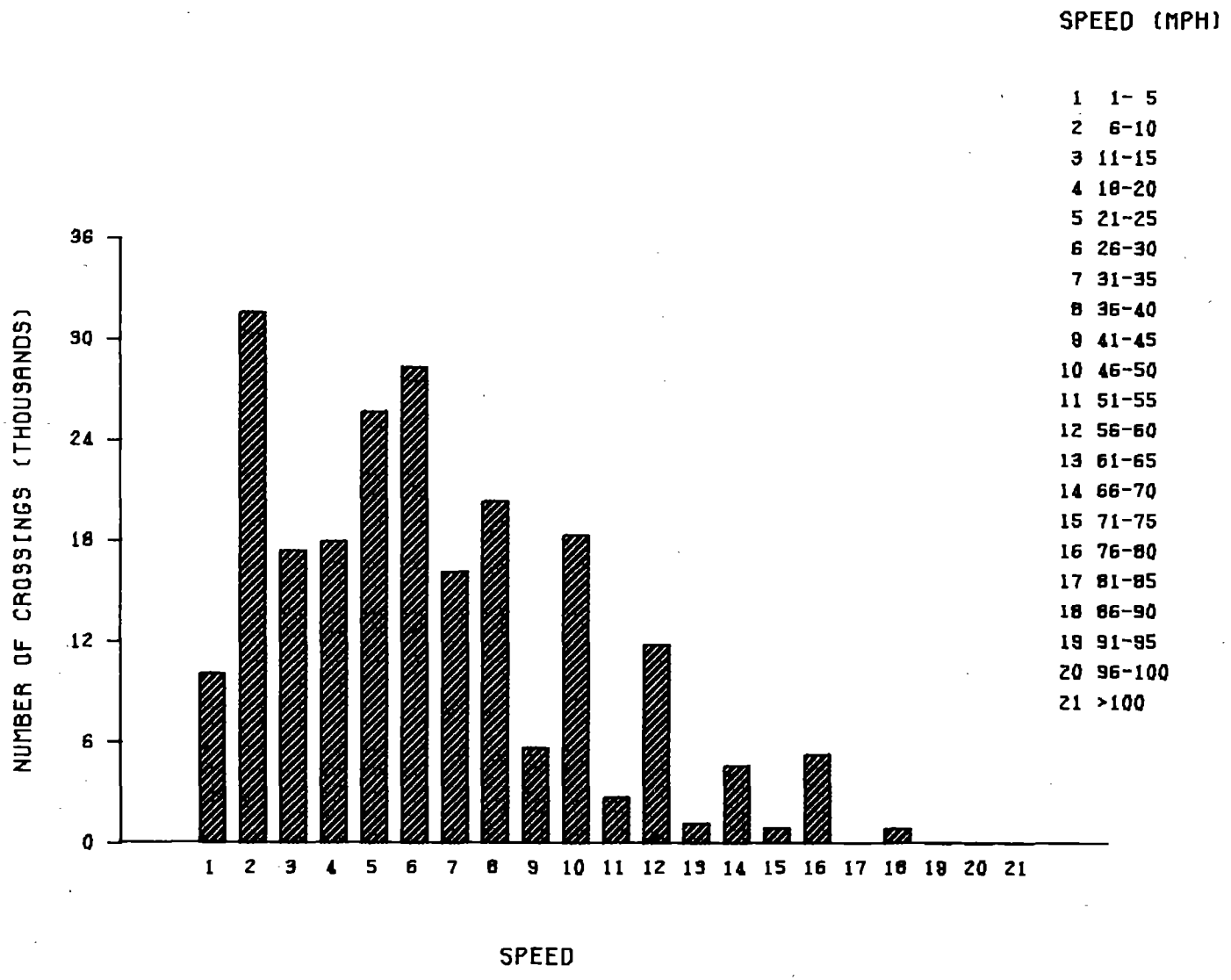

FIGURE 4-9. CROSSINGS BY MAXIMUM TIMETABLE SPEED

TABLE 4-11. CROSSINGS BY TYPICAL MINIMUM SPEED

SPEED	NO. XINGS	SPEED	NO. XINGS	SPEED	NO. XINGS
01-05	76616	36-40	8782	71-75	90
06-10	28596	41-45	2595	76-80	5
11-15	14511	46-50	4654	81-85	0
16-20	19048	51-55	1793	86-90	0
21-25	11507	56-60	905	91-95	0
26-30	13352	61-65	34	96-100	1
31-35	5380	66-70	28	>100	1
<1	31225				

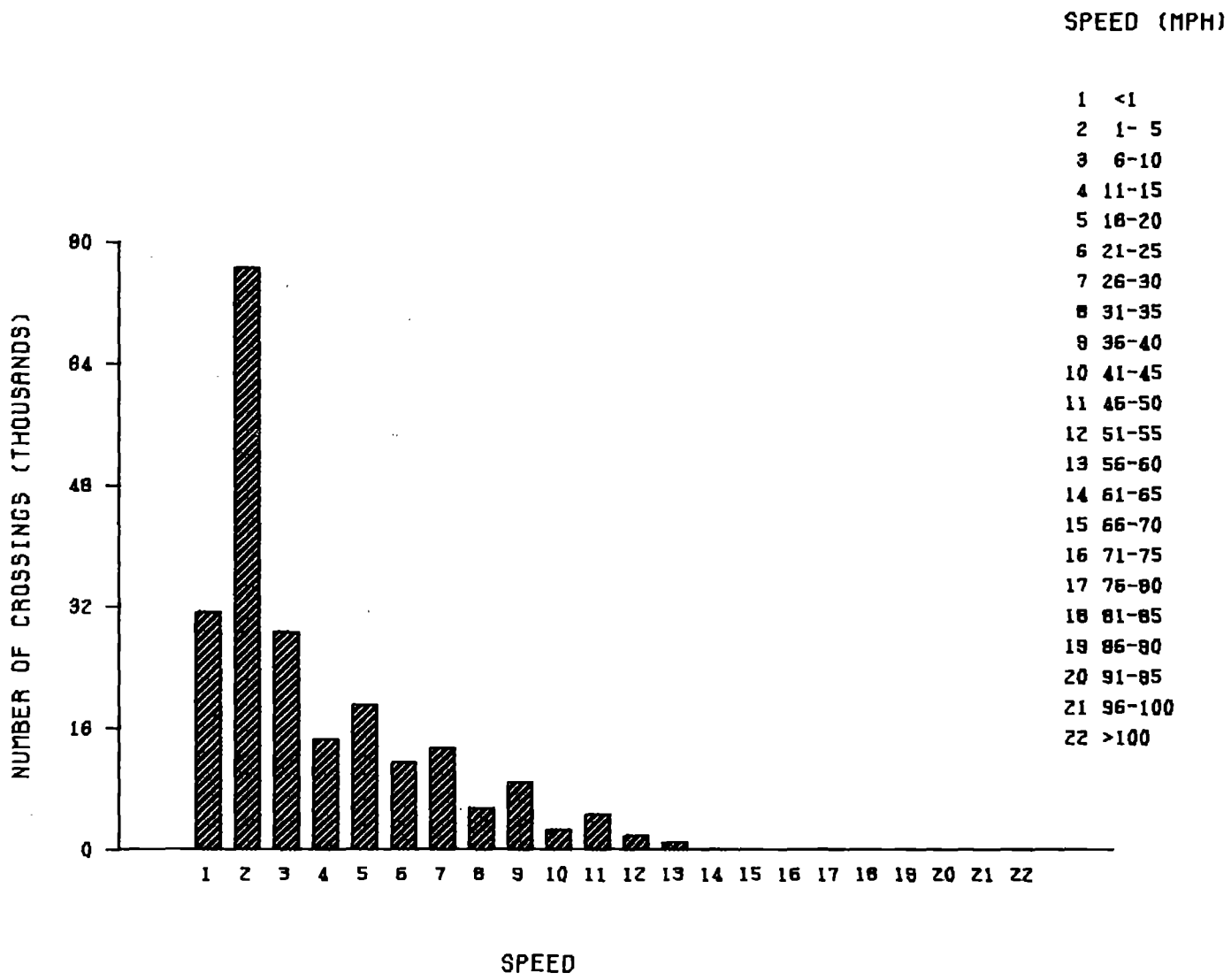

FIGURE 4-10. CROSSINGS BY TYPICAL MINIMUM SPEED

TABLE 4-12. CROSSINGS BY TYPICAL MAXIMUM SPEED

SPEED	NO. XINGS	SPEED	NO. XINGS	SPEED	NO. XINGS
01-05	12835	36-40	19783	71-75	778
06-10	37106	41-45	5545	76-80	4009
11-15	16930	46-50	16909	81-85	11
16-20	18284	51-55	2658	86-90	782
21-25	24425	56-60	10929	91-95	0
26-30	27448	61-65	1237	96-100	3
31-35	14847	66-70	4278	>100	2

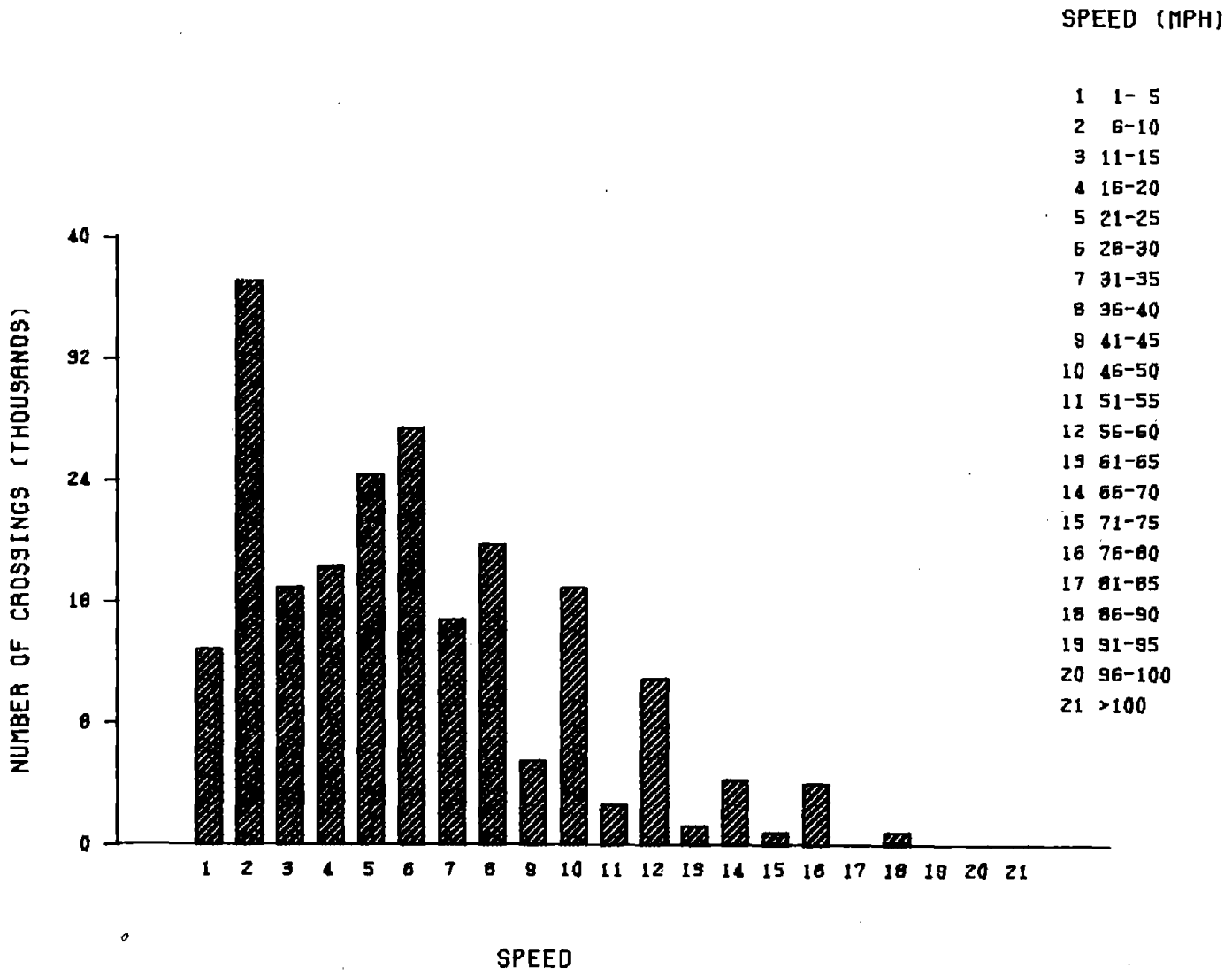

FIGURE 4-11. CROSSINGS BY TYPICAL MAXIMUM SPEED

TABLE 4-13. CROSSINGS BY MAXIMUM SPEED MINUS MINIMUM SPEED

SPEED	NO. XINGS	SPEED	NO. XINGS	SPEED	NO. XINGS
01-05	61101	36-40	6540	71-75	684
06-10	54486	41-45	3401	76-80	489
11-15	25032	46-50	5084	81-85	58
16-20	21541	51-55	1061	86-90	62
21-25	13320	56-60	2616	91-95	0
26-30	12275	61-65	798	96-100	0
31-35	6152	66-70	747	>100	2
<1	3674				

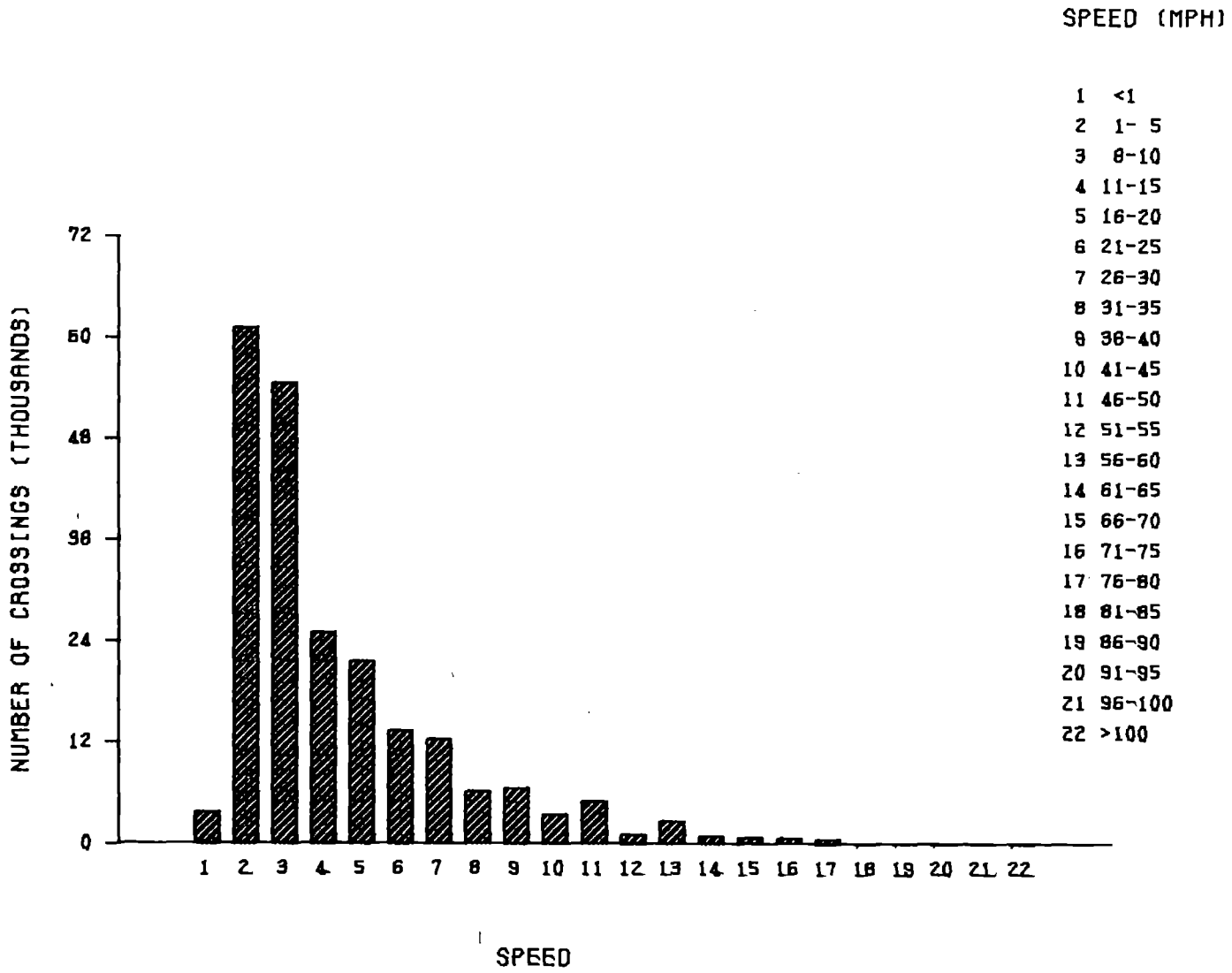

FIGURE 4-12. CROSSINGS BY MAXIMUM SPEED MINUS MINIMUM SPEED

4.3 HIGHWAY TRAFFIC CHARACTERISTICS

TABLE 4-14. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

AADT	NO. XINGS
1-250	115160
251-500	24086
501-1K	22154
1K-5K	39016
5K-10K	11187
>10K	7058

AADT	NO. XINGS	AADT	NO. XINGS	AADT	NO. XINGS
1-100	80607	1-1K	161400	1-10K	211603
101-200	20770	1K-2K	17539	10K-20K	5725
201-300	20595	2K-3K	10423	20K-30K	1088
301-400	8380	3K-4K	5797	30K-40K	192
401-500	8894	4K-5K	5257	40K-50K	31
501-600	4931	5K-6K	3061	50K-60K	7
601-700	3777	6K-7K	2291	60K-70K	4
701-800	5950	7K-8K	2355	70K-80K	4
801-900	2883	8K-9K	1586	80K-90K	3
901-1K	4613	9K-10K	1894	90K-100K	0

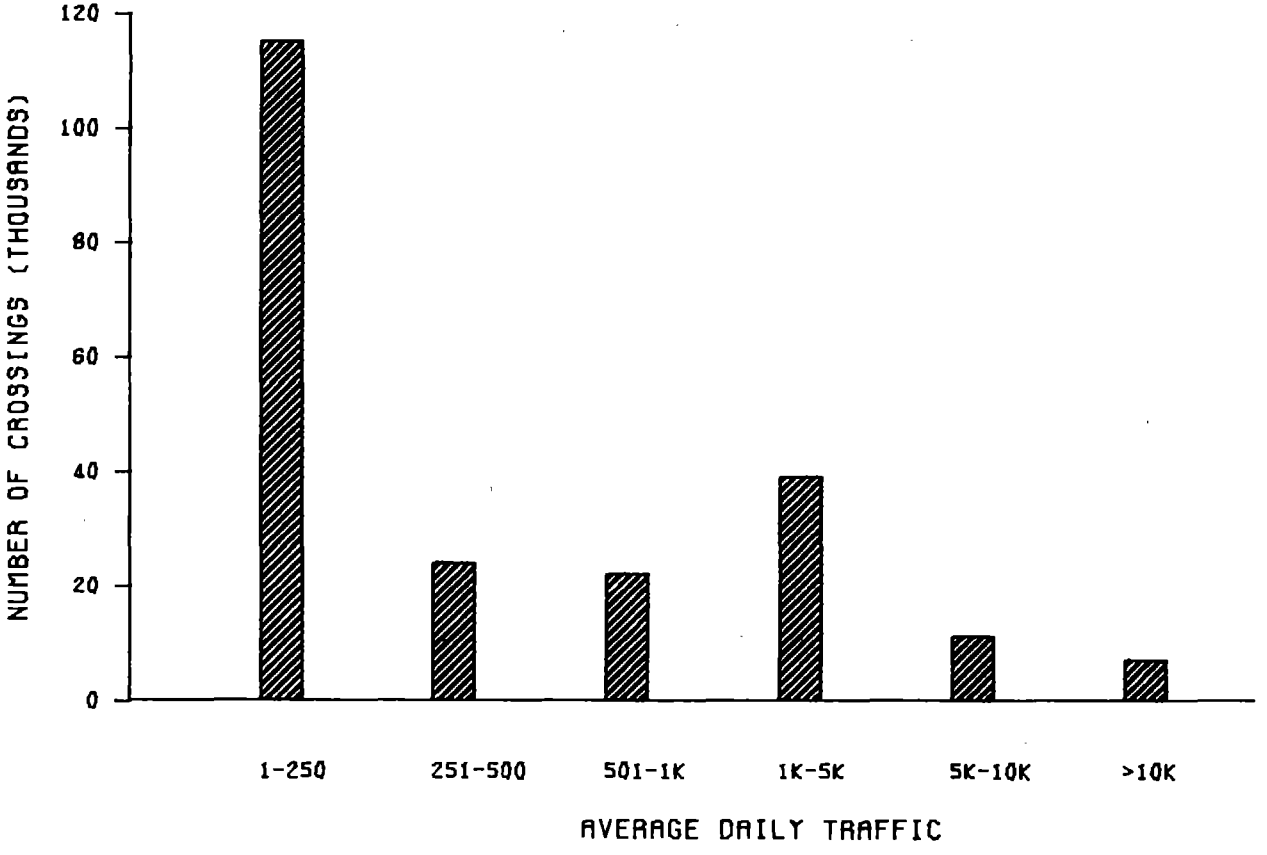

FIGURE 4-13. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

TABLE 4-15. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. STATE (1 OF 2)

	AADT			
	0-1K	1K-5K	>5K	TOTAL
ALABAMA	3569	902	337	4808
ALASKA	183	20	21	224
ARIZONA	723	197	143	1063
ARKANSAS	3143	723	241	4107
CALIFORNIA	4642	2645	2175	9462
COLORADO	1735	435	194	2364
CONNECTICUT	267	207	96	570
DELAWARE	127	85	51	263
DIST. COLUMBIA	33	22	15	70
FLORIDA	3475	1507	922	5904
GEORGIA	5137	1249	551	6937
HAWAII	6	0	0	6
IDAHO	1909	232	70	2211
ILLINOIS	10788	1968	1089	13845
INDIANA	8375	1182	583	10140
IOWA	7095	1370	386	8851
KANSAS	8541	992	314	9847
KENTUCKY	2696	722	255	3673
LOUISIANA	3776	812	420	5008
MAINE	773	258	83	1114
MARYLAND	522	306	241	1069
MASSACHUSETTS	579	366	285	1230
MICHIGAN	5663	1768	1033	8464
MINNESOTA	7063	769	291	8123
MISSISSIPPI	2804	593	184	3581
MISSOURI	5495	846	306	6647
MONTANA	2026	216	51	2293
NEBRASKA	5063	465	145	5673
NEVADA	299	40	24	363
NEW HAMPSHIRE	461	184	74	719
NEW JERSEY	697	941	574	2212
NEW MEXICO	718	111	46	875
NEW YORK	3004	955	461	4420
NORTH CAROLINA	3595	1436	444	5475
NORTH DAKOTA	5416	267	66	5749
OHIO	6852	2205	911	9968
OKLAHOMA	4764	729	290	5783
OREGON	2121	608	231	2960
PENNSYLVANIA	3888	1952	940	6780
RHODE ISLAND	62	33	47	142
SOUTH CAROLINA	3310	787	359	4456
SOUTH DAKOTA	3088	213	81	3382
TENNESSEE	2969	797	402	4168
TEXAS	10301	3109	1257	14667
UTAH	990	268	104	1362
VERMONT	435	121	38	594
VIRGINIA	1908	610	347	2865
WASHINGTON	3114	823	353	4290
WEST VIRGINIA	1871	417	94	2382
WISCONSIN	5238	1470	582	7290
WYOMING	529	64	26	619
PUERTO RICO	24	19	12	55
TOTAL	161862	39016	18245	219123

TABLE 4-15. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. STATE (2 OF 2)

	AADT 1- 250	251- 500	501- 1K	1K- 5K	5K- 10K	>10K	TOTAL
ALABAMA	2353	681	534	902	211	126	4807
ALASKA	118	34	31	20	14	7	224
ARIZONA	466	115	142	197	74	69	1063
ARKANSAS	2261	434	448	723	174	67	4107
CALIFORNIA	2138	1240	1259	2645	1064	1111	9457
COLORADO	1268	225	221	435	119	75	2343
CONNECTICUT	93	78	93	207	63	33	567
DELAWARE	59	34	28	85	27	24	257
DIST. COLUMBIA	1	5	27	22	4	11	70
FLORIDA	2025	786	621	1507	492	430	5861
GEORGIA	3797	747	585	1249	386	165	6929
HAWAII	6	0	0	0	0	0	6
IDAHO	1465	275	149	232	45	25	2211
ILLINOIS	7646	1805	1134	1968	606	483	13842
INDIANA	6552	341	1481	1182	345	238	10139
IOWA	5386	924	758	1370	282	104	8824
KANSAS	7007	856	654	992	222	92	9823
KENTUCKY	1905	433	354	722	163	92	3669
LOUISIANA	2143	1036	588	812	269	151	4999
MAINE	466	146	149	258	39	44	1102
MARYLAND	200	169	152	306	121	120	1068
MASSACHUSETTS	209	253	117	366	156	129	1230
MICHIGAN	3804	940	918	1768	561	472	8463
MINNESOTA	6086	517	459	769	205	86	8122
MISSISSIPPI	2021	449	327	593	130	54	3574
MISSOURI	4254	708	532	846	199	107	6646
MONTANA	1740	165	117	216	32	19	2289
NEBRASKA	4266	449	348	465	101	44	5673
NEVADA	238	30	27	40	10	14	359
NEW HAMPSHIRE	316	80	65	184	53	21	719
NEW JERSEY	29	362	305	941	372	202	2211
NEW MEXICO	572	79	67	111	28	18	875
NEW YORK	1863	62	1053	955	298	163	4392
NORTH CAROLINA	1620	1052	920	1436	333	111	5472
NORTH DAKOTA	4848	314	243	267	51	15	5738
OHIO	4555	1176	1109	2205	648	263	9956
OKLAHOMA	3767	599	395	729	166	124	5780
OREGON	1305	457	359	608	164	67	2960
PENNSYLVANIA	2019	962	902	1952	614	326	6775
RHODE ISLAND	34	16	12	33	30	17	142
SOUTH CAROLINA	2353	513	443	787	242	117	4455
SOUTH DAKOTA	2709	213	166	213	51	30	3382
TENNESSEE	1998	467	504	797	247	155	4168
TEXAS	7225	1616	1460	3109	810	447	14667
UTAH	630	213	147	268	60	44	1362
VERMONT	306	59	65	121	23	15	589
VIRGINIA	1039	387	340	610	208	139	2723
WASHINGTON	2275	453	386	823	222	131	4290
WEST VIRGINIA	1289	298	219	417	73	21	2317
WISCONSIN	3751	795	692	1470	355	227	7290
WYOMING	451	37	41	64	18	8	619
PUERTO RICO	13	3	8	19	7	5	55
TOTAL	115160	24086	22154	39016	11187	7058	218661

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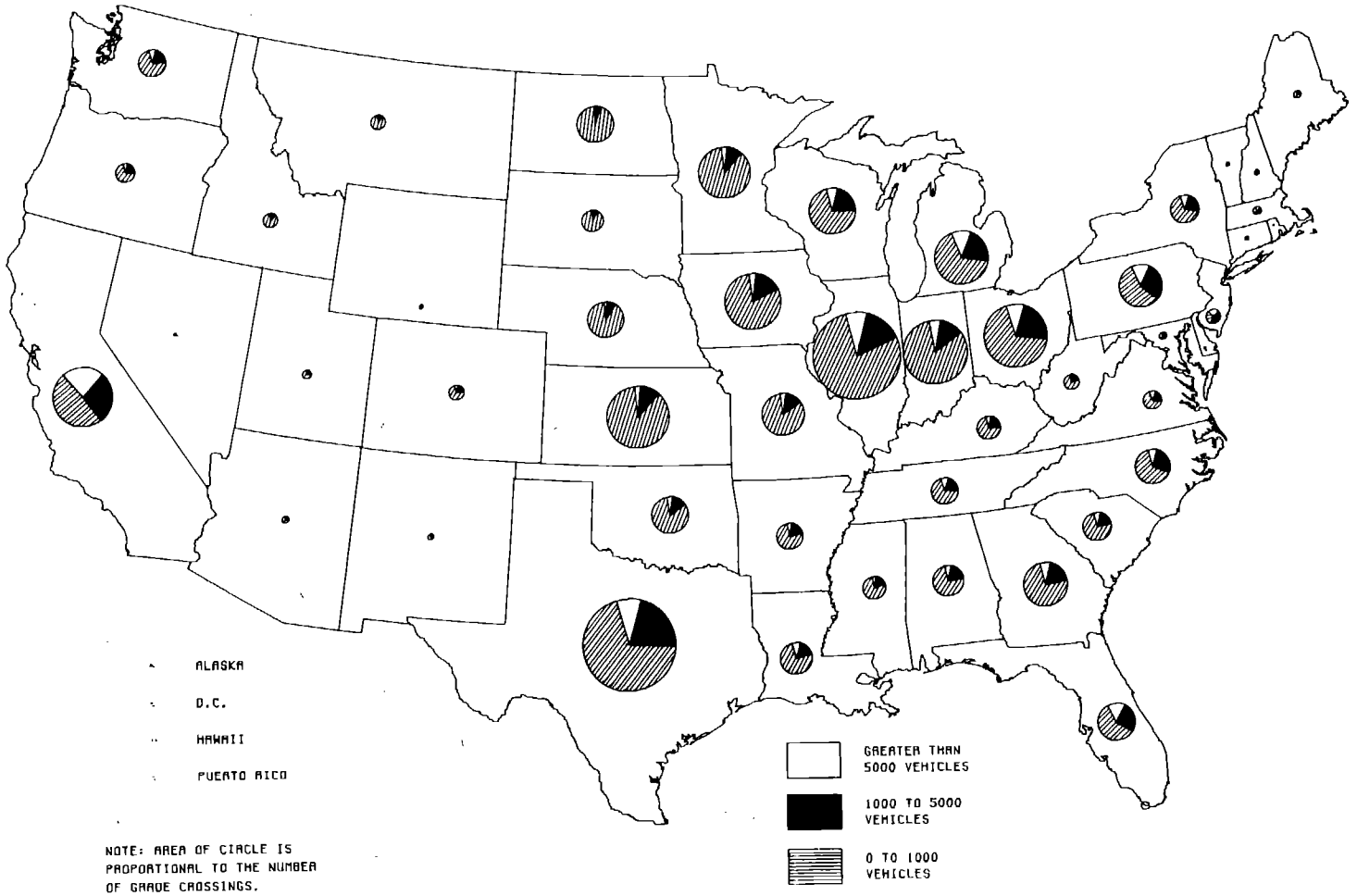

FIGURE 4-14. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. STATE

TABLE 4-16. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. WARNING DEVICE GROUP (ACTIVE/PASSIVE)

AADT	WARNING DEVICE GROUP		
	ACTIVE	PASSIVE	TOTAL
1-250	7632	107528	115160
251-500	5179	18907	24086
501-1K	7232	14922	22154
1K-5K	18502	20514	39016
5K-10K	6736	4451	11187
>10K	4848	2210	7058
TOTAL	50129	168532	218661

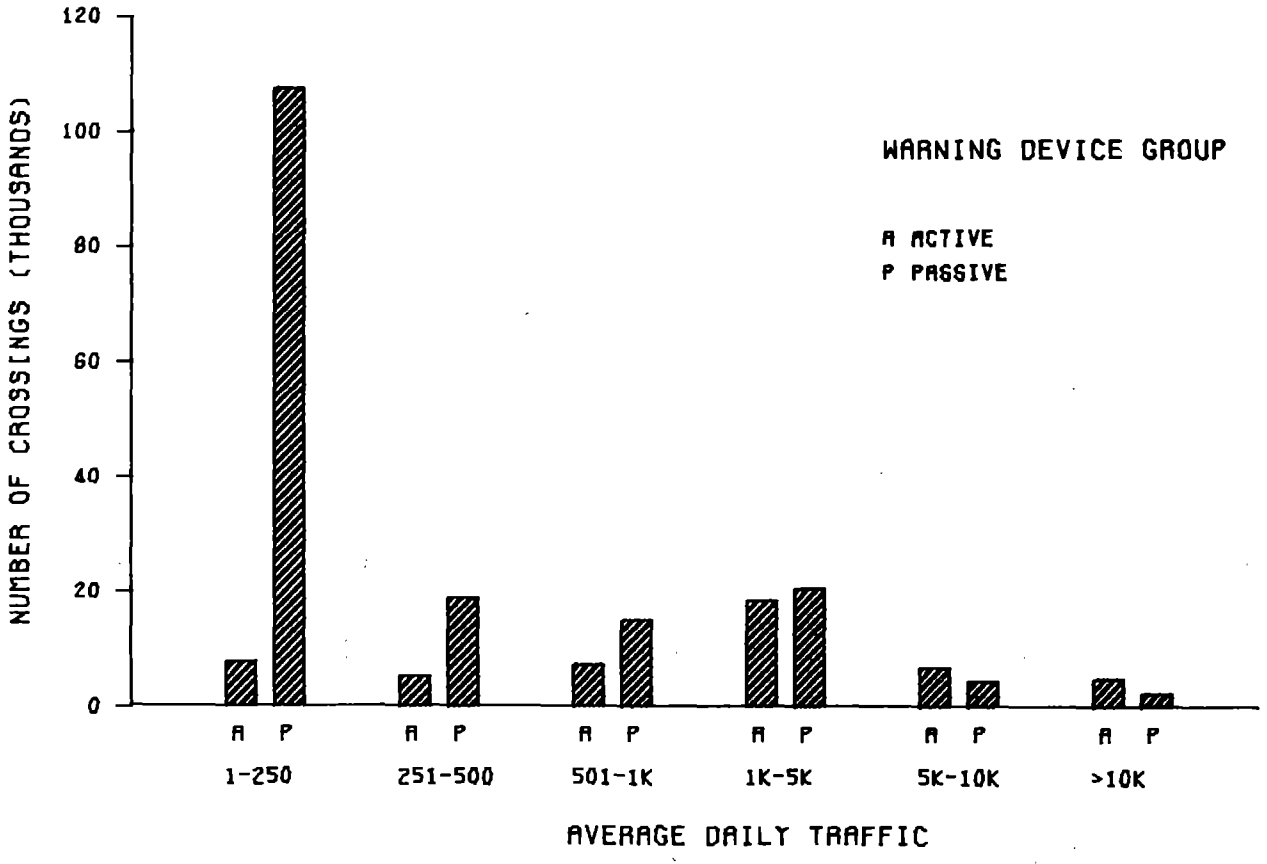

FIGURE 4-15. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. WARNING DEVICE GROUP (ACTIVE/ PASSIVE)

TABLE 4-17. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. WARNING DEVICE CLASS

WARNING DEVICE CLASS	AADT 1-250	251-500	501-1K	1K-5K	5K-10K	>10K	TOTAL
GATES	1556	1124	1659	4603	2027	1695	12564
FLASHING LIGHTS	5063	3648	5097	12987	4424	2917	34136
HWY. SIGNALS, WIGWAGS, BELLS	1013	407	476	912	285	236	3329
SPECIAL WARNING DEVICES	1636	941	990	2463	905	658	7593
CROSSBUCKS	94932	15557	11923	14924	2682	1131	141149
STOP SIGNS	2078	483	383	485	82	27	3538
OTHER SIGNS	515	205	139	141	42	12	1054
NO SIGNS OR SIGNALS	8367	1721	1487	2501	740	382	15198
TOTAL	115160	24086	22154	39016	11187	7058	218661

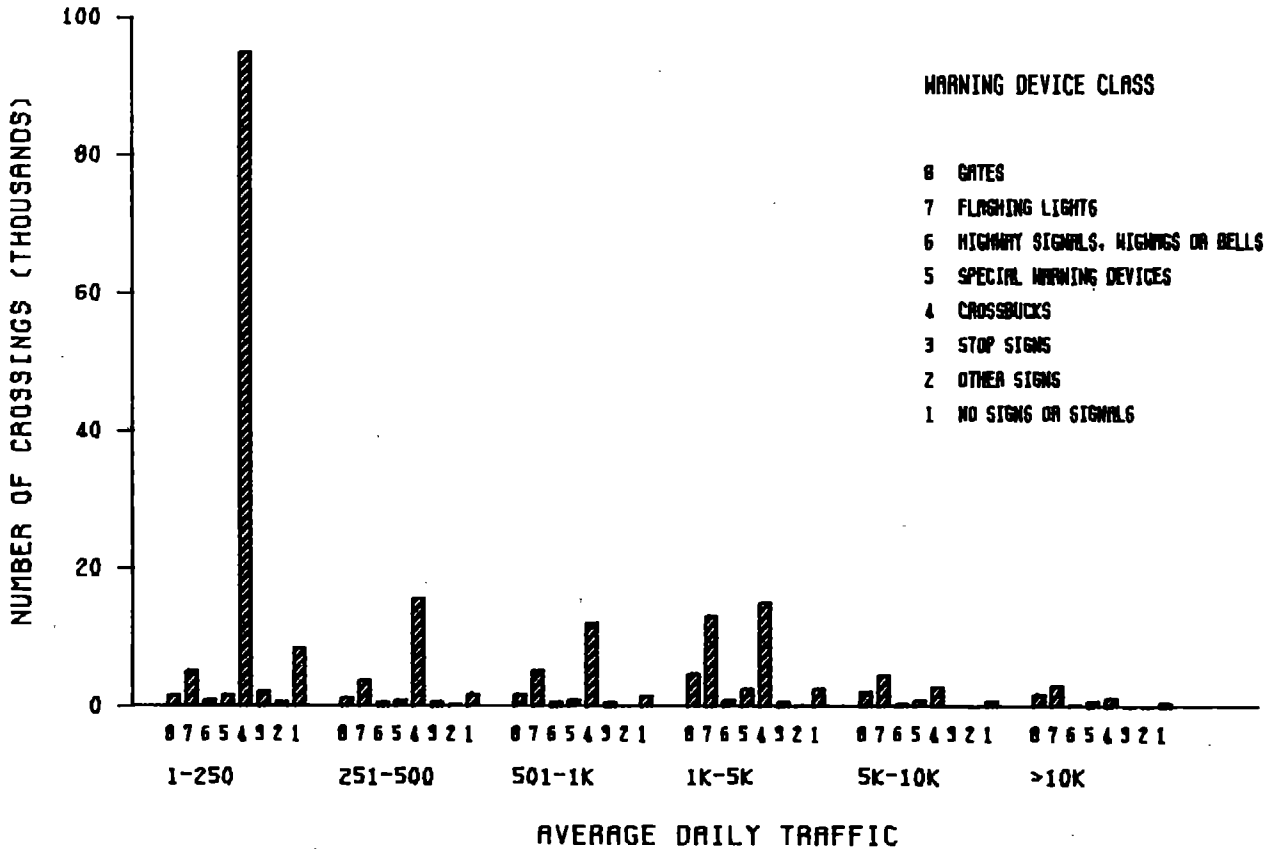

FIGURE 4-16. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC VS. WARNING DEVICE CLASS

TABLE 4-18. CROSSINGS VS. TRUCK TRAFFIC AS PERCENT OF AADT

PCT	NO. XINGS	PCT	NO. XINGS	PCT	NO. XINGS
<1	8015	01-05	88185	51-55	22
1	13677	06-10	77580	56-60	164
2	13048	11-15	20917	61-65	5
3	12603	16-20	10249	66-70	61
4	12708	21-25	2488	71-75	116
5	36149	26-30	8244	76-80	70
6	21977	31-35	422	81-85	6
7	10315	36-40	1206	86-90	57
8	17779	41-45	160	91-95	1
9	3251	46-50	1150	96-99	5
>9	69601				

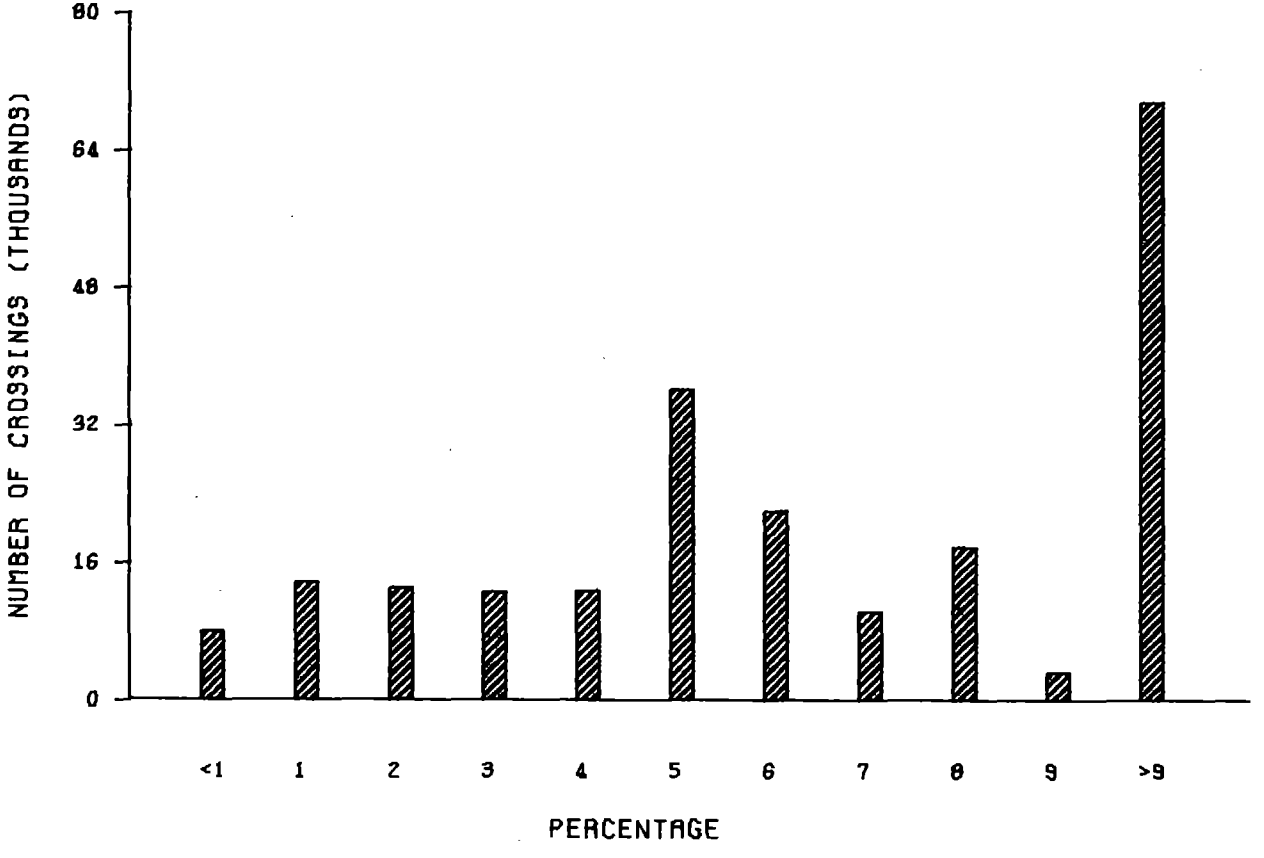

FIGURE 4-17. CROSSINGS VS. TRUCK TRAFFIC AS PERCENT OF AADT

TABLE 4-19. CROSSINGS BY TRUCK TRAFFIC AS PERCENT OF AADT VS. STATE

	PERCENT							
	00-05	06-10	11-15	16-20	21-25	26-30	>30	TOTAL
ALABAMA	1516	1875	511	392	143	130	241	4808
ALASKA	103	36	34	20	8	7	16	224
ARIZONA	0	3	0	16	53	208	783	1063
ARKANSAS	21	2955	76	47	4	4	0	4107
CALIFORNIA	907	1229	1975	2864	584	717	1186	9462
COLORADO	2168	105	51	29	8	1	2	2364
CONNECTICUT	570	0	0	0	0	0	0	570
DELAWARE	33	72	148	8	1	1	0	263
DIST. COLUMBIA	52	8	0	1	1	1	7	70
FLORIDA	2391	341	3118	44	3	2	5	5904
GEORGIA	5785	1001	100	13	3	8	27	6937
HAWAII	6	0	0	0	0	0	0	6
IDAHO	544	262	946	393	47	9	10	2211
ILLINOIS	13763	66	7	3	3	0	3	13845
INDIANA	21	3108	906	48	313	5729	15	10140
IOWA	3019	4944	791	66	15	8	8	8851
KANSAS	3591	5995	153	75	17	8	8	9847
KENTUCKY	973	1592	969	88	20	16	15	3673
LOUISIANA	1408	3396	46	57	5	26	70	5008
MAINE	144	933	27	3	1	6	0	1114
MARYLAND	375	361	124	81	10	33	85	1069
MASSACHUSETTS	769	459	2	0	0	0	0	1230
MICHIGAN	4846	3073	333	99	36	25	52	8464
MINNESOTA	3263	4685	112	32	8	1	22	8123
MISSISSIPPI	2165	1066	203	100	16	17	14	3581
MISSOURI	1475	2797	203	1919	120	63	70	6647
MONTANA	671	752	533	214	49	26	48	2293
NEBRASKA	5211	258	158	31	5	6	4	5673
NEVADA	198	84	25	23	30	1	2	363
NEW HAMPSHIRE	676	40	0	1	2	0	0	719
NEW JERSEY	1776	351	30	35	13	5	2	2212
NEW MEXICO	493	238	90	30	11	3	10	875
NEW YORK	196	2649	1375	142	32	0	26	4420
NORTH CAROLINA	4348	1095	21	5	0	0	6	5475
NORTH DAKOTA	392	646	2735	1957	10	0	9	5749
OHIO	643	9124	110	38	21	13	19	9968
OKLAHOMA	4087	1598	64	12	2	13	7	5783
OREGON	161	780	680	538	161	130	510	2960
PENNSYLVANIA	5163	1441	145	20	4	2	5	6780
RHODE ISLAND	107	21	1	0	6	1	6	142
SOUTH CAROLINA	1955	2074	279	125	0	5	18	4456
SOUTH DAKOTA	599	1825	879	69	8	0	2	3382
TENNESSEE	2345	1049	382	180	128	36	48	4168
TEXAS	12794	1102	437	211	66	44	13	14667
UTAH	635	569	126	25	6	0	1	1362
VERMONT	290	216	59	22	0	3	4	594
VIRGINIA	168	1217	24	8	511	932	5	2865
WASHINGTON	1153	1926	1000	147	3	4	57	4290
WEST VIRGINIA	2150	152	70	9	0	0	1	2382
WISCONSIN	0	6946	344	0	0	0	0	7290
WYOMING	42	50	515	9	0	0	3	619
PUERTO RICO	39	15	0	0	1	0	0	55
TOTAL	96200	77580	20917	10249	2488	8244	3445	219123

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TABLE 4-20. CROSSINGS BY TRUCK TRAFFIC AS PERCENT OF AADT, VS. ANNUAL AVERAGE DAILY TRAFFIC

TRUCKS (PERCENT OF AADT)	AADT 1- 250	251- 500	501- 1K	1K- 5K	5K- 10K	>10K	TOTAL
00-05	53459	11600	8953	15700	3960	2108	95780
06-10	38723	8205	8655	14792	4437	2744	77556
11-15	9154	1966	2236	4880	1603	1061	20900
16-20	5220	751	894	1902	683	799	10249
21-25	987	338	276	455	245	187	2488
26-30	5441	807	846	908	142	99	8243
>30	2176	419	294	379	117	60	3445
TOTAL	115160	24086	22154	39016	11187	7058	218661

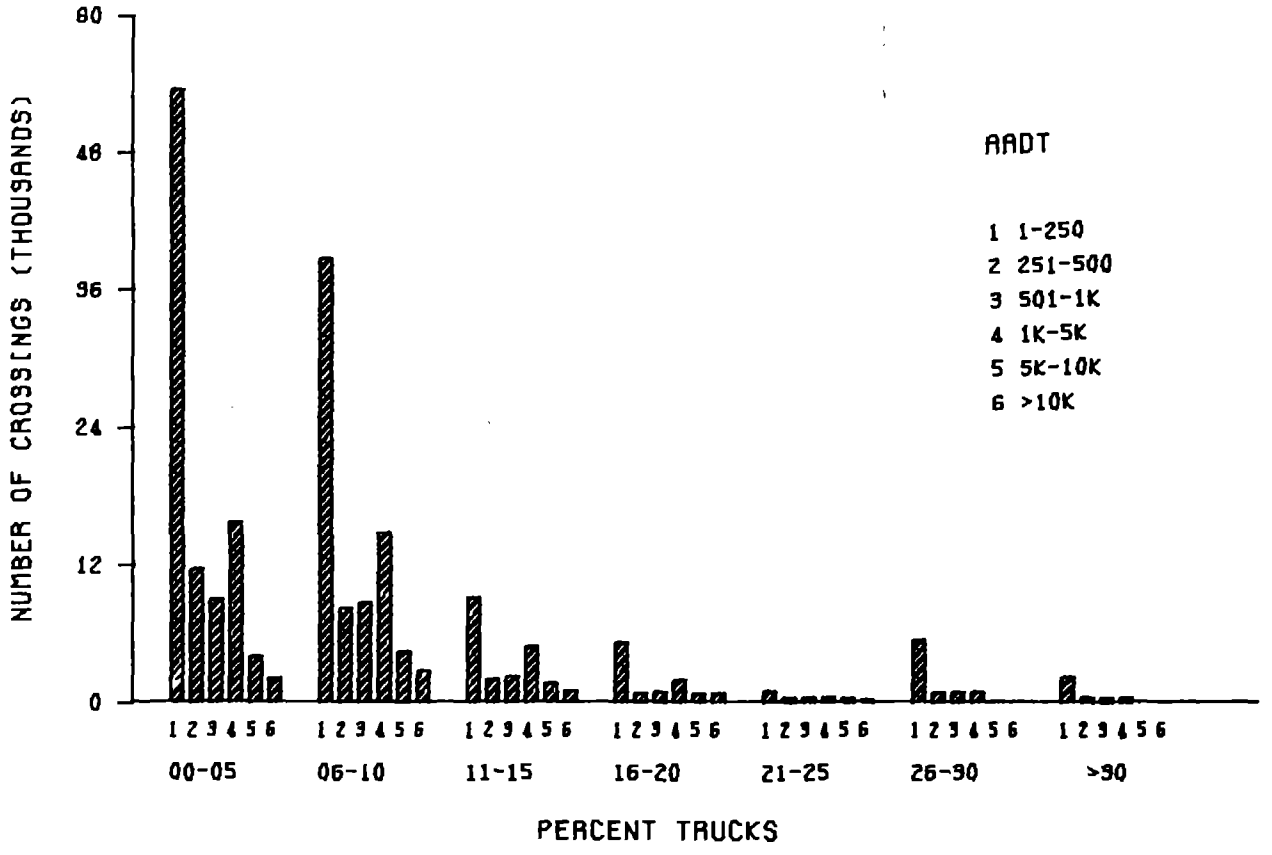

FIGURE 4-18. CROSSINGS BY TRUCKS AS A PERCENT OF AADT VS. ANNUAL AVERAGE DAILY TRAFFIC

5. MISCELLANEOUS DATA REQUESTE ON DOT-AAR INVENTORY FORM

TABLE 5-1. MISCELLANEOUS DATA REQUESTED ON THE DOT-AAR INVENTORY FORM

LESS THAN ONE TRAIN PER DAY?

YES 38809 NO 180313 N/R 1

DOES ANOTHER RAILROAD OPERATE A SEPARATE TRACK AT CROSSING?

YES 5463 NO 213556 N/R 104

DOES ANOTHER RAILROAD OPERATE OVER YOUR TRACK AT CROSSING?

YES 28095 NO 190869 N/R 159

IS TRACK EQUIPPED WITH ANY SIGNS OR SIGNALS?

YES 202296 NO 16823 N/R 4

IS TRACK EQUIPPED WITH SIGNALS FOR TRAIN OPERATION?

YES 60170 NO 158515 N/R 438

IS HIGHWAY PAVED?

YES 148221 NO 70874 N/R 28

IS COMMERCIAL POWER AVAILABLE?

YES 196911 NO 22089 N/R 123

DOES TRACK RUN DOWN A STREET?

YES 6767 NO 202535 N/R 9821 *

NEARBY INTERSECTING HIGHWAY?

YES 76055 NO 133158 N/R 9910 *

RR ADVANCE WARNING SIGNS PRESENT?

YES 86608 NO 132456 N/R 59

ARE TRUCK PULLOUT LANES PRESENT?

YES 2786 NO 216231 N/R 106

IS CROSSING ON STATE HIGHWAY SYSTEM?

YES 33233 NO 185793 N/R 97

DOES CROSSING PROVIDE SPEED SELECTION?

YES 5610 NO 74959 N/A 138554

N/R MEANS NOT RECORDED
N/A MEANS NOT APPLICABLE

* This question not on original inventory form used in the five pilot states.

APPENDIX A

U.S. DEPARTMENT OF TRANSPORTATION - ASSOCIATION OF AMERICAN RAILROADS INVENTORY FORM

OMB-004-R4039

U.S. DOT — AAR CROSSING INVENTORY FORM

A. INITIATING AGENCY ☐ RAILROAD ☐ STATE

B. CROSSING NUMBER ____

C. REASON FOR UPDATE: ☐ CHANGES IN EXISTING CROSSING DATA ☐ NEW CROSSING ☐ CLOSED CROSSING

D. EFFECTIVE DATE ____ (M) ____ (D) ____ (Y)

Part I Location and Classification of All Crossings (Must Be Completed)

1 Railroad Operating Company

2 Railroad Division or Region

3. Railroad Subdivision or District

4. State

5. County

6. County Map. Ref. No.

DO NOT WRITE IN THIS SPACE — State ____ County ____ City ____ Nearest City ☐ RR Code ____ Timetable Station ____

7 City

8. Nearest City

9. Highway Type and No.

10. Street or Road Name

11. RR I. D No

12 Nearest RR Timetable Station

13 Branch or Line Name

14. Railroad Mile Post

15. Pedestrian Crossing ☐ 1 at grade ☐ 2. RR under ☐ 3. RR over

16. Private Vehicle Crossing
A. ☐ 1. Farm ☐ 2. Residential ☐ 3. Recreational ☐ 4. Industrial
B. ☐ 5. at grade ☐ 6. RR under ☐ 7. RR over
C. ☐ 8. signs-specify ____ ☐ 9. signals-specify ____ ☐ 0. none

17. Public Vehicle Crossing ☐ 1. at grade ☐ 2. RR under ☐ 3. RR over

COMPLETE REMAINDER OF FORM ONLY FOR PUBLIC VEHICLE CROSSINGS AT GRADE

Part II Detailed Information for Public Vehicular at Grade Crossing

1A. Typical Number of Daily Train Movements

Daylight (6 AM to 6 PM)		Night (6 PM to 6 AM)	
thru trains	switching	thru trains	switching
____ 1	____ 2	____ 3	____ 4

1B. Check if Less Than One Movement Per Day ☐ 5

2. Speed of Train at Crossing
A. Maximum time table speed ____ 1
B. Typical Speed Range Over Crossing from ____ 2 to ____ 3 mph

3. Type and Number of Tracks
main ____ 1 other ____ 2 If other specify ____ 3

4. Does Another RR Operate a Separate Track at Crossing?
☐ Yes 1 ☐ No Specify RR ____ 2

5. Does Another RR Operate Over Your Track at Crossing?
☐ Yes 1 ☐ No Specify RR ____ 2

6. Type of Warning Device at Crossing

A. Signs

Crossbucks		Standard Highway Stop Sign	Other Stop Signs	Other Signs Specify
reflectorized	non-reflectorized			05 Number ____ 06 ____
____ 01 Number	____ 02 Number	____ 03 Number	____ 04 Number	07 Number ____ 08 ____

B. Train Activated Devices

Gates		Cantilevered Flashing Lights		Mast Mounted Flashing Lights	Other Flashing Lights Specify	Highway Traffic Signals	Wigwags	Bells
red & white - reflectorized	other colored	over traffic lane	not over traffic lane					
____ 09 Number	____ 10 Number	____ 11 Number	____ 12 Number	____ 13 Number	____ 14 Number ____ 15	____ 16 Number	____ 17 Number	____ 18 Number

C. Specify Special Warning Device not Train Activated ____ 19

D. No Signs or Signals ☐ 20

7. Is Commercial Power Available? ☐ Yes ☐ No

8. Does Crossing Signal Provide Speed Selection for Trains? ☐ Yes ☐ No ☐ N/A

9. Method of Signalling for Train Operation: Is Track Equipped with Signals? ☐ Yes ☐ No

Part III Physical Data

1. Type of Development ☐ 1. Open Sp. ☐ 2. Res ☐ 3 Comm. ☐ 4. Ind. ☐ 5. Inst.

2. Smallest Crossing Angle ☐ 0°-29° ☐ 30°-59° ☐ 60°-90°

3. Number of Traffic Lanes Crossing Railroad ____ Number

4 Are Truck Pullout Lanes Present? ☐ Yes ☐ No

5. Is Highway Paved ☐ Yes ☐ No

6. Pavement Markings ☐ Stoplines ☐ RR Xing Sym. ☐ None

7 Are RR Advance Warning Signs Present? ☐ Yes ☐ No

8. Crossing Surface ☐ 1 Sec Timber ☐ 2 Full Wd Plank ☐ 3 Asphalt ☐ 4. Concrete Slab ☐ 5 Concrete Pave ☐ 6 Rubber ☐ 7 Metal Sections ☐ 8 Other Metal ☐ 9 Unconsolidated ☐ 0 Other Specify

9. Does Track Run Down A Street? ☐ Yes ☐ No

10. Nearby Intersecting Highway? ☐ Yes ☐ No

Part IV Highway Department Information 1. Highway System ____

2. Is Crossing on State Highway System? ☐ Yes ☐ No.

3. Functional Classification of Road over Crossing ____

4. Estimate AADT ____

5. Estimate Percent Trucks ____

I. D. Number

APPENDIX B
GLOSSARY

AADT: Estimate of the annual average daily highway traffic total in both directions.

ACTIVE WARNING DEVICES: Warning systems activated by an approaching train; e.g., gates, flashing lights, highway signals, wigwags and bells.

COMMERCIAL POWER: A source of commercial power within 500 feet of the crossing.

CROSSING SURFACE:

1. Sectional Treated Timber: Prefabricated units approximately 8 feet in length of treated timber individually installed and removable for maintenance and replacement purposes.

2. Full Wood Plank: Wood surface, other than sectional treated timber, covering the entire crossing area above the crossties.

3. Asphalt: Asphalt surface over the entire crossing area or in the area between planks or other material forming flangeway openings, with or without single planks on outside of running rails.

4. Concrete Slab: Precast concrete slabs, installed and removable individually for maintenance and replacement purposes.

5. Concrete Pavement: Concrete surface which is continuous over the track area and is not removable except by destruction of the surface.

6. Rubber Slabs: Preformed rubber sections, installed and removable individually for maintenance and replacement purposes.

7. Metal Sections: Preformed sections of steel or other metal, installed and removable individually for maintenance and replacement purposes.

8. Other Metal: Complete coverage of the crossing area with railroad rails or other metal materials not removable in limited sectional units.

9. Unconsolidated: Ballast or other unconsolidated material placed above the tops of crossties, with or without planks on one or both sides of the running rails.

DAYLIGHT TRAIN MOVEMENTS: Train movements between 6 am to 6 pm.

FLASHING LIGHTS: Includes cantilevered flashing lights, mast mounted flashing lights and other flashing lights not in accord with the latest AAR Bulletin on Railroad-Highway Grade Crossing Warning Devices.

HIGHWAY SIGNALS: Train activated typical highway red-amber-green lights that control street traffic over the crossing.

MAIN TRACK: A track over which thru trains operate.

MAXIMUM SPEED MINUS MINIMUM SPEED: Typical variation in train speed, mph, over the crossing. Indicates the possible variability on warning time between signaling of the train and its passage over the crossing if the warning devices are not equipped with speed selection equipment.

MAXIMUM TIMETABLE SPEED: Maximum train speed, mph, permitted over the crossing.

NEARBY INTERSECTING HIGHWAY: A highway intersection within 75 feet of the crossing.

NIGHT TRAIN MOVEMENTS: Train movements between 6 pm to 6 am.

NUMBER OF CROSSBUCKS: The number of masts with crossbucks. A mast with two or more crossbucks is counted as one. A crossbuck on an active device is not counted.

OTHER SIGNS: Signs other than crossbucks or stop signs.

OTHER STOP SIGNS: Stop signs other than the standard highway stop signs.

OTHER TRACK: A track other than main track.

PASSIVE WARNING DEVICE: Warning systems not automatically activated by an approaching train; e.g. signs (crossbucks, standard highway signs) and special warning devices (manually operated gates, flood lights).

PAVEMENT MARKINGS: Markings as prescribed or generally similar to those contained in highway traffic manuals, in particular, stoplines and railroad crossing symbols.

PERCENTAGE TRUCKS: The percentage of total daily highway traffic represented by trucks.

PUBLIC CROSSING: A location where tracks cross a road which is under the jurisdiction of, and maintained by, a public authority and which is open to public travel.

RAILROAD: The railroad company that owns and maintains the roadbed, tracks and signal system controlling the crossing.

RR ADVANCE WARNINGS: Advance warning signs present on any of the highway approaches.

RURAL CROSSING: A crossing located in a community with less than 5,000 population.

SIGNALS FOR TRAIN OPERATION: Automatic signals or interlocks which control train operation in the vicinity of the crossing.

SMALLEST CROSSING ANGLE: The smallest angle between the highway and the track.

SPECIAL WARNING DEVICES: Non-train-activated devices not including signs. Includes manually operated gates, train crew flagging the crossing, watchmen and flood lights.

SPEED SELECTION FOR TRAINS: The provisions for a uniform warning time for the speed range of trains typically encountered at the crossing.

STANDARD HIGHWAY STOP SIGN: Octagonal, red sign with white letters.

STOP SIGNS: The standard octagonal highway stop sign or other stop signs.

SWITCH TRAINS: All trains per day other than thru trains, i.e., locals, industrial runs, switch engines.

THRU TRAINS: Trains per day whose primary responsibility is to move cars over the road and which may have a limited number of pickups and setouts along the route.

TOTAL TRAIN MOVEMENTS: Includes all movements per day for both the reporting company and any other railroad operating over the crossing.

TRAFFIC LANES: Number of highway traffic lanes not including shoulders or lanes that are typically used for parking.

TRUCK PULLOUT LANE: A special lane added to the highway to accomodate vehicles required to stop at the crossing.

TYPE OF DEVELOPMENT:

1. Open space: undeveloped or sparsely developed, very lightly populated, agricultural.
2. Residential: built-up residential area.
3. Commercial: retail stores and businesses, offices, personal services.
4. Industrial: manufacturing, construction, heavy products, factories, warehouses.
5. Institutional: schools, churches, hospitals, parks, and other community facilities.

TYPICAL MAXIMUM SPEED: Maximum train speed, mph, typically encountered at the crossing.

TYPICAL MINIMUM SPEED: Minimum train speed, mph, typically encountered at the crossing.

URBAN CROSSING: A crossing located in a community with greater than 5,000 population.

WARNING DEVICE CLASS: Warning devices categorized as defined in Table 3-30. A crossing is assigned a warning device class equal to the highest class warning device installed.

WARNING DEVICE GROUP: Warning devices categorized as either active or passive.

APPENDIX C
RAILROAD COMPANY SYMBOLS AND NAMES

SYMBOL	COMPANY
AA	ANN ARBOR RR
ABB	AKRON & BARBERTON BELT RAILWAY
ABL	ALAMEDA BELT LINE
ACY	AKRON, CANTON AND YOUNGSTOWN RR
ADN	ASHLEY, DREW & NORTHERN RAILWAY
AHW	AHNAPEE & WESTERN RY
AL	ALMANOR RR
ARR	ALASKA RR
ALM	ARKANSAS & LOUISIANA MISSOURI RR
ALS	ALTON & SOUTHERN
AMC	AMADOR & CENTRAL RR
AMIN	AYERSHIRE MINE
AMR	ARCATA & MAD RIVER RR
AN	APALACHICOLA NORTHERN RR
ANR	ANGELINA & NECHES RR
APA	APACHE RY
AR	ABERDEEN & ROCKFISH
ARA	ARCADE & ATTICA RR
ARC	ALEXANDER RR
ARW	ARKANSAS WESTERN RR
ASAB	ATLANTA & ST. ANDREWS BAY RAILWAY CO.
ATSF	ATCHISON, TOPEKA & SANTA FE RR
ATK	AMTRAK
ATW	ATLANTA & WESTERN RAILWAY
ASRR	AUGUSTA & SUMMERVILLE RR
AUG	AUGUSTA RR
AVL	AROOSTOOK VALLEY RR
AWP	ATLANTA & WEST POINT RR
AWW	ALGERS, WINSLOW & WESTERN RY
AZUC	CORPORATION AZUCA
BLA	BALTIMORE & ANNAPOLIS
BAP	BUTTE, ANACONDA & PACIFIC RY
BAR	BANGOR & AROOSTOOK
BCK	BUFFALO CREEK RR
BCRR	BOYNE CITY RR
BEDT	BROOKLYN EASTERN DISTRICT TERMINAL
BEEM	BEECH MOUNTAIN
BFC	BELLEFONTE CENTRAL RR
BH	BATH & HAMMONDSPORT RR
BLE	BESSEMER & LAKE ERIE
BM	BOSTON & MAINE CORP.
BML	BELFAST & MOOSEHEAD LAKE RR
BMLP	BLACK MESA & LAKE POWELL
BMS	BERLIN MILLS
BN	BURLINGTON NORTHERN
BO	BALTIMORE & OHIO RR CO.
BOCT	BALITMORE & OHIO CHICAGO TERMINAL
BRC	BELT RAILWAY OF CHICAGO
BRFD	BRANFORD STEAM RR
BRR	BELTON RR
BRW	BLACK RIVER & WESTERN
BS	BIRMINGHAM SOUTHERN
BVS	BEVIER & SOUTHERN
BXN	BAUXITE & NORTHERN RAILWAY

SYMBOL	COMPANY
CACV	COOPERSTOWN & CHARLOTTE VALLEY
CAD	CADIZ RR
CARR	CARROLLTON RR
CASR	CASCADE RECREATIONAL RR
CASS	CASS SCENIC RR
CBC	CARBON COUNTY RR
CBL	CONEMAUGH & BLACK LICK RR
CCR	CORINTH & COUNCE RR
CCT	CENTRAL CALIFORNIA TRACTION CO.
CDT	CONNETICUT DEPT. OF TRANSPORTATION
CFR	CAPE FEAR RY INC.
CHTT	CHICAGO HEIGHTS TERMINAL TRANSFER RR
CHV	CHATTAHOOCHEE VALLEY RY
CHW	CHESAPEAKE WESTERN RY
CI	CAMBRIA & INDIANA
CIC	CEDAR RAPIDS & IOWA CITY RY
CIM	CHICAGO & ILLINOIS MIDLAND RY CO.
CIND	CENTRAL INDIANA RY
CIR	CENTRAL IOWA RAILWAY & DEVELOPMENT CO.
CIRR	CHATTAHOOCHEE INDUSTRIAL RR
CKSO	CONDON, KINZUA & SOUTHERN RR
CLC	COLUMBIA & COWLITZ RY
CLCO	CLAREMONT & CONCORD RY
CLIF	CLIFFSIDE RR
CLJ	CITY OF LA JUNTA
CLP	CLARENDON & PITTSFORD RR
CTSR	CUMBRES & TOLTEC RR
CN	CANADIAN NATIONAL RYS
CNJ	CENTRAL RR OF NEW JERSEY
CNL	COLUMBIA, NEWBERRY & LAURENS RR CO.
CNW	CHICAGO & NORTHWESTERN RY
CNYR	CENTRAL NEW YORK RAILROAD CORP.
CO	CHESAPEAKE & OHIO RY CO.
COP	CITY OF PRINEVILLE
CP	CANADIAN PACIFIC RY
CPF	COTTON PLANT-FARGO RY
CPLT	CAMINO PLACERVILLE & LAKE TAHOE
CR	CONRAIL
CRI	CHICAGO RIVER & INDIANA RR CO.
CRR	CHESTNUT RIDGE RY
CCO	CLINCHFIELD RR CO.
CS	COLORADO & SOUTHERN RY CO.
CSL	CHICAGO SHORT LINE RY
CSP	CAMAS PRAIRIE RR
CSS	CHICAGO SOUTH SHORE & SOUTH BEND
XCTA	CHICAGO TRANSIT AUTHORITY
CTN	CANTON RY
CUST	CHICAGO UNION STATION
CV	CENTRAL VERMONT
CW	COLORADO & WYOMING RY
CWI	CHICAGO & WESTERN INDIANA RR
CWP	CHICAGO & WEST PULLMAN & SOUTHERN
CWR	CALIFORNIA WESTERN RR
DC	DELRAY CONNECTING RR
DH	DELAWARE & HUDSON RY CO.
DKS	DONIPHAN, KENSETT & SEARCY
DM	DETROIT & MACINAC RY CO.
DMIR	DULUTH, MISSABE, & IRON RANGE RY CO.

SYMBOL	COMPANY
DMM	DANSVILLE & MOUNT MORRIS RR
DMU	DES MOINES UNION RY
DNE	DULUTH & NORTHEASTERN RR
DOD	DEPARTMENT OF DEFENSE
DQE	DEQUEEN & EASTERN RR
DR	DARDANELLE & RUSSELVILLE RR
DRGW	DENVER & RIO GRANDE WESTERN RR CO.
DRI	DAVENPORT, ROCK ISLAND & NORTHWESTERN RY
DS	DURHAM & SOUTHERN RY
DT	DETROIT TERMINAL RR
DTI	DETROIT, TOLEDO, & IRONTON RR CO.
DTS	DETROIT & TOLEDO SHORE LINE RR
DU	DAYTON UNION
DUT	DENVER UNION TERMINAL
DVS	DELTA VALLEY & SOUTHERN RY
DWP	DULUTH, WINNIPEG, & PACIFIC RY CO.
EBT	EAST BROADTOP
EM	EDGEMOOR & MANETTA
ECH	EAST CAMDEN & HIGHLAND RR
EDW	EL DORADO & WESSON RY
EEC	EAST ERIE COMMERCIAL RR
EJE	ELGIN, JOLIET, & EASTERN RY CO.
EJR	EAST JERSEY RR & TERMINAL CO.
EL	ERIE LACKAWANNA RY CO.
ELS	ESCANABA & LAKE SUPERIOR RR
ERIE	ERIE MINING CO.
ESLJ	EAST ST. LOUIS JUNCTION RR
ETWN	EAST TENNESSEE & WESTERN NORTH CAROLINA RR
EV	EVERETT RR
EW	EAST WASHINGTON RY
FCIN	FRANKFORT & CINCINNATI RR
FDDM	FORT DODGE, DES MOINES & SOUTHERN RY CO.
FEC	FLORIDA EAST COAST RY CO.
FJG	FONDA, JOHNSTON & GLOVERSVILLE RR
FOR	FORE RIVER RR
FP	FORDYCE & PRINCTON RR
FRDN	FERDINAND RR
FSV	FORT SMITH & VAN BUREN RY
FWD	FORT WORTH & DENVER RY CO.
GA	GEORGIA RR
GBW	GREEN BAY & WESTERN RR CO.
GCW	GARDEN CITY WESTERN RY.
GHH	GALVESTON, HOUSTON & HENDERSON RR
GJ	GREENWICH & JOHNSONVILLE RY
GM	GAINSVILLE MIDLAND RR
GMRC	GREEN MOUNTAIN RR
GNA	GRAYSONIA, NASHVILLE & ASHDOWN
GNWR	GENNESEE & WYOMING RR
GRN	GREENVILLE & NORTHERN RY
GRR	GEORGETOWN RR
GSW	GREAT SOUTHWEST RR
GTW	GRAND TRUNK WESTERN RR. CO.

SYMBOL	COMPANY
GU	GRAFTON & UPTON RR
GWF	GALVESTON WHARVES
GWR	GREAT WESTERN RY
HB	HAMPTON & BRANCHVILLE RR
HBS	HOBOKEN SHORE RR
HBT	HOUSTON BELT & TERMINAL RY CO.
HE	HOLLIS & EASTERN RR
HIR	HOLTON INTER-URBAN RY
HLNE	HILLSBORO & NORTHEASTERN
HN	HUTCHINSON & NORTHERN
HPTD	HIGHPOINT, THOMASVILLE & DENTON RR
HRT	HARTWELL RY
HS	HARTFORD & SLOCOMB RR
HSW	HELENA SOUTHWESTERN RR
ITR	IOWA TERMINAL
ICG	ILLINOIS CENTRAL GULF RR CO.
IHB	INDIANA HARBOR BELT RR CO.
IRN	IRONTON RR
ITC	ILLINOIS TERMINAL RR CO.
ITTR	ITT RAYONIER RR
IU	INDIANAPOLIS UNION RY
JSC	JOHNSTOWN & STONY CREEK RR
KC	KANAWHA CENTRAL RY.
KCNW	KELLY'S CREEK & NORTHWESTERN
KCS	KANSAS CITY SOUTHERN RY CO.
KCT	KANSAS CITY TERMINAL RY CO.
KENC	KENNICOTT COPPER
KIT	KENTUCKY & INDIANA TERMINAL RR

SYMBOL	COMPANY
KM	KANSAS & MISSOURI RY & TERMINAL CO.
KNOR	KLAMATH NORTHERN RY
KT	KENTUCKY & TENNESSEE RY
LA	LOUISIANA & ARKANSAS RY CO
LAJ	LOS ANGELES JUNCTION RY CO.
LAL	LIVIONA, AVON, & LAKEVILLE RR
LBR	LOWVILLE & BEAVER RIVER RR
LC	LANCASTER & CHESTER RY
LEFC	LAKE ERIE, FRANKLIN & CLARION RR
LHR	LEHIGH & HUDSON RIVER RY
LI	LONG ISLAND RR
LKP	LAHANINA, KAANAPALI & PACIFIC
LMR	LOUISIANA MIDLAND RAILWAY
LN	LOUISVILLE & NASHVILLE RR CO.
LNE	LEHIGH & NEW ENGLAND RY
LNO	LAONA & NORTHERN RY
LNW	LOUISIANA & NORTHWEST RR
LPB	LOUISIANA & PINEBLUFF
LPN	LONGVIEW, PORTLAND & NORTHERN RY
LRS	LAURINBURG & SOUTHERN RR
LSBC	LA SALLE & BUREAU COUNTY RR
LSI	LAKE SUPERIOR & ISPEMING RR
LSTT	LAKE SUPERIOR TERMINAL & TRANSFER RY
LT	LAKE TERMINAL RR
LUN	LUDINGTON & NORTHERN RY
LV	LEHIGH VALLEY RR CO
LW	LOUISVILLE & WADLEY RY

SYMBOL	COMPANY
LWV	LACKAWANA & WYOMING VALLEY RY
MAA	MAGMA ARIZONA RR
MAYW	MAYWOOD & SUGAR CREEK
MB	MONTPELIER & BARRE RR
MBRR	MERIDIAN & BIGBEE RR
MBRC	MARIANNA & BLOUNTSTOWN RR
MCR	MC CLOUD RIVER RR
MCSA	MOSCOW, CAMDEN & SAN AUGUSTINE RR
MDW	MINNESOTA, DAKOTA & WESTERN RY
ME	MORRISTOWN & ERIE
MEC	MAINE CENTRAL RR CO
MET	MODESTO & EMPIRE TRACTION CO.
METW	MUNICIPALITY OF EAST TROY
MGA	MONONGAHELA RY CO
MHCO	MARQUETTE & HURON MOUNTAIN
MHM	MOUNT HOPE MINERAL RR
MI	MISSOURI-ILLINOIS RR CO
MILW	CHICAGO, MILWAUKEE, ST. PAUL, & PACIFIC RR CO
MISS	MISSISSIPPIAN RY
MJ	MANUFACTURERS JUNCTION RY
MKT	MISSOURI-KANSAS-TEXAS RR CO
MNJ	MIDDLETOWN & JERSEY RY CO
MNS	MINNEAPOLIS, NORTHFIELD, & SOUTHERN
MOV	MOSHASSUCK VALLEY RR
MP	MISSOURI PACIFIC RR CO
MPA	MARYLAND & PENNSYLVANIA RR
MRS	MANUFACTURERS RY
MSE	MISSISSIPPI EXPORT RR
MSV	MISSISSIPPI & SKUNA VALLEY RR
MTFR	MINNESOTA TRANSFER RY CO
MTR	MONTOUR RR
MTW	MARINETTE TOMAHAWK & WESTERN RR
MWR	MUNCIE & WESTERN RR
NALE	NATIONAL LEAD
NAP	NARRAGANSET PIER RR
NB	NORTHAMPTON & BATH RR
NEZP	NEZPERCE RR
NFD	NORFOLK, FRANKLIN, & DANVILLE RY CO
NFG	NICHOLAS, FAYETTE, & GREENBRIAR
NHIR	NEW HOPE AND IVYLAND RR
NJII	NEW JERSEY, INDIANA & ILLINOIS
NLG	NO. LOUISIANA & GULF RR
NN	NEVADA NORTHERN RY
NOPB	NEW ORLEANS PUBLIC BELT RR CO
NPB	NORFOLK & PORTSMOUTH BELT LINE RR CO
PTO	PORTLAND TERMINAL RR
NSL	NORWOOD & ST. LAWRENCE
NSS	NEWBURG & SOUTH SHORE RY
NW	NORFOLK & WESTERN RY CO
NOR	NORTHWEST OKLAHOMA
NWP	NORTHWESTERN PACIFIC RR CO

SYMBOL	COMPANY
NYD	NEW YORK DOCK RY
NYLB	NEW YORK & LONG BRANCH RR
NYSW	NEW YORK, SUSQUEHANNA & WESTERN RR
OURY	OGDENSBURG BRIDGE & POST AUTHORITY
OCE	OREGON, CALIFORNIA & EASTERN RY
OCW	OCEAN CITY WESTERN
OKGE	OKLAHOMA GAS & ELECTRIC
OLB	OMAHA, LINCOLN & BEATRICE RY
ONW	OREGON & NORTHWESTERN RR
OPE	OREGON PACIFIC & EASTERN RY
OTR	OAKLAND TERMINAL RY
PAA	PENNSYLVANIA & ATLANTA RR
PAM	PITTSBURGH, ALLEGHENY & MC KEES ROCKS RR
PBCC	PEABODY COAL CO
PBR	PATAPSCO & BACK RIVERS RR
PC	PENN CENTRAL TRANSPORTATION CO
PCN	POINT COMFORT & NORTHERN RY
PCY	PITTSBURGH, CHARTIERS & YOUGHIOGHENY RR
PT	PENNINSULA TERMINAL
PG	PROCTOR & GAMBLE
PHD	PORT HURON & DETRIOT RR
PI	PADUCAH & ILLINOIS RR
PICK	PICKINS RR
PLE	PITTSBURGH & LAKE ERIE RR CO
PNW	PRESCOTT & NORTHWESTERN RR
POCA	PORT OF CATOOSA
POV	PITTSBURGH & OHIO VALLEY RY

SYMBOL	COMPANY
PPU	PEORIA & PEKIN UNION RY CO
PRSL	PENNSYLVANIA-READING SEASHORE LINES
PRT	PARR TERMINAL RR
PRTD	PORTLAND TRACTION CO
PRV	PEARL RIVER VALLEY RR
PS	PITTSBURGH & SHAWMUT RR
PSR	PETALUMA & SANTA ROSA RR
PTM	PORTLAND TERMINAL CO
PTRA	PORT TERMINAL RR ASSOC.
PTRR	PORT TOWNSHEND RR
PP	PUBLISHER PAPER CO
PUCC	PORT UTILITIES COMMISSION OF CHARLESTON, S.C.
PVS	PECOS VALLEY SOUTHERN RY
PW	PROVIDENCE & WORCHESTER
QRR	QUINCY RR
RBTD	ROBERT DOLLAR CO
RDG	READING CO
RFP	RICHMOND, FREDERICKSBURG & POTOMAC RR
RI	CHICAGO, ROCK ISLAND, AND PACIFIC RR CO
RR	RARITAN RIVER RR
RESV	RESERVE MINING CO
RSP	ROSCOE, SNYDER & PACIFIC RY
RT	RIVER TERMINAL RY
RV	RAHWAY VALLEY CO
SAN	SANDERSVILLE RR

SYMBOL	COMPANY
SB	SOUTH BUFFALO RY
SBK	SOUTH BROOKLYN
SC	SUMTER & CHOCTAW RY
SCL	SEABOARD COAST LINE RR CO
SDAE	SAN DIEGO & ARIZONA EASTERN RY CO
SCY	SEAVIEW RR
SERA	SIERRA RR
SH	STEELTON & HIGHSPIRE RR
STC	SIMPSON TIMBER CO.
SIND	SOUTHERN INDIANA RY
SJB	ST. JOSEPH BELT
SJL	ST. JOHNSBURY & LAMOILLE COUNTY RR CO.
SJT	ST. JOSEPH TERMINAL
SLC	SAN LUIS CENTRAL RR
SLGW	SALT LAKE, GARFIELD & WESTERN RY
SLSF	ST. LOUIS-SAN FRANCISCO RY CO.
SM	ST. MARY'S RR
SMA	SAN MANUEL ARIZONA RR
SMV	SANTA MARIA VALLEY RR
SN	SACRAMENTO NORTHERN RY CO.
SOO	SOO LINE RR CO.
SOU	SOUTHERN RY CO.
SP	SOUTHERN PACIFIC TRANSPORTATION CO.
SRC	STRASBURG RR
SRN	SABINE RIVER & NORTHERN RR
SRTC	SAVANNAH RIVER TERMINAL
SS	SAND SPRINGS RY
SSL	SKANEATELES SHORT LINE RR
SSLV	SOUTHERN SAN LOUIS VALLEY RR
SSW	ST. LOUIS-SOUTHWESTERN LINES
ST	SPRINGFIELD TERMINAL RY
STE	STOCKTON TERMINAL & EASTERN RR
SIRC	STATEN ISLAND RR
TASD	TERMINAL RY ALABAMA STATE DOCKS
TAW	TOLEDO, ANGOLA & WESTERN RY
TB	TWIN BRANCH RR
TCG	TUCSON, CORNELIA & GILA BEND
TCT	TEXAS CITY TERMINAL RY
TEXC	TEXAS CENTRAL RR CO.
POTB	PORT OF TILLAMOOK BAY
TM	TEXAS MEXICAN RY CO.
TMBL	TACOMA MUNICIPAL BELT LINE
TN	TEXAS NORTHERN RY
TOE	TEXAS-OKLAHOMA & EASTERN RR
TOV	TOOELE VALLEY RY
TPW	TOLEDO, PEORIA, & WESTERN RR CO.
TRC	TRONA RY
TRRA	TERMINAL RR ASSN. OF ST. LOUIS
TSRC	TIDEWATER SOUTHERN RY CO.
TSE	TEXAS-SOUTHEASTERN RR
TSR	TEXAS STATE RR
TSU	TULSA-SAPULA UNION RY
TT	TOLEDO TERMINAL RR
TCC	TEXAS TRANSPORTATION CO.
UMP	UPPER MERION & PLYMOUTH
UNI	UNITY RYS

SYMBOL	COMPANY
UO	UNION RR OF OREGON
UP	UNION PACIFIC RR CO.
URR	UNION RR OF PENNSYLVANIA
USSC	U.S. STEEL CO.
UT	UNION TERMINAL RY OF ST. JOSEPH, MO.
UTAH	UTAH RY
VALR	VALLEY RR
VAMD	VIRGINIA-MARYLAND RY
VBR	VIRGINAIA BLUE RIDGE RY
VC	VIRGINIA CENTRAL RY
VCY	VENTURA COUNTY RY
VE	VISALIA ELECTRIC RR
VS	VALLEY & SILETZ
VSO	VALDOSTA SOUTHERN RR
VTR	VERMONT RY CO.
WA	WESTERN OF ALABAMA, INC.
WAG	WELLSVILLE, ADDISON & GALETON RR
WAR	WARRENTON RR
WBC	WILKES BARRE CONNECTING
WNR	WHARTON & NORTHERN RR
WIM	WASHINGTON, IDAHO & MONTANA RY
WCTU	WHITE CITY
WAKS	WANAMAKERS KEMPTON & SOUTHERN
WRC	WOLFBORO RR
WLO	WATERLOO RR
WM	WESTERN MARYLAND RR CO.
WNF	WINFIELD RR
WNFR	WINIFREDE RR
WOV	WARREN & OUACHITA VALLEY
WP	WESTERN PACIFIC RR CO.
PARN	WHITE PASS & YUKON
WRWK	WARWICK RR
WS	WARE SHOALS RR
WSR	WARREN & SALINE RIVER RR
WSS	WINSTON-SALEM SOUTHBOUND RY CO.
WSYP	WHITE SULPHUR SPRINGS & YELLOWSTONE PARK RY
WEYC	WEYERHAUSER TIMBER CO.
WVN	WEST VIRGINIA NORTHERN RR
WW	WINCHESTER & WESTERN RR
WYS	WYANDOTTE SOUTHERN
WYT	WYANDOTTE TERMINAL RR
YDC	YANKEE TOWN DOCK CORP.
YS	YOUNGSTOWN & SOUTHERN
YW	YREKA WESTERN RR CO.

APPENDIX D
PATENT DECLARATION

This report is a comprehensive statistical summary of the characteristics for all public, at-grade railroad crossings reported in the joint government/industry National Inventory of Railroad Highway Crossings as of May 1978.

The report, prepared under Contract RR833, contains no information on any subject which could be considered an invention, improvement or discovery.

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