

**AN OVERVIEW OF
SPEED CAMERA OPERATIONS
IN VICTORIA 1990-1991**

by

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Abstract:

Victoria police started to trial speed cameras in December 1989 and in April 1990 the current speed camera program in Victoria was launched. Operational data from the initiative were made available to monitor the changes in police operations as the initiative evolved. Speed camera operational data from July 1990, when first available in electronic form, to January 1992 have been used to monitor these changes.

The use of speed cameras was phased in over time and appeared to level by mid-1991 in both metropolitan and rural areas of Victoria. Across Victoria from July 1990 to December 1991 there were:

- 8,966 speed camera sessions at 1,698 sites
- over 20,000 hours of speed camera operation
- over 11½ million vehicles checked of which an average of 11% were travelling over the set threshold speed.

The length of speed camera sessions gradually increased from around 2 hours to 3 hours in the period beginning from May 1991 onwards in all areas of Victoria.

The proportion of all vehicles checked that were over the threshold speed also dropped from May 1991 until October 1991, after which a lower proportion was maintained. This drop was most noticeable in the metropolitan area.

Although there was significant use of speed cameras on all days of the week their use on weekends was relatively lower. The level of use of speed cameras in 100 km/h speed zones was also relatively low. In the metropolitan area the level of speed camera use in 100km/h zones was below 3% while the level in rural Victoria was below 12½ % at all times.

All police districts in Victoria used speed cameras to varying degrees. It was also found that the deployment of speed cameras across metropolitan police districts differed. Some districts spread their speed camera sessions over a large number of sites while others tended to return to the same sites more often.

Key Words:

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EXECUTIVE SUMMARY

Victoria police started to trial speed cameras in December 1989 and in April 1990 the current speed camera program in Victoria was launched. Operational data from the initiative were made available to monitor the changes in police operations as the initiative evolved. Speed camera operational data from July 1990, when first available in electronic form, to January 1992 have been used to monitor these changes.

The use of speed cameras was phased in over time and appeared to level by mid-1991 in both metropolitan and rural areas of Victoria. Across Victoria from July 1990 to December 1991 there were:

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- over 11½ million vehicles checked of which an average of 11% were travelling over the set threshold speed.

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All police districts in Victoria used speed cameras to varying degrees. It was also found that the deployment of speed cameras across metropolitan police districts differed. Some districts spread their speed camera sessions over a large number of sites while others tended to return to the same sites more often.

1.0 INTRODUCTION

The trialling of speed cameras as a means of detecting speeding drivers in Victoria began in December 1989 and they were officially launched in April 1990. Data from the speed cameras were not available electronically until mid-June 1990. Operational data, from July 1990 to January 1992, were used to monitor the introduction of speed cameras. This information was used in developing an evaluation of the speed camera program in terms of crashes (Cameron, Cavallo & Gilbert, 1992). This analysis of operational data provides descriptive information about the usage of speed cameras.

2.0 SPEED CAMERA PROGRAM - OPERATIONAL DATA

The characteristics of the speed camera program and a description of its operation in the period from July 1990 to December 1991/January 1992 for different areas in Victoria was undertaken. The characteristics of speed camera use available for examination were:

- the number of hours of operation;
- the number of sessions conducted;
- the number of vehicles checked;
- the proportion of vehicles detected exceeding the speed threshold;
- session duration;
- the number of speed camera Traffic Infringement Notices (TINs);
- time of day and day of week of operation;
- usage in different speed zones; and
- non-speed camera speeding offences.

2.1 Speed Camera Operations Statewide

In the 18 month time period from July 1990 to December 1991 there have been:

8,966 speed camera sessions at **1,698** sites;

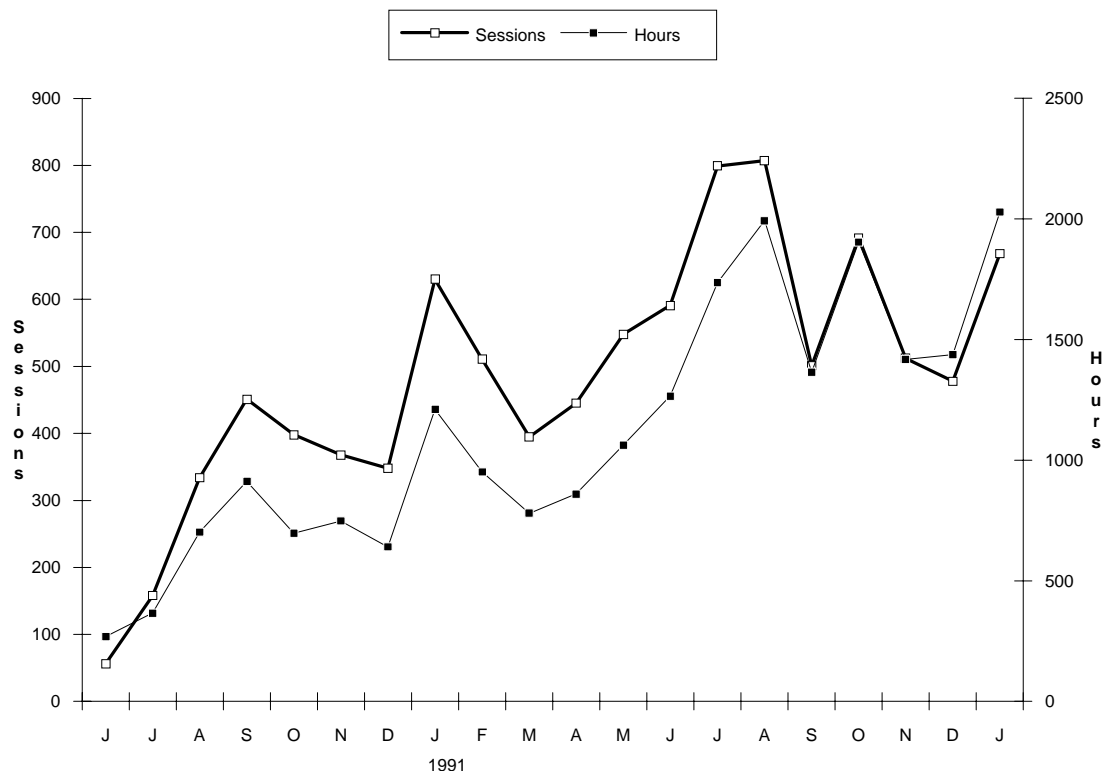
over **20,000** hours of speed camera operation;

over **11½ million** vehicles checked;

1.3 million vehicles detected over the threshold (11.3%).

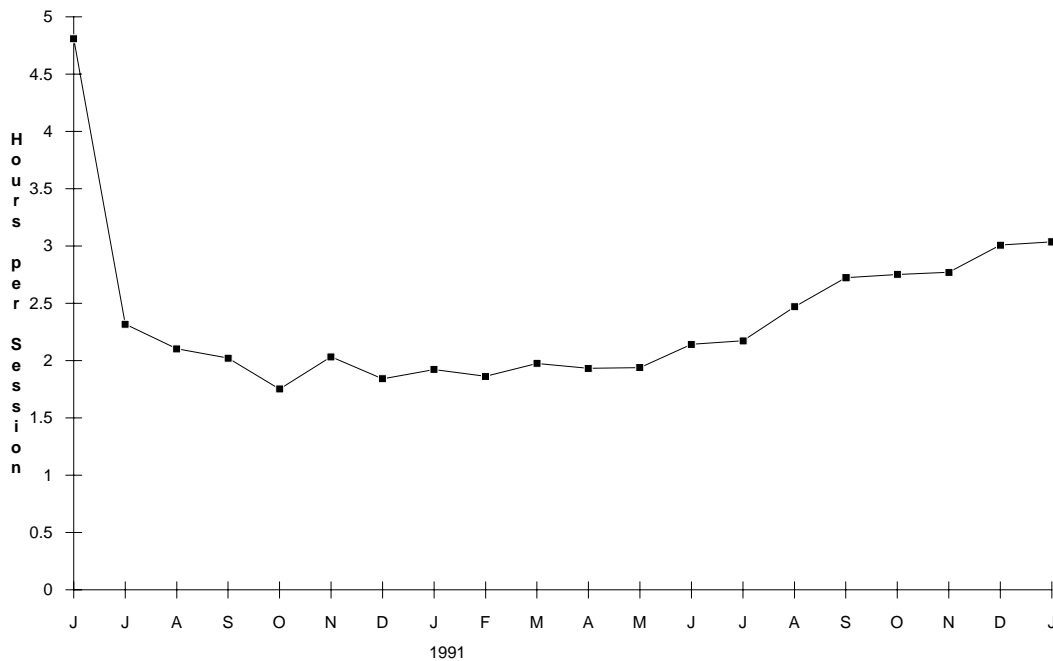
The use of speed cameras (as measured by number of sessions and number of hours of operation) increased substantially until mid 1991, after which the level of use appears to have stabilized (Figure 2.1).

Figure 2.1 Speed Camera Sessions and Hours of Operation, Victoria



The average duration of speed camera sessions was relatively stable from July 1990 to May 1991. After May 1991 the average duration of sessions steadily increased (Figure 2.2).

Figure 2.2 Speed Camera Average Session Duration



In the period from July 1990 to May 1991 the proportion of vehicles detected over the set speed threshold increased from 11.3% to 15.4%. After May 1991 the proportion of vehicles detected over the threshold decreased dramatically to 8.0% in October 1991 and remained at that level (Figure 2.3).

Figure 2.3 Proportion of Vehicles detected over the Threshold, Victoria

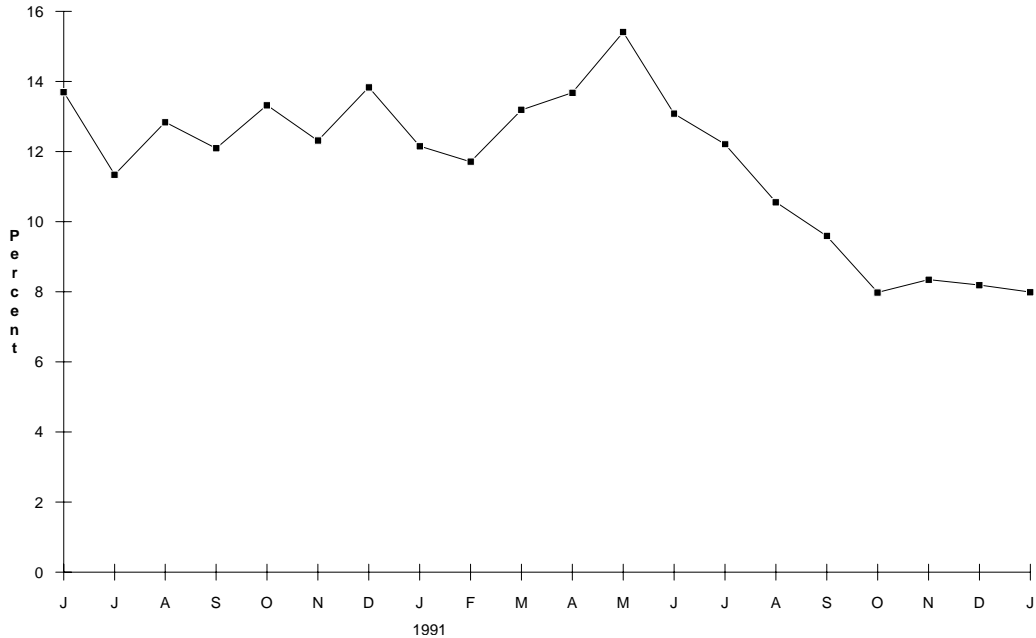
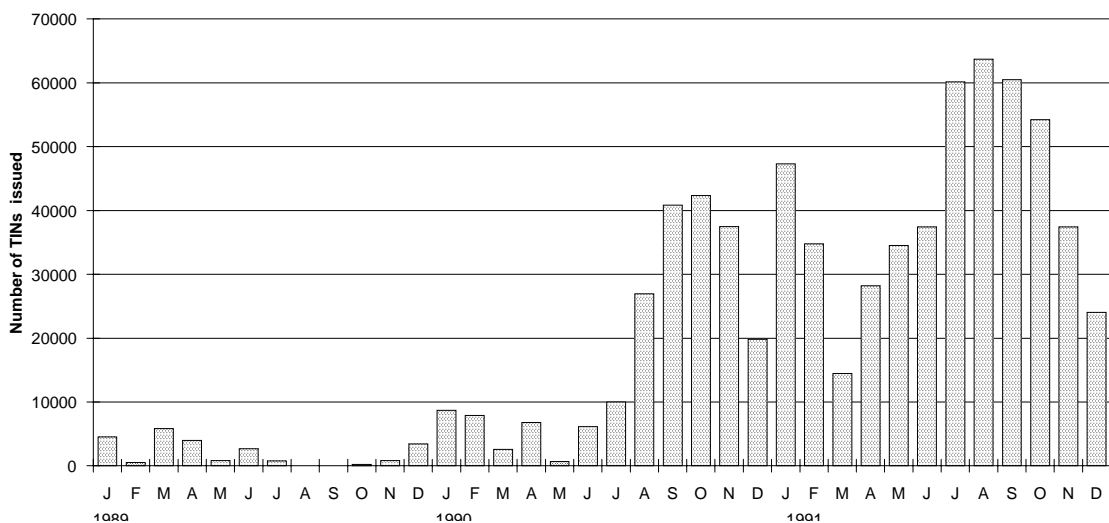


Figure 2.4 shows the number of speed camera offences Victoria-wide over time. Figure 2.5 shows the number of all other speed offences Victoria wide-over time. In comparing Figures 2.4 and 2.5, offences for exceeding speed limits overall have increased dramatically relative to pre-program levels.

Figure 2.4 Speed Camera Offences, Victoria



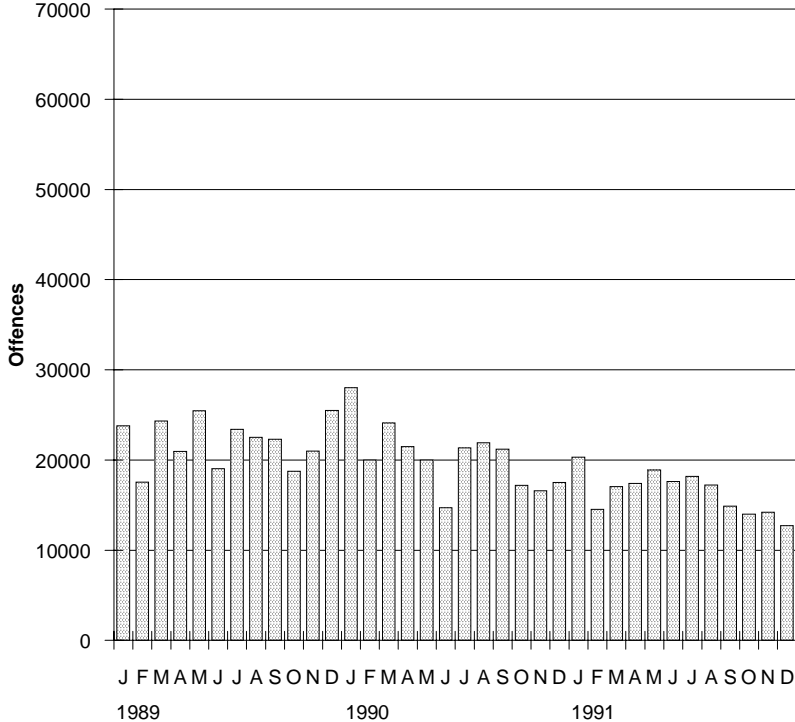
The monthly level of offences through the Speed Camera Program rose two to four times the level achieved by traditional speed enforcement methods, with around 20,000 speeding offenders in all detected per month before July 1990 to 40,000 - 80,000 per month over the operation of the program.

A total of 312,644 non-speed camera speeding offences were detected in the 18 months from July 1990 to December 1991 comprising:

- 62,510** Exceed Speed Zone offences
- 139,360** Built Up Area (Exceed 60 km/h) offences
- 107,507** Exceed 100 km/h offences
- 3,267** Truck Speeding offences

The trend in the 3 years from 1989 to 1991 suggests that the level of these other speed offences is gradually decreasing (Figure 2.5).

Figure 2.5 Non-Speed Camera Speed Offences, Victoria



2.2 Speed Camera Operations in Metropolitan and Rural Victoria

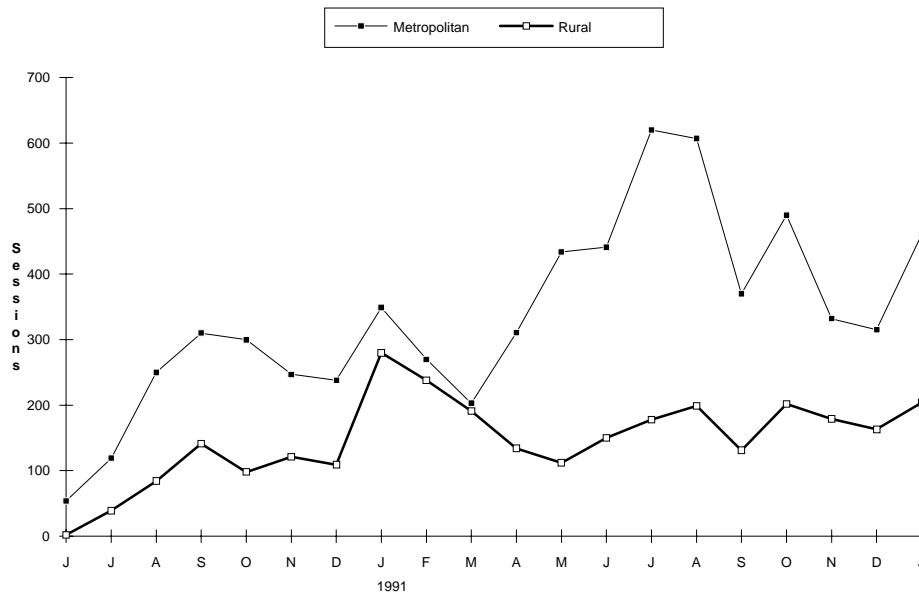
The metropolitan area, referred to in this study, is defined as those areas within police districts A to J. The rural area is the remainder of Victoria, that is, areas within police districts K to Q (Appendix A).

2.2.1 Number of Speed Camera Sessions

In the metropolitan area there were about 250 to 300 speed camera sessions per month from August 1990 to April 1991. Since May 1991 there were about 400 to 500 sessions per month.

The level of speed camera use in the rural area was much lower but slowly increasing. By the end of 1991 about 200 sessions per month were conducted in the rural area (Figure 2.6).

Figure 2.6 Speed Camera Sessions - Metropolitan v. Rural Areas

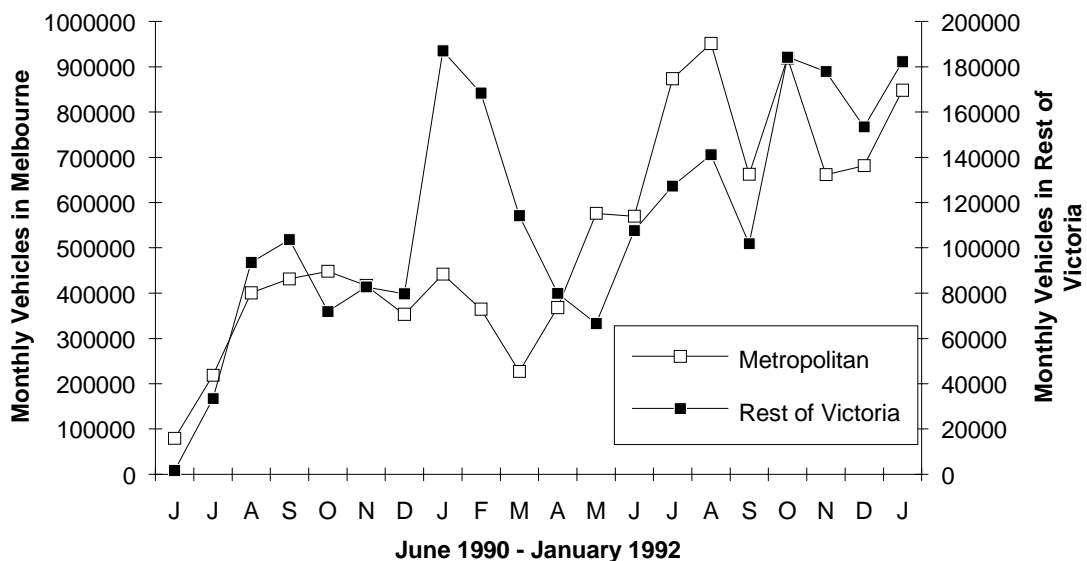


2.2.2 Vehicles Checked

The number of vehicles checked in the metropolitan area quickly rose to a level of around 400,000 vehicles per month until April 1991. Beginning in July 1991 the number of vehicles checked fluctuated between 700,000 and 1 million vehicles per month.

In the rural area there were fewer vehicles checked reaching a level of just under 200,000 vehicles per month at the end of 1991. The increase in January and February 1991 could also reflect an increase in traffic volume in the summer holiday period as well as an increase in speed camera operations during this period (Figure 2.7).

Figure 2.7 Vehicles Checked by Speed Cameras

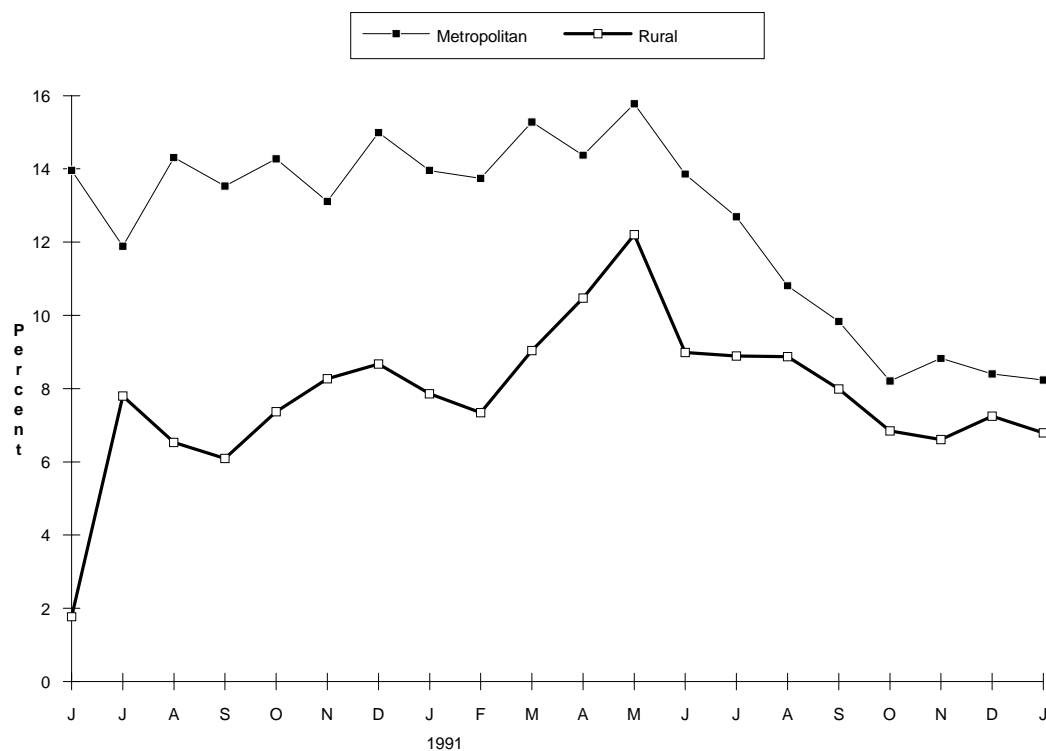


2.2.3 Proportion of Vehicles detected over the Speed Threshold

The proportion of vehicles detected over the speed threshold (offenders) rose slightly in the metropolitan area until May 1991 (15.8%). From May until October 1991 the proportion dropped considerably to a level of around 8% and remained steady.

The proportion over the threshold in rural Victoria was below 10% for all but the months of April and May 1991. Before May 1991 the proportion was increasing but after May 1991 the proportions slowly decreased. The proportion over the limit was about 7½ % at the end of 1991 (Figure 2.8).

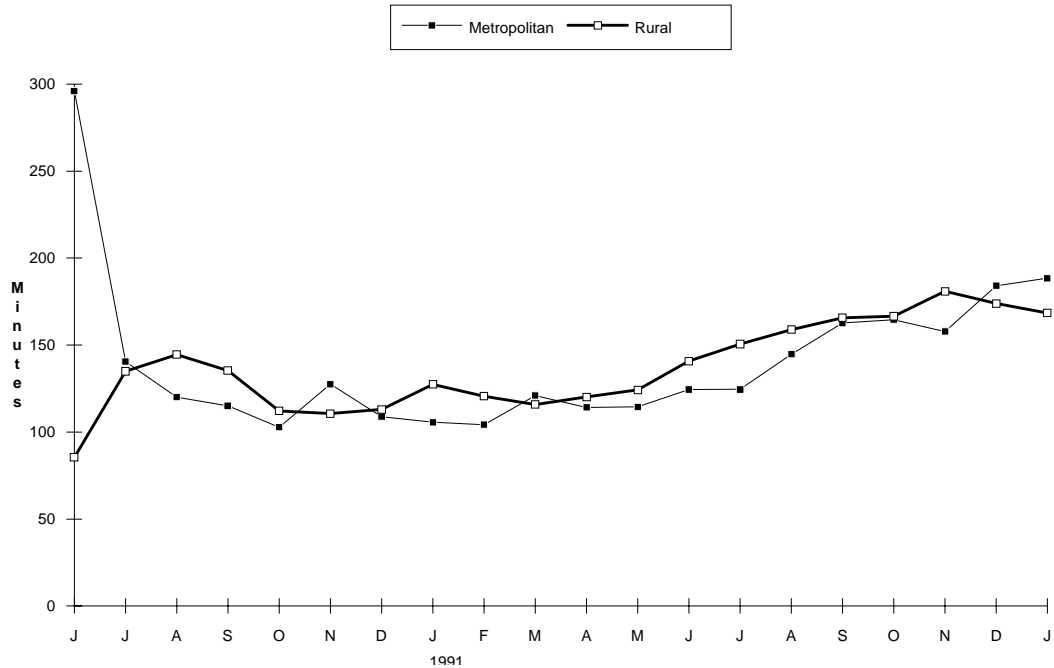
Figure 2.8 Proportion of Vehicles over the Speed Threshold



2.2.4 Speed Camera Session Duration

Average session duration followed a similar trend in both the metropolitan and rural areas of the state, increasing gradually over time. From about October 1990 to March 1991 the average duration was under 2 hours. The average duration began to increase after March 1991 and at the end of 1991 was about 180 to 190 minutes (Figure 2.9).

Figure 2.9 Average Session Duration, Metropolitan v. Rural



The change in the distribution of metropolitan session duration is evident when examining six monthly periods. In the period from July to December 1990 most sessions lasted just under 60 minutes and just over 120 minutes (Figure 2.10). In the following six month period sessions generally lasted between 45 and 150 minutes (Figure 2.11). From July to December 1991 the majority of sessions went for over 2 hours. A much greater proportion of sessions also lasted about 5 hours in this period (Figure 2.12).

The change in session duration in the rural area is similar to that in the metropolitan area. The six monthly periods of July to December 1990 (Figure 2.13) and January to June 1991 (Figure 2.14) follow a similar pattern. From July to December 1991 sessions lasting just over 2 hours are much more common as are those of about 5 hour duration, albeit to a lesser extent (Figure 2.15).

Figure 2.10 Metropolitan Session Duration July to December 1990

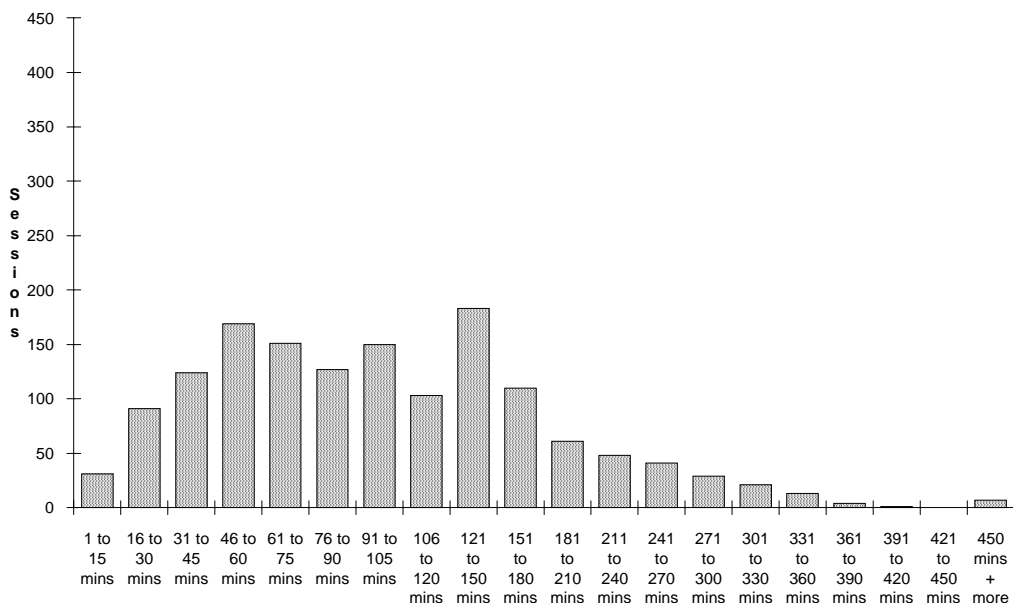


Figure 2.11 Metropolitan Session Duration January to June 1991

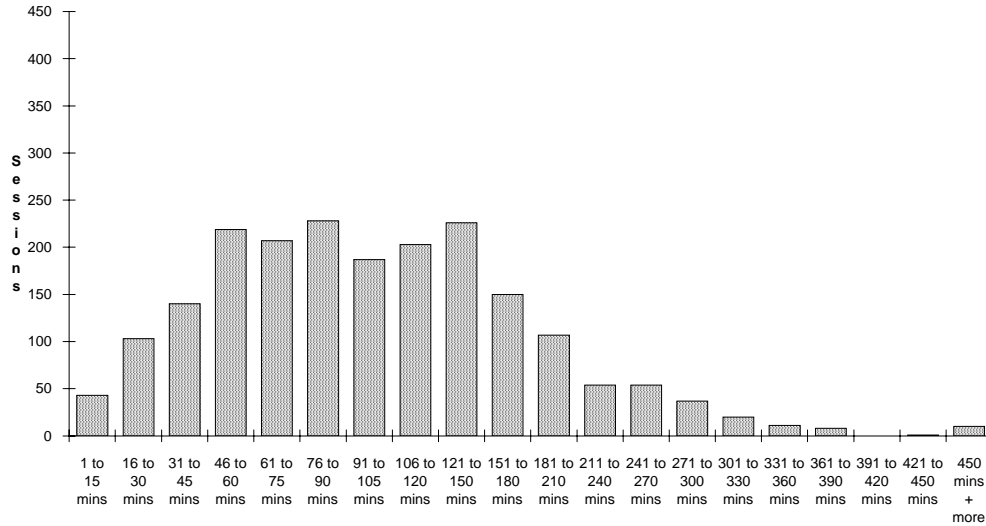


Figure 2.12 Metropolitan Session Duration July to December 1991

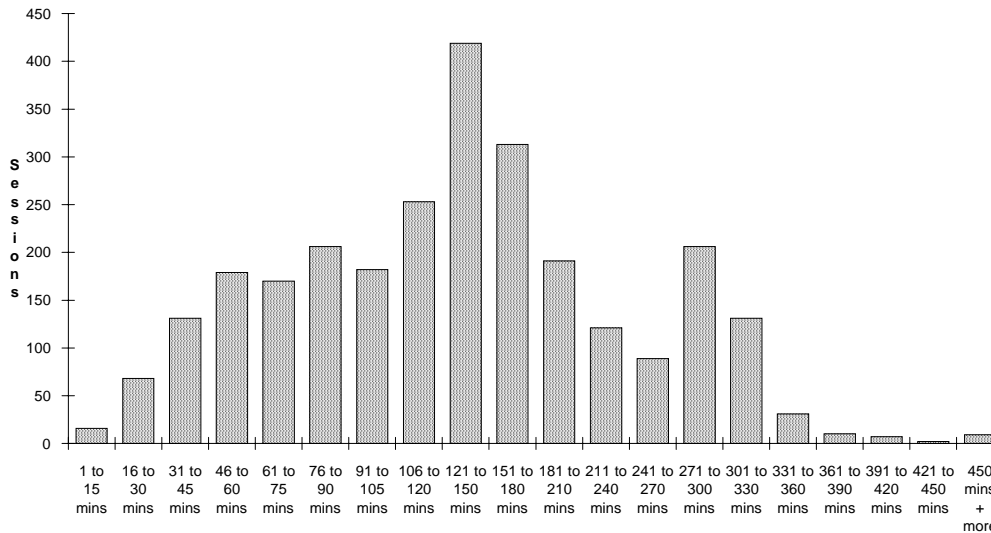


Figure 2.13 Rural Session Duration July to December 1990

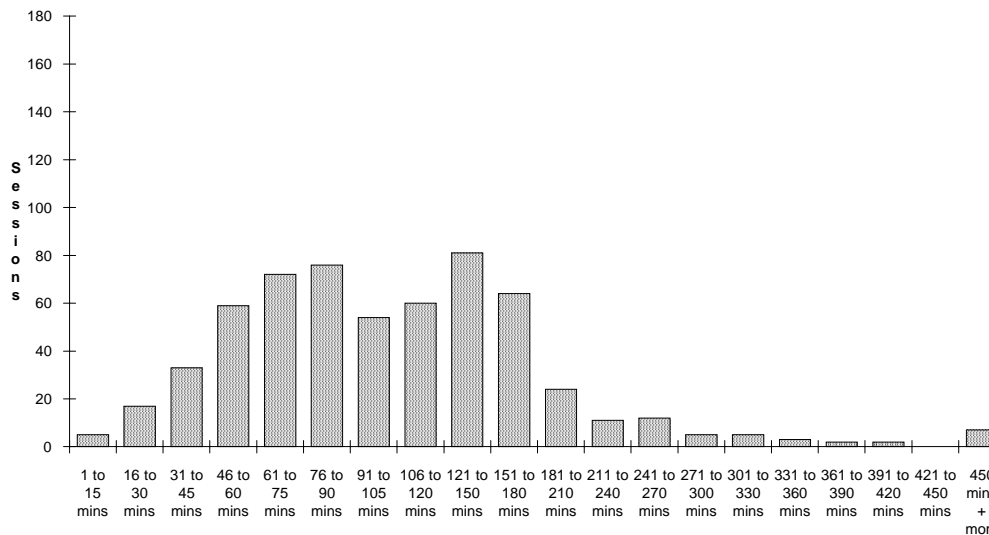


Figure 2.14 Rural Session Duration January to June 1991

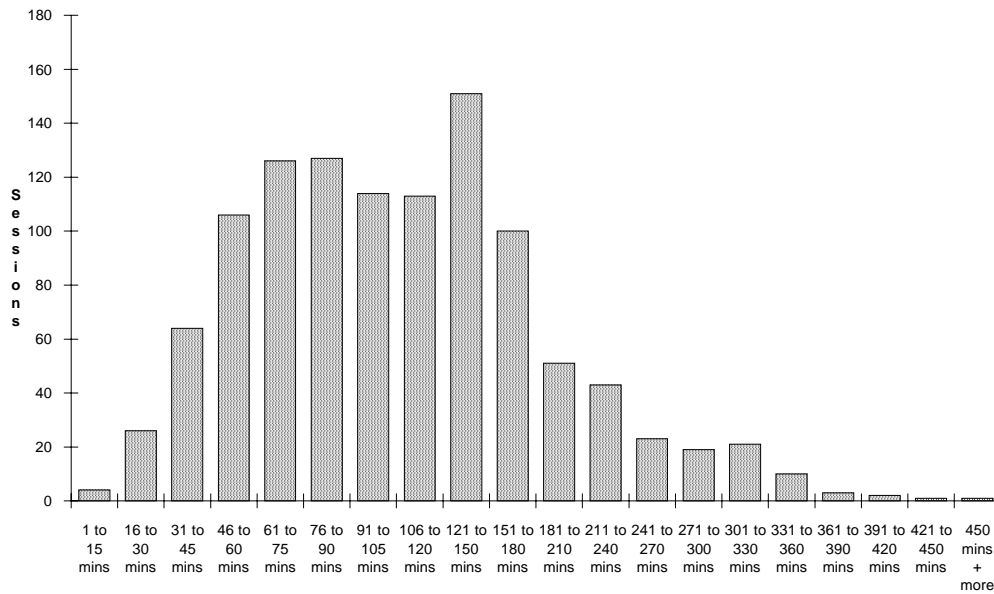
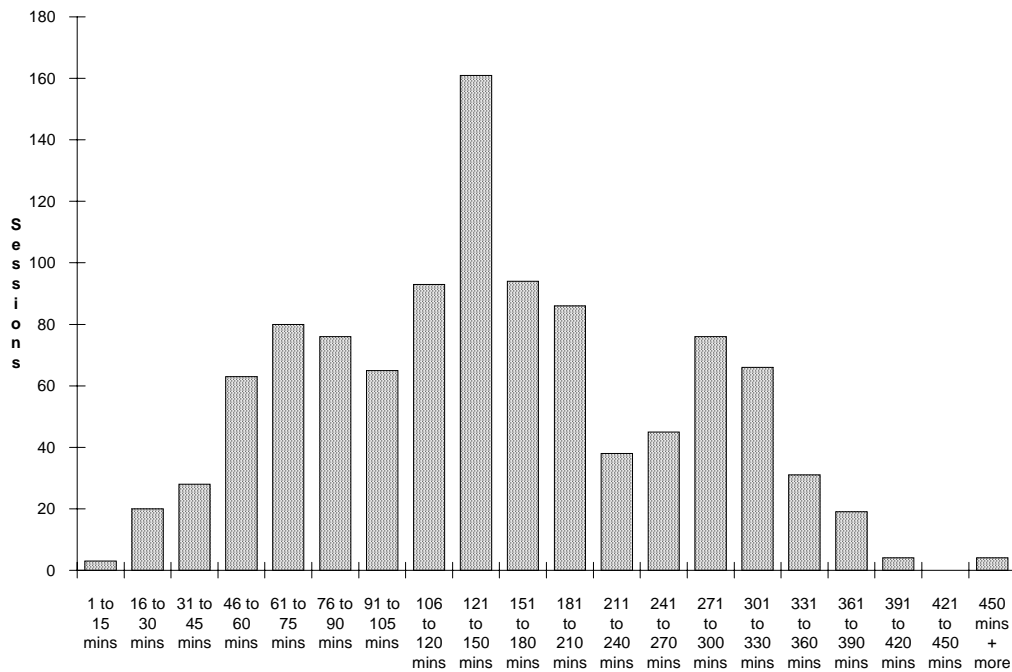


Figure 2.15 Rural Session Duration July to December 1991



2.2.5 Speed Camera Sessions Start/End Times

In metropolitan Victoria the majority of speed camera sessions begin in the morning between 7 am and midday. The majority end in the early afternoon (Figures 2.16 to 2.18). This pattern became clearer as the number of speed camera sessions increased over time.

In the rural area speed camera use was concentrated towards the middle of the day from July to December 1990 (Figure 2.19). As the number of speed camera sessions increased over time, a relatively greater number of sessions started earlier and finished earlier (Figure 2.20 and 2.21).

Speed cameras were not used in the early hours of the morning (seldom before 6am) and their level of use was very low in the later hours of the evening (after 8pm or 9pm).

Figure 2.16 Metropolitan Start/End Times July to December 1990

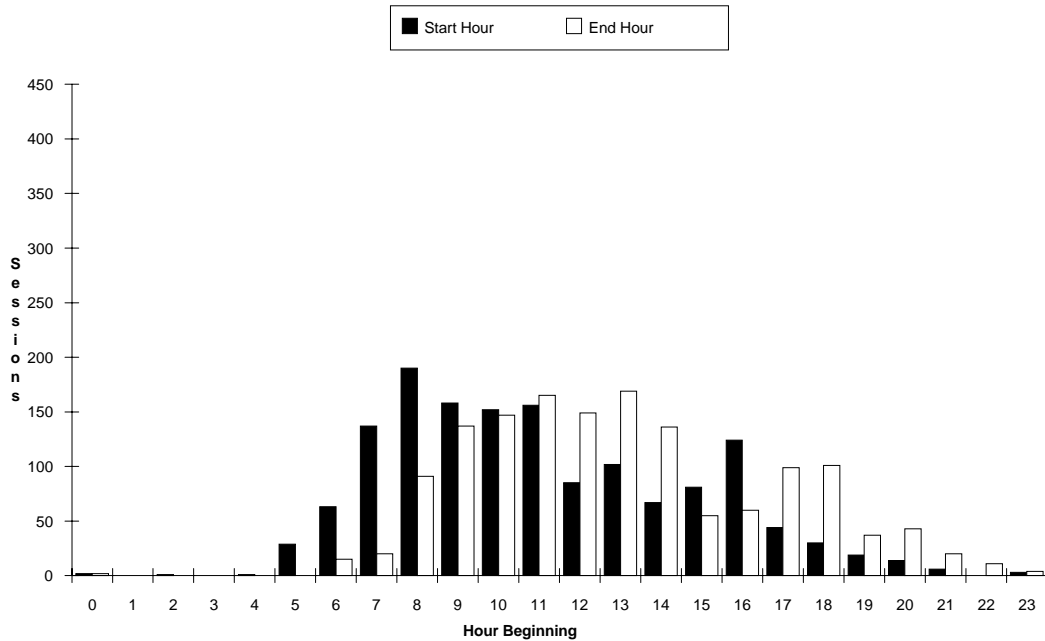


Figure 2.17 Metropolitan Start/End Times January to June 1991

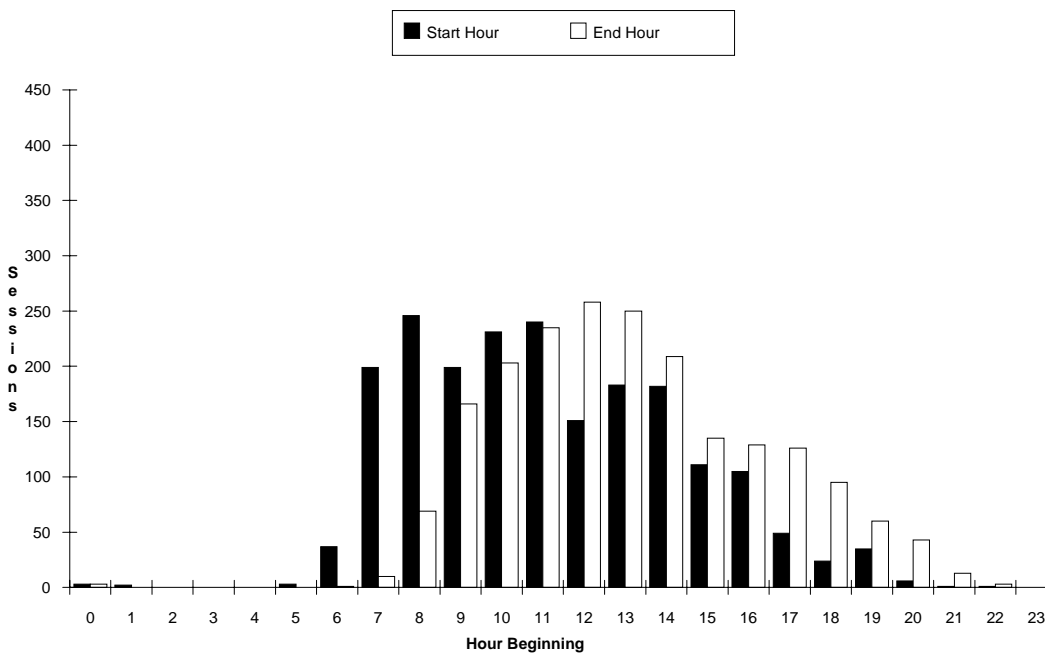


Figure 2.18 Metropolitan Start/End Times July to December 1991

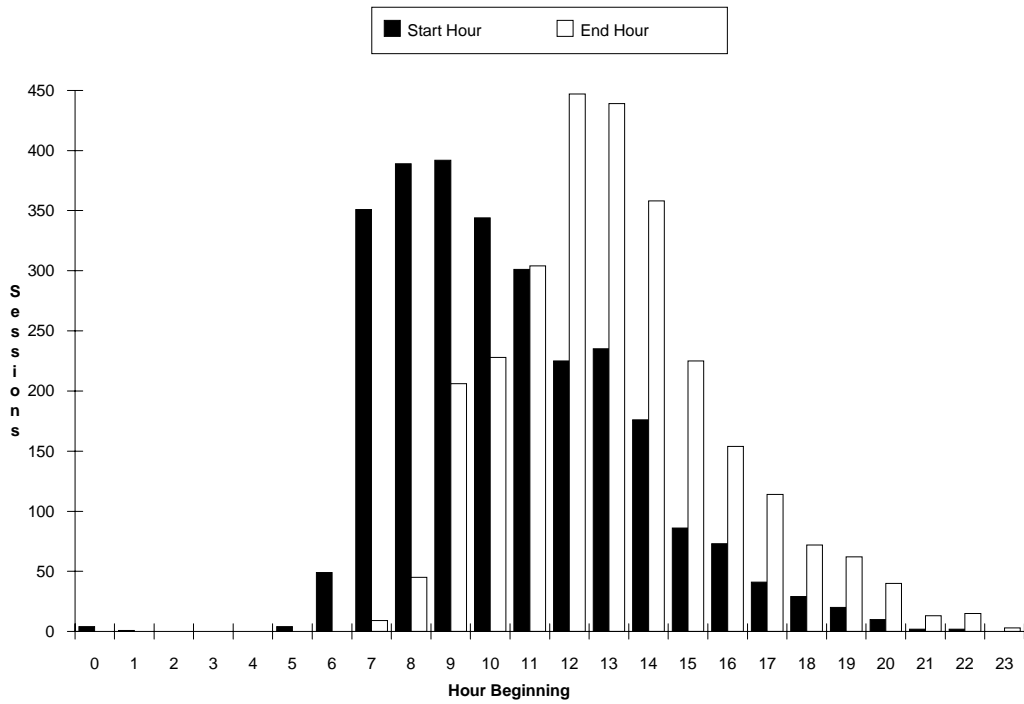


Figure 2.19 Rural Start/End Times July to December 1990

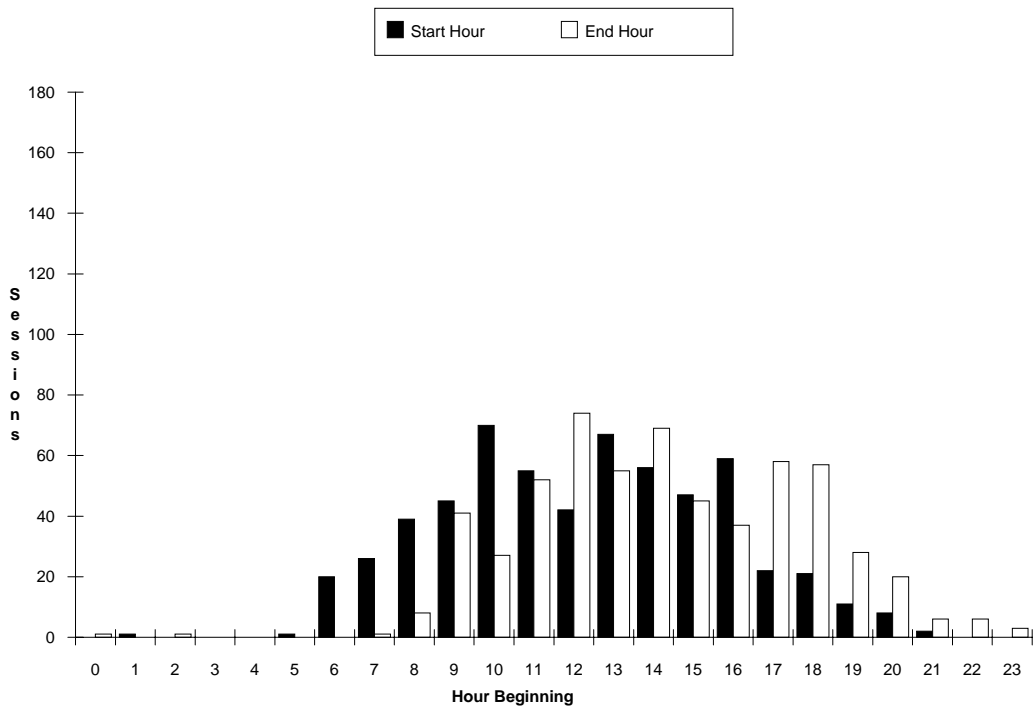


Figure 2.20 Rural Start/End Times January to June 1991

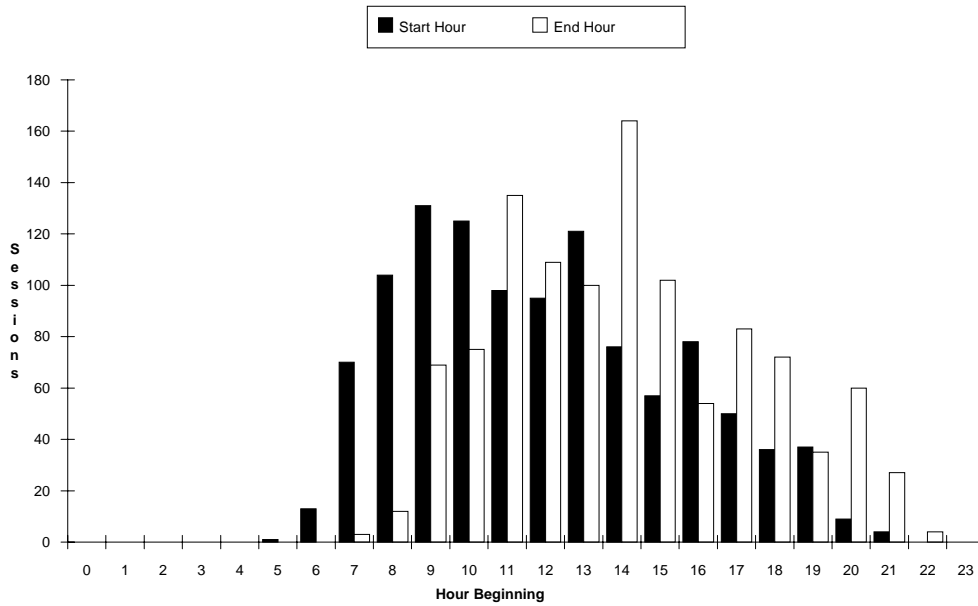
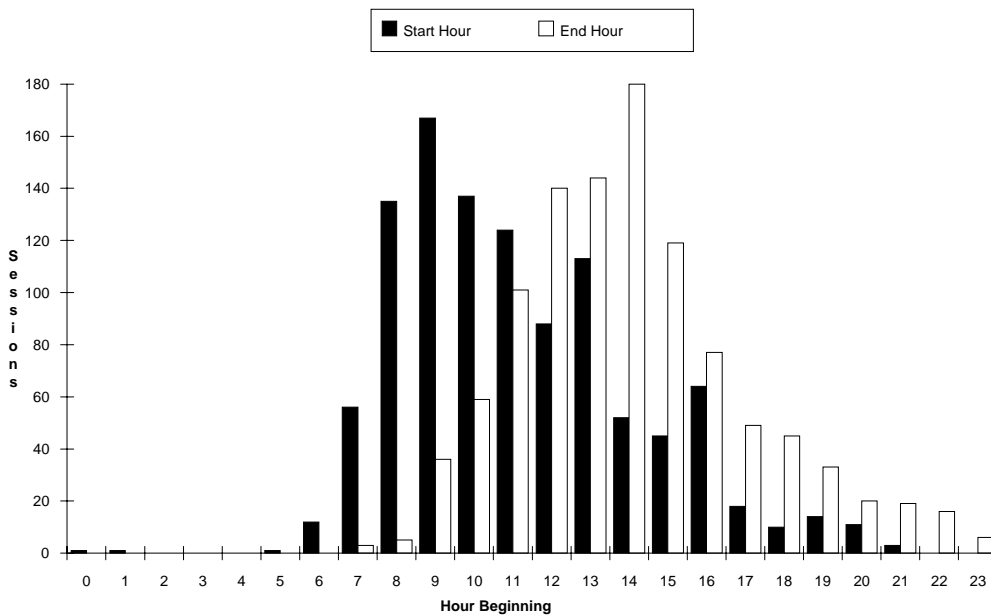


Figure 2.21 Rural Start/End Times Jul to Dec 1991



2.2.6 Speed Camera Sessions by Day of Week

In metropolitan Victoria speed cameras were used on all days of the week, but consistently used at markedly lower levels on Saturdays and Sundays. The level of use on week days was relatively evenly shared over the five days (Figure 2.22).

The “day of week” use of speed cameras in rural Victoria was slightly different than in the metropolitan area. In each of the six monthly periods speed cameras were used at slightly higher levels on Thursday and Friday. The level of use on weekends was slightly lower than the other weekdays but the difference is nowhere near as marked as in the metropolitan area (Figure 2.23).

Figure 2.22 Metropolitan Speed Camera Sessions by Day of Week

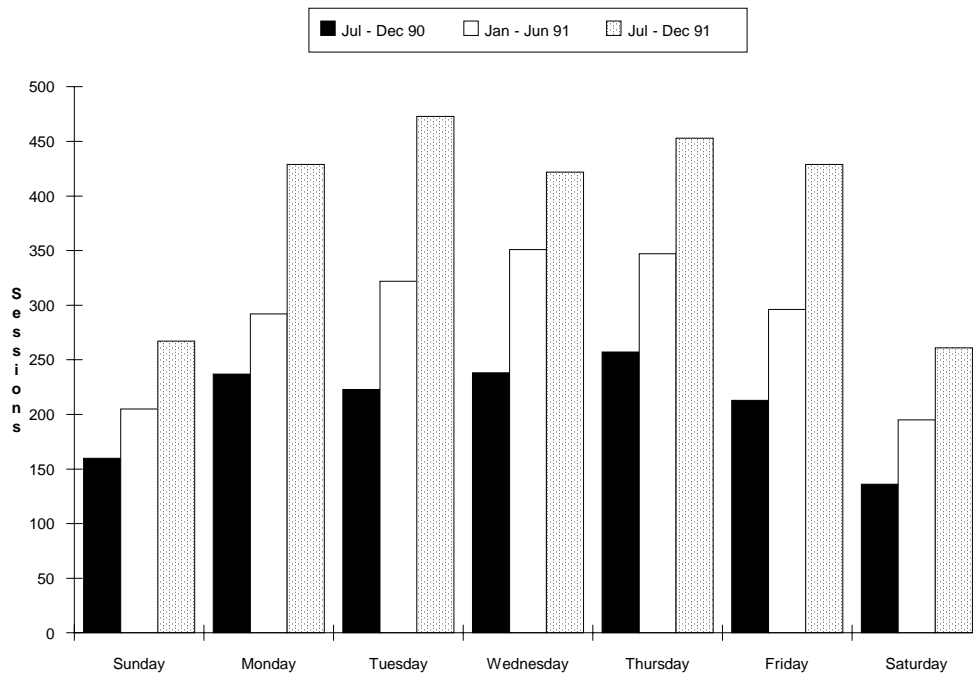
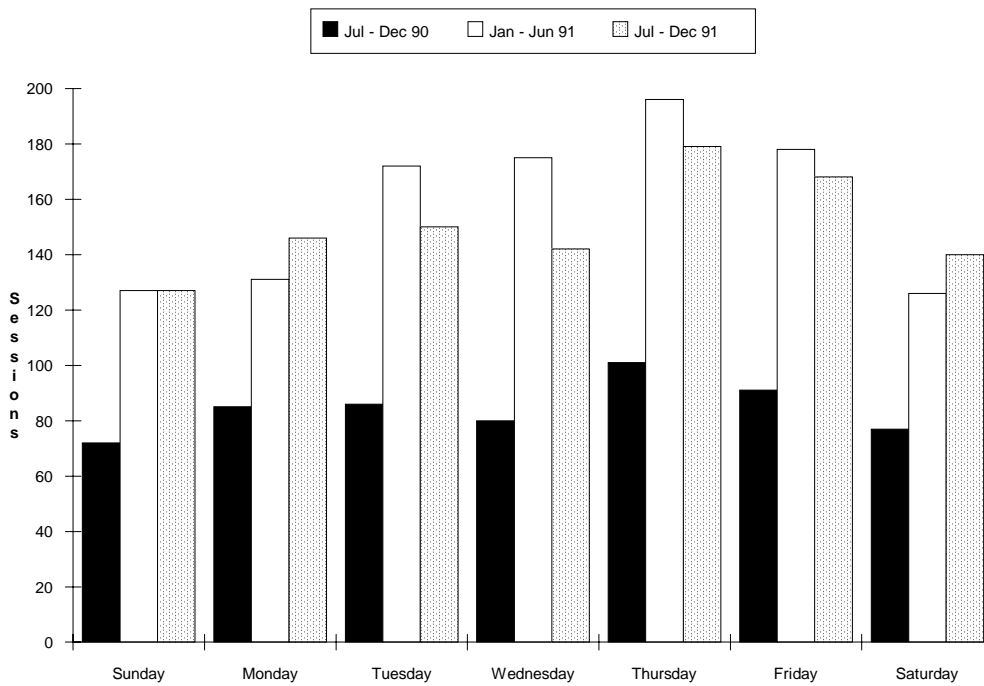


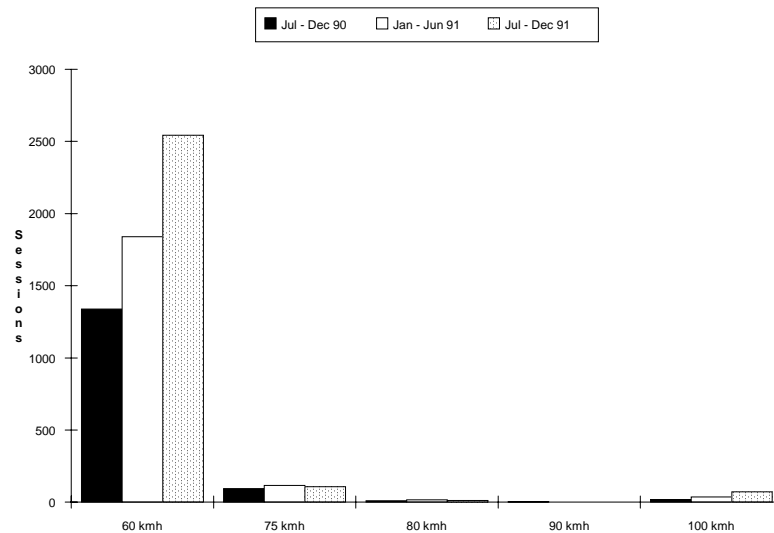
Figure 2.23 Rural Speed Camera Sessions by Day of Week



2.2.7 Speed Camera Sessions by Speed Zone

Over 97% of speed camera sessions in the metropolitan area were in 60 and 75 km/h speed zones. Their use in 100 km/h zones were slightly increasing with 1.3% of use from July to December 1990, 1.8% from January to June 1991 and 2.6% from July to December 1991 (Figure 2.24).

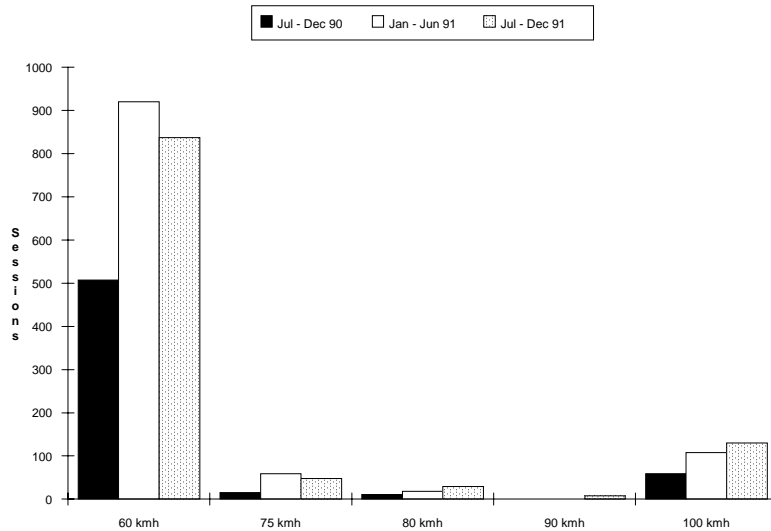
Figure 2.24 Metropolitan Speed Camera Sessions by Speed Zone



The metropolitan area, defined as police districts A to J, includes sections of 100 km/h highways in the outer areas. The vast majority of speed camera use in 100 km/h zones were on the outer metropolitan highways (Princes Fwy - Werribee, Western Hwy - Melton, South Gippsland Hwy - Tooradin, Lang Lang, Bass Hwy - Grantville). There were, however, four sessions at one site on the South Eastern Arterial (November to December 1991) and 3 sessions at one site on the Frankston Freeway (June to August 1991).

The level of speed camera use in 100 km/h zones was higher in rural Victoria, although over 85% of sessions were in 60 and 75 km/h zones. From July to December 1990 the level of use in 60 km/h zones was 86% (10% in 100 km/h zones). This level dropped to 83% from January to June 1991 (10% in 100 km/h zones) and dropped further to 80% from July to December 1991 (12½% in 100 km/h zones) (Figure 2.25).

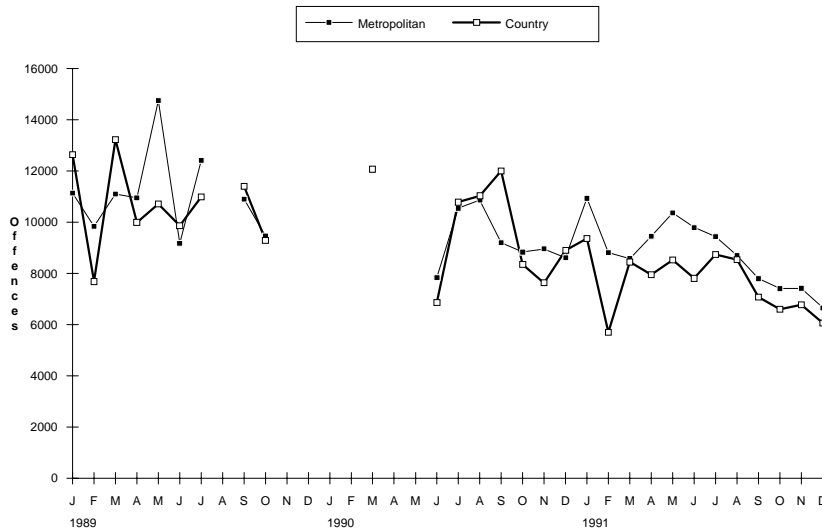
Figure 2.25 Rural Speed Camera Sessions by Speed Zone



2.2.8 Non-Speed Camera Speeding Offences

Non-speed camera offences include “Exceed Speed Zone”, “Exceed 60 km/h”, “Exceed 100 km/h” and “Speed Truck” offences. The trend and number of the total of these offences each month was similar in both metropolitan and rural Victoria. At the beginning of 1989 the level was around 10,000 to 12,000 offences each month in each area and over the three years 1989 to 1991 there was a decreasing trend in the number of these offences. At the end of 1991 the number of monthly offences reduced to around 6,000 to 7,000 offences per month in each of metropolitan and rural Victoria (Figure 2.26).

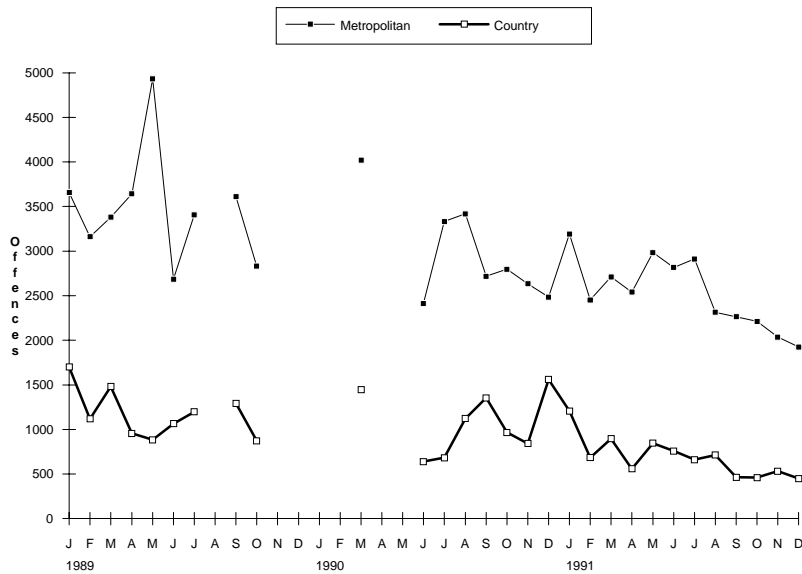
Figure 2.26 Non-Speed Camera Speeding Offences, Metropolitan v. Country



In comparison the number of vehicles detected over the threshold by a speed camera is of the order of 60,000 per month in the metropolitan area and 12,000 per month in rural areas at the end of 1991, although not all receive Traffic Infringement Notices.

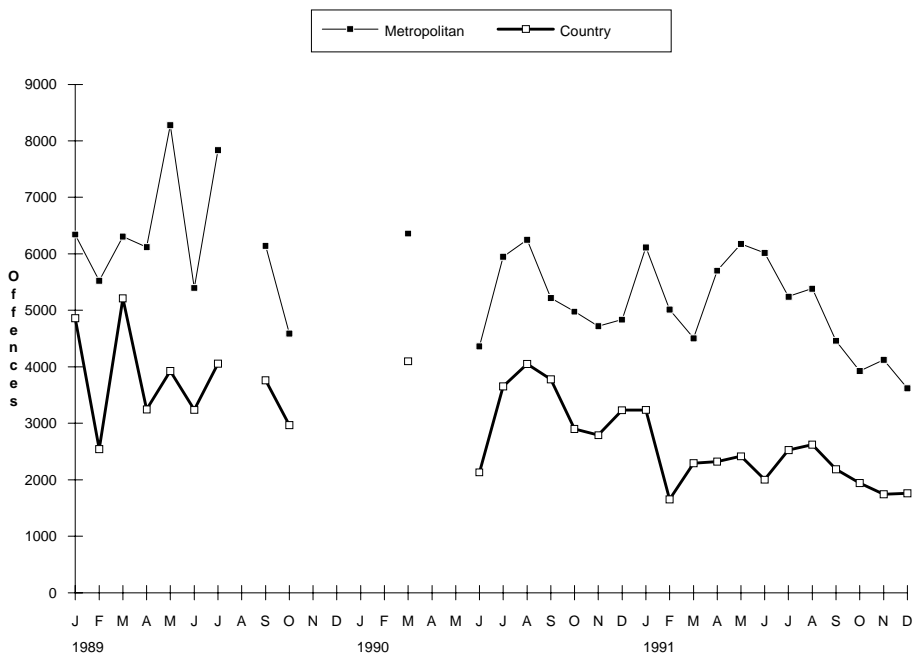
“Exceed Speed Zone” offences decreased from around 3,500 offences per month at the start of 1989 to just above 2,000 offences per month at the end of 1991 in the metropolitan area. In the rural area there were only about half the number of these offences. They reduced from about 1,500 per month in early 1989 to just below 500 per month in late 1991. (Figure 2.27)

Figure 2.27 "Exceed Speed Zone" Offences, Metropolitan v. Country



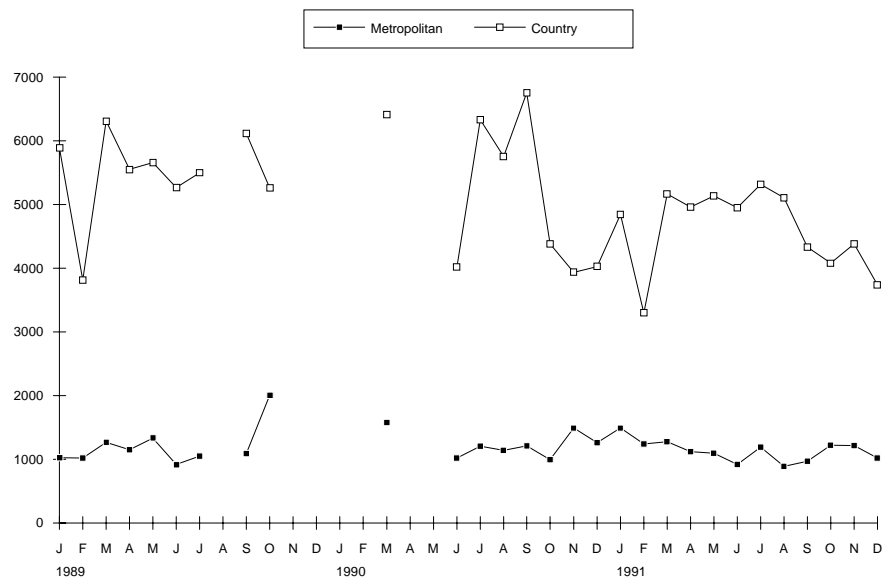
A greater number of “Exceed 60 km/h” offences occurred in metropolitan areas, reducing from about 6,000 per month in early 1989 to about 4,000 per month at the end of 1991. In the rural areas the level of these offences was reduced from 3,000 to 5,000 per month in the early months of 1989 to about 2,000 per month in late 1991 (Figure 2.28).

Figure 2.28 "Exceed 60 km/h" Offences, Metropolitan v. Country



In contrast, “Exceed 100 km/h” offences were much more frequent in rural Victoria. In metropolitan Victoria the number of these offences remained stable at about 1,000 per month for the period from January 1989 to December 1991. In contrast the level of these offences in rural areas reduced from around 6,000 per month to below 4,500 per month over the same time period (Figure 2.29).

Figure 2.29 "Exceed 100 km/h" Offences, Metropolitan v. Country



“Speed Truck” offences are not at all frequent (less than 300 per month) and so do not greatly contribute to non-speed camera offences.

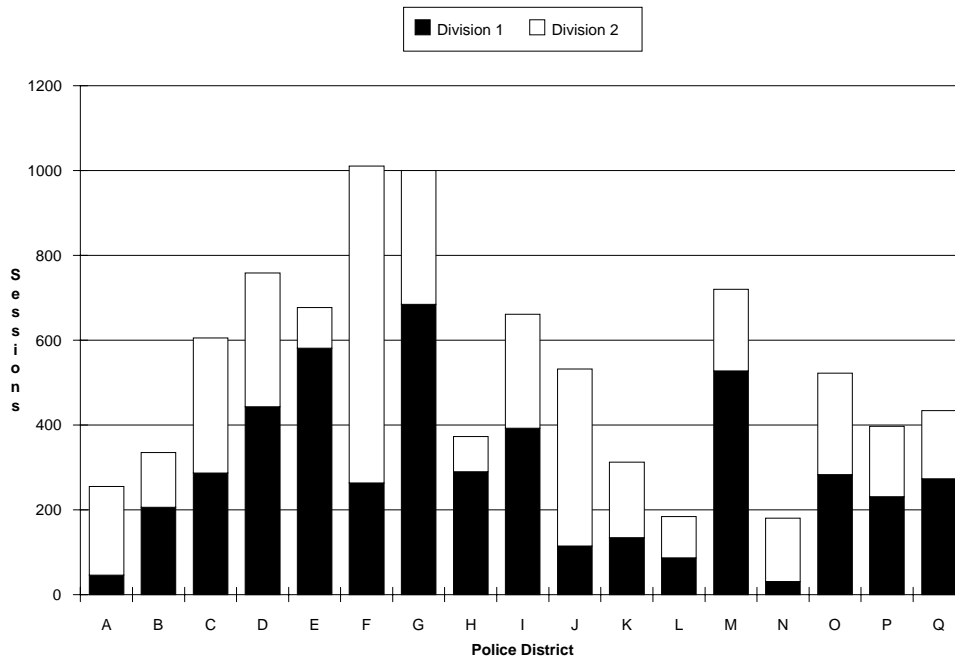
2.3 Speed Cameras in Police Districts

2.3.1 Speed Camera Sessions

All police districts used speed cameras over the eighteen month period, although to varying degrees. The metropolitan districts with the most speed camera sessions, in the eighteen month period from July 1990 to December 1991, were division 2 of F-district (Knox, Ringwood, Sherbrooke) and division 1 of G-district (Waverley, Nunawading, Box Hill) with 747 and 684 sessions respectively. Division 1 of A-district (Richmond), division 2 of H-district (Eltham, Whittlesea, Diamond Valley) and division 2 of E-district (Wonthaggi, Bass, Phillip Island, Cranbourne) had the least number of sessions with 46, 83 and 96 respectively.

Of the rural areas division 1 of M-district (Ararat, Ballarat, Ballan, Grenville, Lexton etc), with 527 sessions, had the most speed camera sessions, while division 2 of N-district (Birchip, Swan Hill, Kerang, Wycheproof) with 31 sessions had the least (Figure 2.30).

Figure 2.30 Speed Camera Sessions by Police District

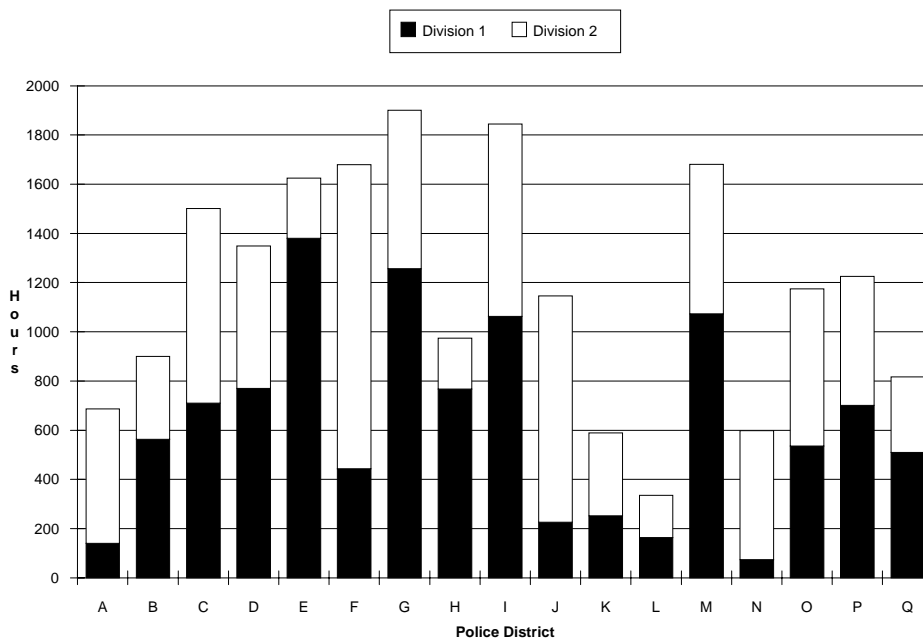


2.3.2 Speed Camera Hours

The amount of time that each police district used speed cameras was similar to the number of speed camera sessions. One notable exception was I-district (1845 hours) which was second to G-district (1902 hours). The metropolitan district with the most sessions, F-district, was third in terms of number of hours (1680 hours). Police districts A, B and H were the districts with the least time testing in the metropolitan area (686, 900 and 974 hours respectively).

In the rural area M-district had the most time (1681 hours) while L-district had the least (335 hours). N-district increased relative to session numbers due to longer durations in division 2 (Figure 2.31).

Figure 2.31 Hours of Speed Camera Operation by Police District

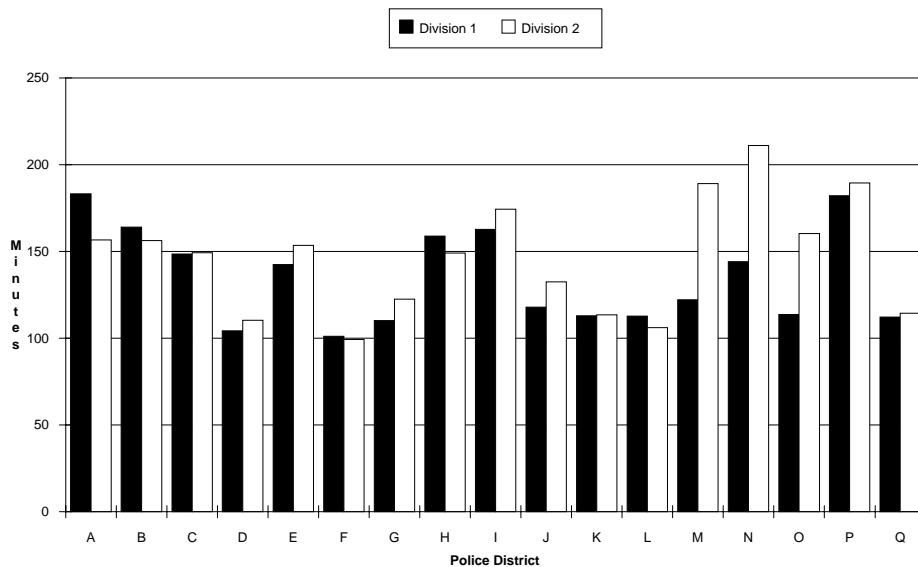


2.3.3 Speed Camera Session Duration

Average session duration over the eighteen month period is shown in Figure 2.32. Almost every area averaged between 100 and 175 minute sessions. In the metropolitan area A-district, B-district, H-district and I-district all averaged over 150 minutes while D-district and E-district averaged just over 100 minutes.

In rural Victoria division 2 of both M-district and N-district and both divisions of P-district all averaged over 180 minutes. At the same time division 1 of police districts J, M and O averaged 120 minutes or just under and K-district, L-district and Q-district also averaged under 120 minutes (Figure 2.32).

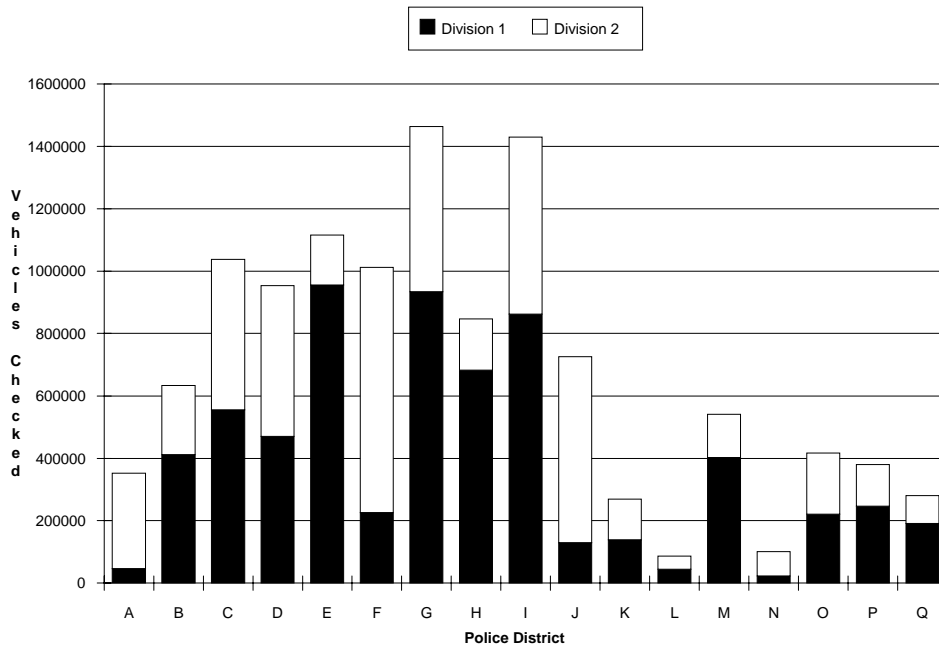
Figure 2.32 Average Speed Camera Session Duration by Police District



2.3.4 Vehicles Checked

There is a direct relationship between the number of vehicles checked (Figure 2.33) and the amount of time speed cameras were in use (Figure 2.31) in the different police districts. The districts with the most use of speed cameras in terms of hours were the districts with the most vehicles checked. This also applies in low-use districts. The numbers of vehicles checked in the rural police districts (police districts K to Q) were fewer than in the metropolitan districts. This reflects the lower traffic volumes in rural areas (Figure 2.33).

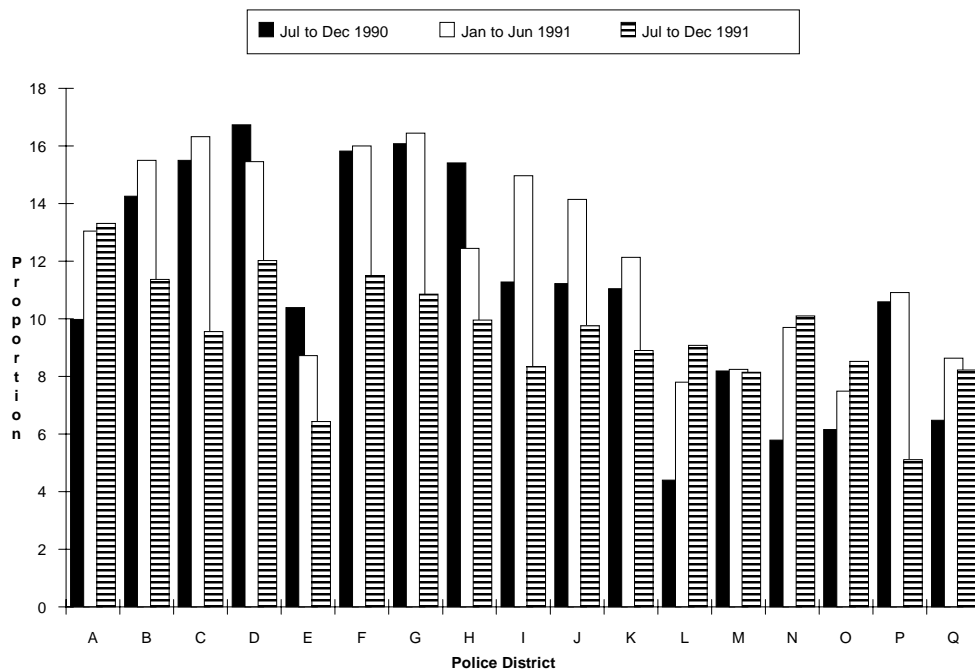
Figure 2.33 Speed Camera Vehicles Checked by Police District



2.3.5 Vehicles detected over the Speed Threshold

In the metropolitan districts there was generally a trend of the number of vehicles over the threshold to reduce over time relative to the number of vehicles checked. While there was not much downward movement from the first six months to the second, the period from July to December 1991 has seen all but one police district reduce to figures below the first twelve months. The one exception is in A-district which has increased in each of the six month periods from 10% to 13.3%. The trend in rural police districts was more varied. There were reductions in K-district and P-district while M-district was stable for the entire eighteen months. The other police districts all increased in the period from July to December 1991 over the same period of the previous year (Figure 2.34).

Figure 2.34 Proportion of Vehicles over the Speed Threshold by Police District



2.3.6 Speed Cameras over time in Police Districts

Within the metropolitan police districts speed cameras were used almost immediately. The only exception was in A-district where the level of speed camera use was below 10 sessions or 20 hours each month until June 1991, after which the levels were from 25 to 40 sessions, or 60 to 120 hours, each month. Police districts A, B, C, G, I and J all had increased use from about mid 1991, although this only occurred for about 4 months in G-district before returning almost to its previous levels.

In the rural police districts almost every division of each district had at least one month of high speed camera usage by November 1990. The exceptions are:

- K2, which had no speed cameras until October 1990, but from then quickly reached a constant level.
- N1, which had low levels of speed cameras throughout. The maximum level of speed cameras in N1 was 5 sessions and 11 hours in October 1990.
- N2, which had low levels (less than 5 sessions or 20 hours each month) until July 1991 when the monthly level of speed cameras more than tripled.

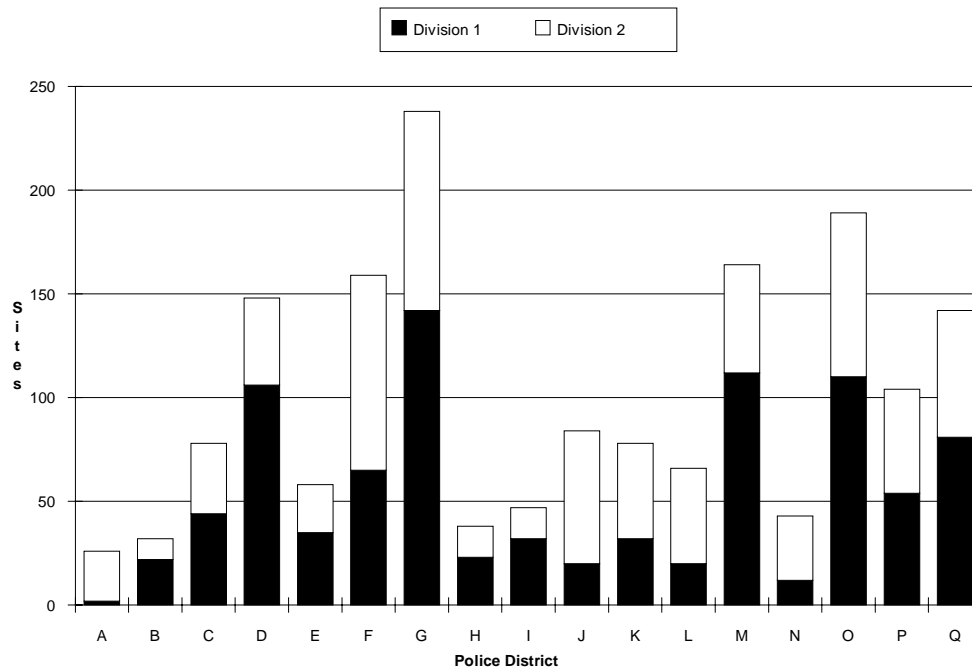
A graphical representation in the change in the number of sessions and the total time spent testing in each police district over time appears in Appendix B.

2.3.7 Variation in the usage of Speed Cameras across sites

In the metropolitan districts (police districts A to J) there was a variation in the number of sites used for speed camera surveillance. Police districts D, F and G used many more sites than the other metropolitan districts. The number of sites used in each of the rural districts was virtually

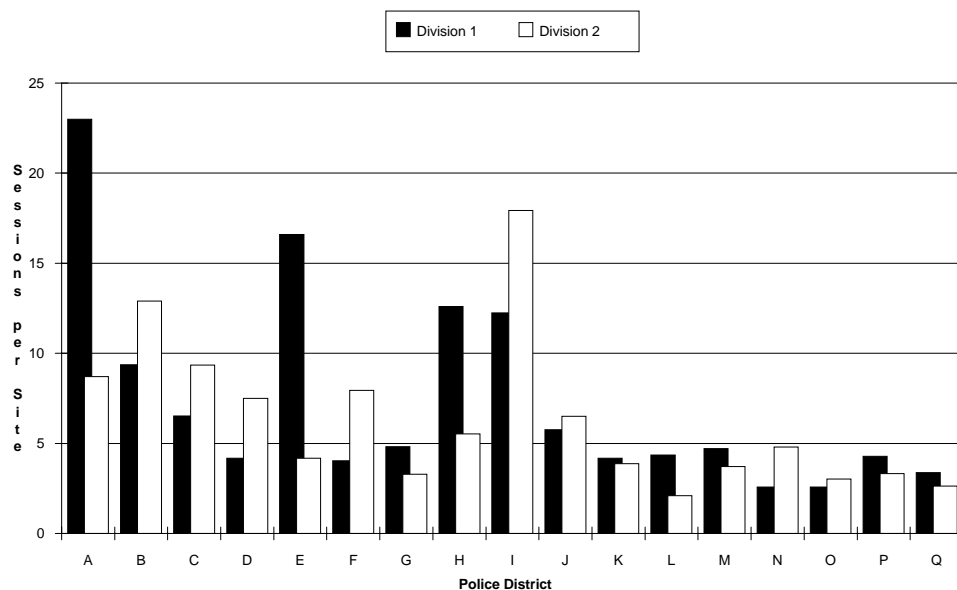
proportional to the number of sessions (Figure 2.30), with the exception of O-district (Figure 2.35).

Figure 2.35 Number of Speed Camera Sites in each Police District



The spread of speed camera sessions over different sites can be seen in Figure 2.36. Areas such as division 1 of both A-district (46 sessions over 2 sites) and E-district (581 sessions over 35 sites) and division 2 of I-district (269 sessions over 15 sites) had sites which were used repeatedly over the period from July 1990 to December 1991. In contrast division 1 of both D-district (443 sessions over 106 sites) and F-district (263 sessions over 65 sites), division 2 of E-district (96 sessions over 23 sites) and both divisions of G-district (1000 sessions over 238 sites) all spread their speed camera use over a large number of locations. Each of the rural police districts spread their speed cameras over many sites, averaging between 2 and 5 sessions per site (Figure 2.36).

Figure 2.36 Average Number of Sessions per Site by Police District



Another way of looking at the extent of use of speed cameras over locations in the different police districts is to look at the proportion of sites with a certain number of sessions in each district. Figure 2.37 shows the proportion of sites with 9 or more sessions (more than one session every 2 months) for each division and district. Of the metropolitan districts A, B, I, division 1 of districts E and H and division 2 of C-district all had 40% or more of sites with at least 9 sessions. In contrast division 2 of both E and G districts and division 1 of F-district had less than 10% of sites with 9 or more sessions. In the rural area all divisions had under 20% of sites with 9 sessions or more (Figure 2.37).

Figure 2.37 Proportion of Speed Camera Sites with 9 or more Sessions

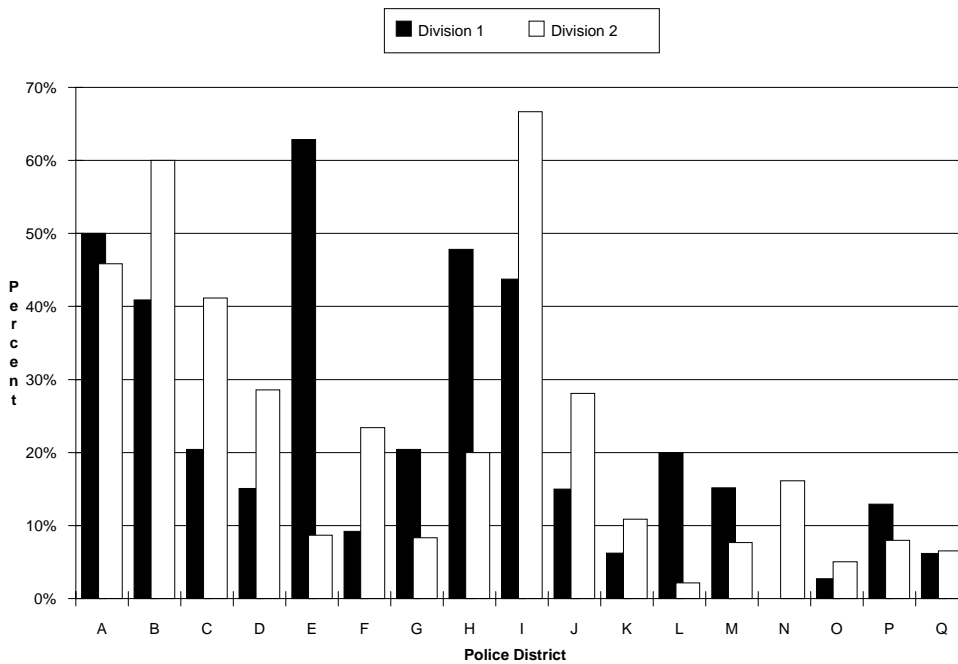


Table 2.1 shows a make-up of the sites for each police district and division. The data presented here helps to confirm which police districts and divisions used speed cameras in many sites and which concentrated on a smaller number of locations, as discussed in the previous sections.

2.4 Speed Cameras in Local Government Areas

The use of speed cameras was generally consistent over LGA's within divisions of police districts but there were some exceptions. Speed cameras were **not** used at all in one metropolitan LGA (Eltham) and 26 rural LGA's. Also, a total of 15 LGA's had only one session in the eighteen month period and 7 LGA's had only 2 sessions (including one metropolitan LGA, Port Melbourne).

In all, a total of 82 LGA's had no more than 9 speed camera sessions each in total (one every 2 months on average) in the period from July 1990 to December 1991. However, only 4 of these were in metropolitan police districts: Eltham (0 sessions), Port Melbourne (2 sessions), Gisborne (4 sessions) and Fitzroy (4 sessions).

2.5 Summary of Speed Camera Operations

The use of speed cameras increased over time and appeared to level by mid 1991 in both the metropolitan and rural areas of Victoria. There was a gradual increase in the average duration of monthly speed camera sessions from a steady level of 2 hours to a level of about 3 hours in the period from May 1991 to January 1992, in both metropolitan and rural areas.

At the same time there was a drop in the proportion of vehicles detected over the threshold speed from May to October 1991, after which a lower proportion was maintained. The decrease was noticeable in both metropolitan and rural areas, but was more gradual in rural Victoria where the proportion returned to previous levels after an increase from February to May 1991.

Speed cameras were used at lower levels on weekends, particularly in the metropolitan area. The use of speed cameras on weekends is, however, still significant.

The level of speed camera usage in 100 km/h speed zones was extremely low. In the metropolitan area the level of use of speed cameras remained below 3% for the entire study period. In rural areas the level of use in 100 km/h zones was below 1½ % at all times.

All police districts in Victoria used speed cameras to varying degrees, over the eighteen month period. In the metropolitan area the usage of speed cameras, in terms of the number of sites, differed across police districts. Police districts D, E (division 2), F and G spread their speed camera sessions over a large number of sites. Alternatively police districts A, B, C (division 2), E (division 1), H (division 1) and I tended to return to the same sites more often.

Table 2.1 Number of Sessions at Speed Camera Sites

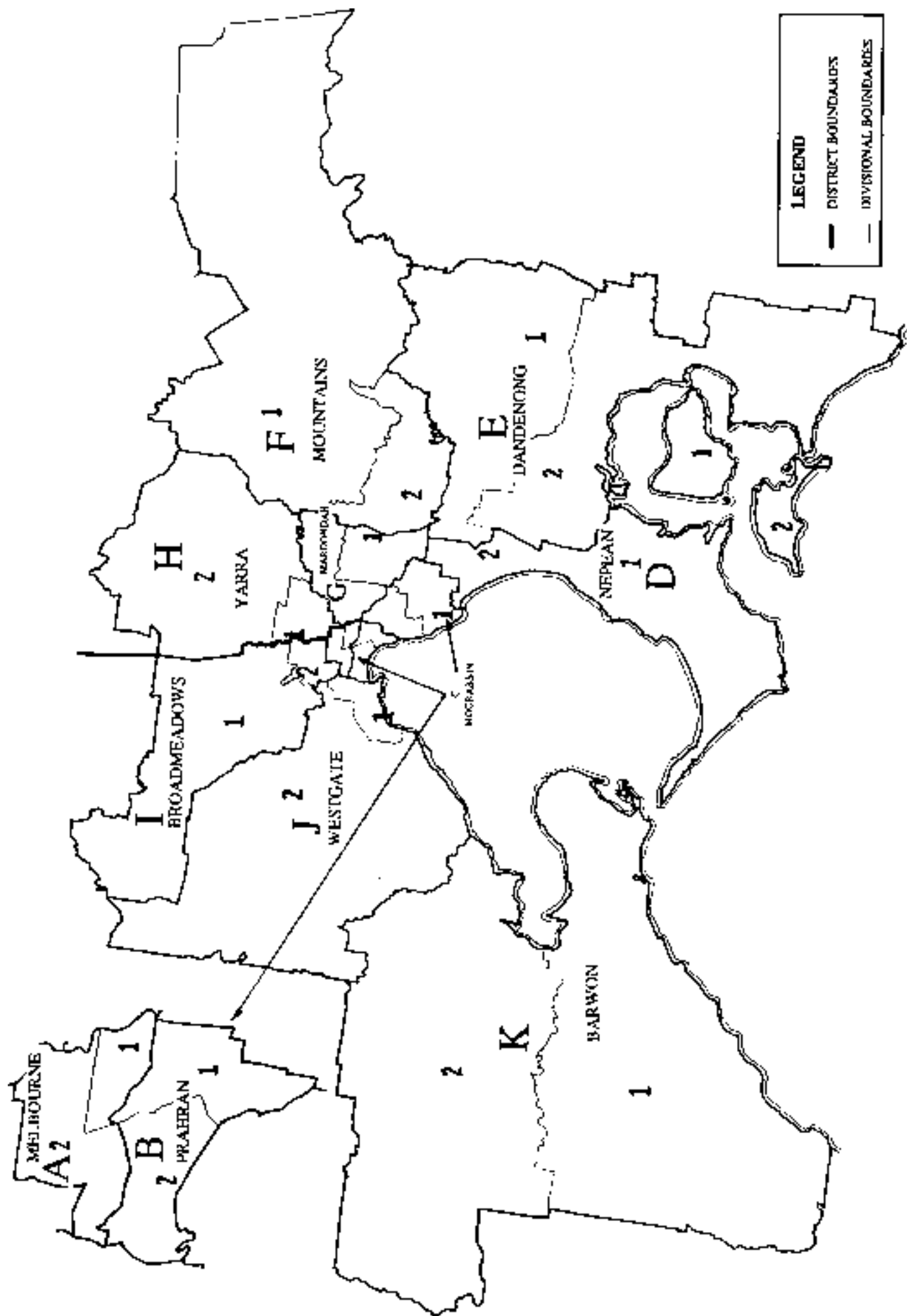
Police District	No. of Sites	No. of Sessions	Sessions per Site	Sessions at Sites										
				1	2	3-4	5-8	9-12	13-16	17-20	21-30	31-50	51 +	
Metropolitan														
A1	2	46	23.0	0%	0%	50%	0%	0%	0%	0%	0%	0%	50%	0%
A2	24	209	8.7	8%	33%	8%	4%	21%	13%	0%	8%	4%	0%	0%
B1	22	206	9.4	9%	14%	27%	9%	14%	5%	9%	9%	5%	0%	0%
B2	10	129	12.9	0%	20%	0%	20%	30%	10%	10%	0%	10%	0%	0%
C1	44	287	6.5	16%	11%	20%	32%	7%	7%	2%	5%	0%	0%	0%
C2	34	318	9.4	24%	3%	21%	12%	15%	6%	6%	12%	3%	0%	0%
D1	106	443	4.2	37%	20%	16%	12%	9%	2%	2%	2%	0%	0%	0%
D2	42	315	7.5	17%	10%	19%	26%	14%	2%	5%	5%	2%	0%	0%
E1	35	581	16.6	9%	11%	14%	3%	14%	11%	9%	9%	17%	3%	0%
E2	23	96	4.2	35%	13%	13%	30%	0%	4%	4%	0%	0%	0%	0%
F1	65	263	4.0	26%	28%	25%	12%	3%	2%	2%	3%	0%	0%	0%
F2	94	747	7.9	22%	23%	16%	15%	4%	3%	4%	6%	4%	1%	0%
G1	142	684	4.8	32%	20%	15%	12%	9%	8%	1%	2%	0%	0%	0%
G2	96	316	3.3	41%	14%	20%	18%	6%	2%	0%	0%	0%	0%	0%
H1	23	290	12.6	17%	4%	13%	17%	13%	9%	4%	9%	13%	0%	0%
H2	15	83	5.5	27%	20%	20%	13%	7%	7%	0%	7%	0%	0%	0%
I1	32	392	12.3	13%	3%	16%	25%	9%	16%	0%	6%	13%	0%	0%
I2	15	269	17.9	20%	0%	7%	7%	7%	27%	0%	13%	13%	7%	0%
J1	20	115	5.8	25%	5%	20%	35%	5%	5%	0%	5%	0%	0%	0%
J2	64	417	6.5	17%	17%	14%	23%	14%	8%	2%	3%	2%	0%	0%
Rural														
K1	32	134	4.2	50%	9%	19%	16%	0%	0%	0%	6%	0%	0%	0%
K2	46	178	3.9	37%	30%	11%	11%	0%	7%	2%	2%	0%	0%	0%
L1	20	87	4.4	30%	20%	25%	5%	15%	0%	5%	0%	0%	0%	0%
L2	46	97	2.1	59%	15%	17%	7%	2%	0%	0%	0%	0%	0%	0%
M1	112	527	4.7	29%	20%	19%	18%	10%	2%	1%	2%	0%	1%	0%
M2	52	193	3.7	37%	15%	25%	15%	6%	0%	0%	2%	0%	0%	0%
N1	12	31	2.6	33%	33%	8%	25%	0%	0%	0%	0%	0%	0%	0%
N2	31	149	4.8	42%	6%	19%	16%	6%	6%	0%	0%	3%	0%	0%
O1	110	283	2.6	48%	20%	15%	14%	2%	1%	0%	0%	0%	0%	0%
O2	79	239	3.0	41%	20%	23%	11%	4%	0%	1%	0%	0%	0%	0%
P1	54	231	4.3	33%	17%	24%	13%	6%	4%	2%	2%	0%	0%	0%
P2	50	166	3.3	30%	20%	30%	12%	6%	0%	0%	2%	0%	0%	0%
Q1	81	273	3.4	43%	19%	19%	14%	1%	2%	1%	1%	0%	0%	0%
Q2	61	161	2.6	51%	20%	16%	7%	3%	3%	0%	0%	0%	0%	0%
Unknown	4	11	2.8	50%	25%	0%	25%	0%	0%	0%	0%	0%	0%	0%

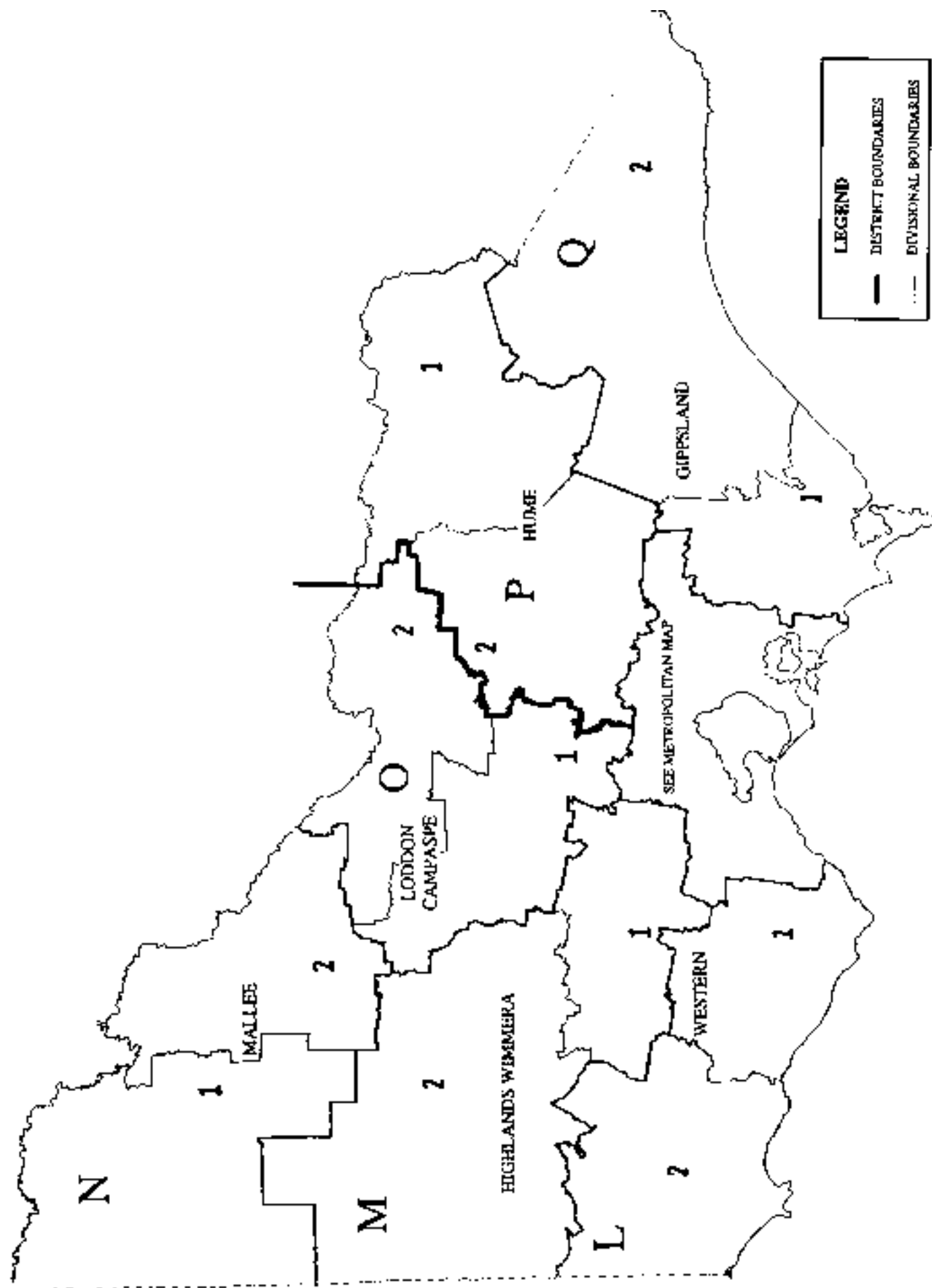
REFERENCES

Cameron, M.H., Cavallo, A. & Gilbert, A. 1992, *Crash-based evaluation of the speed camera program in Victoria 1990-1991. Phase 1: General effects. Phase 2: Effects of program mechanisms*, Report No. 42, Monash University Accident Research Centre, Clayton, Victoria.

Appendix A

Location of Metropolitan and Rural Police Districts





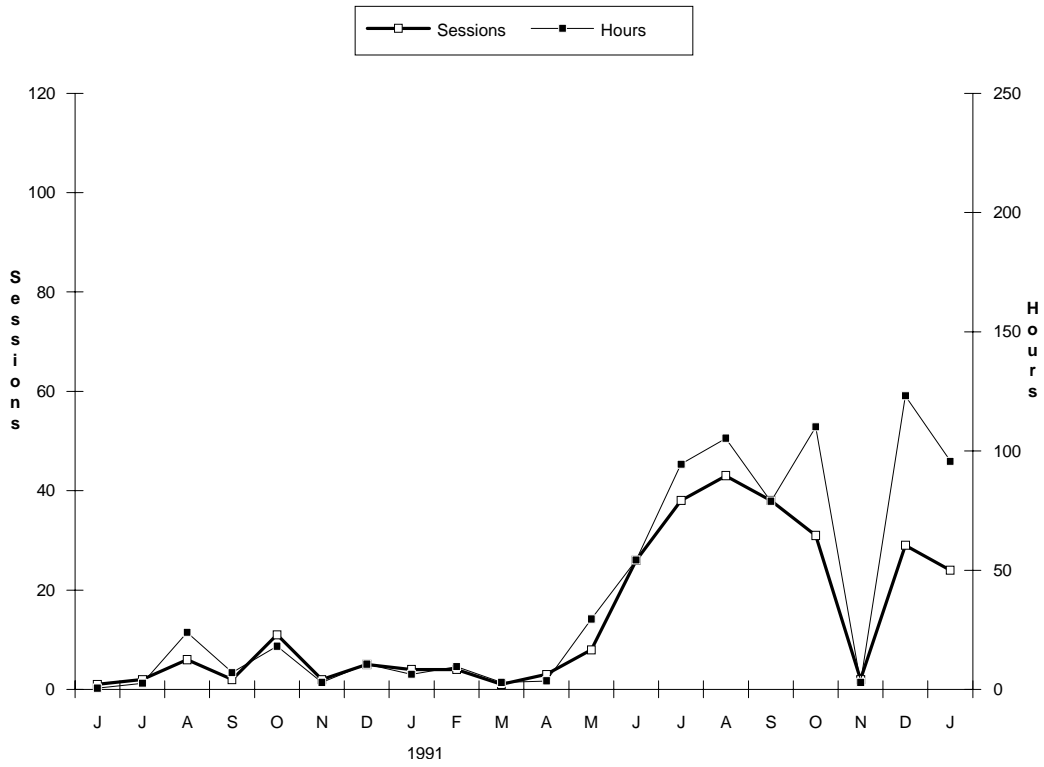
LEGEND

- DISTRICT BOUNDARIES
- - - DIVISIONAL BOUNDARIES

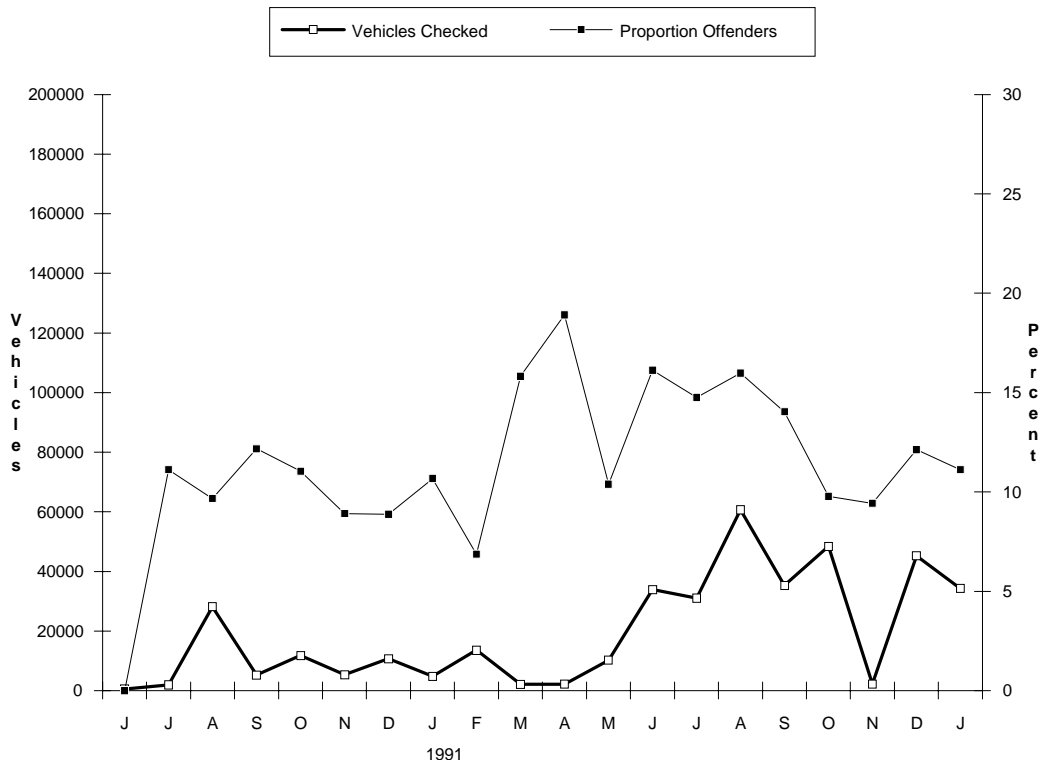
Appendix B

Speed Camera Operations in Police Districts

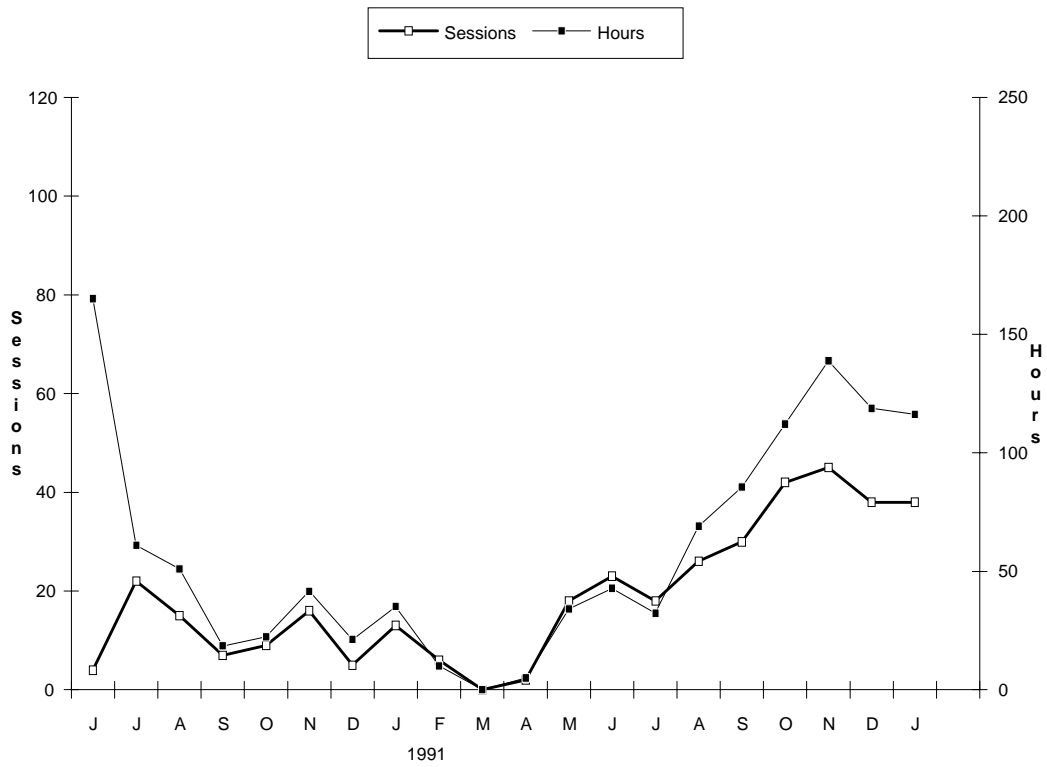
Police District A Speed Camera Sessions and Hours



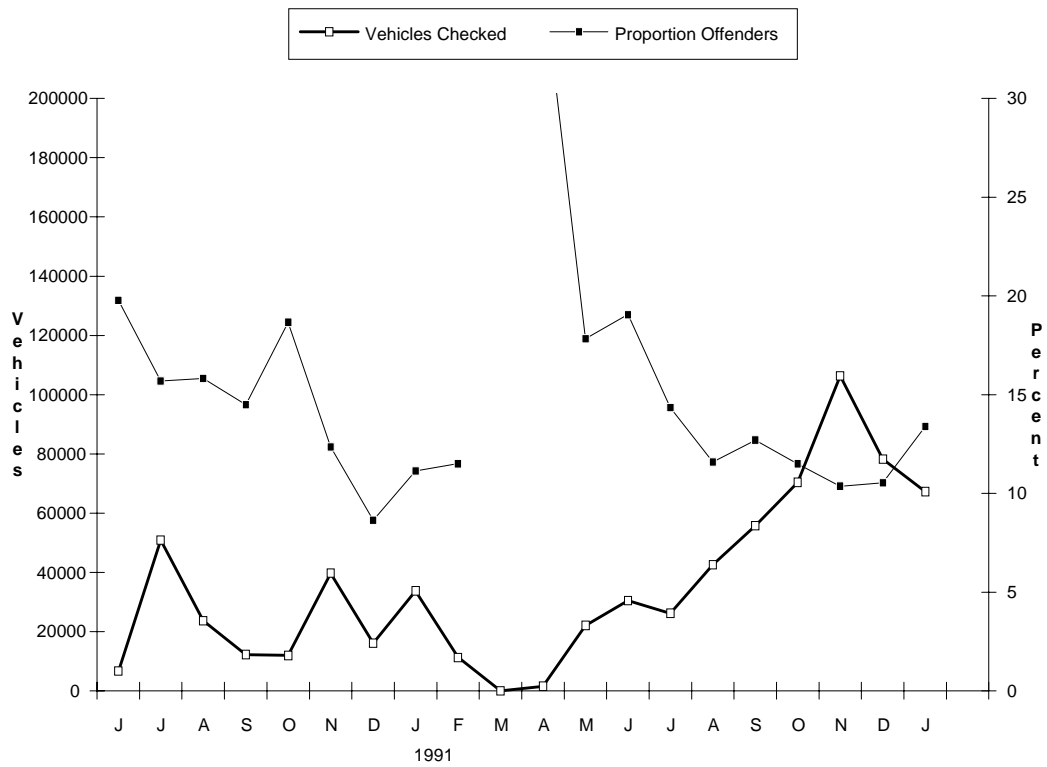
Police District A Vehicles Checked and Proportion Over Threshold Speed



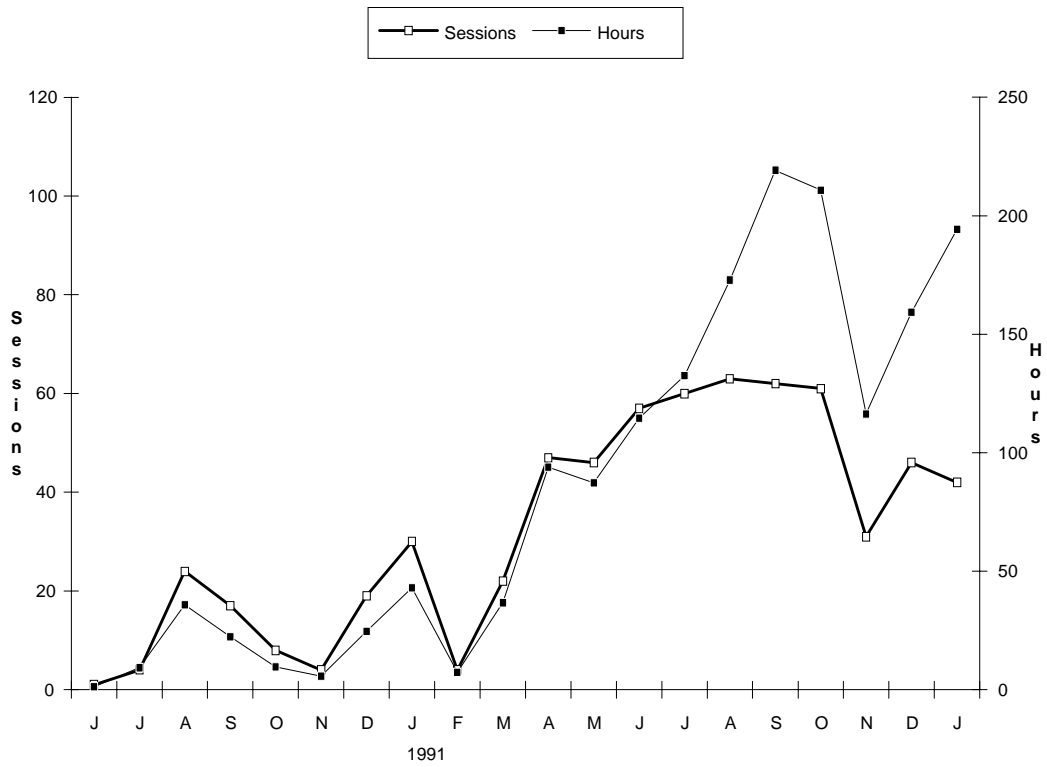
Police District B Speed Camera Sessions and Hours



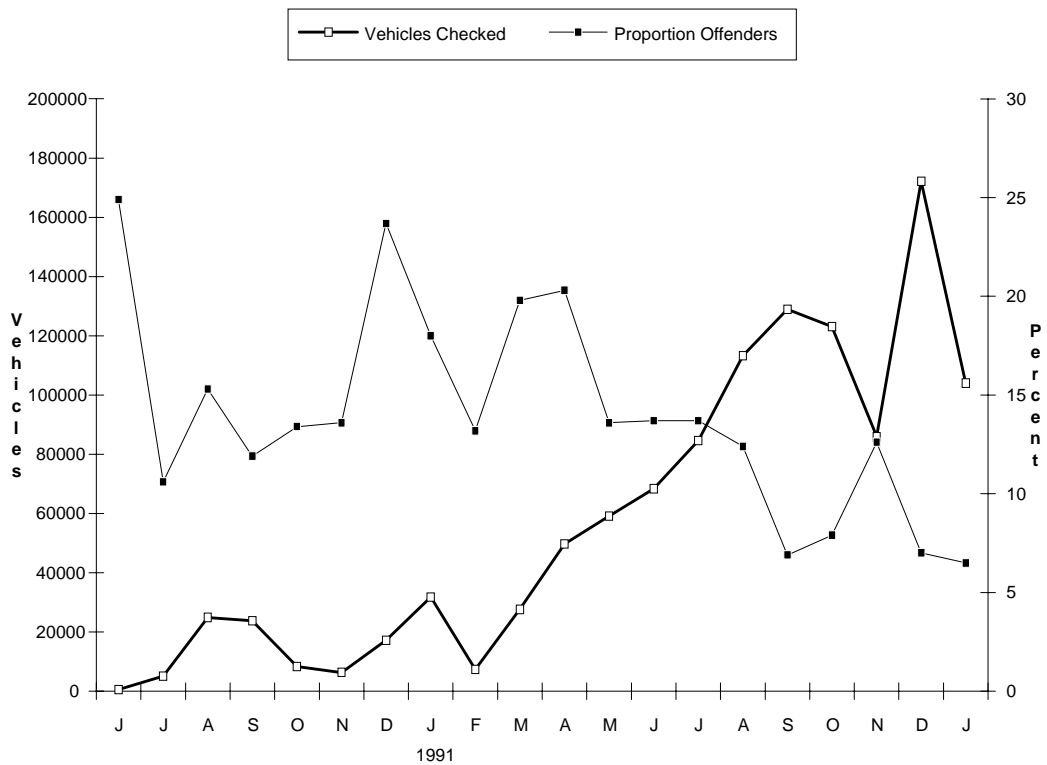
Police District B Vehicles Checked and Proportion Over Threshold Speed



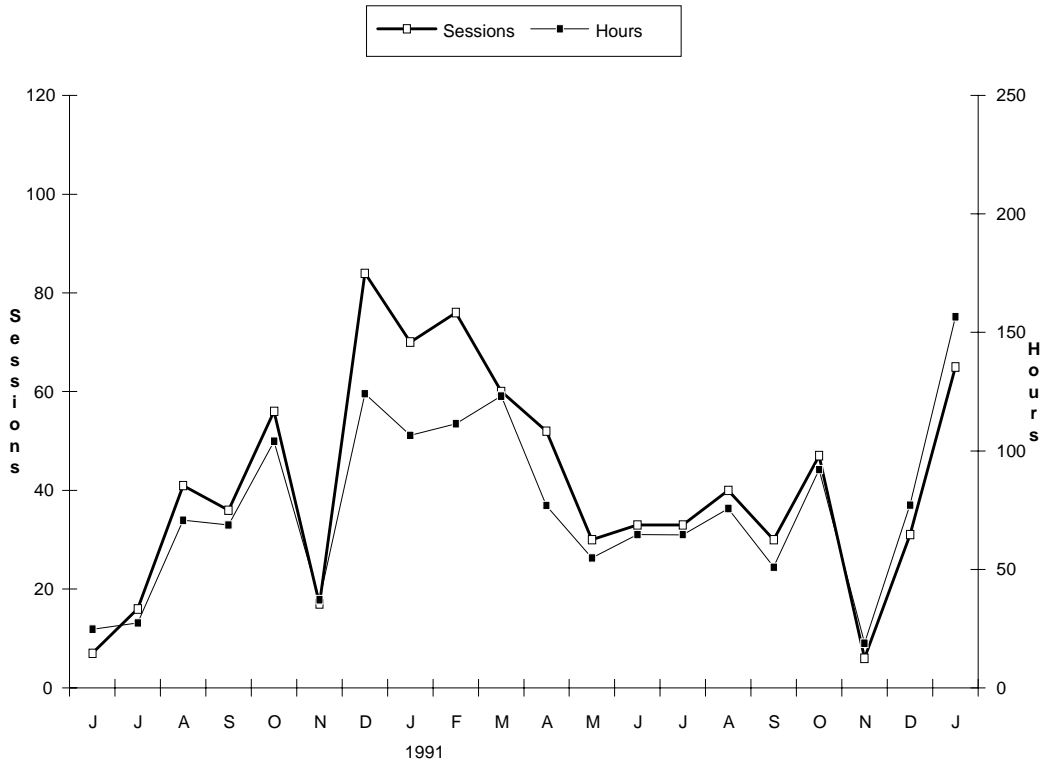
Police District C Speed Camera Sessions and Hours



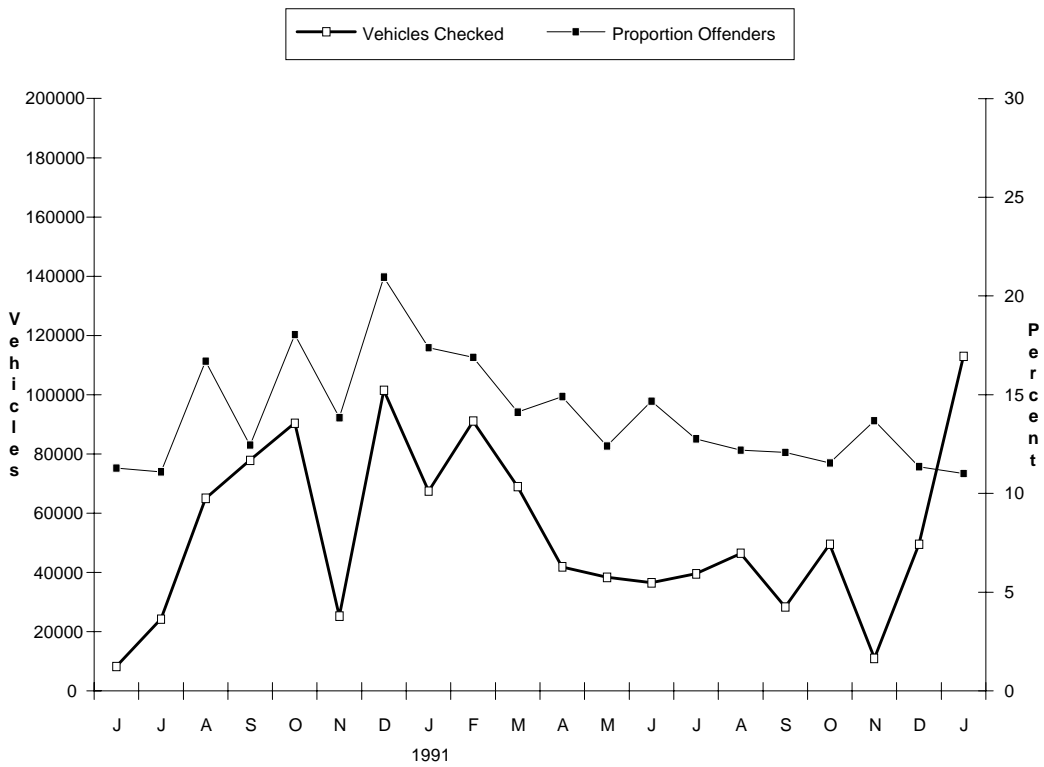
Police District C Vehicles Checked and Proportion Over Threshold Speed



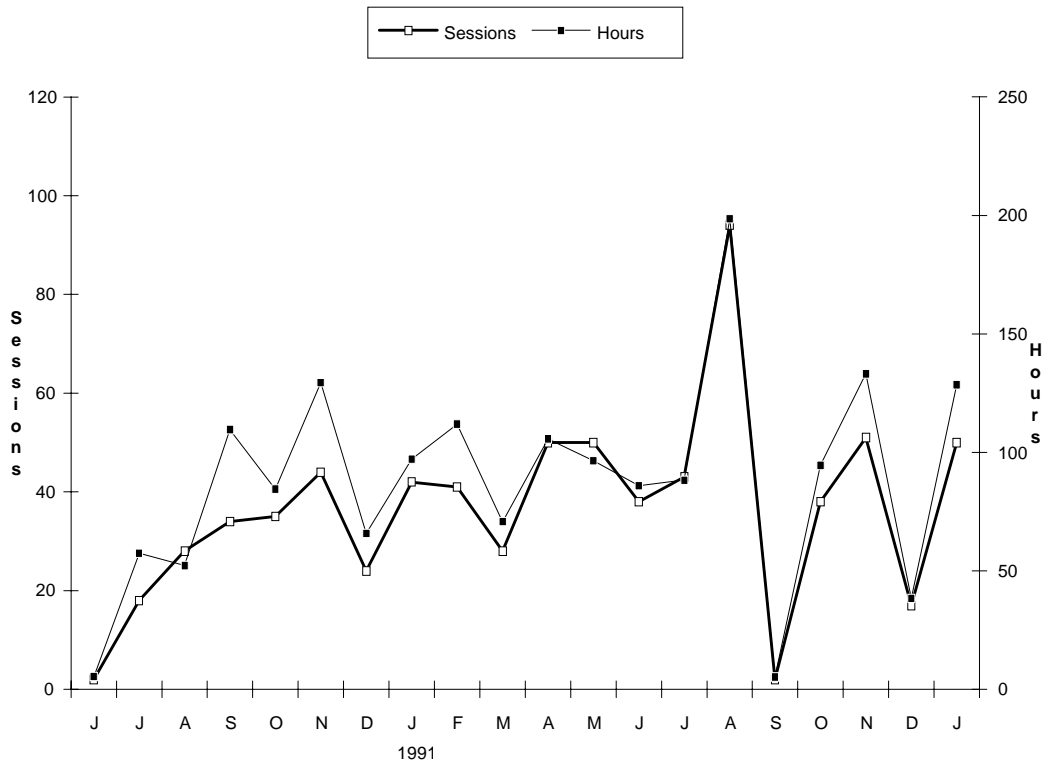
Police District D Speed Camera Sessions and Hours



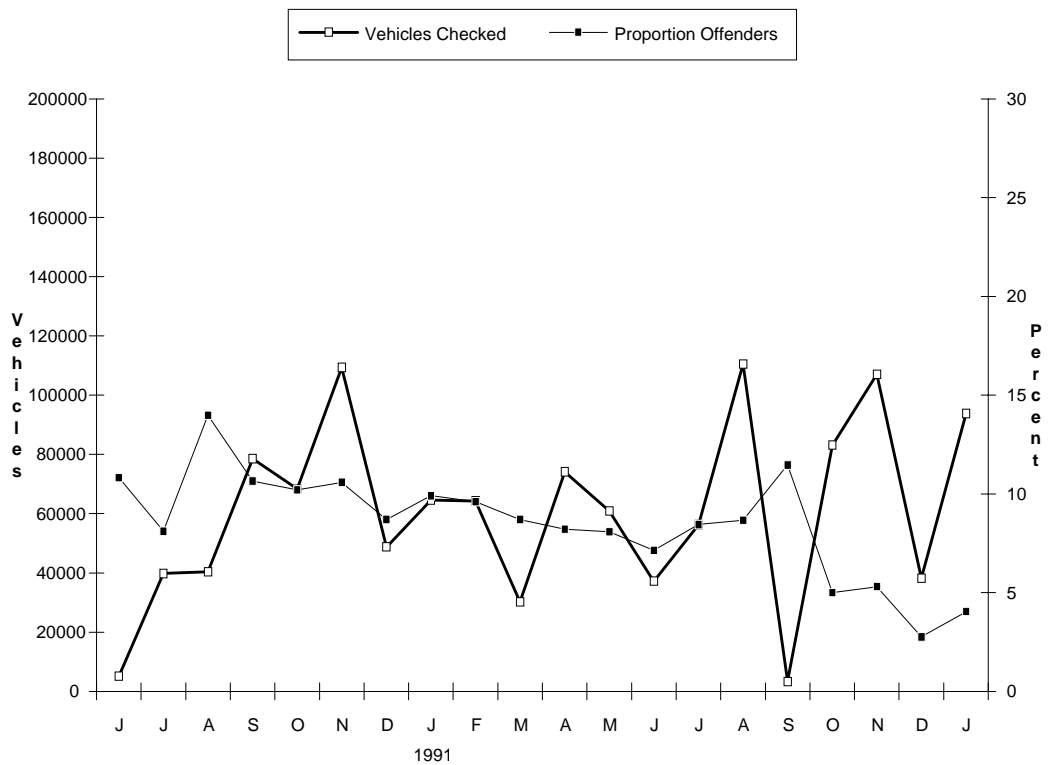
Police District D Vehicles Checked and Proportion Over Threshold Speed



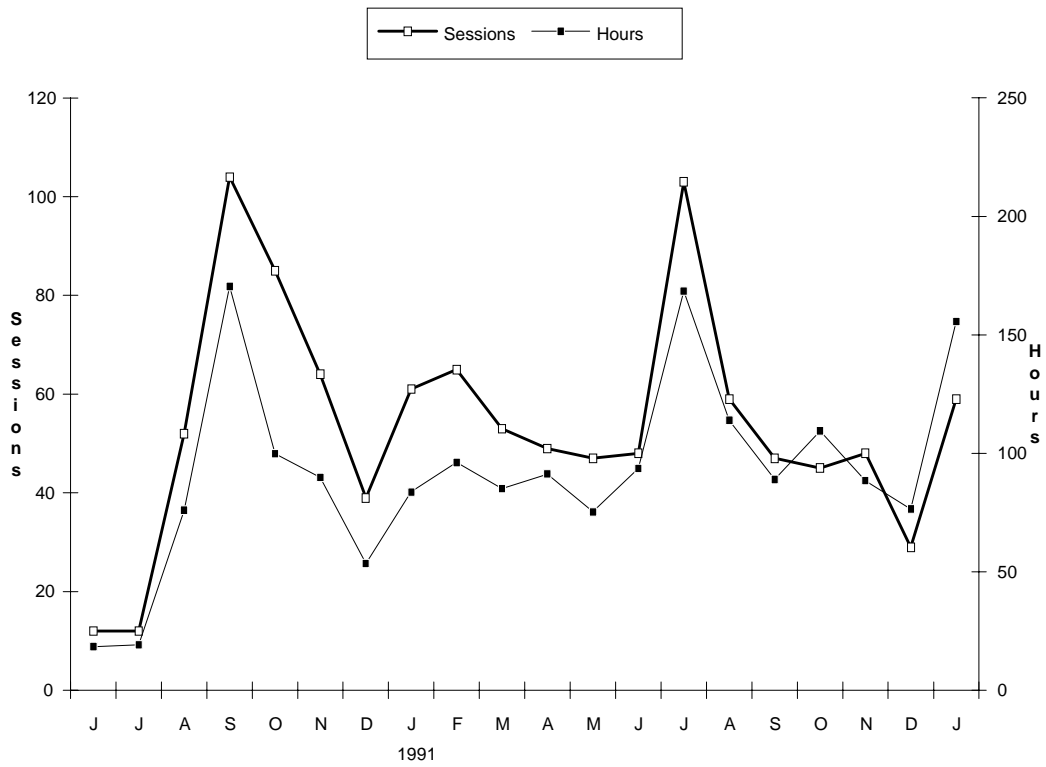
Police District E Speed Camera Sessions and Hours



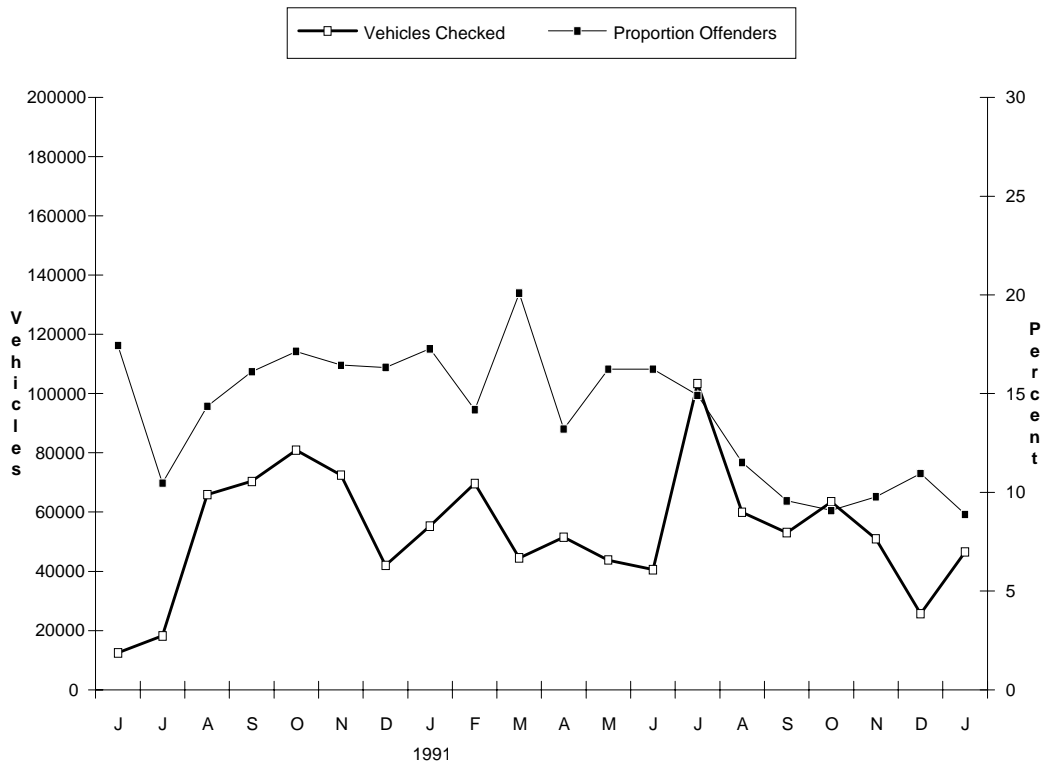
Police District E Vehicles Checked and Proportion Over Threshold Speed



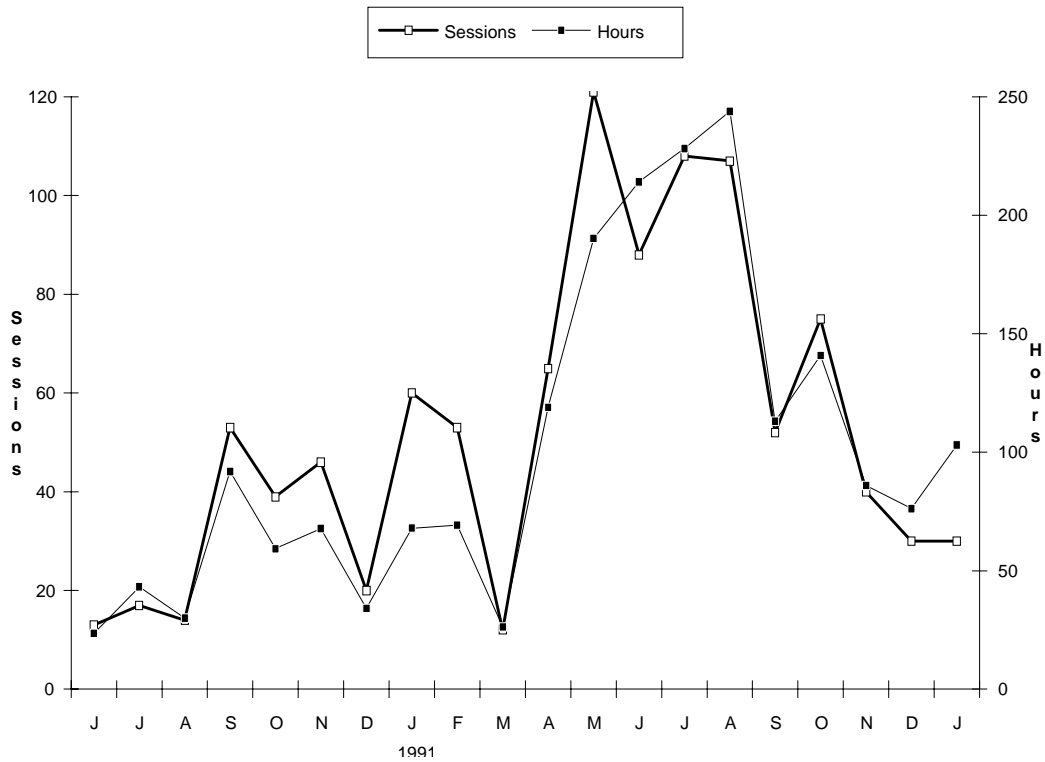
Police District F Speed Camera Sessions and Hours



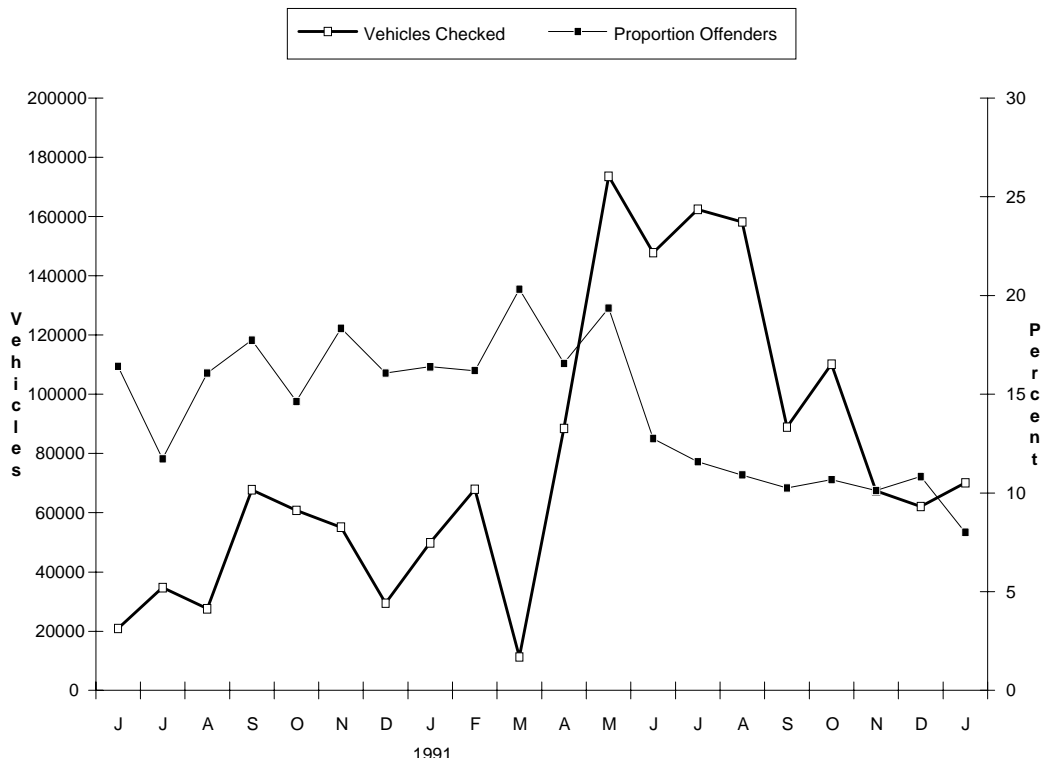
Police District F Vehicles Checked and Proportion Over Threshold Speed



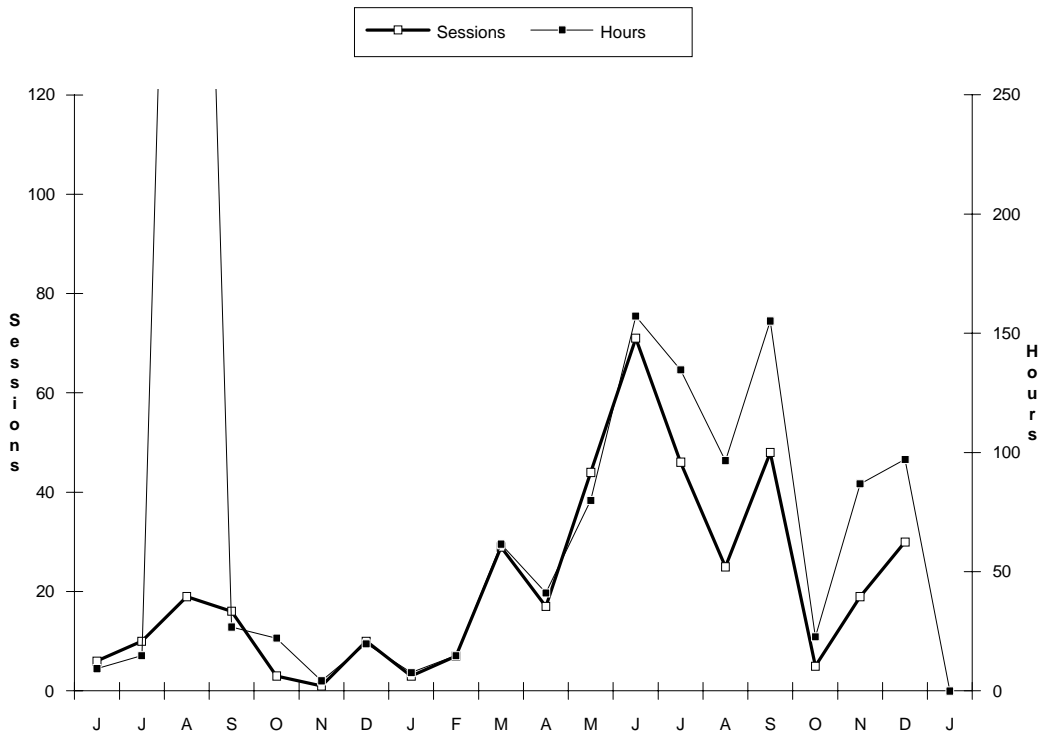
Police District G Speed Camera Sessions and Hours



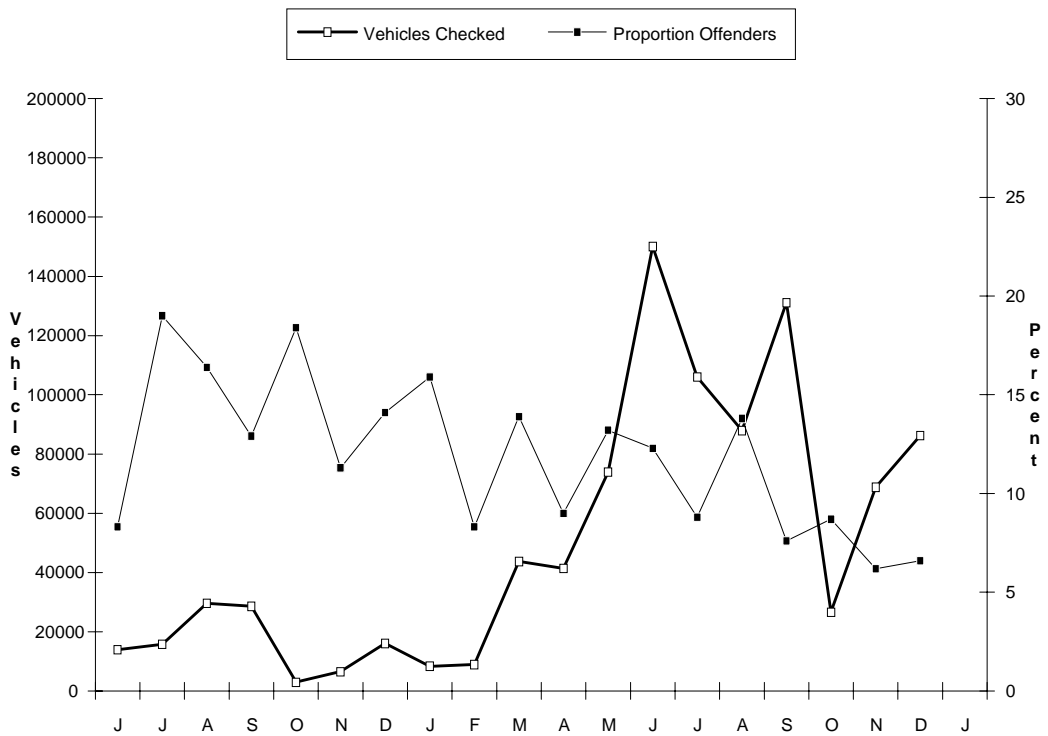
Police District G Vehicles Checked and Proportion Over Threshold Speed



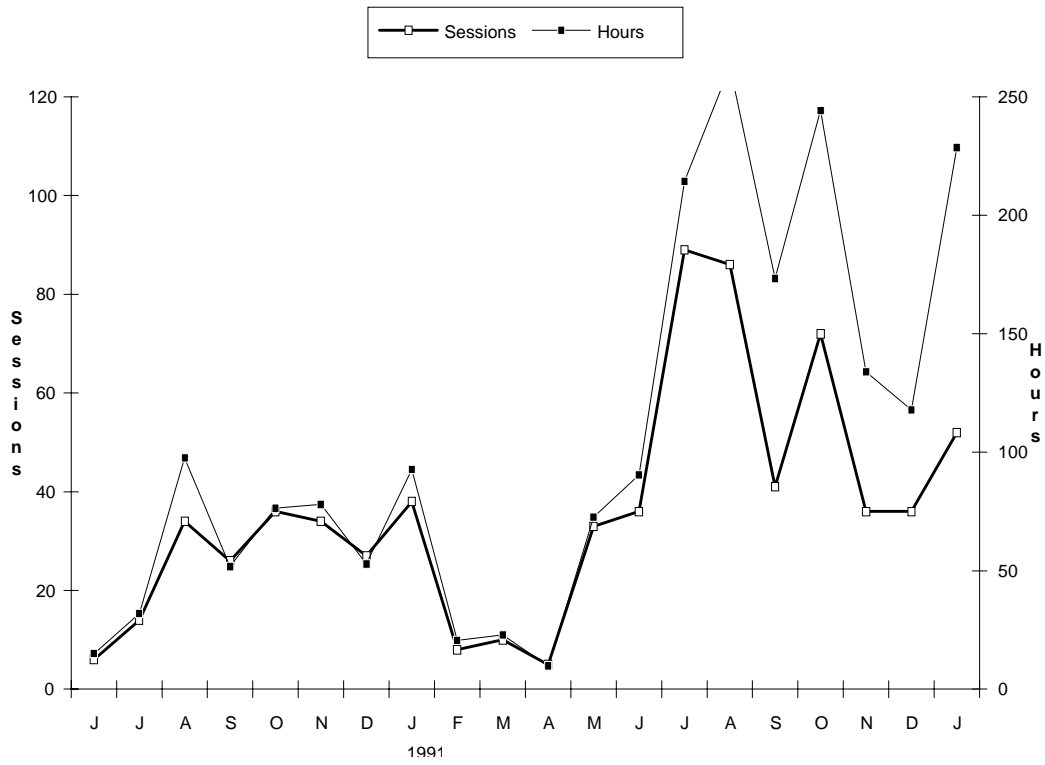
Police District H Speed Camera Sessions and Hours



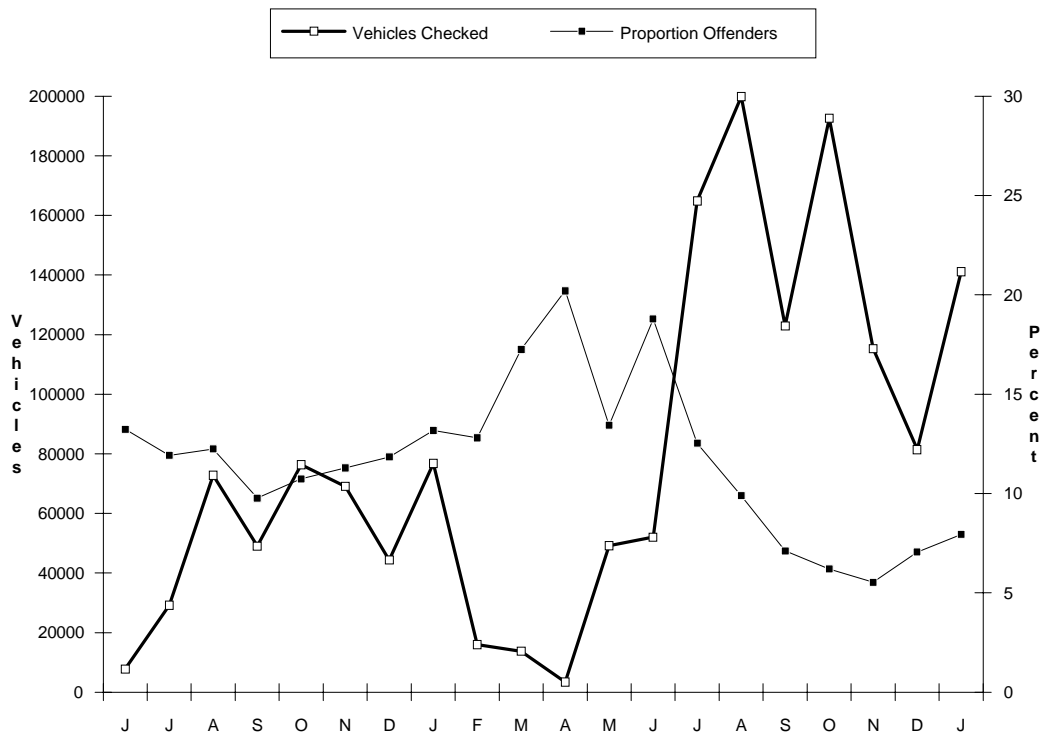
Police District H Vehicles Checked and Proportion Over Threshold Speed



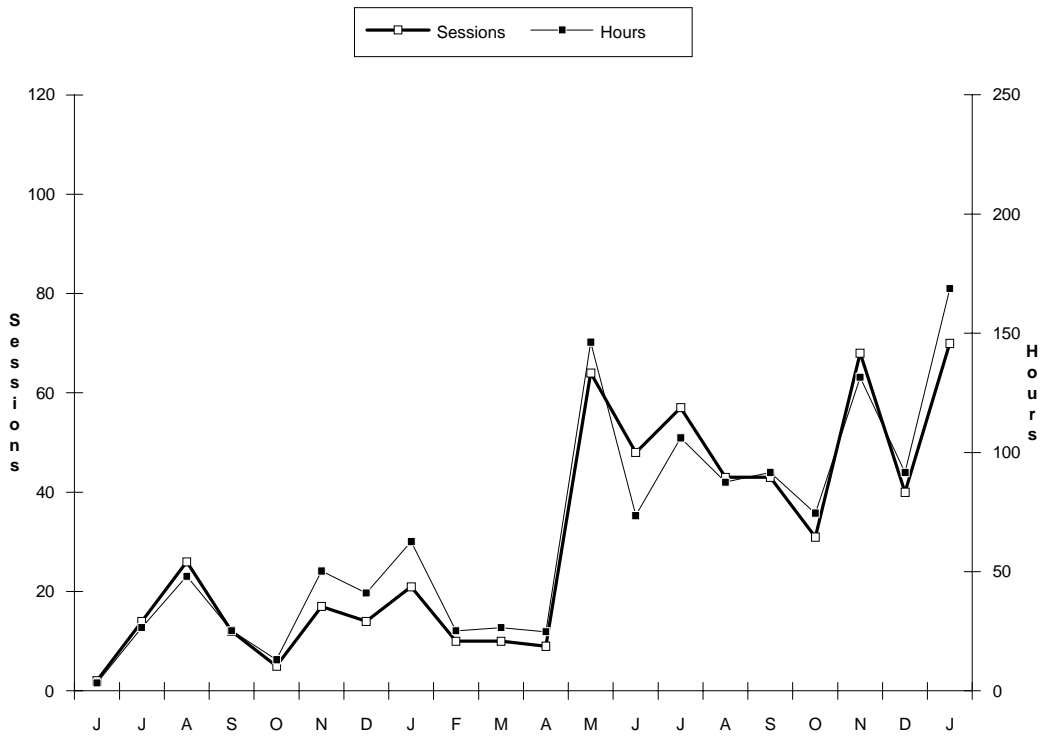
Police District I Speed Camera Sessions and Hours



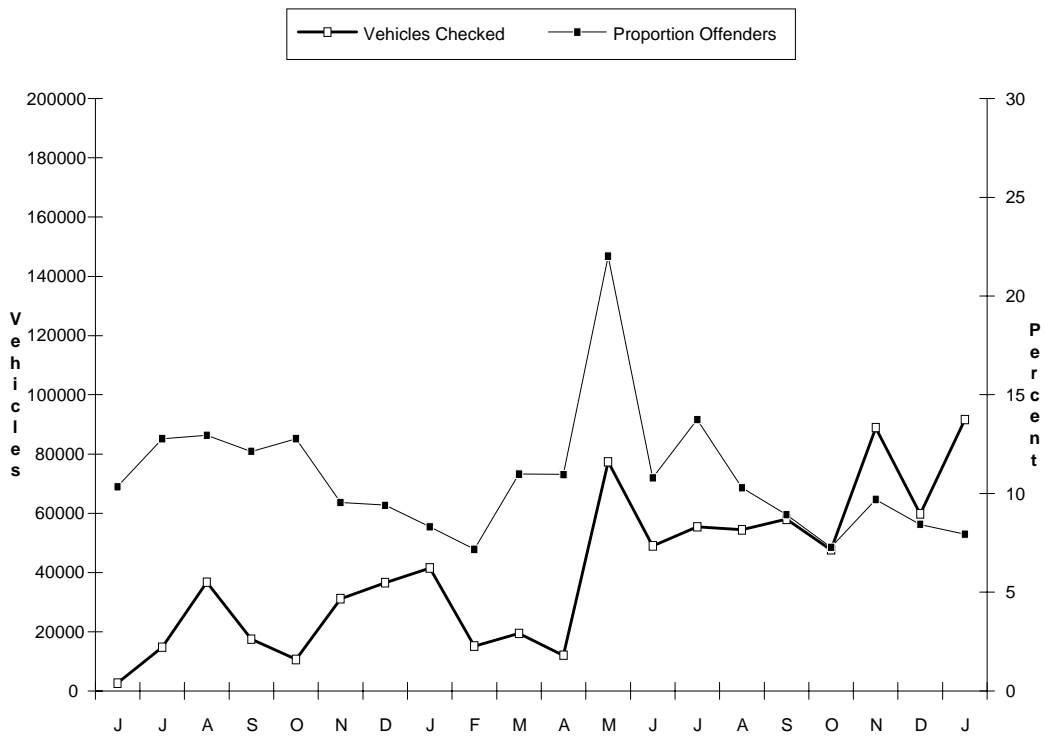
Police District I Vehicles Checked and Proportion Over Threshold Speed



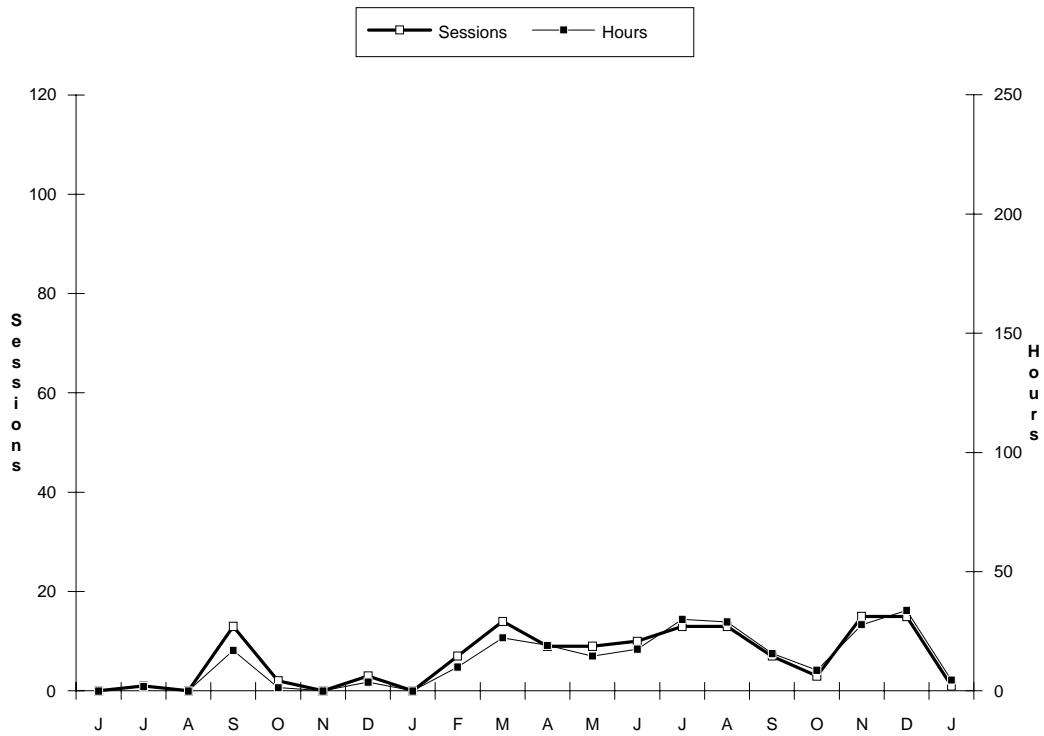
Police District J Speed Camera Sessions and Hours



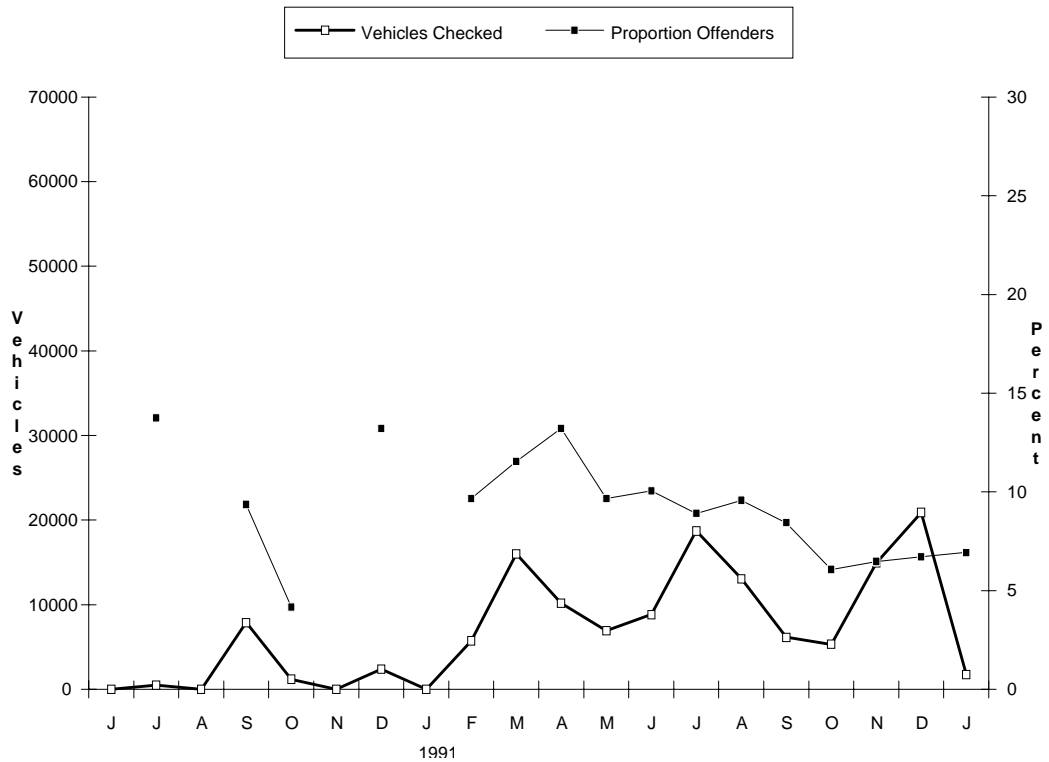
Police District J Vehicles Checked and Proportion Over Threshold Speed



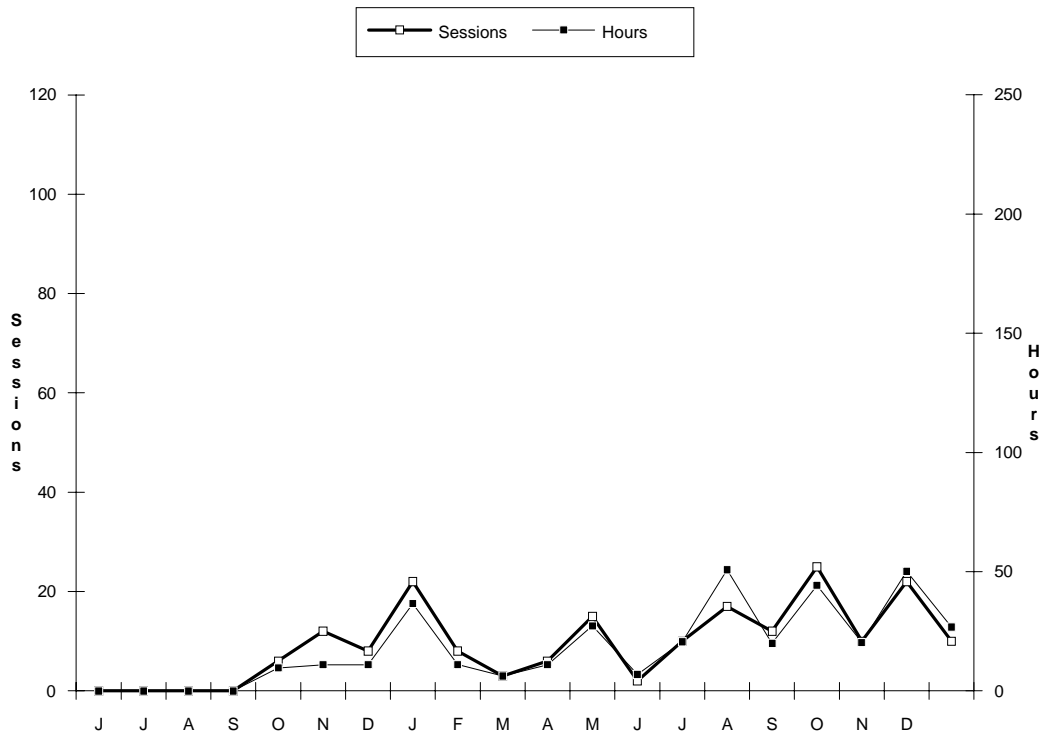
Police District K1 Speed Camera Sessions and Hours



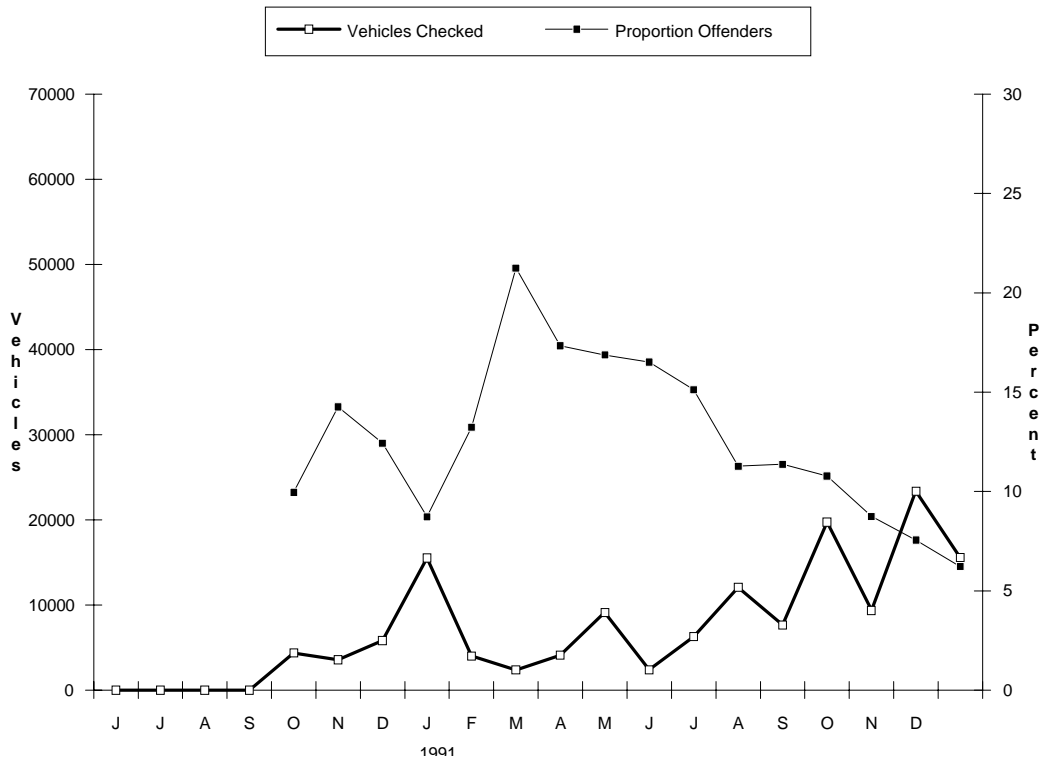
Police District K1 Vehicles Checked and Proportion Over Threshold Speed



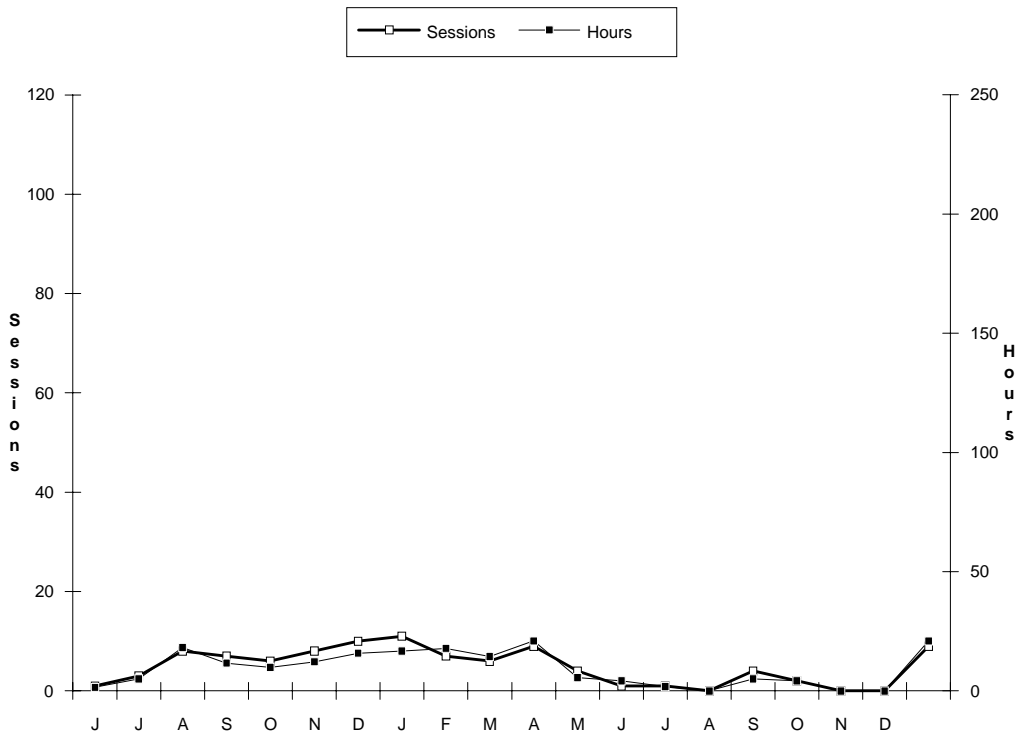
Police District K2 Speed Camera Sessions and Hours



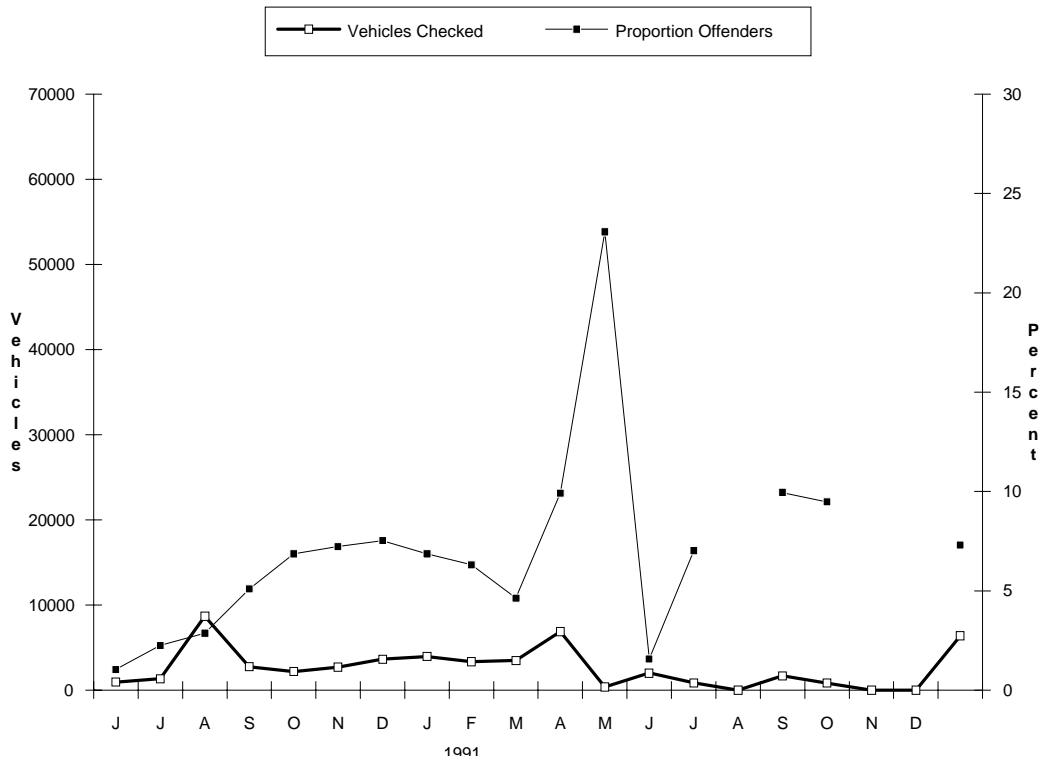
Police District K2 Vehicles Checked and Proportion Over Threshold Speed



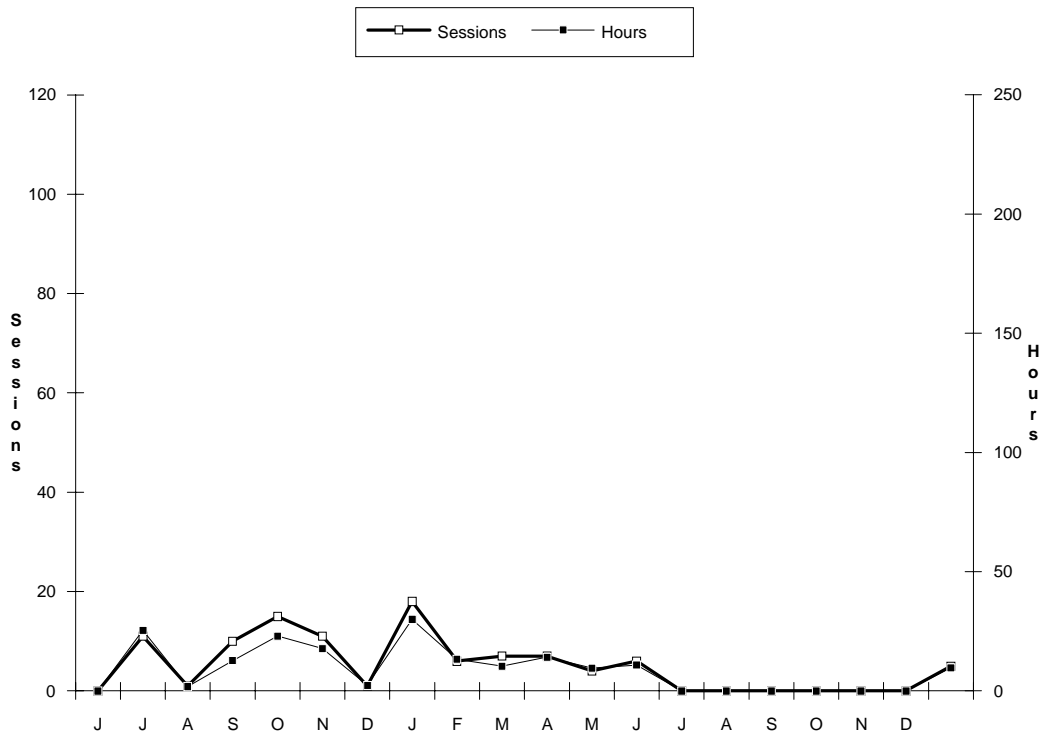
Police District L1 Speed Camera Sessions and Hours



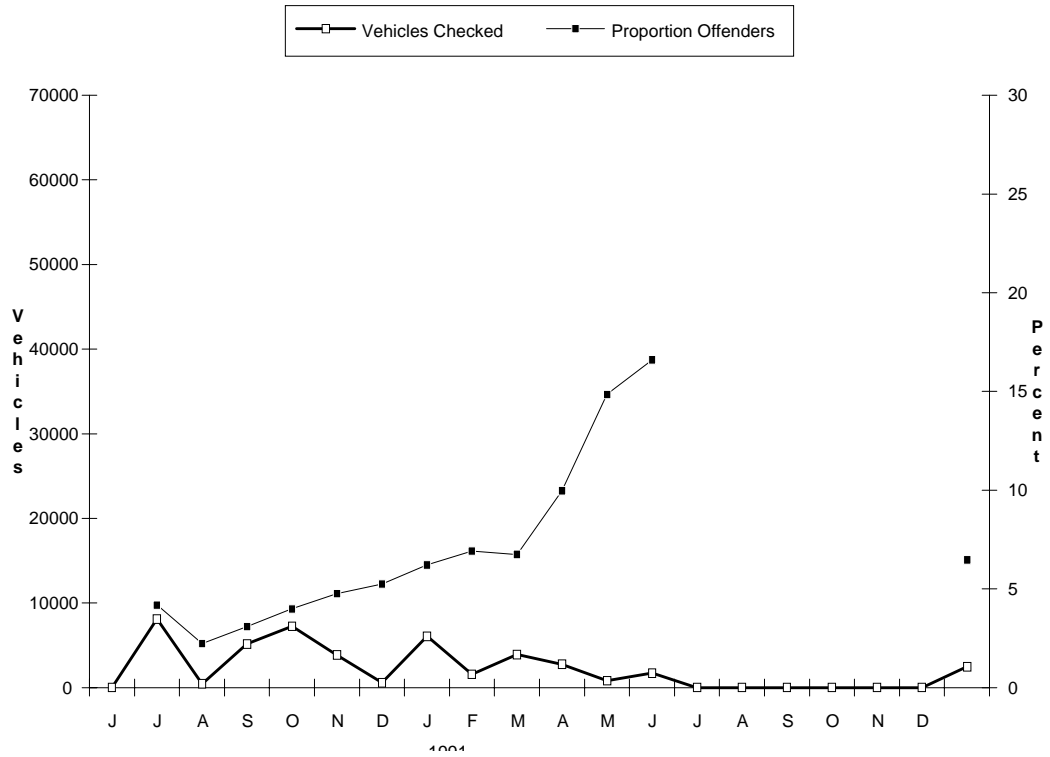
Police District L1 Vehicles Checked and Proportion Over Threshold Speed



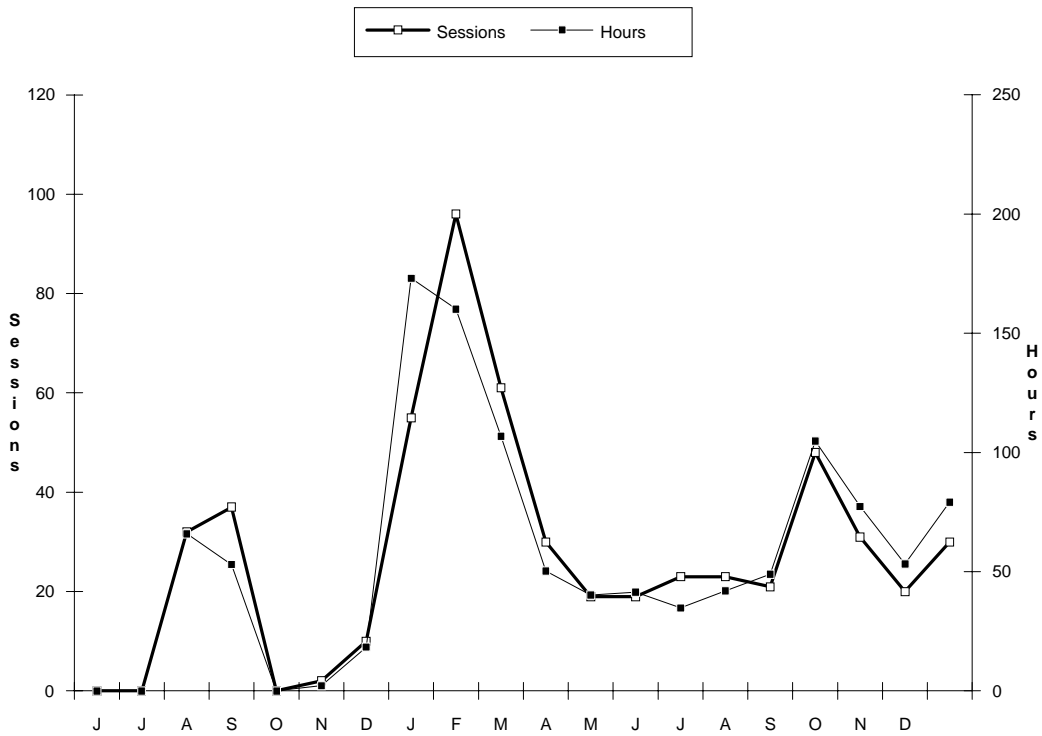
Police District L2 Speed Camera Sessions and Hours



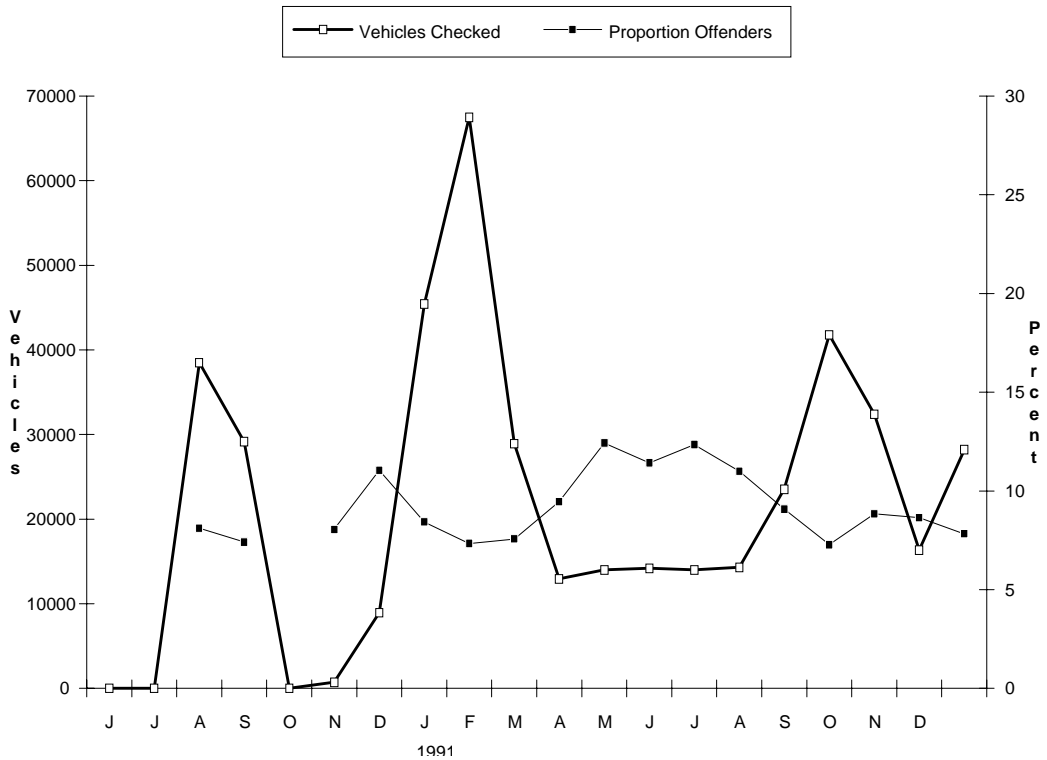
Police District L2 Vehicles Checked and Proportion Over Threshold Speed



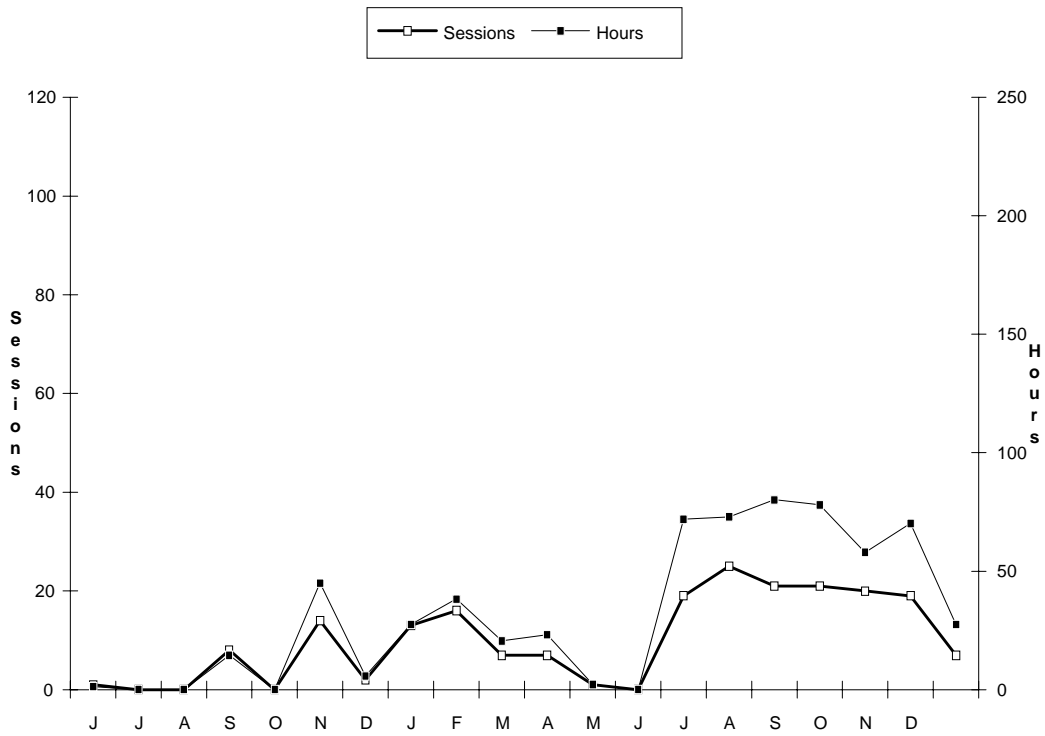
Police District M1 Speed Camera Sessions and Hours



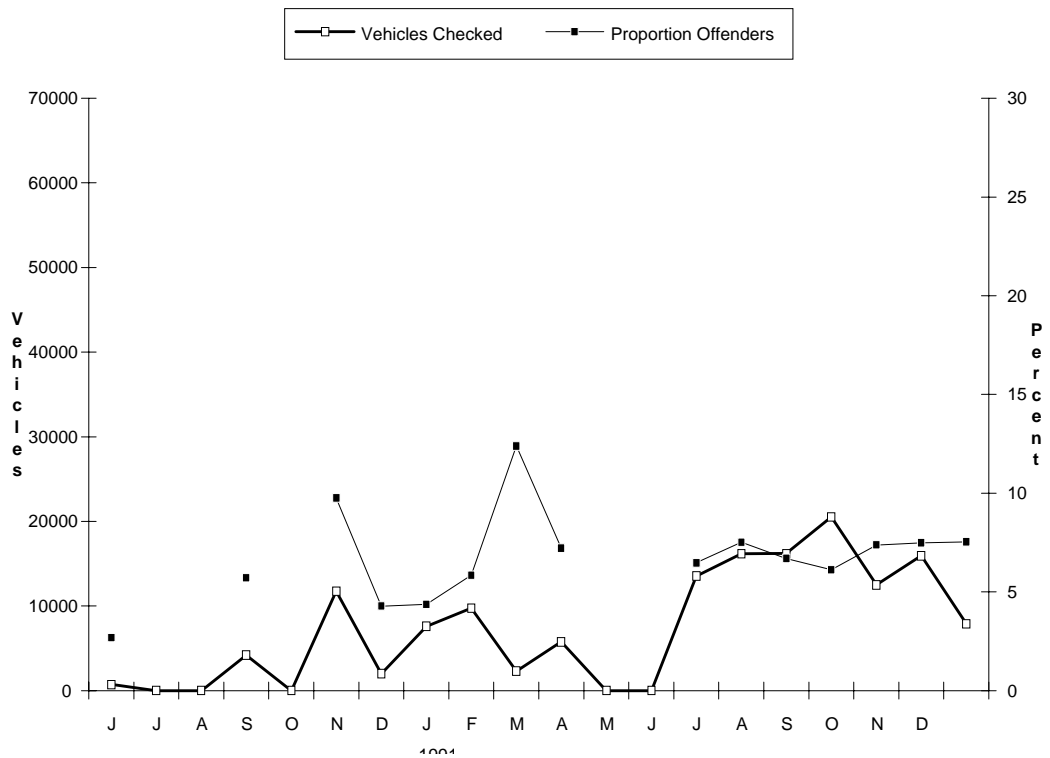
Police District M1 Vehicles Checked and Proportion Over Threshold Speed



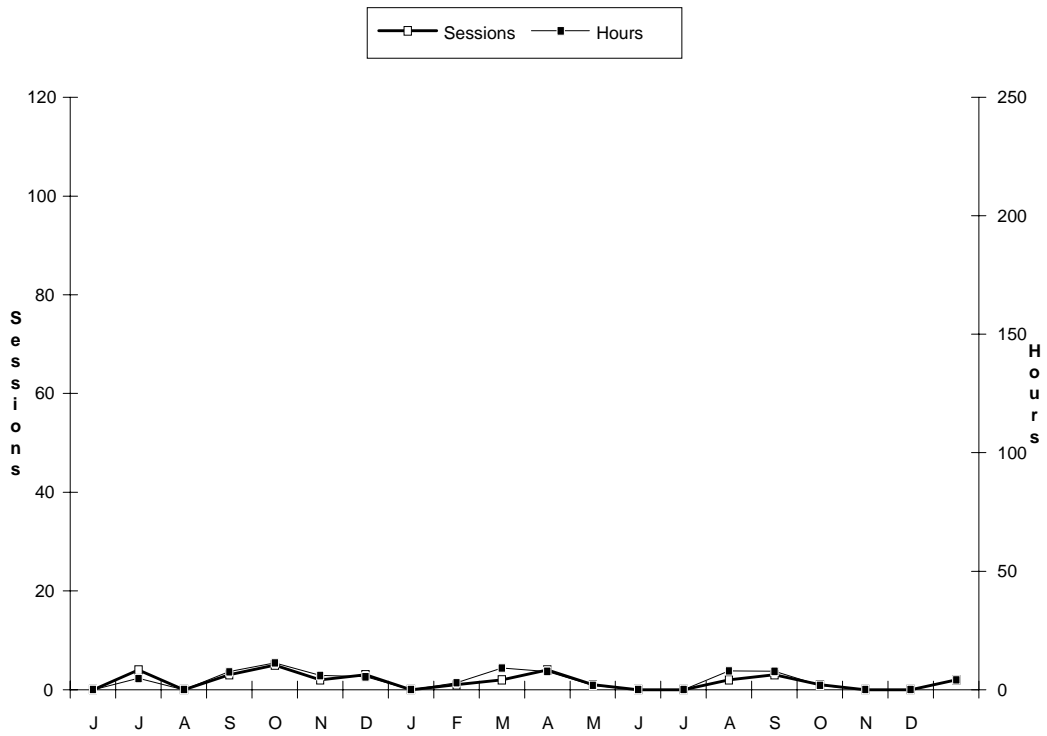
Police District M2 Speed Camera Sessions and Hours



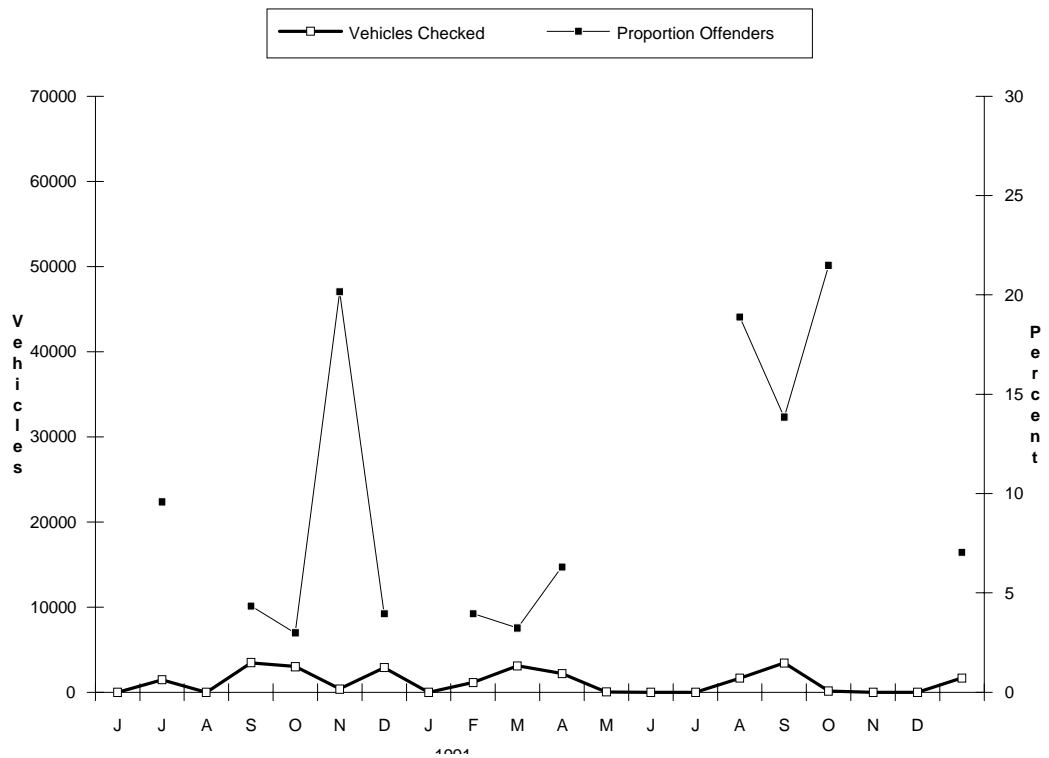
Police District M2 Vehicles Checked and Proportion Over Threshold Speed



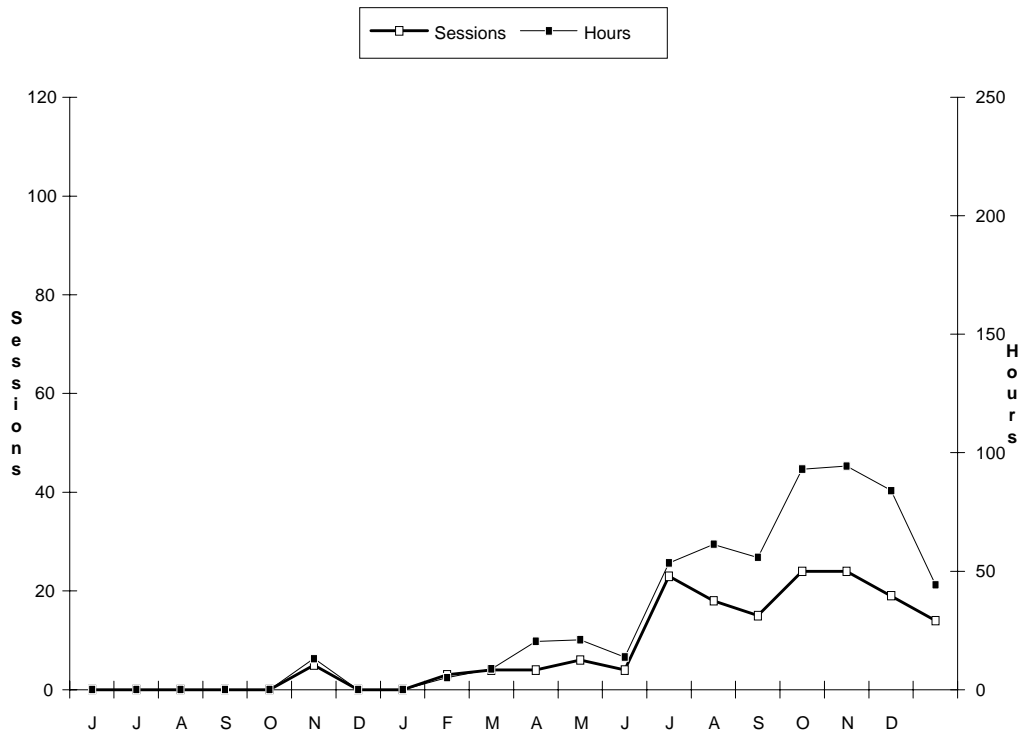
Police District N1 Speed Camera Sessions and Hours



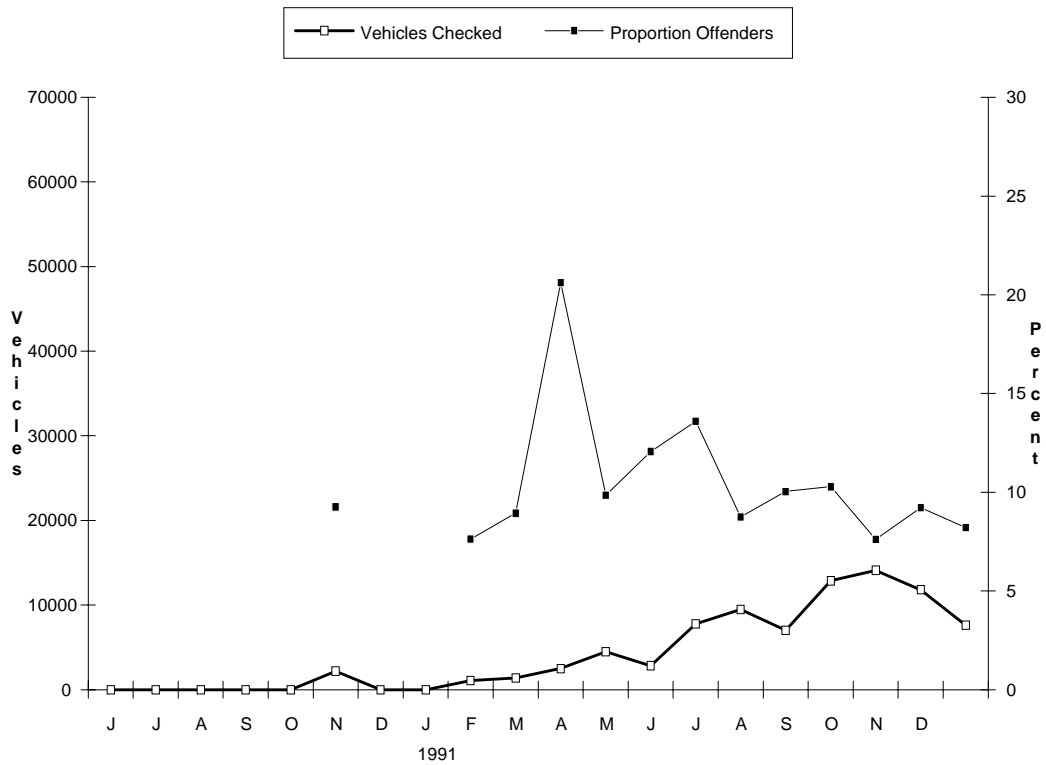
Police District N1 Vehicles Checked and Proportion Over Threshold Speed



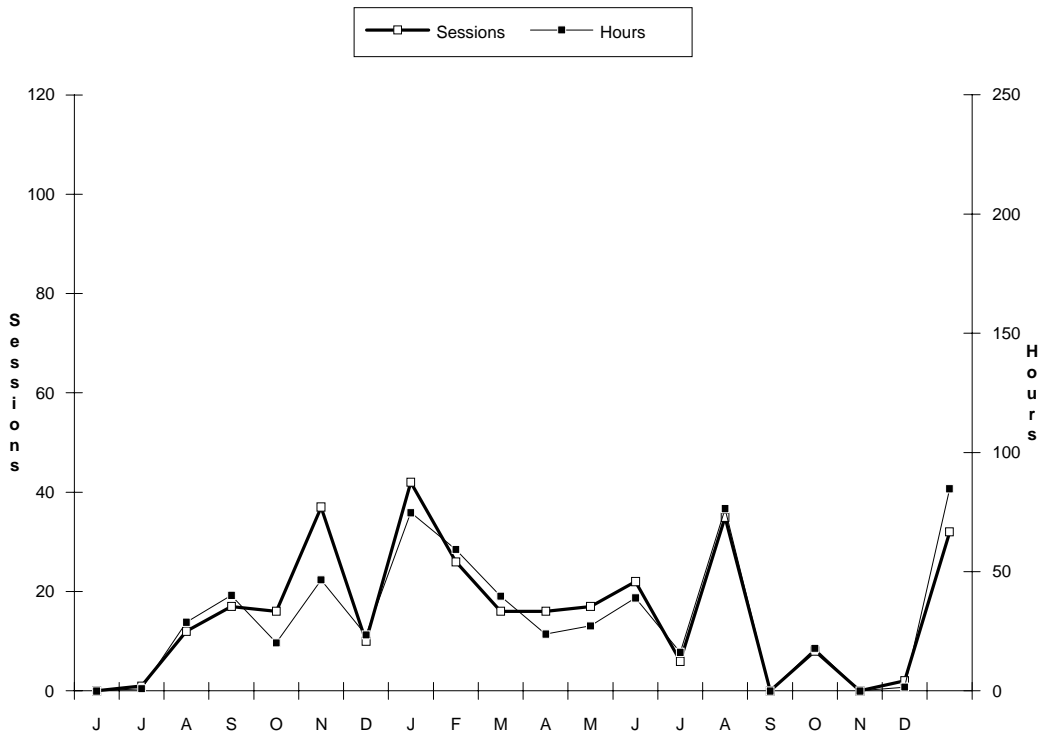
Police District N2 Speed Camera Sessions and Hours



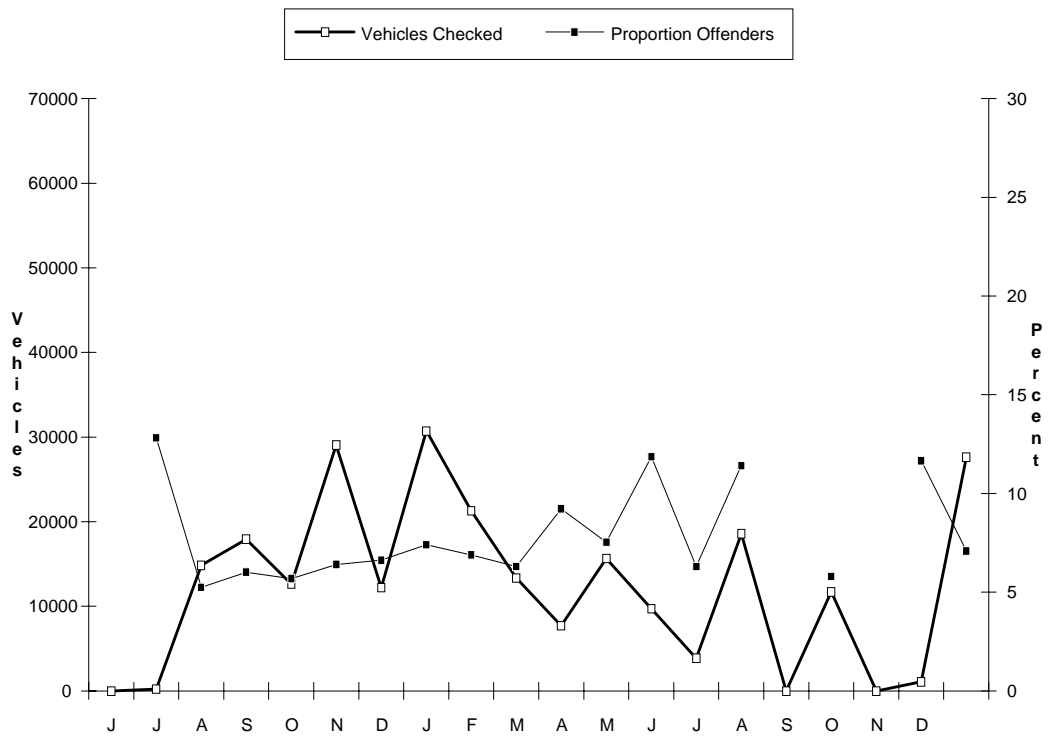
Police District N2 Vehicles Checked and Proportion Over Threshold Speed



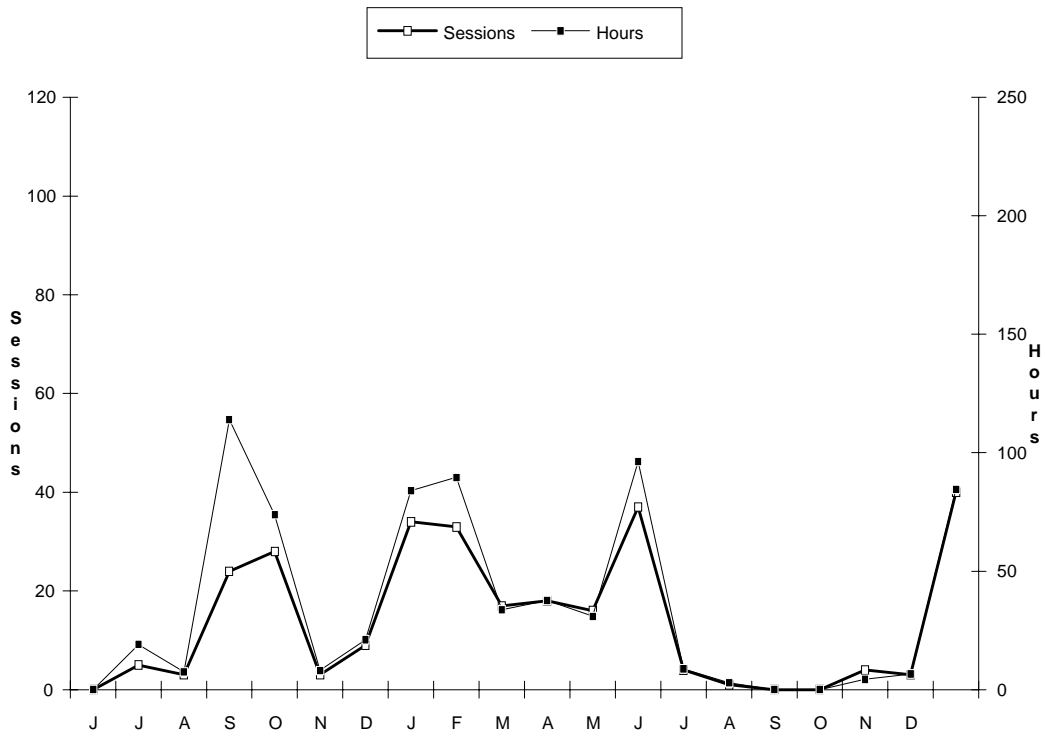
Police District O1 Speed Camera Sessions and Hours



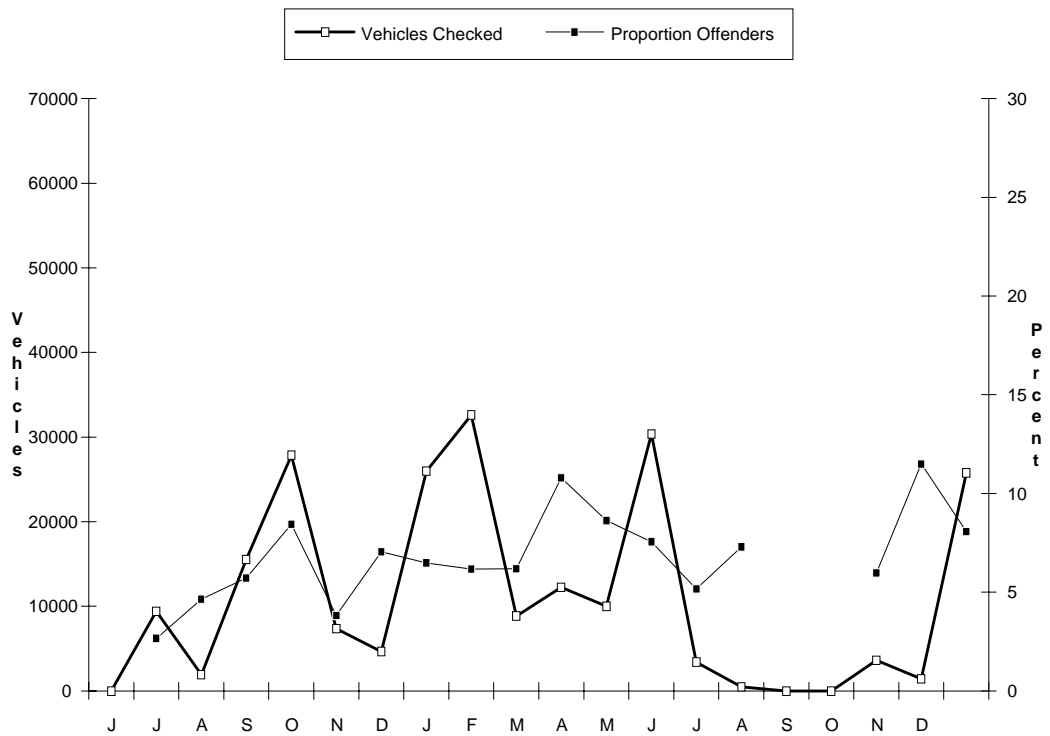
Police District O1 Vehicles Checked and Proportion Over Threshold Speed



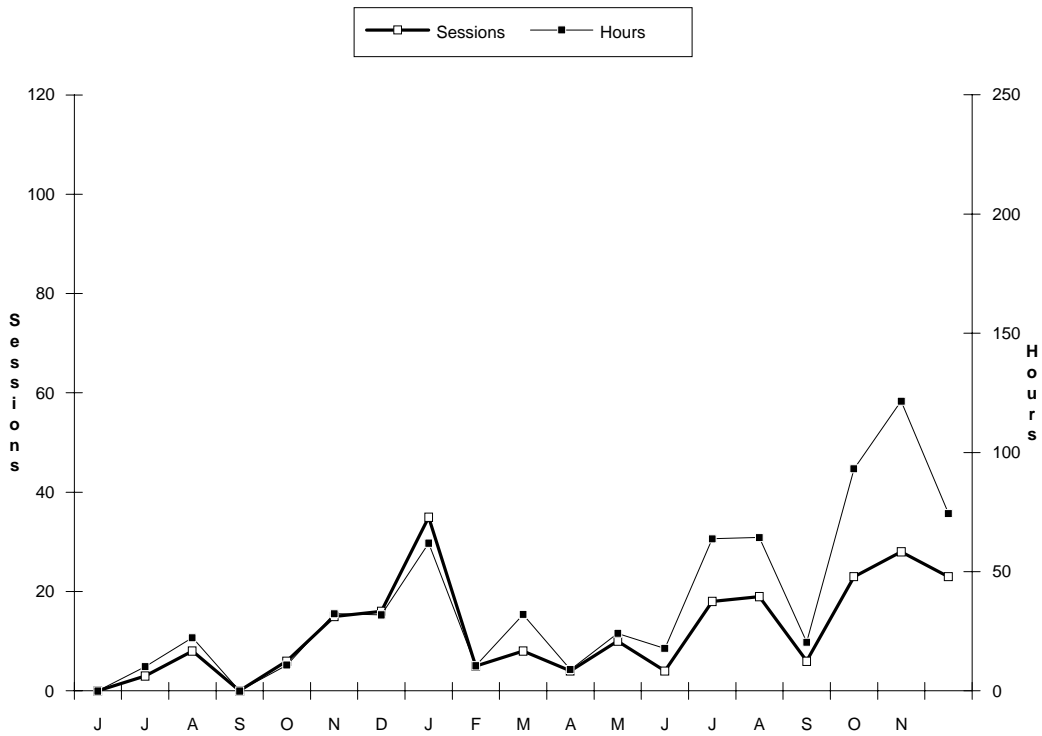
Police District O2 Speed Camera Sessions and Hours



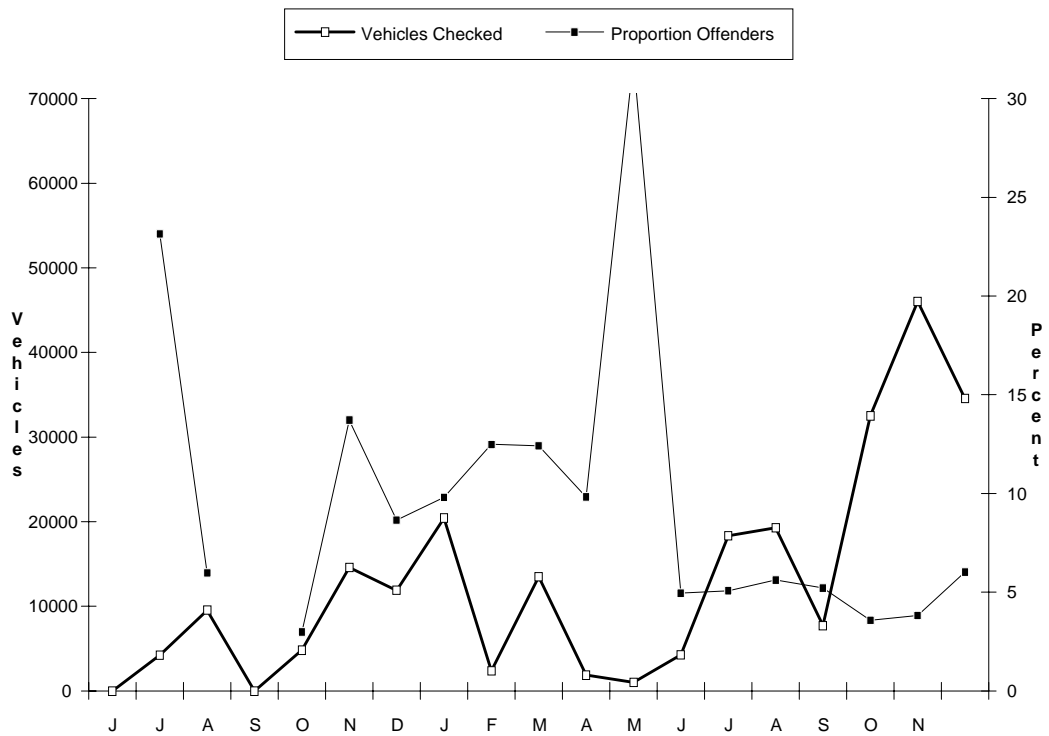
Police District O2 Vehicles Checked and Proportion Over Threshold Speed



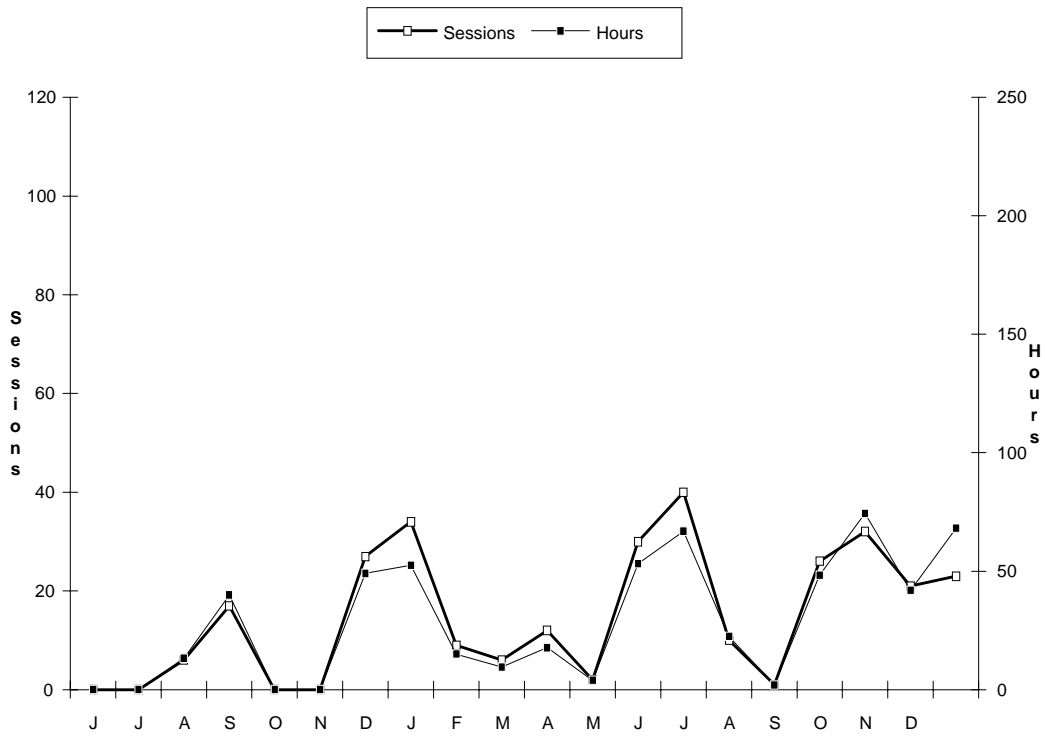
Police District P1 Speed Camera Sessions and Hours



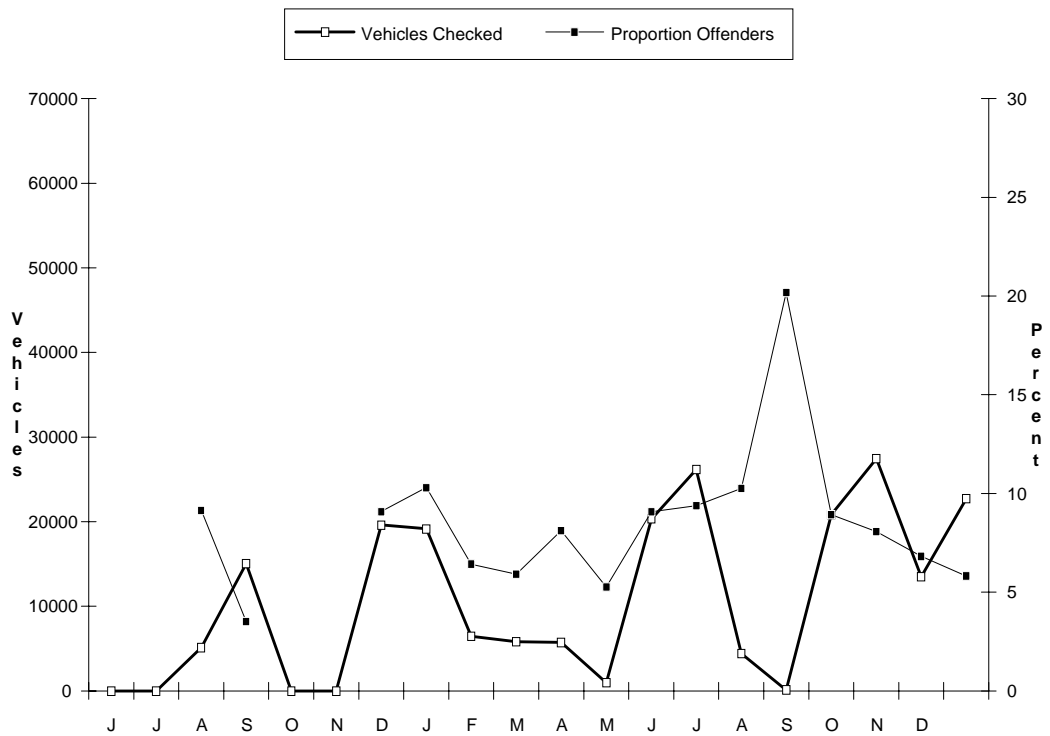
Police District P1 Vehicles Checked and Proportion Over Threshold Speed



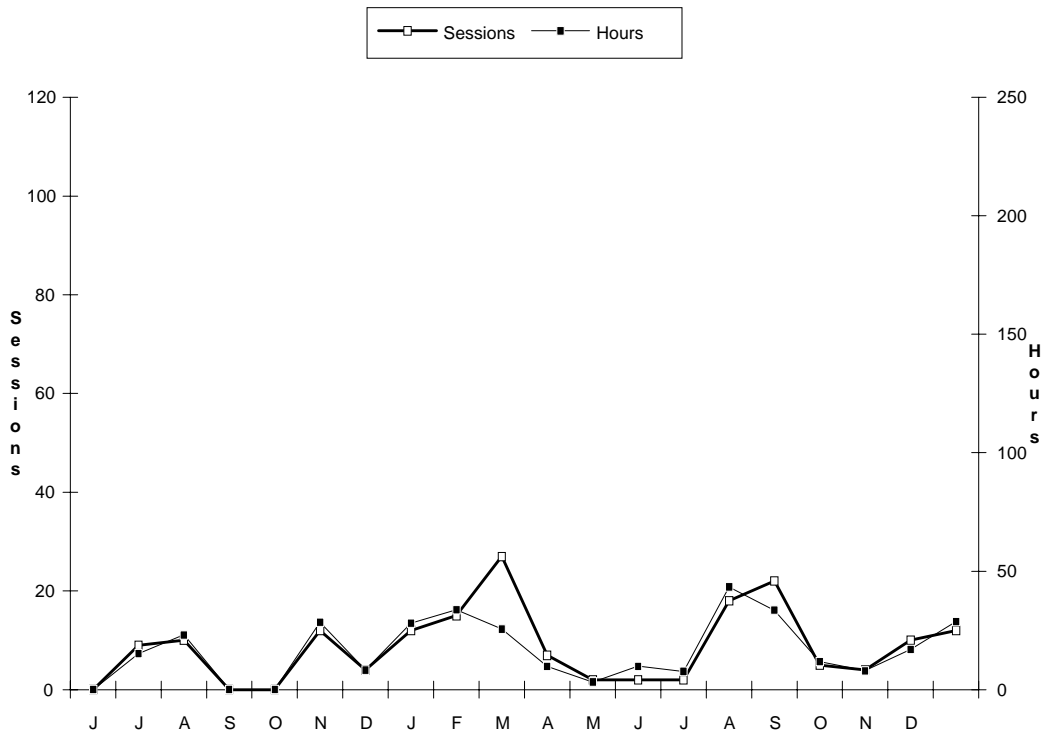
Police District Q1 Speed Camera Sessions and Hours



Police District Q1 Vehicles Checked and Proportion Over Threshold Speed



Police District Q2 Speed Camera Sessions and Hours



Police District Q2 Vehicles Checked and Proportion Over Threshold Speed

