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**PROVIDENCE TRAFFIC STOP STATISTICS
FINAL ANALYSIS
2001, 2002 and 2003 (January – July)**

**Prepared by the Institute on Race and Justice at
Northeastern University**

October 31, 2003

After concluding that the Providence Police Department was in substantial compliance with the court order and that Northeastern University had sufficient information upon which to draw conclusions about the existence of disparities in traffic stops and searches, we now issue a final report on the traffic stop data from Providence.

Instead of identifying individual acts of profiling, this study, like the final report issued for all law enforcement agencies in Rhode Island on June 30, 2003, examines the aggregate patterns of traffic stops to determine if there is a disparity between the proportion of non-whites stopped by the police compared to the proportion of non-whites in the driving population. In addition to addressing questions about disparities in traffic stops, this report examines the extent to which race plays a role in post-stop activity, such as searches in Providence.

The report presents data for traffic stops occurring in Providence between January 15, 2001 and July 31, 2003. A few of the major findings are highlighted below.

- Across the 31 months of data, non-white drivers in Providence are stopped disproportionately to their presence in the driving population. In 2001 there was a disparity of 22.7% between non-white stops and the estimated proportion of non-whites in the driving population. In 2002 the disparity rose to 24.5% and in the last seven months of 2003 the disparity was 25.7%. This represents the highest disparity in the State when compared to the figures released as part of the prior two-year study.
- Once stopped, non-white drivers in Providence are significantly more likely than whites to be subjected to a discretionary search. In 2002 20.8% of the non-white drivers were searched compared to only 14.8% of white drivers. In the first seven months of 2003, 25.2% of non-white drivers were searched compared to 16.5% of white drivers.
- While non-white motorists were more likely to be searched once stopped, white motorists were actually found with contraband at a rate slightly higher than non-white motorists following a discretionary search. In 2002 22.4% of white motorists who were searched were found with contraband compared to only 17.8% of non-white motorists. In 2003 21.8% of white motorists who were searched were found with contraband compared to 17.5% of non-white motorists.

PART I: RACE AND TRAFFIC STOPS

In Providence 56.7% of all the traffic stops made between January 15, 2001 and July 31, 2003 were of non-white motorists compared to a non-white driving population estimate of 32.2% for the city, yielding a disparity of 24.5%. In both the original and this subsequent analysis the City of Providence fell into the statewide category of high concern. The following tables help clarify places where these disparities emerge and provide more information which may help community members and law enforcement administrators target strategies to reduce these disparities.

For this final analysis we have reported the Providence data in three time periods, the 2001 and 2002 calendar years and the six months of additional data collection required by the court in 2003. We chose to report the traffic stop statistics across these three time periods because they represented the first year of data collection prior to any court intervention, the second year of data collection during the initial compliance audit, and the third year of data collection following the court's order for continued data collection and the appointment of Colonel Dean Esserman. This level of analysis is more detailed than was done for other communities in Rhode Island but because of ongoing concerns about data quality over the period of the study we have decided to present this more detailed level of analysis.

Across the 31 months of data collection 23,154 stops were recorded by the Providence Police Department. Across this time period the stops of non-white drivers by the Providence Police Department have remained remarkably stable (Table 1). In 2001 non-white drivers were stopped by the Providence Police in 54.9% of the traffic stops, this number rose to 56.7% of the stops in 2002, and rose again slightly in the first six months of 2003 to 57.9%.¹ Over the 31 months of this analysis the Providence Police stopped more non-white motorists that would have been expected by their modified population estimate. In Providence we estimated that the driving population of the city was 32.2% non-white, yielding a disparity of 22.7% in 2002, 24.5% in 2002 and 25.7% in 2003. These rates of disparity in traffic stops continue to be the largest in Rhode Island, with the next highest jurisdiction having a 16% disparity.

¹ It is impossible to identify all the potential reasons for this change over time. Various factors could explain such changes, one of which is the possibility of underreported stops of non-white motorists prior to court intervention and monitoring.

Table 1: Racial Demographics of Stops by Month

	2001			2002			2003 (January – July)		
	White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
Total	2084	2541	4625	4959	6490	11449	2983	4097	7080
	45.1%	54.9%	100.0%	43.3%	56.7%	100.0%	42.1%	57.9%	100.0%
January	186	244	430	369	414	783	565	758	1323
	43.3%	56.7%	100.0%	47.1%	52.9%	100.0%	42.7%	57.3%	100.0%
February	214	229	443	488	550	1038	406	544	950
	48.3%	51.7%	100.0%	47.0%	53.0%	100.0%	42.7%	57.3%	100.0%
March	153	193	346	316	367	683	571	667	1238
	44.2%	55.8%	100.0%	46.3%	53.7%	100.0%	46.1%	53.9%	100.0%
April	130	251	381	318	329	647	464	617	1081
	34.1%	65.9%	100.0%	49.1%	50.9%	100.0%	42.9%	57.1%	100.0%
May	112	127	239	275	302	577	303	476	779
	46.9%	53.1%	100.0%	47.7%	52.3%	100.0%	38.9%	61.1%	100.0%
June	61	70	131	286	270	556	244	387	631
	46.6%	53.4%	100.0%	51.4%	48.6%	100.0%	38.7%	61.3%	100.0%
July	76	130	206	299	402	701	418	629	1047
	36.9%	63.1%	100.0%	42.7%	57.3%	100.0%	39.9%	60.1%	100.0%
August	78	121	199	406	731	1137	12	19	31
	39.2%	60.8%	100.0%	35.7%	64.3%	100.0%	38.7%	61.3%	100.0%
September	127	171	298	577	788	1365			
	42.6%	57.4%	100.0%	42.3%	57.7%	100.0%			
October	260	273	533	681	1027	1708			
	48.8%	51.2%	100.0%	39.9%	60.1%	100.0%			
November	362	361	723	563	692	1255			
	50.1%	49.9%	100.0%	44.9%	55.1%	100.0%			
December	325	371	696	381	618	999			
	46.7%	53.3%	100.0%	38.1%	61.9%	100.0%			

Characteristics of the Encounter: Place, Time and Season

In order to examine the relationship between race and location of stop we grouped the traffic stop locations provided by the Providence Police Department into eleven major location categories.² In Providence approximately 19% (n=4,487) of the 23,154 total traffic stops occur in Location Group 2, followed by 11.4% of stops (n=2,656) in Location Group 5 and 10% of stops (n=2,355) in Location Group 6. Across the full study period the proportions of non-white stops ranged from a high of 74% in Location Group 2 to a low of 30.5% in Location Group 7.

2. The locations were grouped according to the following parameters: Location Group 1 = locations 11, 13; Location Group 2 = locations 12, 16, 17, 19; Location Group 3 = locations 14, 40; Location Group 4 = locations 42, 43; Location Group 5 = locations 44, 46, 47; Location Group 6 = locations 41, 48, 49; Location Group 7 = locations 31, 32, 33, 37; Location Group 8 = locations 34, 36; Location Group 9 = locations 23, 24; Location Group 10 = locations 27, 28; Location Group 11 = locations 21, 22, 26.

Table 2: Race of Stop by Location Group

	2001			2002			2003 (January - May) ³		
	White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
Location 1	69	104	173	209	307	516	96	120	213
	39.9%	60.1%	100.0%	40.5%	59.5%	100.0%	44.4%	55.6%	100.0%
Location 2	210	597	807	719	1766	2485	333	862	1195
	26.0%	74.0%	100.0%	28.9%	71.1%	100.0%	27.9%	72.1%	100.0%
Location 3	80	162	242	148	267	415	64	109	173
	33.1%	66.9%	100.0%	35.7%	64.3%	100.0%	37.0%	63.0%	100.0%
Location 4	82	170	252	311	643	954	151	287	438
	32.5%	67.5%	100.0%	32.6%	67.4%	100.0%	34.5%	65.5%	100.0%
Location 5	221	361	582	519	951	1470	216	388	604
	38.0%	62.0%	100.0%	35.3%	64.7%	100.0%	35.8%	64.2%	100.0%
Location 6	405	243	648	826	428	1254	278	175	453
	62.5%	37.5%	100.0%	65.9%	34.1%	100.0%	61.4%	38.6%	100.0%
Location 7	243	147	390	638	306	944	376	165	541
	62.3%	37.7%	100.0%	67.6%	32.4%	100.0%	69.5%	30.5%	100.0%
Location 8	98	52	150	300	159	459	199	98	297
	65.3%	34.7%	100.0%	65.4%	34.6%	100.0%	67.0%	33.0%	100.0%
Location 9	78	66	144	176	158	334	83	109	192
	54.2%	45.8%	100.0%	52.7%	47.3%	100.0%	43.2%	56.8%	100.0%
Location 10	93	141	234	218	398	616	140	262	402
	39.7%	60.3%	100.0%	35.4%	64.6%	100.0%	34.8%	65.2%	100.0%
Location 11	193	178	371	356	387	743	173	218	391
	48.8%	51.2%	100.0%	47.9%	52.1%	100.0%	44.2%	55.8%	100.0%

Although the extent of disparities may differ within each of these locations, Providence makes the greatest proportion of traffic stops in Location Group 2 – the most non-white district in the city. While there are multiple explanations for the existence of racial disparities in traffic stops in Providence, the department’s allocation of traffic enforcement to Location Group 2 is at least in part contributing to the overall citywide disparities. While these deployment decisions help to explain some of the city-wide disparities, they do not explain all these differences. For example in 2003, in eight of the eleven locations in Providence, over 50% of all drivers stopped by the Providence Police Department were non-white drivers.

Time of day is often considered an important variable for understanding why disparities occur. Identifying particular shifts where disparities are greatest may be of importance to law enforcement administrators in the effort to reduce citywide disparities. Table 3 illustrates that

³ Location specific analysis was only conducted from January through May of 2003 since a new location code system was put into place beginning in June, 2003 which utilizes different location codes than the previous 29 months of data.

compared to the estimated citywide non-white driving population of 32.2% all shifts stopped a disproportionate number of non-white drivers. The proportion of non-white stops was highest during the 4 p.m. to midnight shift in each year in the analysis.

Table 3: Race of Stops by Shift

	2001			2002			2003 (January – July)		
	White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
1st Shift (8 AM – 4 PM)	556 46.8%	631 53.2%	1187 100.0%	1509 47.1%	1693 52.9%	3202 100.0%	711 49.7%	720 50.3%	1431 100.0%
2nd Shift (4 PM – 12:00 AM)	939 42.1%	1290 57.9%	2229 100.0%	1937 40.1%	2899 59.9%	4836 100.0%	1368 38.7%	2167 61.3%	3535 100.0%
3rd Shift (12:00 AM – 8 AM)	434 48.1%	468 51.9%	902 100.0%	1138 44.5%	1421 55.5%	2559 100.0%	879 42.8%	1175 57.2%	2054 100.0%

As in the discussion of location above, the frequency of stops at certain times of the day contributes to the overall citywide disparity. The Providence Police conduct more of their traffic stops during the second shift – the time period where the stops of non-white drivers are most disproportionate. This enforcement decision contributes to the overall disparity. It is important to note, however, that it is difficult to draw conclusions about disparate stop practices across times of day because our estimated driving population estimate is a constant measure of the driving demographics and cannot account for shifts in driving demographics that occur throughout the day.

Looking at the proportion of non-white stops by time of day within locations helps to identify if particular times of day affect the demographics of who is stopped. In Providence, the racial differences in stops by location were fairly consistent across all three shifts during the full 31 months of data collection. Table 4 illustrates that although proportionately more non-white drivers were stopped on the second and third shifts in nearly all locations, this difference does not appear to explain away patterns of disparities that exist citywide or in a particular location. It is interesting to note the significant decreases in the proportion of non-white drivers stopped in the first shift in locations 1, 7, and 8 during 2003. It appears in these locations during the first shift there was a change in enforcement practices that resulted in a reduction in the proportion of non-white drivers stopped. It may be helpful for the PPD to investigate the causes of this change

to determine if any strategies can be identified that could be put to use on a citywide basis to reduce racial disparities.

Table 4: Race by Shift for Each Location Group

		2001			2002			2003 (January - May)		
		White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
Location1	1st Shift	68	69	137	23	25	48	45	12	57
		49.6%	50.4%	100.0%	47.9%	52.1%	100.0%	78.9%	21.1%	100.0%
	2nd Shift	90	137	227	31	53	84	39	58	97
		39.6%	60.4%	100.0%	36.9%	63.1%	100.0%	40.2%	59.8%	100.0%
	3rd Shift	33	74	107	12	15	27	12	49	61
		30.8%	69.2%	100.0%	44.4%	55.6%	100.0%	44.7%	55.3%	100.0%
Location2	1st Shift	172	390	562	34	104	138	38	89	127
		30.6%	69.4%	100.0%	24.6%	75.4%	100.0%	29.9%	70.1%	100.0%
	2nd Shift	267	860	1127	94	337	431	126	461	587
		23.7%	76.3%	100.0%	21.8%	78.2%	100.0%	21.5%	78.5%	100.0%
	3rd Shift	205	375	580	53	110	163	167	307	474
		35.3%	64.7%	100.0%	32.5%	67.5%	100.0%	35.2%	64.8%	100.0%
Location3	1st Shift	24	48	72	14	38	52	11	16	27
		33.3%	66.7%	100.0%	26.9%	73.1%	100.0%	40.7%	59.3%	100.0%
	2nd Shift	51	96	147	37	75	112	26	56	82
		34.7%	65.3%	100.0%	33.0%	67.0%	100.0%	31.7%	68.3%	100.0%
	3rd Shift	47	86	133	24	31	55	26	36	62
		35.3%	64.7%	100.0%	43.6%	56.4%	100.0%	41.9%	58.1%	100.0%
Location4	1st Shift	120	201	321	29	59	88	43	63	106
		37.4%	62.6%	100.0%	33.0%	67.0%	100.0%	40.6%	59.4%	100.0%
	2nd Shift	98	254	352	35	83	118	53	112	165
		27.8%	72.2%	100.0%	29.7%	70.3%	100.0%	32.1%	67.9%	100.0%
	3rd Shift	67	130	197	10	16	26	53	112	165
		34.0%	66.0%	100.0%	38.5%	61.5%	100.0%	32.1%	67.9%	100.0%
Location5	1st Shift	70	88	158	196	320	516	55	85	140
		44.3%	55.7%	100.0%	38.0%	62.0%	100.0%	39.3%	60.7%	100.0%
	2nd Shift	111	211	322	169	361	530	111	224	335
		34.5%	65.5%	100.0%	31.9%	68.1%	100.0%	33.1%	66.9%	100.0%
	3rd Shift	22	40	62	99	189	288	50	79	129
		35.5%	64.5%	100.0%	34.4%	65.6%	100.0%	38.8%	61.2%	100.0%
Location6	1st Shift	79	73	152	293	138	431	89	62	151
		52.0%	48.0%	100.0%	68.0%	32.0%	100.0%	58.9%	41.1%	100.0%
	2nd Shift	185	95	280	273	136	409	77	66	143
		66.1%	33.9%	100.0%	66.7%	33.3%	100.0%	53.8%	46.2%	100.0%
	3rd Shift	113	60	173	207	110	317	111	47	158
		65.3%	34.7%	100.0%	65.3%	34.7%	100.0%	70.3%	29.7%	100.0%

		2001			2002			2003 (January - May)		
		White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
Location7	1st Shift	41	32	73	101	47	148	116	24	140
		56.2%	43.8%	100.0%	68.2%	31.8%	100.0%	82.9%	17.1%	100.0%
	2nd Shift	124	74	198	373	171	544	187	104	291
		62.6%	37.4%	100.0%	68.6%	31.4%	100.0%	64.3%	35.7%	100.0%
	3rd Shift	60	35	95	119	66	185	71	36	107
		63.2%	36.8%	100.0%	64.3%	35.7%	100.0%	66.4%	33.6%	100.0%
Location8	1st Shift	46	16	62	126	31	157	60	14	74
		74.2%	25.8%	100.0%	80.3%	19.7%	100.0%	81.1%	18.9%	100.0%
	2nd Shift	29	22	51	112	78	190	109	62	171
		56.9%	43.1%	100.0%	58.9%	41.1%	100.0%	63.7%	36.3%	100.0%
	3rd Shift	16	12	28	45	38	83	30	22	52
		57.1%	42.9%	100.0%	54.2%	45.8%	100.0%	57.7%	42.3%	100.0%
Location9	1st Shift	19	13	32	68	27	95	19	25	44
		59.4%	40.6%	100.0%	71.6%	28.4%	100.0%	43.2%	56.8%	100.0%
	2nd Shift	28	31	59	51	65	116	41	53	94
		47.5%	52.5%	100.0%	44.0%	56.0%	100.0%	43.6%	56.4%	100.0%
	3rd Shift	20	16	36	49	53	102	23	31	54
		55.6%	44.4%	100.0%	48.0%	52.0%	100.0%	42.6%	57.4%	100.0%
Location10	1st Shift	24	36	60	49	69	118	17	32	49
		40.0%	60.0%	100.0%	41.5%	58.5%	100.0%	34.7%	65.3%	100.0%
	2nd Shift	48	56	104	105	245	350	81	157	238
		46.2%	53.8%	100.0%	30.0%	70.0%	100.0%	34.0%	66.0%	100.0%
	3rd Shift	17	34	51	45	62	107	40	73	113
		33.3%	66.7%	100.0%	42.1%	57.9%	100.0%	35.4%	64.6%	100.0%
Location11	1st Shift	63	55	118	122	127	249	53	46	99
		53.4%	46.6%	100.0%	49.0%	51.0%	100.0%	53.5%	46.5%	100.0%
	2nd Shift	90	97	187	144	177	321	89	139	228
		48.1%	51.9%	100.0%	44.9%	55.1%	100.0%	39.0%	61.0%	100.0%
	3rd Shift	27	14	41	59	56	115	30	32	62
		65.9%	34.1%	100.0%	51.3%	48.7%	100.0%	48.4%	51.6%	100.0%

In addition to characteristics such as location and time of day, seasonal differences in traffic enforcement have been posited as one of the potential explanations for racial disparities in traffic stops. In Providence this does not appear to be the case. As Table 5 illustrates racial demographics of traffic stops remain relatively consistent across all seasons of the year during the 30 months of analysis.

Table 5: Seasonal Differences in Race of Stops

	2001			2002			2003 (January - July)		
	White	Non-White	Total	White	Non-White	Total	White	Non-White	Total
Winter	725	844	1569	1238	1582	2820	971	1302	2273
	46.2%	53.8%	100.0%	43.9%	56.1%	100.0%	42.7%	57.3%	100.0%
Spring	395	571	966	909	998	1907	1338	1760	3098
	40.9%	59.1%	100.0%	47.7%	52.3%	100.0%	43.2%	56.8%	100.0%
Summer	215	321	536	991	1403	2394	674	1035	1709
	40.1%	59.9%	100.0%	41.4%	58.6%	100.0%	39.4%	60.6%	100.0%
Fall	749	805	1554	1821	2507	4328	0	0	0
	48.2%	51.8%	100.0%	42.1%	57.9%	100.0%	0.0%	0.0%	0.0%

Characteristics of the Stop: Reason for Stop and Basis for Stop

Information about both the reason and the legal basis for why a motorist was stopped may be one of the most helpful ways to understand the existence of racial disparities in traffic stops. For example, much of the literature has focused on disparities in traffic stops for highly discretionary police actions. Some community members have suggested that non-white motorists are more likely to be stopped for criminal investigation purposes. In Providence, however, little variation exists in the proportion of non-white motorists who are stopped for investigatory reasons compared to white motorists, but the variation while small appears to be increasing over time. In 2001 the Providence Police Department stopped 13.2% of the white drivers for investigatory reasons and 14.8% of the non-white drivers for similar reasons. These numbers changed to 22.8% (white) and 24.5% (non-white) in 2002 and increased further in 2003, 23.1% (white) 27.9% (non-white). Over the three year period of the study it appears that the Providence Police Department increased their use of investigatory stops and were slightly more likely to initiate these stops involving non white drivers (1.6% in 2002 vs. 4.8% in 2003).

Table 6: Reason for the Stop by Race

	2001		2002		2003 (January - July)	
	White	Non-White	White	Non-White	White	Non-White
Investigatory	275	380	1126	1583	690	1144
	13.2%	14.8%	22.8%	24.5%	23.1%	27.9%
Motor Vehicle	1756	2127	3765	4901	2258	2918
	84.2%	82.9%	76.2%	75.7%	75.6%	71.2%
Assist	71	88	80	59	23	31
	3.4%	3.4%	1.6%	0.9%	0.8%	0.8%

Although there were small racial differences in the reason for the stop given by an officer, it is often helpful to understand if racial differences also exist in the legal basis for the traffic stop. Table 7 indicates that there is not a great deal of variation between the proportions of white and non-white drivers stopped under different legal bases. A greater proportion of white motorists were stopped for speeding than were non-white motorists, yet for Providence speeding was not a major basis for traffic stop. On the other hand proportionately more non-white drivers were stopped based on equipment violations and registration violations. Overall, however, there is little reason to believe that any one reason stands out as contributing to the overall racial disparity found citywide for all stops.

In stops for speeding for example, in each year of the analysis white drivers were more apt to be stopped for all forms of speeding. In 2001, 7.9% of the white drivers stopped for “high speeding” (speeding more than 15 miles over the legal limit) compared to 2.5% of the non-white drivers. This pattern remained in 2003 where 3.3% of the white drivers were stopped for “high speeding” and 1.0% of the non-white drivers. This pattern can be contrasted with stops for equipment violations where non-white drivers were more likely to be stopped. In each of the years of the analysis non-white drivers were more likely to be stopped for equipment and registration violations than white drivers. In 2001 16.9% of the non-white drivers were stopped for an equipment violation while only 10.9% of the white drivers were similarly stopped. A similar pattern can be seen in 2003 where 13.8% of the non-white drivers were stopped for equipment violations and 9.2% of the white drivers were stopped for these violations. Although registration violations make up a smaller proportion of the total stops, non-white drivers were disproportionately more likely to be stopped for registration violations.

Some law enforcement agencies generally have suggested that calls for service or reports of suspicious persons may explain racial differences in stop patterns. Despite the fact that Providence has a higher proportion of calls for service for all point bulletins and warrant initiated stops than most other jurisdictions in Rhode Island, these stops are still a rare occurrence in Providence making up less than 5% of all stops in any given year. Among these stops, non-whites are somewhat more likely to be stopped than whites as a result of calls for assistance or all points bulletins.

Table 7: Legal Basis for the Stop by Race

	2001		2002		2003 (January - July)	
	White	Non-White	White	Non-White	White	Non-White
Low Speeding	110 5.5%	51 2.1%	226 4.9%	86 1.4%	244 8.2%	77 1.9%
High Speeding	159 7.9%	62 2.5%	239 5.2%	133 2.2%	98 3.3%	40 1.0%
Other Traffic	1175 57.5%	1404 56.0%	2597 54.8%	3277 52.8%	1488 49.8%	2024 49.4%
Equipment Violation	222 10.9%	423 16.9%	559 11.8%	1008 16.3%	276 9.2%	564 13.8%
Registration Violation	79 3.9%	276 11.0%	203 4.3%	616 9.9%	122 4%	427 10.0%
Call For Service/APB	55 2.7%	98 3.9%	144 3.0%	316 5.1%	89 3.0%	241 5.9%
City Ordinance	108 5.3%	133 5.3%	308 6.5%	409 6.6%	180 6.0%	260 6.3%
Special Detail	80 3.9%	77 3.1%	307 6.5%	341 5.5%	243 8.1%	288 7.0%
Motorist Assist	60 2.9%	56 2.2%	91 1.9%	80 1.3%	36 1.2%	38 0.9%
Warrant	11 0.5%	36 1.4%	23 0.5%	51 0.8%	6 0.2%	19 0.5%

PART II: RACE AND SEARCHES

Nationwide, racial disparities in the likelihood of being searched once a vehicle is stopped have become one of the most persistent concerns in assessments of racial profiling. Numerous studies of police traffic stop activity suggest that non-white motorists are significantly more likely to be searched once they are stopped than white motorists. Although there are a number of important factors that may explain the existence of such racial differences, disparate search rates, more than any other post-stop activity, are consistently identified as among the most problematic issues by members of the minority community.

Unlike an analysis of racial disparities in traffic stops, examining disparities in search practices does not depend on establishing the correct “benchmark.” Although there may be particular behavioral differences between motorists who are stopped which make one group more likely to be searched than another, our study in Rhode Island starts with the full population of people who are stopped. To understand disparities in search behavior we must answer two basic questions: 1) of those motorists who are stopped are non-whites searched proportionately more often than whites? and 2) are there legitimate explanations for the existence of such disparities?

In Providence non-white motorists are more likely than white motorists to be subject to a discretionary search across all 31 months of data collection. Table 8 below provides a breakdown of the race of individuals who were searched once stopped. In 2002 20.8% of non-white drivers were searched once stopped compared to only 14.8% of white drivers. In 2003 25.2% of non-white drivers are searched once stopped compared to 16.5% of white drivers. In both years the racial differences are statistically significant.⁴

For the purposes of this analysis we included only discretionary searches – all searches except those that arise from searches incident to arrest. In the statewide traffic stop study released by Northeastern University in June, 2003, we limited our analysis of searches to include only those stops that occurred in 2002, following the adoption of a new traffic stop statistics card which

⁴ Since the search analysis presented in Table 8 presents information on the proportion of drivers who are searched once stopped, we can estimate the degree of error associated with these differences. A chi-square test of significance was employed to determine the extent to which an observed disparity is not the result of chance or random error alone. For example a significance value of .097 means that there is a 9.7% chance that the observed

specified whether or not the search was conducted incident to arrest. Therefore, in this report we will only compare the 2002 data to the search data gathered in 2003.

Table 8: Discretionary Searches by Race

	2002		2003	
	White	Non-White	White	Non-White
Search				
No Search	3567 85.2%	4003 79.2%	2299 83.5%	2553 74.8%
Search	622 14.8%	1054 20.8%	453 16.5%	861 25.2%
	p=.000		p=.000	

Although non-white drivers are disproportionately likely to be searched in Providence Race ...once stopped there may be many legitimate explanations for such disparities. In the next section we examine some of the possible reasons why non-white drivers may be disproportionately searched and begin to evaluate the legitimacy or illegitimacy of such disparities.

An officer’s decision to conduct a search during a traffic stop is limited by a number of legal protections. Most importantly, police searches of vehicles are protected by the Fourth Amendment doctrine that we are secure in our “persons, houses, papers and effects, against unreasonable searches and seizures.”⁵ One of the most controversial issues related to the legal justification for searching a vehicle or person following a traffic stop is the use of consent searches. Unlike searches based on probable cause or reasonable suspicion, consent searches do not require officers to establish a level of specific suspicion to justify searching the vehicle. Many criticisms of consent searches have arisen out of the racial profiling controversy. Most importantly, critics argue that traffic stops are inherently coercive and therefore the voluntary nature of a consent search is undermined. In Providence, however, consent searches do not appear to be the cause of racial disparity. In fact, white drivers are proportionately more likely to be searched due to consent compared to non-white drivers.

disparity could be the result of sampling error or random chance alone. Results that have a significance value below .050 (or a 5% chance they are due to error) are considered statistically significant.

⁵ Fourth Amendment, United States Constitution

Table 9: Reason for Search by Race

Reason for Search	2002		2003	
	White	Non-White	White	Non-White
Consent	232	338	214	304
	37.3%	32.1%	47.2%	35.3%
Probable Cause	195	322	122	258
	31.4%	30.6%	26.9%	29.1%
RAS	141	310	102	269
	22.7%	29.4%	22.5%	30.3%
Inventory	24	72	16	55
	3.9%	6.8%	3.5%	6.2%

Another way to evaluate the existence of racial disparities in searches is to examine the productivity of searches for whites versus non-white. If groups are being disproportionately searched but proportional amounts of contraband are found from white and non-white searches departments should closely evaluate their search strategies. Although non-white drivers are more likely to be searched in Providence they are less likely to be found with contraband as a result of the search. In 2002, 22.4% of the white drivers searched were found to be in possession of contraband compared to 17% of the non-white drivers and these numbers remained consistent in 2003 with 21.8% of the searched white drivers found with contraband and 17.5% of the non-white drivers.

Table 10: Productivity of Searches by Race

Contraband	2002		2003	
	White	Non-White	White	Non-White
No	689	1566	359	711
	77.6%	83.0%	78.2%	82.5%
Yes	199	320	100	151
	22.4%	17.0%	21.8%	17.5%

Completely understanding the decision to conduct a search during a traffic stop is extremely complex. While past research on policing has examined many decision points very little is known about the decision to search, particularly in the context of traffic stops. It is generally believed that a number of situational (time of day, location, context of the stop) as well as individual characteristics (age, gender, race) are associated with the decision to search.

However, little consensus exists about the degree to which these factors relatively contribute to the decision to search.

Not only are social scientists unaware of all the potential factors officers use to decide to search a vehicle, officers themselves cannot fully articulate the full scope of cues that lead them to search a vehicle. Officers may develop suspicion based on the way a driver answers basic questions during the traffic stop encounter. In other cases an officer's judgement may be based on past experiences in similar situations may lead them to ask the types of questions that could justify a search. It is likely that the decision to search a motorist or vehicle comes from a collection of consciously and unconsciously recognized cues.

The goal of this report, as in the statewide report, is not to fully understand all the nuances that may influence an officer's decision to conduct a search. Instead, we are measuring the extent to which race is associated with being searched, holding constant all other relevant factors which can be measured with this data. These other factors, such as the driver's gender or age, may mediate the extent to which the race of the driver alone determines a search. For example, if officers are more likely to search males and males who are stopped are disproportionately non-white, a racial disparity would exist at the bivariate level, but they would be the result of decisions based on gender not race. In order to isolate the degree to which race alone is associated with search decisions we must control for other factors that could also be associated with the decision to search. We do this using a statistical analysis technique called logistic regression which uses binary outcome variables that are coded either 0 or 1. In this case, our outcome variable is whether or not a search was conducted, coded 1 for a search and 0 for no search conducted.

In our logistic regression model we examine the relationship between race and our outcome variable (being searched) while simultaneously holding constant other variables which may affect an officer's decision to conduct a search.⁶ These variables which are held constant,

⁶ There are several variables that were explored for inclusion in the multivariate analysis but were ultimately excluded from the analysis for theoretical as well as practical reasons. The two most important variables that were excluded are reason for the stop and location. Reason for the stop was excluded because in the case of investigatory stops the intent of the stop itself was to investigate criminal activity. Ultimately since we could not disentangle

sometimes called control variables, include both driver/car characteristics (gender, age, passengers and registration plate) and situational variables (time of day and weekend versus weekday).⁷

In Providence in 2002 the odds of an officer searching a non-white driver after a traffic stop are 1.3 times greater than the odds of an officer searching a white driver, holding other characteristics constant (odd ratio = 1.361). In 2003 the odds of an officers searching a non-white driver remain 1.3 times greater (identical to that found in 2002), holding other characteristics constant. Therefore, as with the bivariate analysis, non-white drivers are more likely to be searched than whites even after holding other factors constant in both 2002 and 2003.

whether or not race was used in part of the decision to search before or after the decision to make an investigatory stop it was not included in these analyses. Location was excluded as a control variable since being in high crime particular locations, often those predominately non-white neighborhoods, could motivate officers to search everyone, therefore location would be measuring the context not the individual decision of officers. Partitioned multivariate analyses of the search decision across different locations was included for select communities.

⁷ The logistic regression model uses variables coded in the following fashion – Race (Non-white=1; White=0); Gender (Male=1; Female=0); Age (Under 30=1; Over 30=0); Passengers (Yes=1; No=0); Registration (Out of State=1; RI Registration=0); Morning (Yes=1; No=0); Afternoon (Yes=1; No=0); Night (Yes=1; No=0); Weekend (Yes=1; No=0). While we decided to code age as under 30 and over 30 dichotomy, it could have been categorized in a myriad of ways. We initially explored categorizing by more specific age groups. For several test jurisdictions the results showed only slight differences between age groups that were under 30 years of age and between age groups above 30. In most instances the younger the age group the more likely an officer was to conduct a search. Certainly, using the dichotomous variable masks this more detailed relationship between age and search decisions. The dichotomous age variable, however, is at a break where search patterns begin to change rapidly and there is little or no effect on the results of race when using a more specific age categories. We used dummy variables to code the time of day. In this analysis morning refers to the hours between 5:00 am and 12:59 pm, afternoon the hours between 1:00 pm and 8:59 pm and night the hours between 9:00 pm and 4:59 am. These categories were constructed to reflect times of day where officer behavior, specifically search behavior, may be different. Night was hypothesized to have a higher proportion of traffic stops resulting in a search compared to the other times because officers have more time to conduct searches and also might believe that vehicles traveling at this time are inherently more suspicious.

Providence - 2002

**Table 1: Bivariate Analysis of Searches
Searches by Race**

Race		Search		
		No	Yes	Total
White	N	3567	622	4189
	%	85.2	14.8	100.0
Non-white	N	4003	1054	5057
	%	79.2	20.8	100.0
Total	N	7570	1676	9246
	%	81.9	18.1	100.0

Chi-Square Test

	Value	Df	Sig.
Chi Square	55.465	1	.000

**Table 2: Multivariate Analysis
Logistic Regression Predicting Search (yes=1; N=6832)**

Variable	B	S.E.	Sig.	Odds Ratio
<i>Driver/Car Characteristics</i>				
Race (non-white=1)	.309	.069	.000	1.361*
Gender (male=1)	1.086	.107	.000	2.962*
Age (Under 30=1)	.197	.071	.006	1.217*
Passengers (yes=1)	.768	.070	.000	2.155*
Registration (out of state=1)	-.016	.045	.713	.984
<i>Time^a and Day</i>				
Afternoon (yes=1)	.072	.098	.461	1.075
Night (yes=1)	.513	.095	.000	1.671*
Weekend (yes=1)	-.140	.080	.079	.869
<i>Constant</i>	-3.429	.134	.000	.032*
Nagelkerke R ² = .096				

Notes: a = morning is reference; * p < .05

Cases Processing Summary

Cases Included in Analysis:	6832	69.1%
Cases Missing from Analysis:	3059	30.9%
Total Cases in Data:	9891	100.0%

Providence – 2003 January - May

Table 1: Bivariate Analysis of Searches
Searches by Race

Race		Search		
		No	Yes	Total
White	N	2299	453	2752
	%	83.5	16.5	100.0
Non-white	N	2553	861	3414
	%	74.8	25.2	100.0
Total	N	4852	1314	6166
	%	78.7	21.3	100.0

Chi-Square Test

	Value	Df	Sig.
Chi Square	69.71	1	.000

Table 2: Multivariate Analysis
Logistic Regression Predicting Search (yes=1; N=6832)

Variable	B	S.E.	Sig.	Odds Ratio
Driver/Car Characteristics				
Race (non-white=1)	.264	.089	.003	1.302*
Gender (male=1)	1.381	.154	.000	3.980*
Age (Under 30=1)	.208	.089	.019	1.231*
Passengers (yes=1)	.617	.086	.000	1.854*
Registration (out of state=1)	.183	.129	.158	1.201
Time^a and Day				
Afternoon (yes=1)	.088	.137	.521	1.092
Night (yes=1)	.513	.133	.000	1.671*
Weekend (yes=1)	.042	.101	.674	1.043
<i>Constant</i>	-3.543	.190	.000	.029*
Nagelkerke R ² = .098				

Notes: a = morning is reference; * p < .05

Cases Processing Summary

Cases Included in Analysis:	4071	63%
Cases Missing from Analysis:	2395	37%
Total Cases in Data:	6466	100.0%

PART III: CONCLUSION AND RECOMMENDATIONS

The results from this analysis parallel the results for Providence from the previous statewide analysis. The findings from the full 31 months of analysis reveal that the Providence Police stop a disproportionate number of non-white drivers compared to their modified census population. When the data is reviewed over time it appears that there has been little change in the rates in which non-white drivers have been stopped over the 31 months of the study. While it is true that the Providence Police do a greater proportion of their traffic stops in certain neighborhoods and at certain times of day, these factors do not explain the racial disparities documented above. In Providence white drivers are more likely to be stopped for speeding while non-white drivers are more likely to be stopped for equipment and registration violations.

When it comes to evaluating racial disparity in searches the pattern is quite consistent. Non-white drivers are more likely to be searched than white drivers in both 2002 and the first seven months of 2003. When controlling on other factors such as the driver gender, age and the time of day, the race of the driver remains a significant predictor of who will be searched. As we found in the statewide report, in Providence although non-white drivers are disproportionately searched they are proportionately less likely to be found with contraband than white drivers.

Racial disparities in traffic stops can be produced by a number of factors that we are just beginning to understand, only one of which is racial bias on the part of individual officers. Regardless of why they occur, racial disparities may impose costs on minority citizens and may negatively influence how community members perceive the police in their community. This report has identified a number of areas where racial disparities in stops and searches exist in Providence. Now that the initial phase of data collection is completed for the Providence Police Department there are a number of ways that the Providence Police Department can address the issue of racially disparate traffic stop practices.

Initially, the Department should closely examine and address any internal practices or actions of individual officers that may cause the types of disparate stop patterns observed in this study. Because Providence was identified as having racial disparities in both stop or search practices, supervision and monitoring programs should be established to help determine whether such disparities are the result of wide-spread institutional practices or the actions of a smaller number of individual officers. In some cases this may require the collection of additional information which identifies the activities of individual officers.

A training program should be implemented for all Providence police officers and supervisors. This training should focus on three major issues, first to discuss the findings of this report including a discussion of the locations, shifts and types of traffic stops where the greatest disparities have been identified. Second the training should include a discussion of the policies and actions that the Providence Police are putting in place to reduce any racial disparities that have been identified in this report. Finally, the training should also include a discussion of the costs of racial disparities in traffic stops on the community of color.

To help the department monitor the success of any intervention efforts to reduce disparities, we recommend that the Providence Police Department continue collecting data on traffic stop activity. Because of previous issues of non-compliance with statutorily mandated data collection, we recommend that an internal auditing strategy be developed within the Department to assess the accuracy and quality of any traffic stop information that is collected.

In addition to internal changes in supervision and future monitoring we recommend that the Providence Police Department begin a discussion with members of the community to review and discuss the role traffic stops should play in promoting traffic safety, drug control, or other legitimate law enforcement goals in the community. Since specific traffic enforcement practices may be contributing to racially disparate traffic stop patterns, the Department should closely assess both benefits and potential costs of such enforcement strategies considering the potential disparities such practices create.

