LEGISLATIVE # 110529C

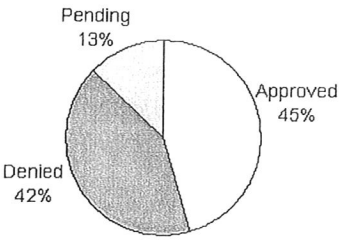
040111

City of Gainesville

TRAFFIC CALMING PROGRAM

Public Works Department
Transportation Services Division

The City of Gainesville has been utilizing traffic calming techniques since the mid 1980's when the first devices were installed. In 1997, the City Commission approved the Speed Hump Policy to guide the installation process for speed humps and speed tables. Since then the Public Works Department has received a total of 597 requests for the installation of traffic calming devices throughout the City. All of the requests received are processed by the department to verify field conditions and the need for such devices. A number of field studies have been conducted by the department over the years, including several "before and after" studies to evaluate the conditions and determine the effects of installation.



Traffic Calming Requests
(1997 - 2003)

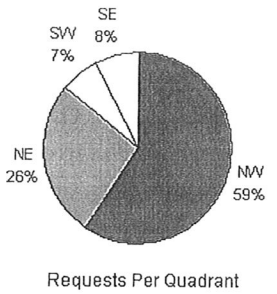
Of the 597 total requests, 269 (45%) were completed with the installation of speed humps, speed tables, mini traffic circles, chokers, stop-controlled intersections and marked crosswalks. A total of 250 (42%) requests were denied based on either the results of ballots submitted to property owners or the warrants for installation of traffic calming devices were not met. The remaining 78 (13%) requests are still pending. Refer to Table 1 for detailed description.

TABLE 1. Tabulation of Traffic Calming Requests (1997 - 2003)

REQUESTS	STATUS	DEVICES INSTALLED				
	269 APPROVED	HUMPS	TABLES	MINI CIRCLES	TRAFFIC CIRCLES	CHOKERS
		473	43	30	5	30
	REQUESTS DENIED					
597	250 DENIED	VOTE		WARRANT		OTHER*
		31 (13%)		196 (78%)		23 (9%)
	PENDING REQUESTS					
	78 PENDING	Requests pending counts				

* Denial based on several factors: roadway classification as an arterial or collector road; roadway outside city limits or a state road; dead end street; private street.

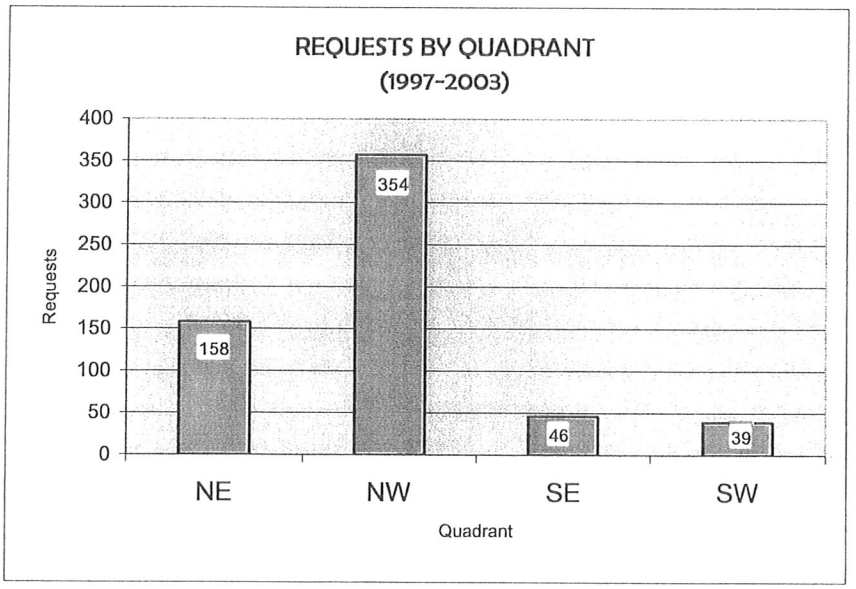
1. REQUESTS RECEIVED

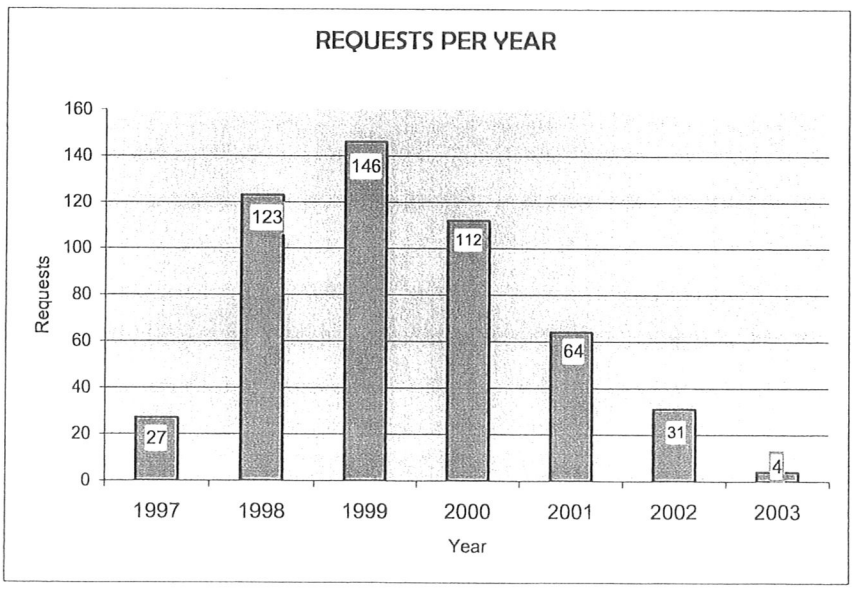


Requests Per Quadrant

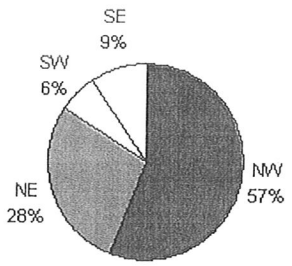
The majority of requests for the installation of traffic calming devices originated in the Northwest quadrant of town, representing 354 (59%) of the total number of requests. The Northeast quadrant originated 158 (26%) requests, the Southeast quadrant 46 (8%) and the Southwest quadrant 39 (7%). In 1999 the department received the highest number of requests – 146; since then the number of requests received has dropped significantly, to only 4 in 2003 (see Figure 1).

FIGURE 1. Traffic Calming Facts - REQUESTS





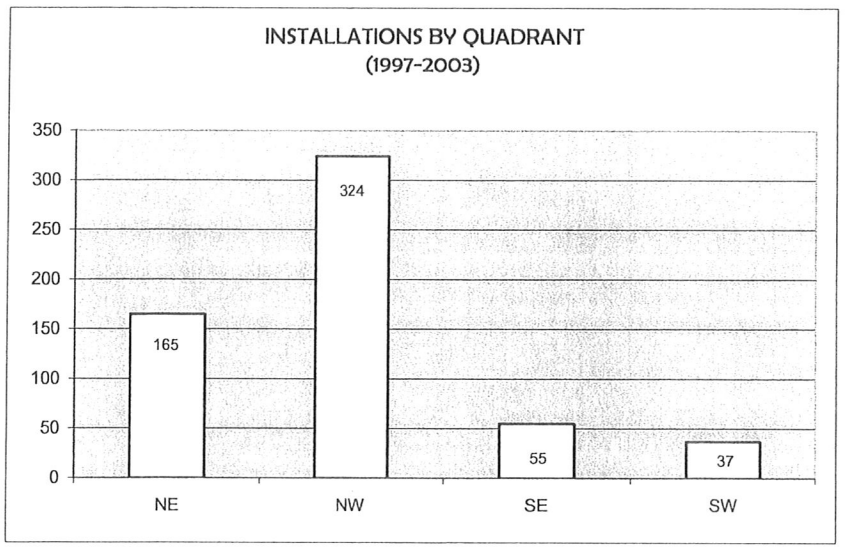
2. REQUESTS APPROVED

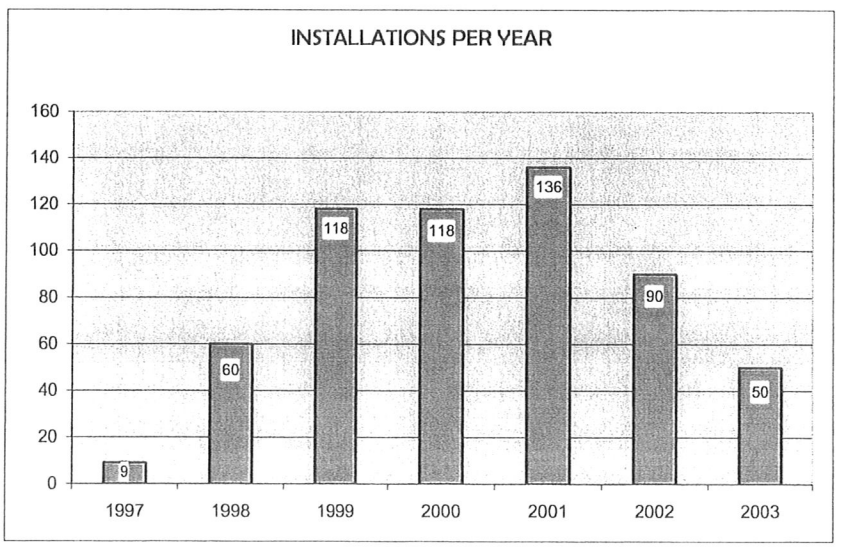


Installations per Quadrant

A total of 269 requests for the installation of traffic calming devices were approved between 1997 and 2003 resulting in the installation of 581 traffic calming devices. Of these, 324 (57%) were installed in the Northwest quadrant, 165 (28%) were installed in the Northeast quadrant, 55 (10%) were installed in the Southeast quadrant, and 37 (6%) in the Southwest quadrant. On average, each request resulted in the installation of 2.2 traffic calming devices. Figures 2 and 3 illustrate the distribution of installations per year and per quadrant.

FIGURE 2. Traffic Calming Facts - INSTALLATIONS





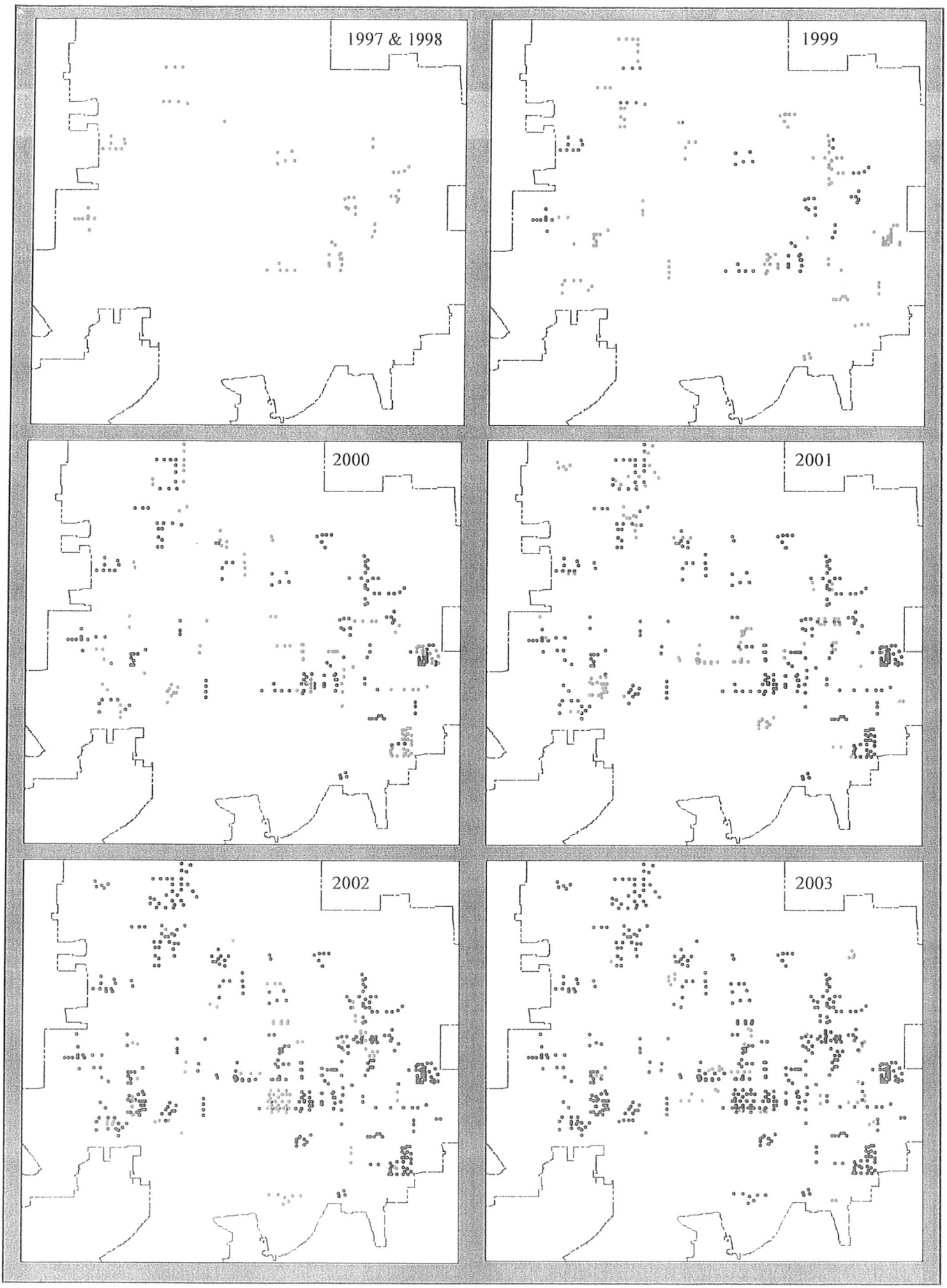


FIGURE 3. Traffic Calming Device Installation per Year
(1997 to 2003)

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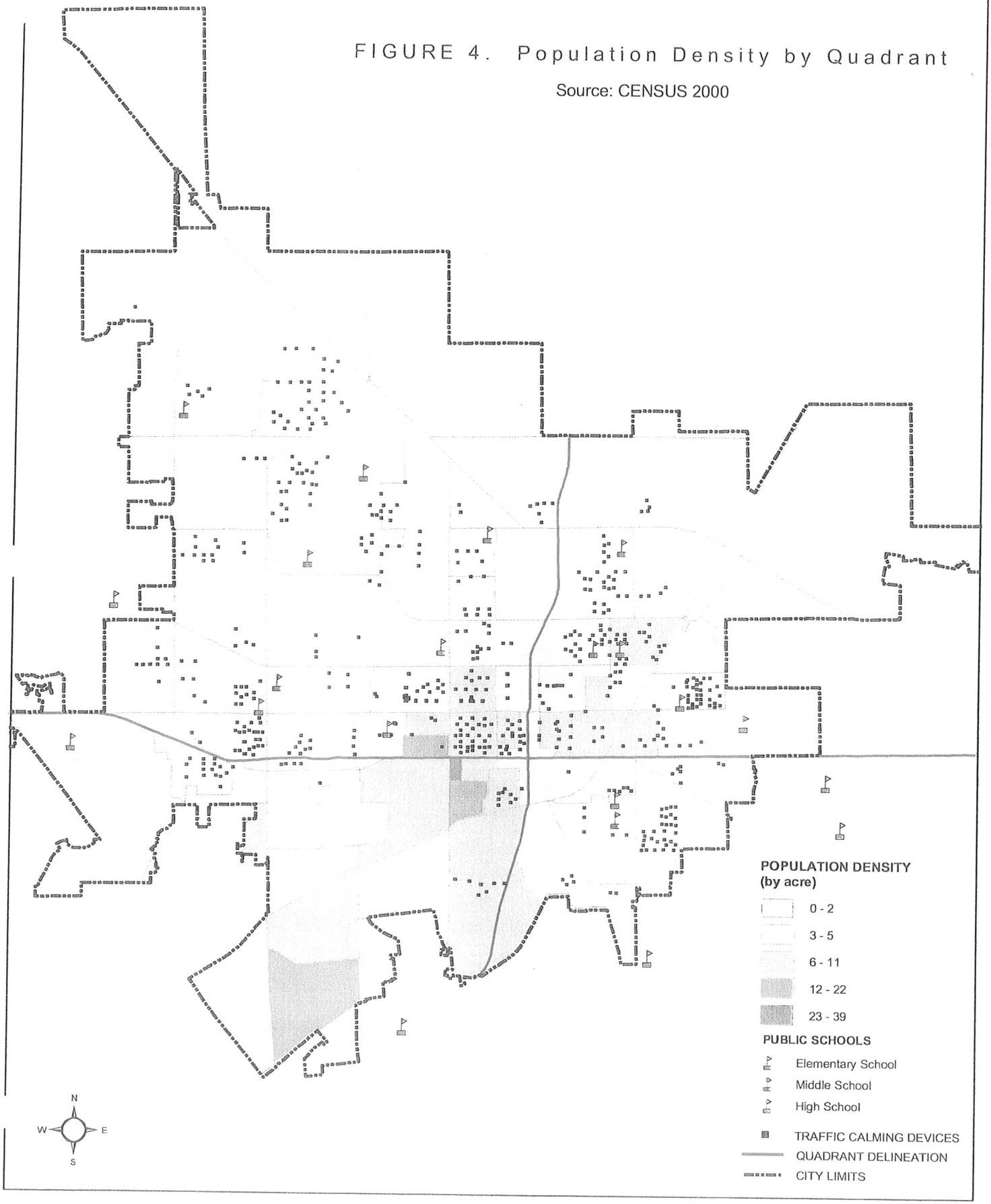
Devices installed in 1997 · New devices installed during the specified year · Existing Devices

FIGURE 4. Population Density by Quadrant

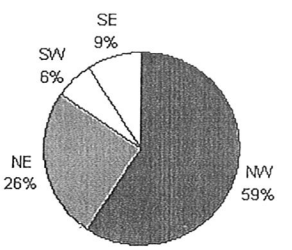
Source: CENSUS 2000



The majority of traffic calming devices was installed on local, residential streets. A few of the devices were installed on collector roads with a traffic volume ranging between 1,300 and 3,000 vehicles per day. These amount to 51 devices or 9% of the total installed, and include: 18 chokers and 9 speed tables on NW 10th Avenue; 8 chokers and 2 speed tables on NW 18th Terrace; 4 speed humps on NE 31st Avenue; 3 speed humps on NW 3rd Street; 3 speed humps on NW 2nd Street; 2 speed tables on NE 9th Street; 1 mini circle at the intersection of NW 5th Avenue and NW 12th Street; and, 1 traffic circle at the intersection of NW 45th Ave and NW 19th Street.

The high proportion of requests and installations on the Northwest quadrant may be explained by the large land area and fairly even population distribution in the quadrant when compared to the other quadrants. Figure 4 depicts the four quadrants and citywide population density.

3. REQUESTS DENIED



Requests Denied per Quadrant
(1997 to 2003)

During the same period, 250 (42%) of the requests received were denied. The requests were denied for several reasons: a) the criteria established in the City Speed Hump Policy were not met; b) affected property owners voted against installation of the devices; and, c) the streets in question were not City streets or were located outside the city limits. Of the requests denied, 147 (59%) were located in the Northwest quadrant, 64 (26%) in the Northeast quadrant, 23 (9%) in the southeast quadrant, and 16 (6%) in the Southwest quadrant.

4. EXPENDITURE

Since the beginning of the traffic calming program, the city has spent over $441,000 with the installation of speed humps and speed tables. The cost of each device, including labor, materials, signing and markings is as follows:

Speed Humps	$830
Speed Tables	$1,130

The cost of installation for the other devices used, such as chokers, mini circles and traffic circles varies depending on the size, type of curb and treatment used.

5. 'BEFORE & AFTER' STUDIES

Over the years the Public Works Department has conducted several 'before and after' studies to determine the effectiveness of the city traffic calming program in reducing speeding in neighborhoods. The results of the studies indicate that the installation of traffic calming devices results in:

1. a significant reduction in the 85th - percentile speed; and,
2. a significant reduction in the number of vehicles at excessive speeds (over 30 mph).

After the devices were installed the travel speeds dropped between 10% to 20% (typically 3 – 7 mph) and the number of motorists at excessive speeds above 30 mph dropped between 21% to 41%. See Table 2 for typical 'before and after' studies.

TABLE 2. Sample of 'Before & After' Study Results

Location	BEFORE			AFTER			
	85% Speed	24h Traffic Volume	# Vehicles > 30 MPH	85% Speed	24h Traffic Volume	# Vehicles > 30 MPH	SPEED REDUCTION
NW 5th Ave (1100 blk)	29.6	2414	610 (25%)	26.5	2024	9 (0.5%)	3.1 (10%)
NW 7th Ave (800 blk)	32.3	828	373 (45%)	25.1	955	36 (4%)	7.2 (22%)
NW 19th Ave (700 blk)	29.2	420	104(25%)	23.4	401	15 (4%)	5.8 (20%)
NW 10th St (1700 blk)	29.8	317	81 (26%)	23.1	270	9 (4%)	6.7 (22%)

The excessive speeding (over 30 mph) typically results in requests for traffic calming. The excessive speeding problem is solved by the installation of traffic calming devices