

Memorandum

To: Mayor & Council

CC: Bill Coleman, Ben Shivar

From: Scott Cunningham, Police Chief & Jeff Ulma, Planning Director

Date: 10/29/2007

Re: Development Density and Crime Statistics

Staff in the Police Department and Planning Department have continued to work together to collect and analyze available data related to the question of density of development versus incidents of crime. We have also looked at a couple of national studies about this matter (Irving, TX and Anchorage, AK).

We provide this additional information as a follow-up to the preliminary results shared at the 2007 Council/Staff Retreat. In particular, we have focused on the comparison of crime in apartments versus single-family detached homes since this issue has been raised most often.

Our data and these studies do not support the theory of housing density as the determining factor for crime counts. Even though the amount of crime is higher in apartment projects, staff believes that there is a negligible difference in the rate of crime generated from an equivalent number of apartment units vs. single family dwelling units, and we do not recommend that such information be used as the basis for determining overall land use policy for the Town of Cary.

DATA/INFORMATION

Crime Statistics

Crime data for a two-year period have been assembled by the Police Department. This includes information for calendar years 2005 and 2006, and covers various types of crime. The data are collected in standard categories as follows:

- Part 1 Crimes = aggravated assault, arson, burglary, larceny, motor vehicle theft, rape, robbery, murder
- Part 2 Crimes = alcohol offenses, drugs, forgery, embezzlement, fraud, family offenses, sex offenses, simple assault, vandalism
- All Other Crimes = weapons, disorderly conduct, gambling, pornography, stolen property, all other offenses

Such data are tallied by the Police Department for single-family detached dwellings, townhomes (considered single-family “attached” units), apartments, and commercial (i.e., nonresidential) development. The results are presented in Table 1 below.

	SF	TH	Apt
Part 1	1044	110	552
Part 2	1109	80	687
All Other	1580	191	865
Total	3733	381	2104

Table 1: Crime Counts by Dwelling Unit Type

Dwelling Unit Information

The Planning Department has generated an estimate of the number of dwellings in each of these three residential categories (SF, TH, and Apt) as of December 31, 2006. (For ease of analysis, these numbers will be used throughout the study period.)

A total of 45,282 dwellings existed at the end of last year, and the number of different dwelling unit types are presented in Table 2:

SF (Single family detached)	30,919 units	68.3%
TH (Townhome – SF attached)	3,358 units	7.4%
Apt (Multifamily apartment)	11,005 units	24.3%
Total Units	45,282 units	100.0%

Table 2: Housing Unit Counts

STUDY RESULTS

Combining this information, we have created a tabulation of the number of crimes by dwelling unit type. Our data produces the following results, none of which support the argument that “density causes crime.”

Total Crime Counts

As shown in Tables 1 and 2, nearly 31,000 single-family detached dwellings generated a total of just over 3,700 reported crimes over the two-year period. During the same time, just over 11,000 apartment units yielded a total of about 2,100 crimes. Therefore, approximately 1/4 of all residential units (i.e.,

apartments) generated about 1/3 of the total number of crimes that occurred in residential areas.

Part 1 Crime per 100 units

Translating this to a “per-100 units” of housing to better understand the numerical results, the data show that 100 apartment units in Cary generate 5.0 Part 1 crimes versus 3.4 Part 1 crimes per 100 SF detached units (See Table 3). This equals 1.6 more Part 1 crimes over the 2-year study period or 0.8 more crimes per year for an equivalent number of units. This is the information that was previously presented at the Retreat.

Since the Retreat, we have looked at all categories of crime and can report the following additional result: Contradicting the theory that higher densities generate more crime, townhome dwellings in Cary yielded slightly less Part 1 crimes (3.3 crimes/100 units) than single-family detached dwellings (3.4 crimes/100 units) even though townhome projects are, on average, more than twice as dense.

Part 2 Crime per 100 units

For Part 2 crimes, 100 apartment units generate 6.2 such crimes vs. 3.6 Part 2 crimes per 100 SF detached units. This translates to 2.6 more Part 2 crimes over the 2-year study period, or 1.3 more per year.

Again, more dense townhomes generate fewer crimes per 100 units (2.4) than single-family detached dwellings (3.6) in this particular crime category. (See Table 3). This is 1/3 fewer Part 2 crimes than the equivalent number of single-family detached units.

All Other Crime per 100 units

In this remaining category, 100 apartment units generate 7.9 “All Other” crimes versus 5.1 “All Other” crimes per 100 SF detached units. Over two years, this yields 2.8 more “All Other” crimes (or 1.4 more per year). In this category of crimes, townhomes do generate slightly more crimes per 100 units than a comparable number of detached single-family dwellings and less than 100 apartment units.

Total Crime per 100 units

Summing all crimes in residential areas, and as shown in Table 3, we find that 100 apartments generate 19.1 Total crimes vs. 12.1 Total crimes per 100 SF detached units. This means that there are 7.0 more Total crimes over the 2-year study period, or 3.5 more per year, in 100 apartment units.

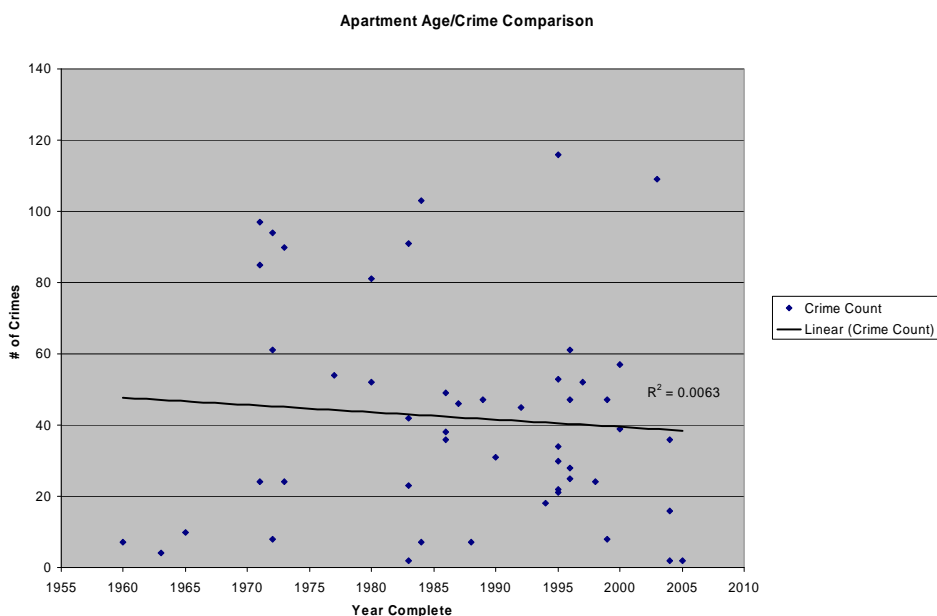
Overall, townhomes generated about one less crime per 100 units than the single-family, detached product, even though the density of townhome developments is higher.

	SF	TH	Apt
Part 1	3.4	3.3	5.0
Part 2	3.6	2.4	6.2
All Other	5.1	5.7	7.9
Total	12.1	11.4	19.1

Table 3: Crime Counts per 100 Dwellings by Type of Dwelling

Other Factors

In an attempt to explain some of these results, staff has looked at various aspects of the apartment developments in Town. For instance, we analyzed the year the complex was constructed against crime rates to determine whether the age of the development was important. In this case, regression analysis shows that no statistically significant relationship exists between the age of apartment complexes and the total number of crimes that occur in apartments ($r^2 = 0.0063$). This analysis is represented in this graph:



We also evaluated the size of apartment complexes to try to isolate that as a determining factor (i.e., do larger complexes with more units generate more crime?). Here too, regression analysis did not produce a statistically significant relationship ($r^2 = 0.2473$).

Finally, staff looked at available information about apartments in terms of the nature of the type of development (market rate, “affordable,” and “publicly assisted”). While market rate units did indeed generate fewer crimes per 100 units than affordable or assisted projects, the results within each of those categories are not consistent. For example, some publicly assisted and

affordable projects yield rates of crime that are lower than market rate rental units. Further, the range of difference in the annual amount of crime per 100 apartment units is quite narrow for the vast majority of apartment complexes (5 to 15 total crimes per year), making it difficult to suggest a relationship with this factor.

Summary/Conclusion

In conclusion, we believe that the “human” component and not simply the physical form or style of the development (i.e., density of the development) accounts for the differences between the amount of crime that occurs in apartment developments as compared to single family or townhome developments. We believe that numerous other factors that the Town does not control need to be accounted for before attributing the amount of crime to density alone. Some of these characteristics may include:

- the type of crime,
- the socioeconomic level of the residents,
- the types of tenants (e.g., elderly) in the apartment complex,
- the differences between renting and owning property, and
- management practices of complex owners with regard to screening of tenants and enforcement of strict limits on the number of residents per unit.

We hope this more-detailed data and summary are adequate. Please let us know if we can provide any additional information.