

# DOWNTOWN AREA CRIME: OFFENSE TRENDS, TYPES, & GEOSPATIAL FREQUENCIES

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# DOWNTOWN AREA CRIME: OFFENSE TRENDS, TYPES, AND GEOSPATIAL FREQUENCIES

## EXECUTIVE SUMMARY

To determine the crime characteristics of the downtown area, an analysis of crime trends, locations and types of offenses was performed. The downtown area was broadly defined to include the core downtown area, Pearl District, Old town/Chinatown, Northwest Districts, and surrounding areas. In general, offense and arrest rates have declined in Multnomah County over the last decade. The most likely reported offenses were for property crimes (larceny), while the most likely arrests were for behavioral crimes (drug possession). Citizen perception of safety downtown has improved over the last decade, day or night. The downtown area accounted for approximately 18% of all reported offenses, but varied by type of offense. For example, 6% of all burglaries, 16% of all larceny, and 20% of all other crimes were reported downtown. Drug offenses downtown accounted for 39% of all drug offenses. These high drug offense rates were specific to two districts downtown, where past drug-free zones were located.

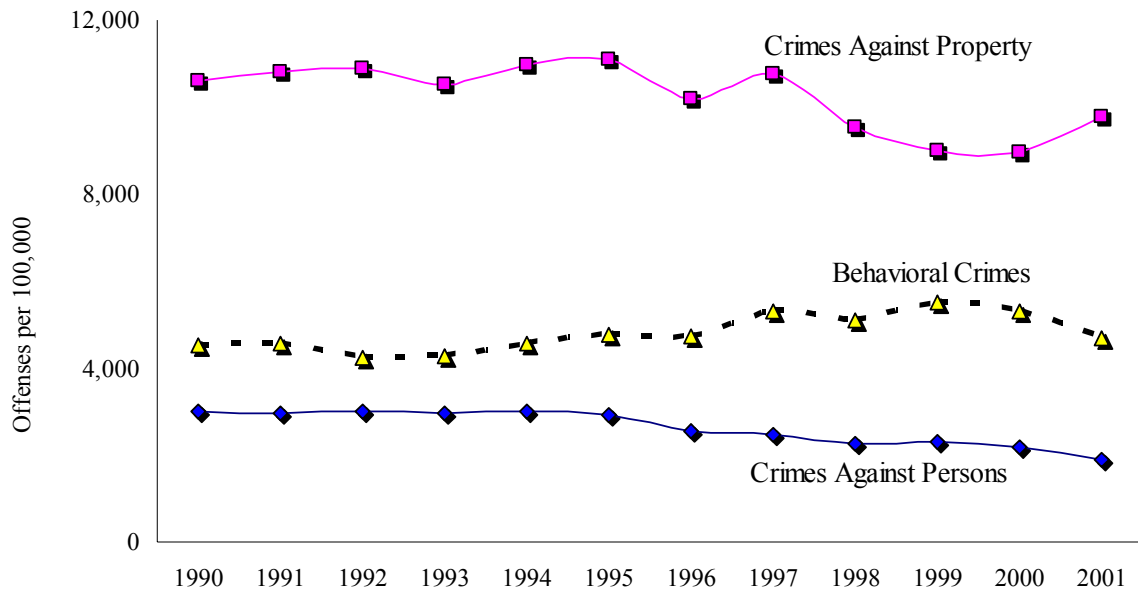
Mapping the location of reported Index crimes found higher concentrations in the downtown areas than other places in Portland, with larceny being the most common offense. While higher concentrations of crime were seen throughout areas downtown, one section showed elevated frequency. In this section elevated counts were found in nearly all offenses that were examined. This section was also the location of a major shopping mall, transit mall with light-rail service, and freeway access, each increasing the concentrations of persons and property. In addition, it included several county social service locations including health and community justice programs, and services for aging and disabled, developmentally disabled, mental health and alcohol and drug affected citizens. These factors along with large workforce, policing, and transient populations, interrelate increasing the likelihood that offenses will occur downtown.

## Crime Trends

Analyses of crime trends, locations and types of offenses were performed to determine the crime characteristics of the downtown area for budgetary consideration. The analyses utilized ten years of historical data, citizen survey responses, law enforcement archives, and geographical information systems (GIS) spatial maps. A variety of data sources were used to assess crime downtown, including the City of Portland Auditor's Office data, Portland Police Data System (PPDS), Oregon's Law Enforcement Data System (LEDS), and the City of Portland's Portland Map System (GIS mapped PPDS data).<sup>1</sup>

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<sup>1</sup> The Portland Map System maps (color maps) reported offenses on a revolving 12-month pattern for all Index Crimes, 10/2001 to 10/2002 [www.portlandmaps.com](http://www.portlandmaps.com); PPDS data was used for 1/1/2001 to 12/31/2001, and totals may differ from published LEDS reports.



Source: LEDS 1990-2001. All reported offenses.

**Figure 1. Multnomah County offense-rate trend by crime group.**

Trends in offense (reports of crime) and arrest rates for all of Multnomah County show that generally both have been declining for some time.<sup>2</sup> Recent research by Pratt has identified five macro-level predictors of offense rates, including high levels racial heterogeneity, economic deprivation, family disruptions, and incarceration/incapacitation rates.<sup>3</sup> Policing policies (i.e., police expenditures, get tough policies, police per capita, and police size) examined had little effect on crimes rates.<sup>4</sup> Offense rates against persons and property have shown decline over the last decade (Figure 1). Behavioral crime rates have seen a more recent decline since their peak in 1999.<sup>5</sup> Behavioral crimes consisted mostly of drug law, driving while under the influence of intoxicants (DUII), disorderly conduct, and liquor law violations among others. Property offenses accounted for the majority of all reported crimes, with larceny (theft) accounting for more than half of all property offenses.

Arrest rates follow the same general trend of decline over the last decade. However unlike reported offenses, arrests were more likely to occur for behavioral crimes than property crimes (Figure 2). The single biggest driver of behavioral crime arrests was for drug related charges, accounting for one in five of all behavioral arrests. According to LEDS statewide, 88% of drug related arrests were for possession, with marijuana

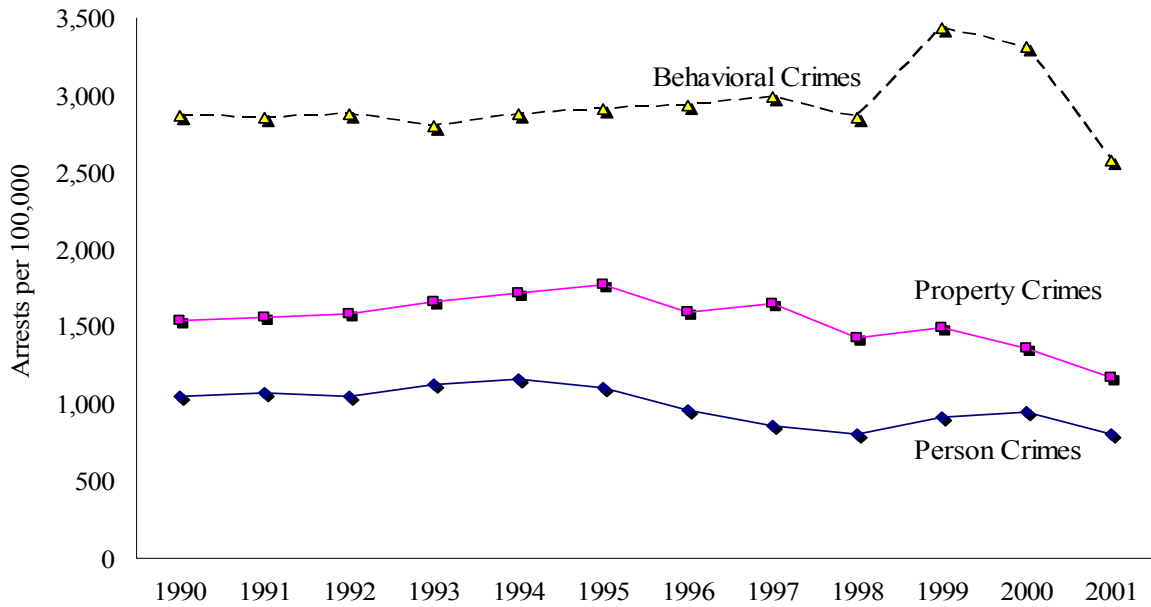
<sup>2</sup> A preliminary report from the FBI stated that the first half of 2002 saw a 12% increase in Index crimes for the City of Portland over 2001 levels. [http://www.fbi.gov/ucr/cius\\_02/02ciusprelim.pdf](http://www.fbi.gov/ucr/cius_02/02ciusprelim.pdf)

<sup>3</sup> Pratt, T. C. (2001). Assessing macro-level predictors and theories of crime: A meta-analysis. Doctorial dissertation. University of Cincinnati.

<sup>4</sup> Ibid. pg 141.

<sup>5</sup> The 1999 peak was due to primarily to increases in drug law and DUII arrests. Behavioral crimes are predominately drug law, DUII, disorderly conduct, and liquor law violations among others.

accounting for 40% of all statewide arrests.<sup>6</sup> In Multnomah County, it's possession of a controlled substance (PCS) and not marijuana which accounts for a large proportion of arrests.



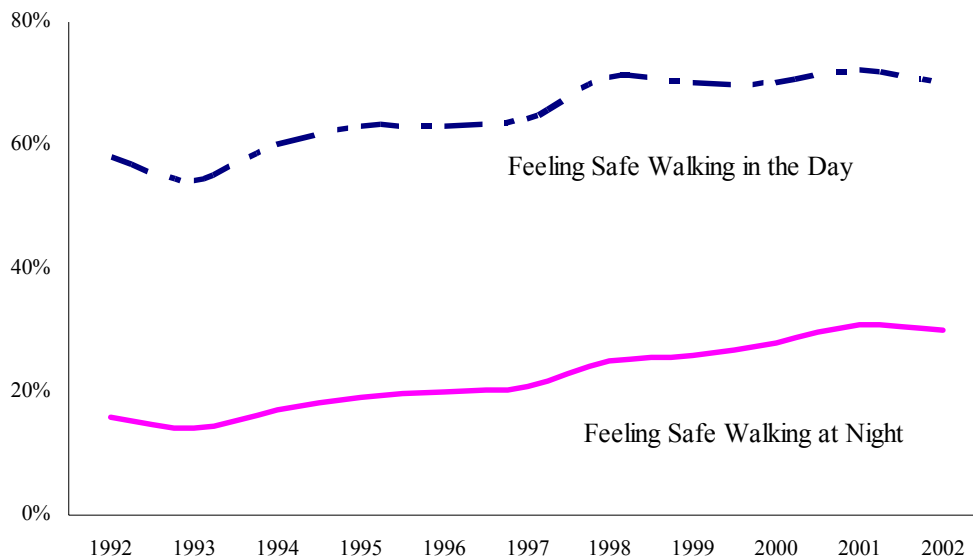
Source: LEDS 1990-2001

**Figure 2. Multnomah County arrest rate-trend by crime group.**

### Perception of Crime

As important as actual measures of crime is the perception of crime and the fear it generates by citizens. The City of Portland Auditor's Office surveys citizens' perceptions of safety in a number of areas in Portland on an annual basis. Figure 3 displays the results for the downtown area over the last decade, measured for both day and night times.

<sup>6</sup> Source: LEDS Report of criminal Offenses and Arrests 2001. Section 4-9. Most marijuana possession was for less than 1 oz. Proportions were consistent for offenses and arrests, but vary but county.



Source: City of Portland Auditor's Office. SEA 1992-2002.

**Figure 3. A decade of citizens' perceptions of safety while walking alone downtown.**

As depicted above, citizens walking alone downtown in the daytime reported a greater perception of safety than at nighttime. While the gap between daytime and nighttime has remained constant over the last decade, both have increased by 12% points. While these reports showed increasing perceptions of safety downtown, it should be noted that downtown consistently rated as least safe when compared to local neighborhoods and parks in the day, but better than parks at night.

#### Concentration of Crime

The frequency and type of crime is often geographically related. Some crime appears to have a greater likelihood of occurring in commerce related areas (e.g., robbery), while others may be more likely in residential areas (e.g., domestic violence). Figure 4 maps the number of reported *Index Crimes* in Portland, in quarter-mile grids shaded by volume of Index offense.<sup>7</sup> Index Crimes are a subset of serious crimes reported to the FBI and include: homicide, robbery, forcible rape, aggravated assault, burglary, larceny, arson, and motor vehicle theft. This subset of serious crimes accounts for approximately a quarter of all reported crimes.<sup>8</sup>

Many factors influence meaningful comparisons between crime grids. For example large work force areas, areas with increased police or security presence, or areas with transient populations such as downtown can distort reported crime rates in these areas.

<sup>7</sup> Index Crimes are a subset of serious crimes reported to the FBI. The eight serious crimes include: homicide, robbery, forcible rape, aggravated assault, burglary, larceny, arson, and motor vehicle theft.

<sup>8</sup> Carlson, J. (2000). If crime is dropping why isn't our workload: A presentation to LPSCC by the evaluation committee. Slide 21.

Nonetheless, greater concentrations of reported offenses are shown in the urban core, with the greatest concentrations in the downtown area.

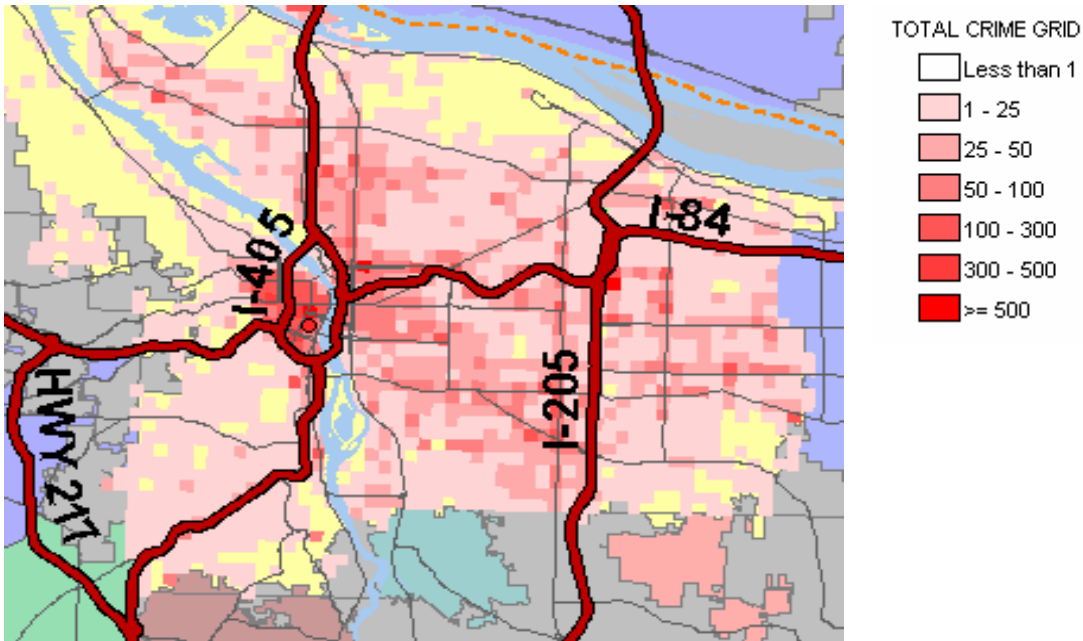


Figure 4. Index Crime for the City of Portland by frequency of offense.

Enlarging the downtown area more clearly identifies the areas with greater reported incidents (Figure 5). For this report the downtown area was broadly defined to include the core downtown area, Pearl District, Old town/Chinatown, Northwest Districts, and some surrounding areas to the south. The total number of Index Crime offenses includes common crimes such as larceny and infrequent crimes such as arson and homicide.

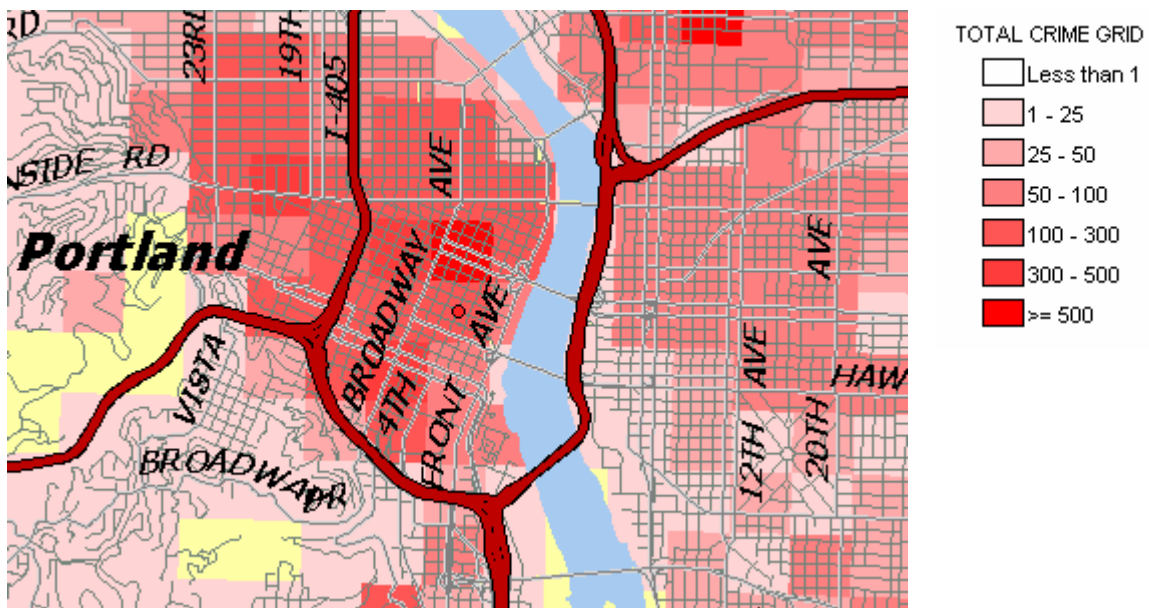


Figure 5. Index Crime for downtown Portland by frequency of offense.

As shown in the Figure 4, greater concentrations of reported crimes are bound on the north and east by the Willamette River, the south by I-405 and Highway 26, and the west by 23<sup>rd</sup> Avenue and its surround hills. These areas are consistent with downtown Portland Police Patrol Districts illustrated in Figure 6.

Using data by patrol districts more specifically identifies the volume and type of reported crimes in the downtown area and allows a general comparison to Portland as a whole.<sup>9</sup> Table 1 identifies the number of offenses for selected crimes in 2001 by patrol district. Bear in mind the differences in each districts' size when comparing the number of reported offenses, as larger districts may distort the number of offenses (e.g., 812 and 850). For its size, District 832 had the highest reported crime, accounting for 20% of crime downtown, largely drug related.

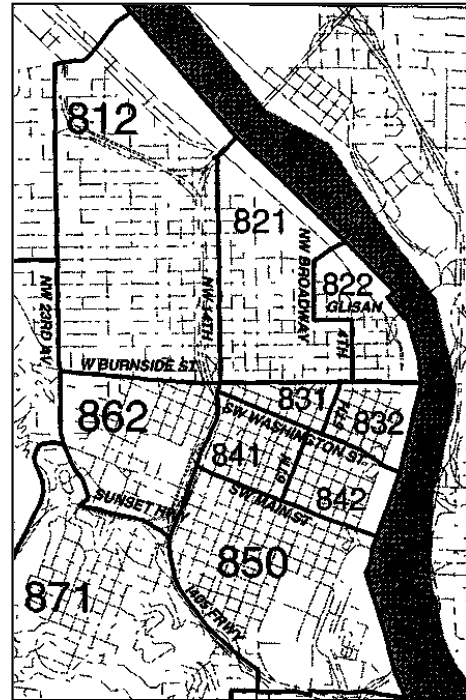


Figure 6. Police Patrol Districts.

<sup>9</sup> Downtown totals included all reported offenses in the districts listed, and could include small numbers of offenses reported by agencies other than Portland Police (e.g., Sheriff's Office). Portland totals differ slightly, as they include all reported offenses by the Portland Police, and in some cases may include offenses reported outside the Portland area (e.g., child abuse task force may report offenses outside the City of Portland). While this methodology may impact the absolute counts slightly, the proportional differences should be immaterial.

According to the PPDS the downtown area accounted for 23,802 reported offenses, while the Portland Police recorded 126,845 total offenses. Thus, approximately 18% of all reported crime in Portland occurred in the downtown area.

**Table 1. Frequency of crime by patrol district<sup>10</sup>**

	Counts by Downtown Patrol Districts (Calendar 2001) <sup>11</sup>									PPDS Reported Offenses		
	812	821	822	831	832	841	842	850	862	Downtown Total	Portland Total	Percent Downtown
Robbery*	23	17	16	28	25	34	27	26	10	206	1215	17%
Aggravated Assault*	32	39	27	44	48	28	25	34	19	296	2823	10%
Burglary*	76	34	13	12	22	43	26	65	39	330	5628	6%
Larceny*	1000	377	171	211	281	584	621	877	354	4476	28608	16%
Other Common Crimes <sup>12</sup>												
Simple Assault	72	42	46	52	82	42	62	80	20	498	4824	10%
Vandalism	216	105	47	64	70	92	58	170	86	908	7430	12%
Drugs Crimes	91	522	157	164	607	117	108	150	46	1962	5052	39%
All Others Crimes	1503	1531	746	1043	2002	2061	1865	2995	660	14406	71265	20%
<b>Total</b>	<b>3013</b>	<b>2667</b>	<b>1223</b>	<b>1618</b>	<b>3137</b>	<b>3001</b>	<b>2792</b>	<b>4397</b>	<b>1234</b>	<b>23082</b>	<b>126845</b>	<b>18%</b>

\*Denotes an Index Crime.

As stated earlier and shown in Table 1, the proportion of offenses reported downtown varied by type of crime reported.<sup>13</sup> On the low end, only 6% of all Portland burglaries were reported in downtown, much lower than the overall downtown average of 18%. This is likely due to greater burglary activity occurring in the city's residential areas that consists of more single-family dwellings. On the high end, 39% of all Portland drug related offenses were reported in downtown. This rate is more than double the overall downtown average and was likely related in part to the past locations of two drug-free zones and their increased policing, among other factors.

<sup>10</sup> Source: PPDS tactical inquiry, queried 11/26/02. Downtown totals include all reported offenses in the districts listed, while Portland totals included all reported offenses by the Portland Police.

<sup>11</sup> Nine (15%) Police Patrol Districts are downtown with 61 districts in total.

<sup>12</sup> Other common crimes were selected by highest non-index crime based on LEDS reports. They are not Index Crimes and mapping data was unavailable at the time of this report.

<sup>13</sup> Note that not all crimes are reported to authorities, and the rate at which they are reported varies by crime.



**Table 2. Proportion of crime type within each patrol district**

Proportions by Downtown Patrol Districts (Calendar 2001)										
	812	821	822	831	832	841	842	850	862	Downtown Overall Avg.
Robbery*	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%
Aggravated Assault*	1%	1%	2%	3%	2%	1%	1%	1%	2%	1%
Burglary*	3%	1%	1%	1%	1%	1%	1%	1%	3%	1%
Larceny*	33%	14%	14%	13%	9%	19%	22%	20%	29%	19%
Other Common Crimes										
Simple Assault	2%	2%	4%	3%	3%	1%	2%	2%	2%	2%
Vandalism	7%	4%	4%	4%	2%	3%	2%	4%	7%	4%
Drugs Crimes	3%	20%	13%	10%	19%	4%	4%	3%	4%	9%
All Others Crimes	50%	57%	61%	64%	64%	69%	67%	68%	53%	62%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

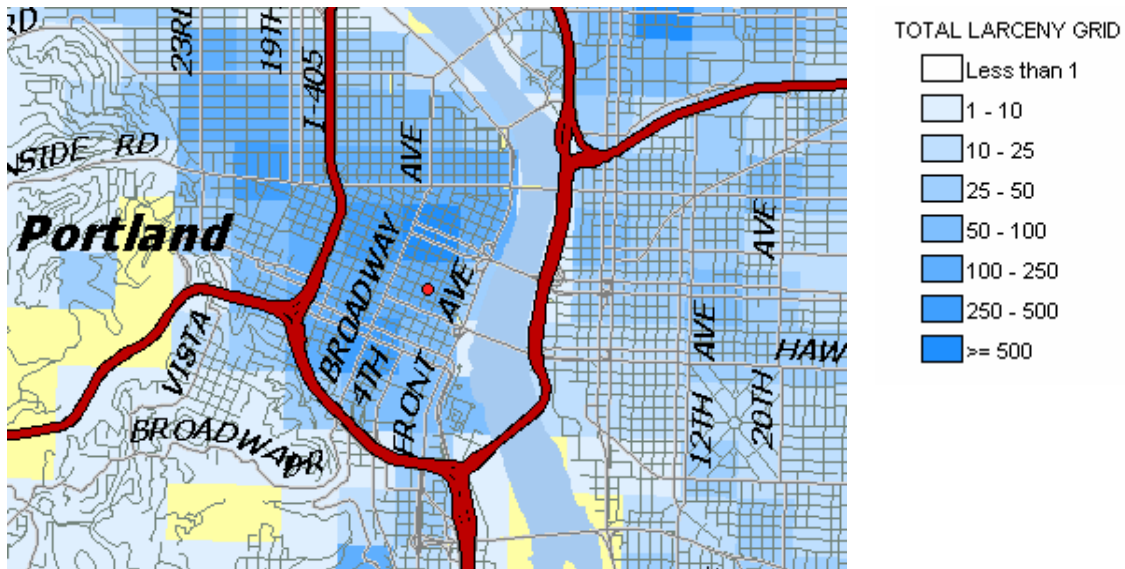
Examining the proportion of reported crime type within each patrol district finds distinct differences between districts and the downtown area as a whole (Table 2). For example, the proportions of robbery and aggravated assaults were fairly infrequent and consistent across most districts at approximately 1%. However, dramatic differences were found in both larceny and drug offenses by district. Overall downtown larceny accounted for 19% of offenses, but varied widely from 9% in district 832 to 33% in district 812. Residential areas such as districts 812, 850, and 862 showed elevated levels of larceny. Drug offenses also showed variance by district, with 821 and 832 more than double the downtown average. Again, former drug-free zones were located in these districts downtown, increasing the proportions of these offenses.<sup>14</sup>

### Mapping Index Crime

Mapping reported offenses in greater detail allows a better understanding of the location and frequency by type of crime. Below each of the Index Crimes is mapped in the downtown area ordered by frequency of reported offense.<sup>15</sup> Darker shading indicates greater frequency in that quarter mile grid.

<sup>14</sup> The former drug-free zones do not appear to account for all the elevated drug offense proportions. The west-side drug-free zone also included Districts 841 and 842 which had relatively low proportions of drug offenses. These are also known as exclusion zones.

<sup>15</sup> Mapping was only available for Index Crimes.



**Figure 7. Reported larceny downtown by frequency of offense.**

Larceny was consistently the most commonly reported offense. According to LEDS larceny accounted 31% of all reported offenses in Multnomah County.<sup>16</sup> While larceny accounts for a substantial proportion of all reported crime, only 13% of all larceny offenses resulted in an associated arrest.<sup>17</sup> This means that while theft is very common, it often occurs without an arrest. Figure 7 shows downtown and surrounding areas shaded based on the number of total larcenies reported in each grid. Downtown accounted for approximately 16% of all reported larceny in Portland (Table 1). Other eastside areas also show larceny as commonplace.

Particular attention should be paid to the volume of larceny crimes reported and the scale used to map the data. Both the pattern and the scale are the same as those reported for all Index Crimes in Figure 5. This means that larceny, while less serious than other Index Crimes, accounted for the majority of all reported offenses shown in Figure 5.

<sup>16</sup> Larceny accounted for 65% of all eight Index offenses.

<sup>17</sup> Source: Cleared offenses for Multnomah County, LEDS 2001.

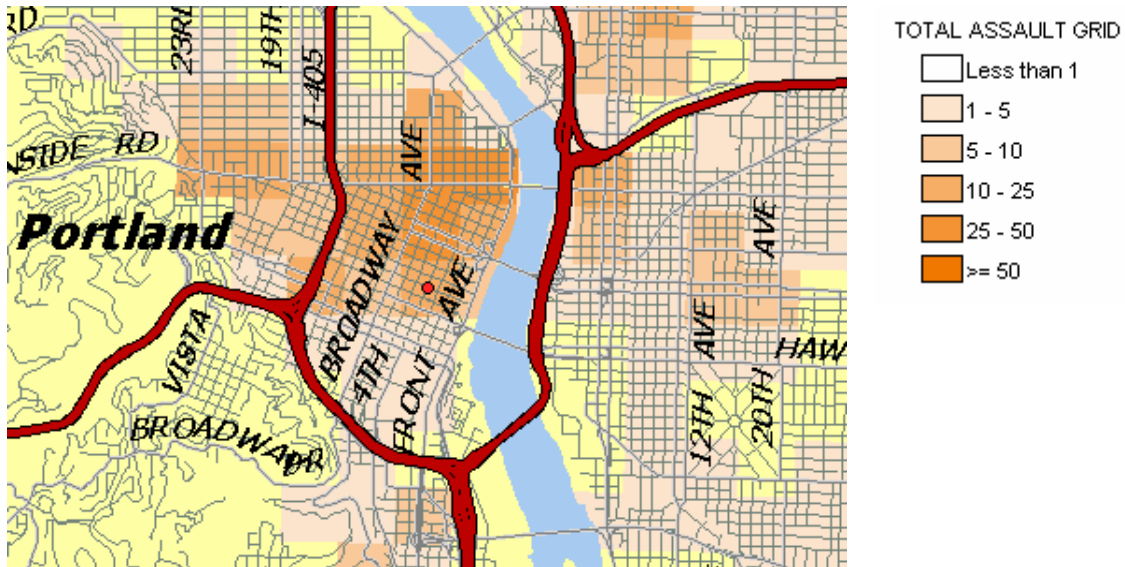


Figure 8. Reported aggravated assault downtown by frequency of offense.

Aggravated assaults are reported separately from simple assaults due to their severity. Multnomah County recorded more than 3,200 reported aggravated assaults in 2001. This accounted for only 3% of all reported crimes. Figure 8 shows downtown and surrounding areas shaded based on the number of total aggravated assaults reported in each grid. Downtown accounted for approximately 9% of reported aggravated assaults in Portland. Again, eastside areas also show reports of aggravated assaults, with noticeably greater concentration in the Lloyd District.

Simple assaults are more common in our community than aggravated assaults, and according to LEDS accounted for half of all person-to-person crimes in Multnomah County in 2001.<sup>18</sup> Downtown accounted for approximately 8% of reported simple assaults in Portland, somewhat similar rates to aggravated assault. Simple assaults are often related to domestic violence, an offense more likely to occur in residential areas.

<sup>18</sup> Simple assaults are not Index Crimes, and therefore no map was available for this report.



Figure 9. Reported motor vehicle theft downtown by frequency of offense.

Motor vehicle theft is also an Index Crime. As shown in Figure 9, the frequency of vehicle theft downtown shows greater density in specific grids. Areas around and south of Burnside Avenue between I-405 and 3<sup>rd</sup> Avenue showed the greatest concentrations of auto thefts. Specific areas of elevated frequency were also found in Northwest Portland and the Lloyd District.

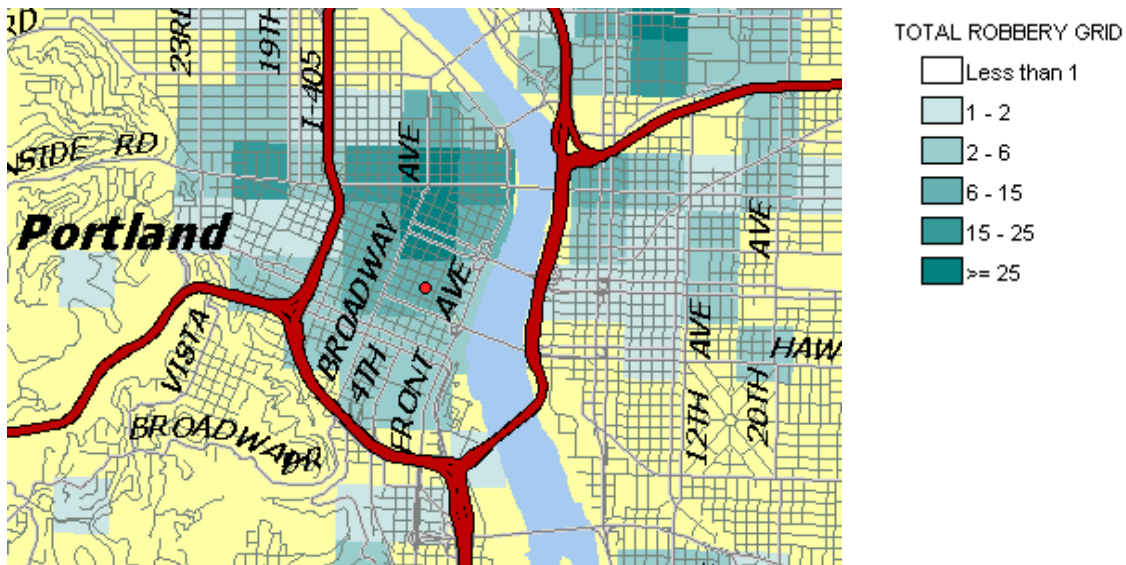
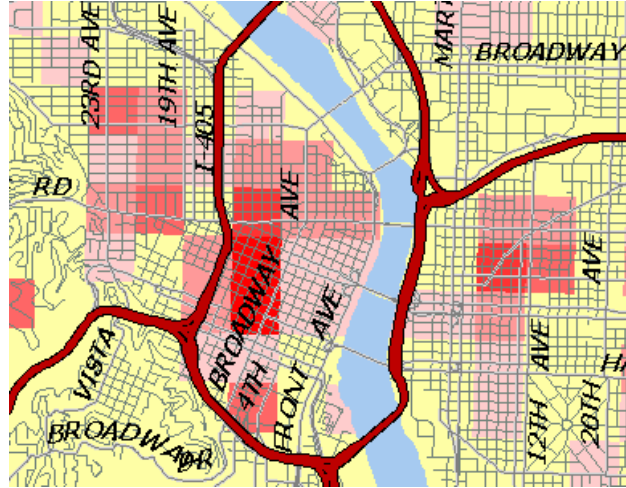


Figure 10. Reported robbery downtown by frequency of offense.

Figure 10 depicts reported robberies in the downtown and surrounding areas. As shown in the figure, concentrations are related to areas of commerce downtown and the Lloyd District. The downtown core accounted for approximately 17% of all Portland robberies.

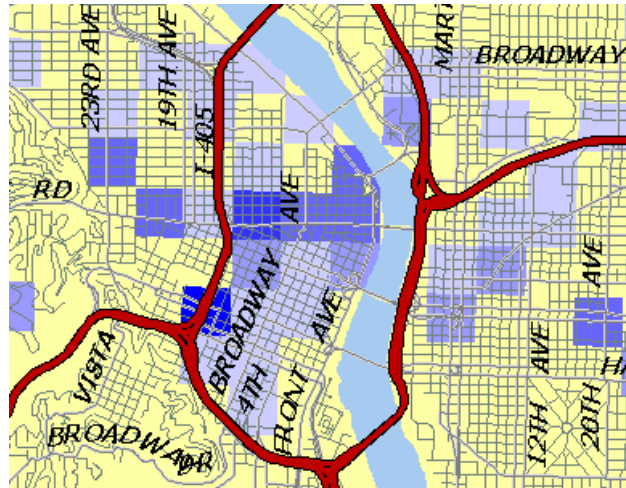
Figures 11a-c maps the relatively low levels of arson, sexual assault, and homicide.<sup>19</sup> While the severity of these crimes is great, their frequency is quite low, making spatial analysis less reliable. Reports of arson, while infrequent, were consistent with other crimes reported in commercial areas (Figure 11a).



**Figure 11a.**  
TOTAL ARSON GRID

- Less than 1
- 1 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- >= 8

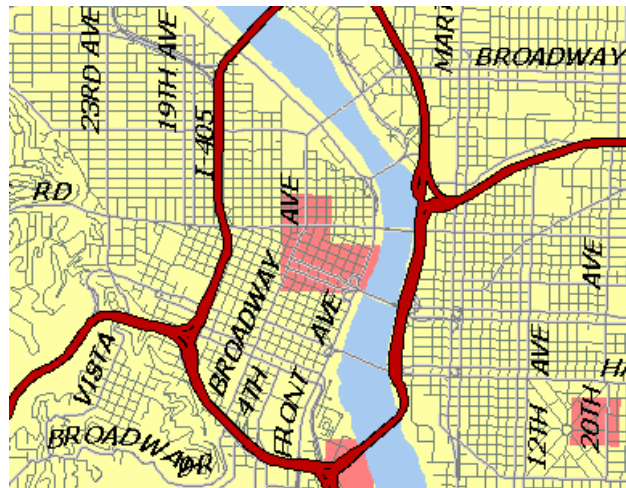
With few reports of sexual assault it is difficult to assess whether they appeared more dispersed than other reported types crimes (Figure 11b).



**Figure 11b.**  
TOTAL SEXUAL ASSAULT GRID

- Less than 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- >= 5

Even less common than sexual assaults were homicides (Figure 11c). According to LEDS, 29 cases of homicide were reported for all of Multnomah County in 2001.



**Figure 11c.**  
TOTAL HOMICIDE GRID

- Less than 1
- 1 - 2
- >= 2

**Figure 11a-c. Other reported index crimes downtown by frequency of offense.**

<sup>19</sup> Note that all crime maps were produced using dynamic scales. This means that that color gradation is inconsistent with enumeration. Caution is advised when comparing various maps.



Discussion

Consistently, the crime maps showed greater reports of Index Crimes in areas with greatest concentration of commerce and transportation. Two quarter-mile grids, one downtown east of Broadway bisected by Washington and Alder Streets, and one in the Lloyd District showed the highest frequencies for all but a few Index offenses (Figure 12).<sup>20</sup> These areas both have shopping malls (Pioneer Place and the Lloyd Center), transit malls with light-rail service, and freeway access. This higher concentration of people, property, and mobility appears, at least spatially, related to the increased frequency of crimes.

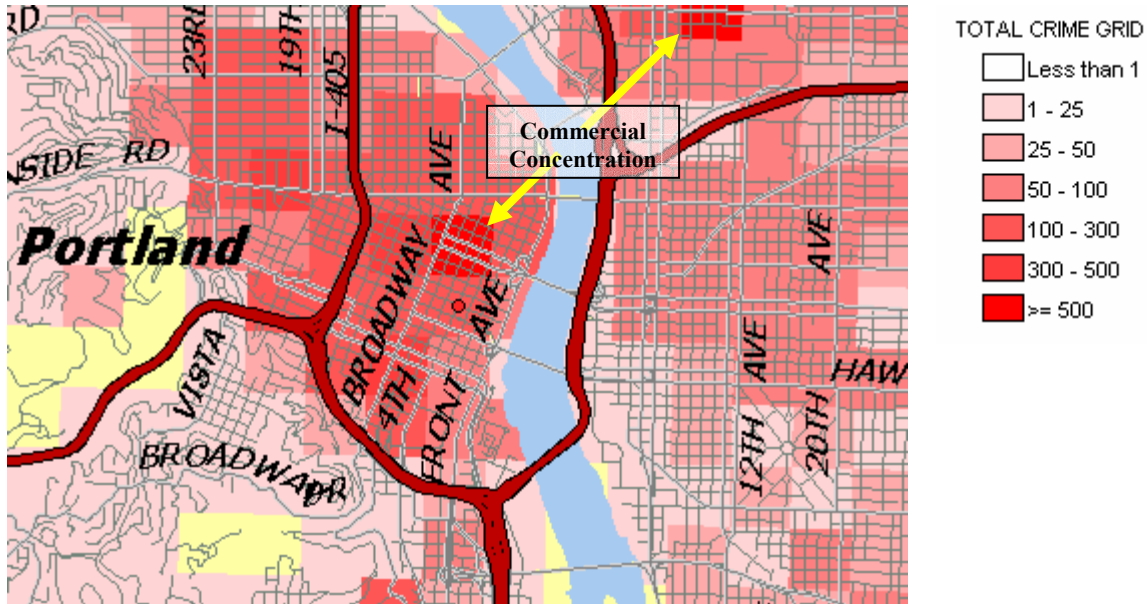


Figure 12. Index Crime for Portland, highlighting commercial areas.

The downtown grid of interest also included several county social service field locations (Figure 13).<sup>21</sup> The McCoy Building (#160) offers county health services, such as disease prevention and control. The Mead Building (#161) stations some adult community justice programs, including day reporting and centralized intake. The Commonwealth Building (#166) provides a variety of social services for aging and disabled citizens, developmentally disabled, and those with mental health or alcohol and drug problems. The Regional Drug Initiative (building #175) no longer is in service and did not provide direct social services.

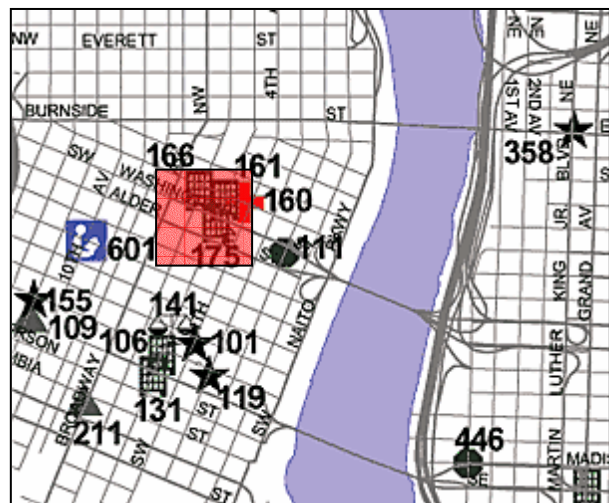


Figure 13. Downtown map of county buildings.

<sup>20</sup> Note that this area downtown was consistent with Police District 832.

<sup>21</sup> Many county services and contracted service providers are located throughout the downtown area.

It is difficult, if not impossible to assess the direction of the relationship of service location and crime (i.e., did these services increase crime or did increased crime bring these services, a combination of both, or neither). This report only attempts to identify spatial relationships and describe the context, not explain the cause-and-effect of such relationships.

### Conclusions

Results showed a general decline in the offense and arrest rates over the last decade. At the same time the citizen's perception of safety downtown had increased. Thus, actual crime and the perception related to it have shown general improvement. The downtown area accounted for 18% of crimes which varied widely by offense type and by specific location. Larceny was the most commonly reported offense, but its proportion was consistent with crimes that occurred in downtown in general (18%). Drug offenses were considerably higher downtown accounting for 39% of the city's overall drug offenses, related at least in part to former drug-free zones.

One downtown section showed the greatest frequency of offenses in general, and by specific Index crime. Drug offenses also appeared to be common in this area. This section was spatially related to a major shopping mall, transit mall with light-rail service, and freeway access. In addition, this section included several county social service locations including health and community justice programs, and services for aging and disabled, developmentally disabled, mental health and alcohol and drug affected citizens. These factors along with a large workforce, policing, and transient populations, interrelate increasing the likelihood that offenses will occur downtown.

### Limitations

Two limitations should be noted regarding the interpretation of the data and this report. First, crime and urban areas are complex systems, making assessment of causes difficult under controlled circumstances. This report illustrated available data crime and geographic data to suggest possible explanations. These are not the only explanations. Second, most of the data reported herein is between the years of 2000 and 2001, with parts of 2002. While this is relatively recent, one should keep in mind that changes in policies can have immediate impacts upon the presented data and long term trends (e.g., jail closures, booking policy changes, etc).

### Acknowledgements

A special thanks goes to Steve Beedle of the Portland Police Bureau's Research and Planning group and Andrea Westersund of Multnomah County GIS for their reviews and comments on this report. I would also like to thank Bill Wesslund and Debbie Haugen for their technical assistance on this project.