

# **The Geography of Charter Schools and the Nonprofit Sector in New York City**

by

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## **Introduction**

A growing number of charter schools are being designed, launched, and operated by community-based organizations (CBOs) in center cities. New York has an extensive nonprofit industry, and many strong CBOs provide educational and social services to children. Increasingly, CBOs, especially those serving families, children and youth, are seeing partnerships with charter schools as a way to increase the impact of their programs and services. At the same time, charter school leaders/planners understand that families, children, and youth face many challenges, and student's social and academic achievement hinge on the ability of the school and community to unite in overcoming barriers to learning.

The New York Charter School Act permits applicants to submit applications in conjunction with a college, university, education institution, nonprofit CBO, or for-profit corporation authorized to operate in New York State (SUNY, 1998). The term "in conjunction with," however, is not defined further in the case of partnerships with CBOs, but such partnerships have taken a variety of forms and differing levels of involvement on the partner CBOs, which in many cases affect formal charter applications. The people

involved in the creation of the charter school – including the founding team and the proposed initial Board of Directors – are required to bring with them substantial contributions, from fulfilling compelling evidence of community support for the school to identifying real estate options. As charter school founder teams prepare applications, and as a Board of Directors oversee the school, informal and formal working arrangements can be developed with for-profit companies and CBOs to assist during the start-up process and provide education services or programs to the school. Applications to establish charter schools may be filed by a partner CBO as a co-applicant.<sup>1</sup> As well, a Board of Directors may enter contract arrangements with CBOs for lease space, fund development, facility construction or renovation, back office support, and other services. A careful reading of each charter school’s mission statement reveals an overwhelming number of charter schools in New York City that explicitly state the word “community” in the mission statement. The inclusion of the community concept in the actual charter school mission raises the need to assess the desirability of seeking out CBOs to facilitate access to a suitable school location or school-linked, integrated services that bear on the interconnected needs of students and their families.

Little is known about the locational dynamics between a charter school, its partner CBO, and its environment. There is a paucity of research that relates the high density of CBOs in areas served by charter schools, particularly in poor neighborhoods. Our overall research agenda is to advance two preliminary findings based on our subset

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<sup>1</sup> Charter schools are publicly funded, independent public schools that operate according to the terms of a five-year performance contract or “charter.” Once charter schools are open, a not-for-profit board of trustees governs them. Similarly, a CBO is a community-based organization that is non-profit (with 501-c-3 status). CBOs and charter schools are considered separate entities.

of study using GIS. First, we find that charter schools with a community service orientation (“mission-oriented”) locate in community districts with high density of CBO activities in housing, human service, community improvement, and education. Second, we find a sizeable clustering of charter schools and CBO activities in community districts with significant community needs and resources. The need to examine the geographic spread of housing development and education-related activities by CBOs in newly revitalized neighborhoods is brought to the fore by findings of large numbers of racial/ethnic minorities and female-headed households, many of whom encounter unique obstacles in the pursuit of affordable housing, employment opportunities, child care arrangements, and quality schools. In an era of tight resources and increased local responsibility for programs and services, the co-location or near-school location of services through charter schools is serving new ways to connect and deliver a range of supportive services for children, youth and their families.

GIS technology is emerging as a significant contributor to overcome the impediments that hindered empirical work with a spatial focus. Our study incorporates the spatial structure –the arrangement and relationships – in geographic data represented by point data (i.e., the high density of CBOs in areas served by charter schools) within the encompassing social geography. While there is an extensive literature on the role of nonprofit providers of affordable housing and early childhood programs in harder-to-serve populations, a spatial analysis of the scope and geographic spread of nonprofit housing and early childhood providers in prime urban centers has been studied much less frequently (Marcelli & Wolch, 2003). This study seeks to build on several studies of

nonprofit location by considering a full geographic appreciation of the various organizations, public facilities, housing rehabilitation projects, early childhood centers, and other community resources that are expected to foster strong community partnerships around education reform (i.e., charter schools).

### **Conceptual Framework**

Researchers and practitioners increasingly recognize that school-to-community outreach, linking families and schools, has important benefits for improving student commitment to school work and the academic outcomes that follow. Notable researchers at the Harvard Family Research Project underscore the model of “out-of-school time (OST) programs” in which schools and CBOs work together to coordinate services and leverage resources that link children, youth, and their families (Little, 2003; Lopez, 2003). Inherent in the OST model is recognition of the connection between improving academic performance and linking complementary investments in improved health, nutrition, recreation, housing, family stability, and community development services to the schools. For example, Wimer, Post, & Little (2004) emphasized the inherent attractiveness of housing all services in a facility (school or near-school locations) that is readily accessible to virtually all communities and that is set up to serve children and adolescents, much akin to the concept of “one-stop” school-based service centers or “multi-service” centers. This may take the form of school-linked health services, social and recreational services, child welfare, day care, counseling, income support, employment training and placement, personal support services, and afterschool programs.

The authors reviewed data from school-CBO collaborative services listed at the Harvard Family Research Project's Out of School Time Program. These school-linked, integrated services demonstrate several creative ways that CBOs share physical, intellectual, social, and financial resources with partner schools, especially in ways that benefit students and their families beyond the boundaries of the afterschool programs.

The coordinated services model complements our hypothesis about the locational relationships among CBOs, charter schools, and the children/youth they aim to serve. We find that a number of CBO partners of charter schools such as Wildcat Service Corporation, Sheltering Arms, and Boys and Girls Harbor participate in or support various social service programs (i.e., tutoring/mentoring, recreation and sports, child welfare services, and community improvement). Other CBO partners of charter schools in New York City have long histories of housing involvement – in particular, St. Nicholas Neighborhood Preservation Corporation, Mount Hope, and Morrisania Revitalization Corporation. Even in partnerships with for-profit companies, charter schools such as Harriet Tubman, Grand Concourse Academy, and Our World Neighborhood have a strong CBO-initiated founding base (See Table 1).

As part of the locational analysis of the study, we expect to generate results that follow a pattern of *agglomeration* with similar organizations located near each other. Drawing upon the organizational theory literature, our research is consistent with studies that emphasize the relationship between the organization and its environment, resulting

from the exchange of resources with important external organizations. De Vita, Manjarrez & Twombly (1999) use Geographic Information System (GIS) techniques to spatially relate providers and needs within the District of Columbia. Twombly & Auer (2004) examined the distribution of locally oriented child and youth nonprofits in the District of Columbia and found it to be linked to child population and child poverty rates. In their analysis of for-profit and nonprofit day care programs, Baum & Oliver (1996) claimed that there may be fewer demands for CBOs to compete and more incentive for them to work in partnership thereby making agglomeration more likely.

Our study takes a similar approach from the studies cited above. In particular, we propose to investigate the existence and significance of spatial dependencies of CBOs and charter schools in neighborhoods with significant community needs and resources.

## **Data and Methodology**

New York City is a particularly attractive place to study charter schools, nonprofit service provision, and socio-demographic dynamics because of the availability of detailed data on neighborhood conditions, public services, and CBOs from a number of uniquely city data sources.

New York City (NYC) Department of City Planning's "Bytes of the Big Apple" provide free downloadable shapefiles for administrative, political and census areas as

well as a street map with a geocoding locator file. These files permit the spatial analysis of relevant NYC data. We have used the Community District, Boros, 2000 Census Tracts, and the locator file in this analysis. “Bytes of the Big Apple” also has a downloadable MS Access file with data about government and nonprofit operated facilities throughout NYC. It includes XY coordinates and street addresses that allow it to be easily mapped. The 2000 Census data was downloaded from the U.S. Census American Factfinder website. Other free online data sources include charter school organizational and demographic data published by the three chartering authorities in New York State – Board of Regents, State University of New York’s Charter School Institute, and NYC Schools Chancellor. The New York State Department of Housing and Community Renewal (NYC DHCR) is used as a source of data on CBO housing developers and the location of affordable housing units developed by CBOs. The data on publicly funded housing projects from 1987-20002 are obtained from the NYC Department of Housing Preservation and Development. The Municipal Arts Society is our primary source of data on CBOs’ involvement in community planning and revitalization.

Our geographical units of analysis are community districts and census tracts. In New York City, census tracts are typically several square city blocks and can have populations ranging from 1,500 to 10,000. Widely considered as precise geographic units, census tract boundaries can be used to determine a variety of population characteristics within each tract. Geographically, New York is a city with 5 boroughs and 59 community districts. It should be noted that community districts match up most

closely to neighborhood boundaries when compared to other administrative districts in the city.<sup>2</sup>

By choosing community districts as a unit of analysis, this study makes it possible to spatially relate the locational patterns of charter schools and CBO-related activities that are locally oriented to serve the needs of targeted neighborhood residents. To do this, we first mapped our data by either geocoding with addresses and Boro numbers, or using XY coordinates. By making spatial joins of the mapped data and the community districts, we were able to quantify our data at the district level and get an overall picture of the magnitude of data counts in comparison with the level of charter school development in that district. Other data that was more pertinent to physical proximity to charter schools and CBOs such as housing and childcare development was mapped at the street address level. We found that census tracts did not share common boundaries with the districts, so we superimposed locations of charter schools with their 2004-05 enrollment figures over the census tract demographic data. From our maps, patterns of concentration could be seen readily due to the clustering together of geocoded addresses in certain areas. We used mapping cluster tools such as spatial joins, graduated symbols, and overlays to look at the concentration of several point features – i.e., concentration of CBO housing activities and day care programs, location of charter schools, and other demographic characteristics.

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<sup>2</sup> Different city agencies in New York have carved the city into districts according to their respective services. Examples of administrative districts in the city are school districts, congressional districts, police precincts, and city council districts.



## **Results**

Consistent with our conceptual framework, we organized our findings according to a discussion of community needs and resources.

### *Community Needs*

Map 1 illustrates the distribution of charter schools according to the 5 Boroughs that divide New York City – Staten Island, Brooklyn, Queens, Manhattan, and the Bronx. Darker color means that there is a higher concentration of charter schools. The location of charter schools appears to concentrate in Brooklyn, upper Manhattan, and the Bronx.

From a spatial perspective, there seems to be a fairly good fit between the location of charter schools in New York City and community need (See Maps 2 to 7). Our analysis examines census tracts relative to the demographic and socioeconomic characteristics that surround charter schools. We overlaid the location and enrollment size of charter schools using graduated circles to map discrete locations and show the difference in data values.

As shown in Map 2, the location of charter schools and the density of population aged 5 to 17 appear to correlate at the census tract. It is apparent that most charter schools target the densest areas of children and youth. Map 3 shows that there are

notable clusters of charter schools in census tracts with high density of female-headed household. For instance, charter schools in Brooklyn, upper Manhattan, and the Bronx have the densest concentration of female-headed households as a percentage of total households. The presence of higher percentages of African-Americans and Hispanics makes it more likely that charter schools will locate in a census tract (see Maps 4 and 5). The analysis of median family income shows that charter schools in New York City primarily locate in high and extreme poverty tracts. Map 6 illustrates that most charter schools locate in census tracts with median family income of below \$35,000. Map 7 shows the location of charter schools and the density of public assistance income. It appears that most charter schools locate near heavy concentrations of disadvantaged populations. Finally, Map 8 reveals a substantial number of charter schools that locate in census tracts with a higher percentage of rental housing.

### *Community Resources*

We shift our focus from a view that the community is replete with needs/problems to a belief that a community is rich in local resources and functional linkages between nonprofit partners. The succeeding maps (Maps 9 to 13) illustrate the particular community resources/assets which exist within each district's borders. Following community district as a unit of analysis, we mapped the density of features to look at distinct patterns in neighborhood boundaries. We used the operation, called a spatial join, in *ArcView 9.1* to do district-by-district counts of CBOs and publicly funded

affordable housing according to their spatial relationship to charter schools within each community district.

The results of our map analysis indicate that charter schools locate in the same community districts with a high density of publicly-funded affordable housing (See Maps 9 and 10). A darker shade of blue represents a more intense district concentration of charter schools within the same district as publicly-funded affordable housing units. As shown in Map 9, the high-poverty community districts (Central Harlem and East Harlem in Manhattan; Morrisania and Highbridge in the Bronx) with a sizeable concentration of city capital funded housing developments each have 4 or 5 charter schools. Likewise, map 10 shows that high density of state-funded affordable housing units seems to correlate with pockets of charter schools in those districts.

A similar spatial analysis of charter schools within community districts illustrates high density of community development corporations (CDCs) and economic development corporations (EDCs) in those areas, particularly in upper Brooklyn, Manhattan, and the Bronx (See Maps 11 and 12). CDCs and EDCs are nonprofit entities – usually authorized as 501(c) 3 organizations – that typically serve and carry out housing, economic, and social programs within a defined territory. Map 13 also highlights density of CBO provision in affordable housing and corresponding presence of charter schools in those districts.

Finally, our spatial analysis looks intensely at the distribution patterns of individual locations (geocoded address points) to determine whether an activity such as public affordable housing occurs inside an area within a given distance to charter schools. In this analysis, point pattern is concerned with the location of nonprofit facilities and state-funded affordable housing development, and with answering questions about the distribution of those locations, specifically whether they are clustered or dispersed. Map 14 displays the location and capacity of publicly funded day-care and Headstart programs from community districts throughout the city. The location of charter schools appears to correlate with the geographic concentration of publicly funded day-care and Headstart programs. Likewise, map 15 spatially relates the location of charter schools to tight clustering of state funded housing development in specific areas.

### **Analysis and Conclusion**

The spatial analysis developed here using GIS relates the location of charter schools to the scale and geographic spread of nonprofit affordable housing provision and early childhood programs. Our study also finds a sizeable concentration of charter schools in neighborhoods with high density of ethnic minorities, population from age 5-17, public assistance income, rental housing, low median income, and female-headed households.

The mapping of the demographic landscape reveals that charter schools are physically located in areas where poverty is most entrenched. Our results indicate that charter schools generally locate in high poverty census tracts with relatively higher service needs but also significantly higher levels of public resources and higher density of CBO activities in neighborhood revitalization, thereby verifying the conceptual framework in this paper. Our twin-emphasis on school-linked services and agglomeration pattern lends support to our use of GIS techniques to connect charter schools, CBOs, public resources, and community needs into geo-spatial contexts. Examining the spatial proximity of charter schools to high density of CBO activities and public facilities is important not only as sites for school-linked or integrated services, but also as physical community anchors around which vibrant school-CBO partnerships and functional linkages between nonprofits can expand in many of the highly distressed neighborhoods. Although our descriptive findings do not allow us to delve into causal factors, we believe that our analysis has both demonstrated the utility of mapping the density of features and uncovered a number of interesting locational dynamics between charter schools and CBOs.

Our findings support the extensive research on the role of nonprofit providers in community renewal — and specifically on the dominant force of such providers in the nonprofit housing industry and child-care (Wolch, 1996; O’Regan & Quigley, 2000; Weber & Smith, 2003). To the extent that public affordable housing goals and nonprofit early childhood programs emphasize harder-to-serve populations or those with particularly low income, the results of our spatial analysis reveal that charter schools

locate in those areas of nonprofit urban services and publicly-funded revitalization initiatives. Several studies confirmed that CBOs are promoted as a critical component of the affordable housing industry and early childhood programs because of their willingness to serve residents who live in poorer neighborhoods and in projects with less financial security in economic returns (Walker, 1993; Newman & Schnare, 1993; Twombly, 2003; Turnham & Bonjorni, 2004).

Our preliminary analysis on formal and informal CBO partners of charter schools is a useful starting point for identifying other active neighborhood partners of charter schools and determining their geographic proximity to public facilities and nonprofit services. While our spatial analysis suggests that charter schools reach disadvantaged residents, identifying adequate access to various public institutions, services, and facilities that can be used to leverage school-linked programs requires a more intensive and direct look at the resources of specific poor community districts. In addition, more empirical work is needed to understand the use of mapping density to connect the location of charter schools to public facilities and program sites in New York City (i.e., cultural/recreational facilities, public libraries, historic preservation, health and social services). Additional spatial analysis mapping the density of CBOs within a given distance to charter schools in geographic areas of deep poverty and substantial need is also important. We intend to expand our initial work on point pattern analysis using the spatial statistics tools such as hot spot and buffers to help quantify our geographic patterns. Understanding the geographic distribution of locally-oriented nonprofits such as

CDCs and EDCs is a useful starting point for identifying potential resources that exist in the community and their geographic proximity to local needs.

A major reason to mapping the density of features is the assumption that data represent one source of evidence that may be helpful in learning more about phenomenon represented and the processes responsible for generating it. Mapping density using GIS can be of great help to charter school founding teams and CBOs in their decisions on how to best leverage their scarce resources to different areas. In this study, a GIS-based spatial analysis is of immense utility in exploring the actual and potential educational linkages between CBOs and charter schools. This is a study that should have wide applicability to inner city schools as well as for enhancing the small-school strategy and school-linked services currently being pursued in New York City and other cities.

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Appendix A: List of New York City Charter Schools and Partner CBOs

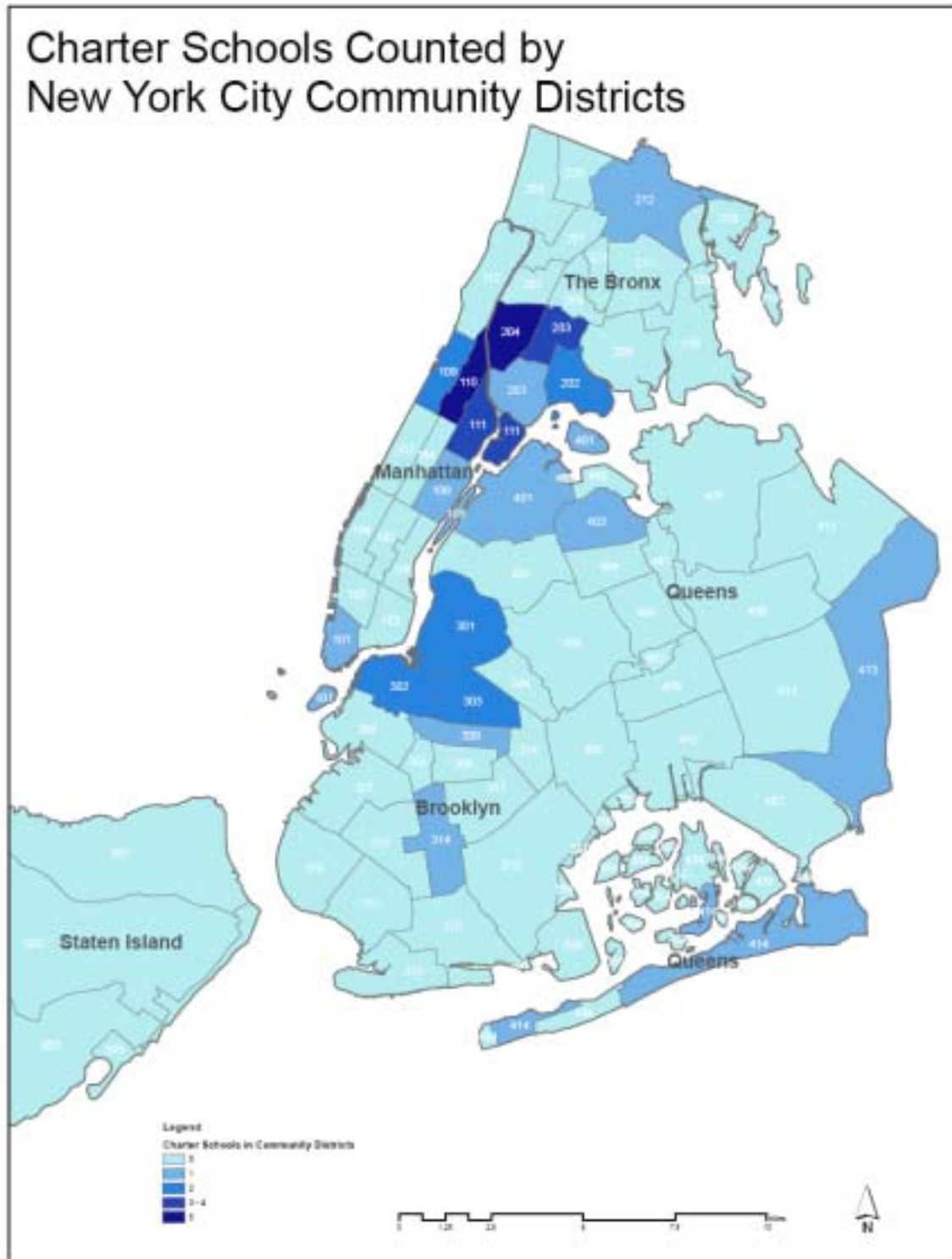
<b>Active Charters</b>	<b>Institutional Nonprofit Partners</b>	<b>Other Nonprofit Partners</b>	<b>Management Company</b>
Bronx Preparatory	None	Bronx Museum of the Art	None
Carl C. Icahn	Foundation for a Greater Opportunity	To be determined	None
Family Life Academy	The Latino Pastoral Action Center	To be determined	None
Harriet Tubman	None	Martin Luther King; Center for Nonviolence; African Legal Defense & Educ Fund	Edison Schools, Inc.
Bronx Charter School for Better Learning	Gattegno Foundation	To be determined	None
Bronx Charter School for the Arts	None	The Point Community Development Corporation; Civic Builders; Lincoln Center Institute; LEAP; Learning Leaders; Midori & Friends; Learning Through Art	None
Bronx Charter School for Excellence	None	To be determined	None
KIPP Academy	None	To be determined	None
Grand Concourse Academy	None	Walker Memorial Baptist Church	Victory Schools
Bronx Charter School for Children	The Friends of the Bronx Charter School for Children	To be determined	None
Bronx Lighthouse	None	Lighthouse Academy, Inc.	None
Explore	None	To be determined	None
Beginning with Children	Beginning with Children Foundation	To be determined	None
Community Partnership	Beginning with Children Foundation	To be determined	None
Brooklyn Excelsior	None	To be determined	National Heritage Academies
Williamsburg	St. Nicholas Neighborhood Preservation Corporation	To be determined	None
Brooklyn Charter	Clearpool Inc.	To be determined	None

Amber	Community Association of Progressive Dominicans	To be determined	None
Excellent Charter School of Bedford Stuyvesant	None	To be determined	None
Readnet Bronx Academy	None	Readnet Foundation	None
Harbor Science and Arts	Boys Harbor, Inc.	To be determined	None
Harlem Day	Sheltering Arms, Inc.	To be determined	None
John Lindsay Wildcat Academy	Wildcat Service Corporation	To be determined	None
Sisulu	To be determined	To be determined	Victory Schools
East Harlem Village Academy	To be determined	To be determined	None
John Reisenbach	To be determined	To be determined	The Learning Project, Inc.
KIPP S.T.A.R. College Preparatory	To be determined	To be determined	None
Opportunity	To be determined	To be determined	None
Harlem's Children Zone/ Promise Academy	To be determined	To be determined	None
Our World Neighborhood	To be determined	To be determined	Mosaica Education, Inc.
Merrick Academy	To be determined	To be determined	Victory Schools
Renaissance	To be determined	To be determined	None
Family Academy of the Bronx	Friends of the Family Academy	To be determined	None
Manhattan Charter School	To be determined	To be determined	None
Girls Preparatory	To be determined	To be determined	None
Peninsula Preparatory Academy	To be determined	To be determined	None
KIPP Infinity Charter School	To be determined	To be determined	None
KIPP AMP Academy	To be determined	To be determined	None
Harlem Link	To be determined	To be determined	None

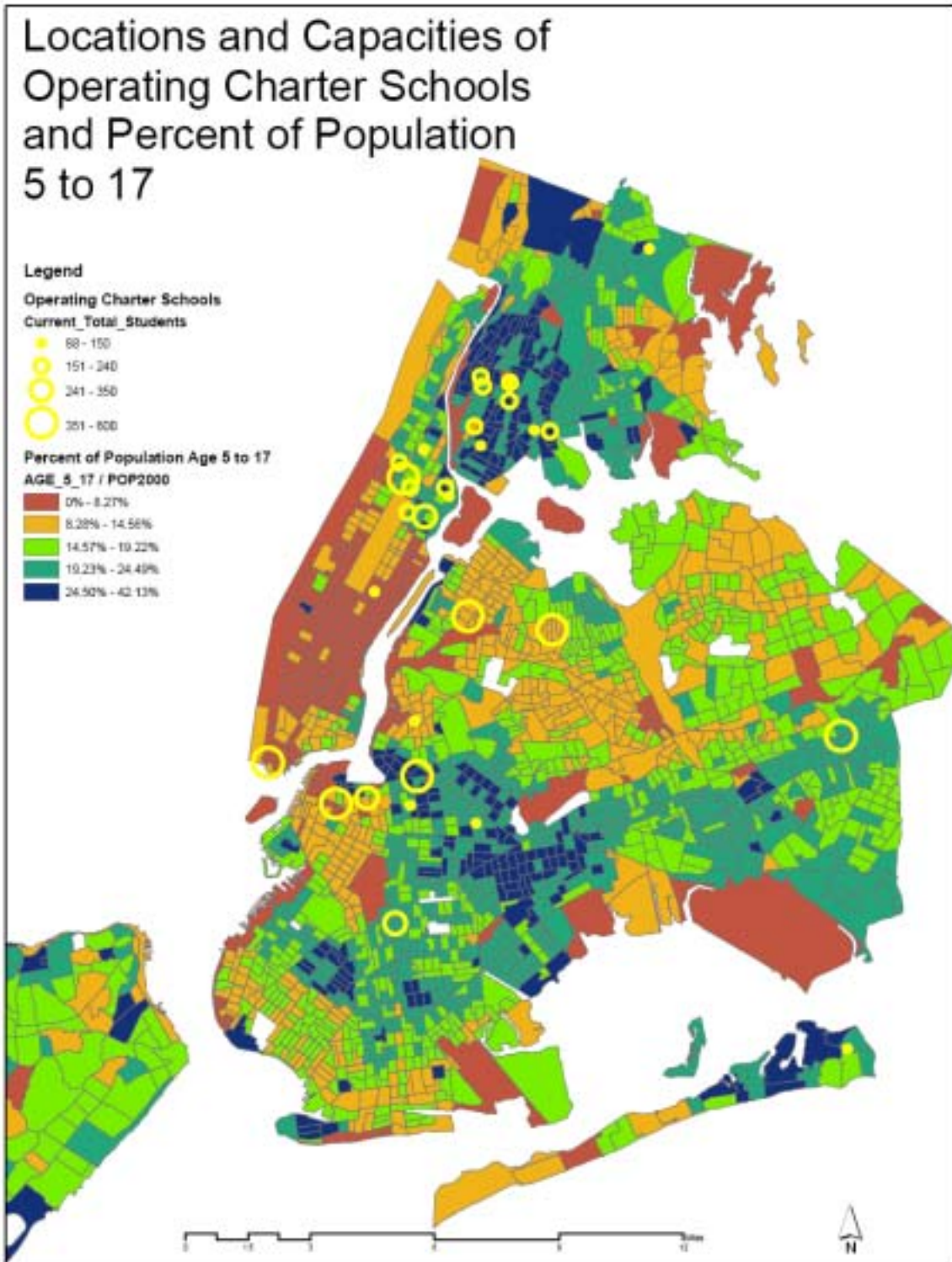
Source: Charter School Institute State University of New York (1998). Schools in New York. Available at <http://www.newyorkcharters.org/charterny/schoolprofiles.asp>.

Appendix B: Maps

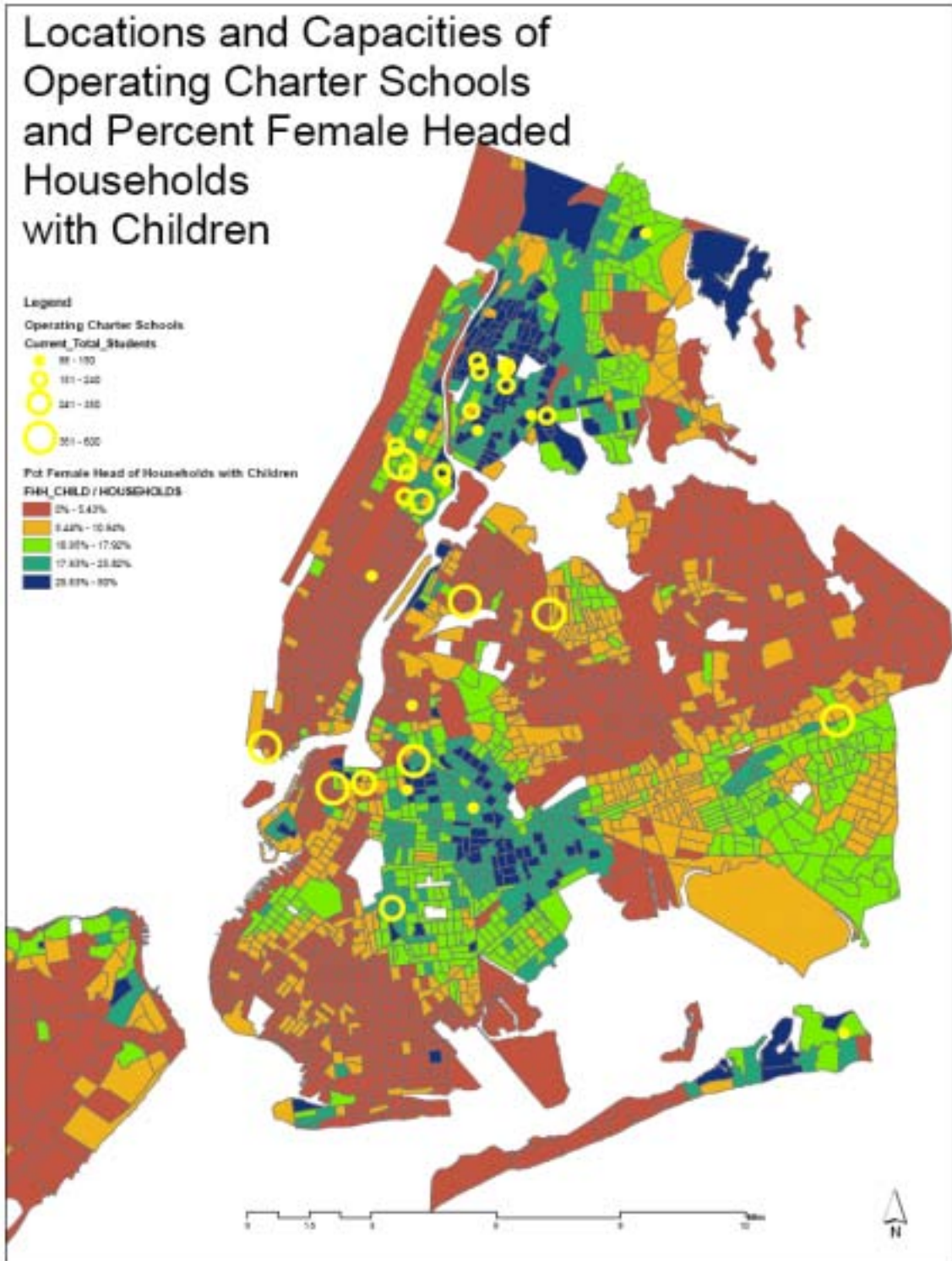
Map 1



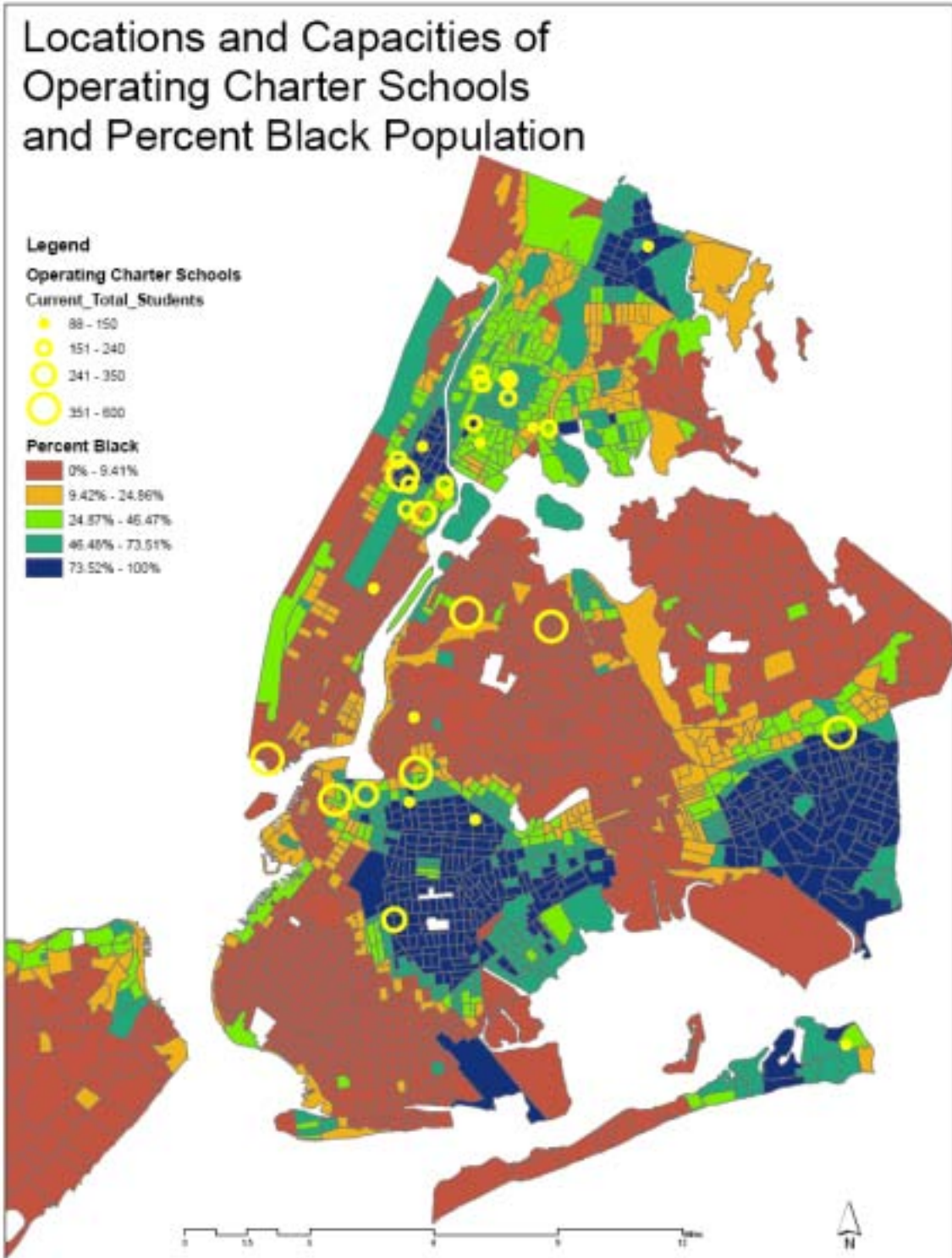
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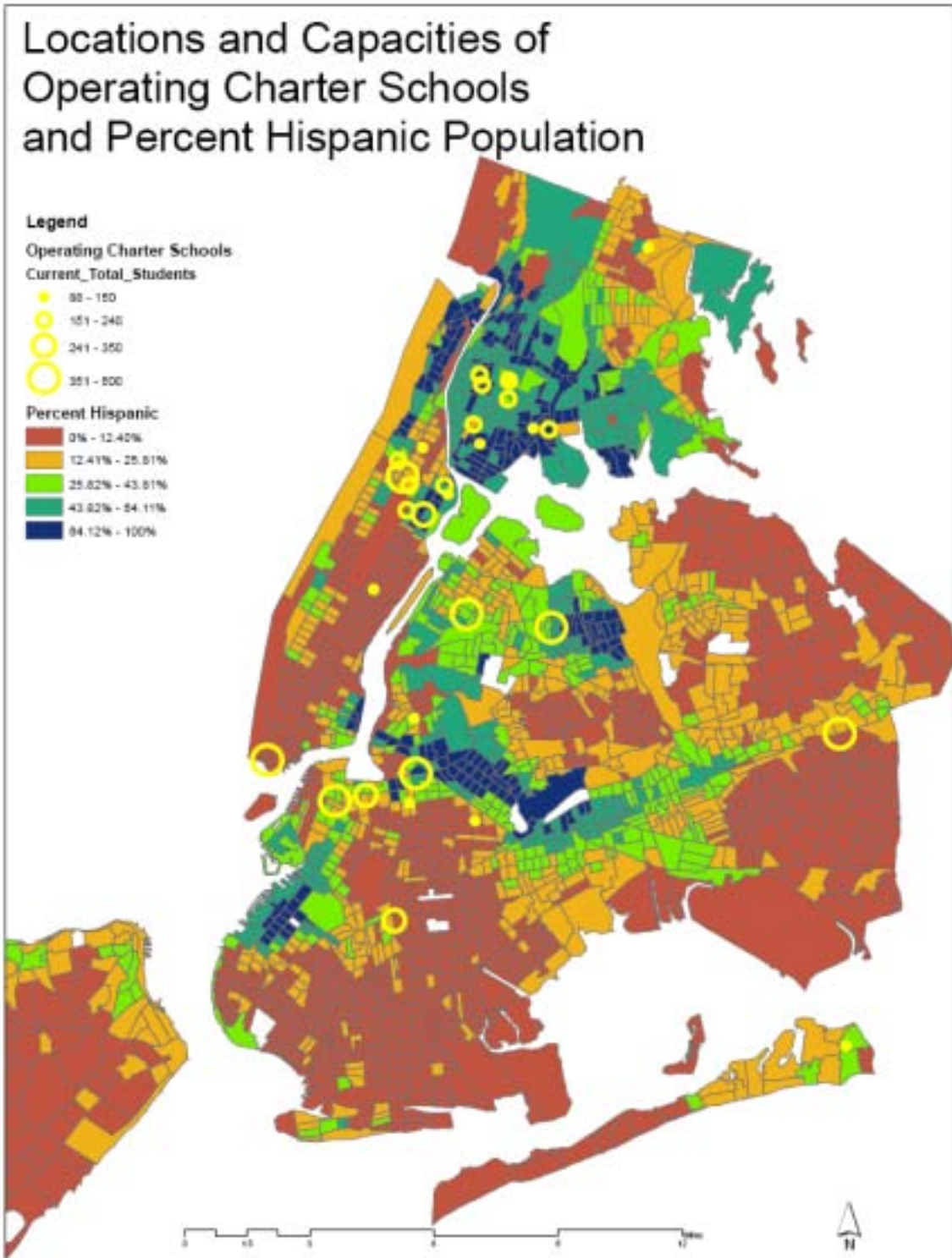
Map 3



Map 4

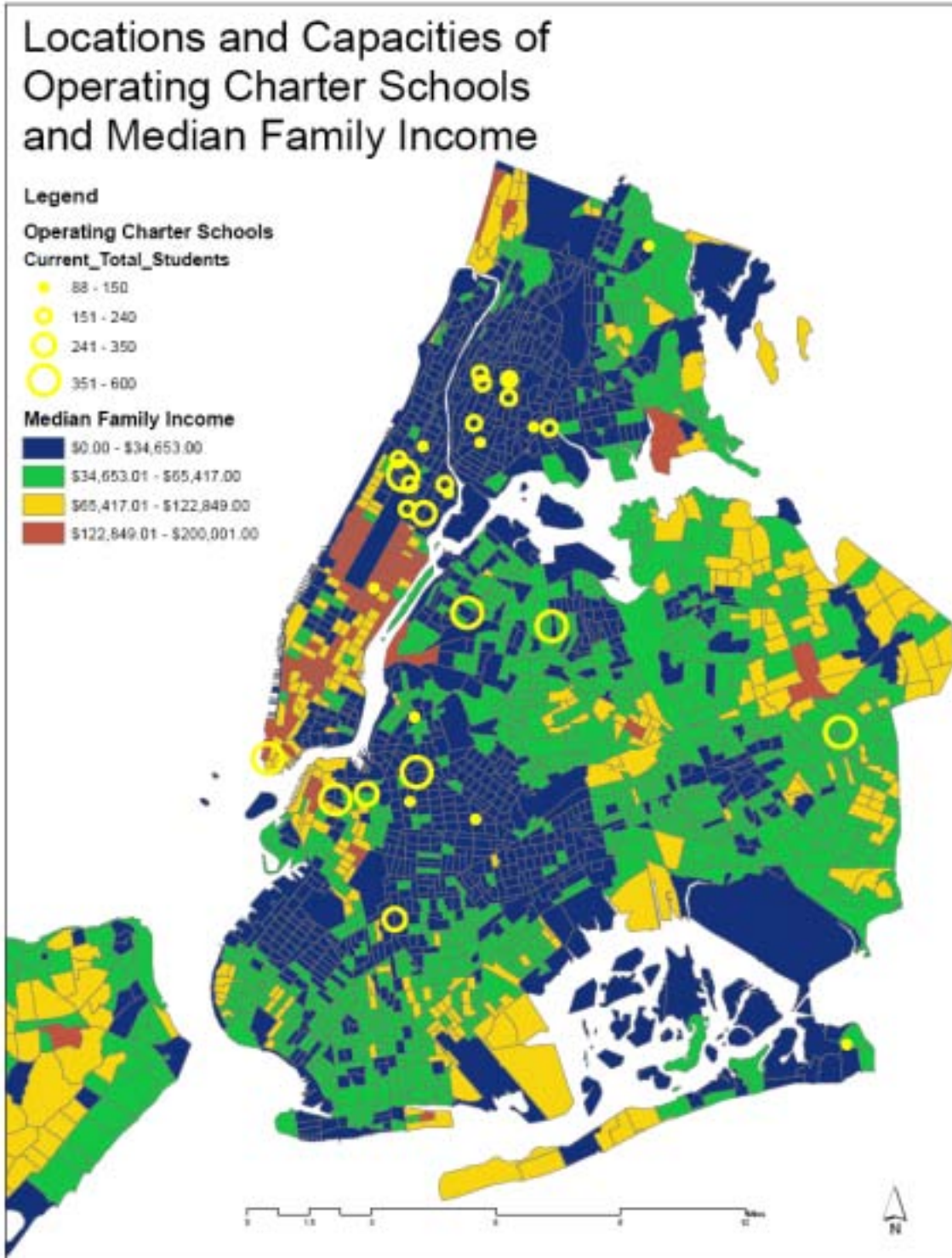


Map 5

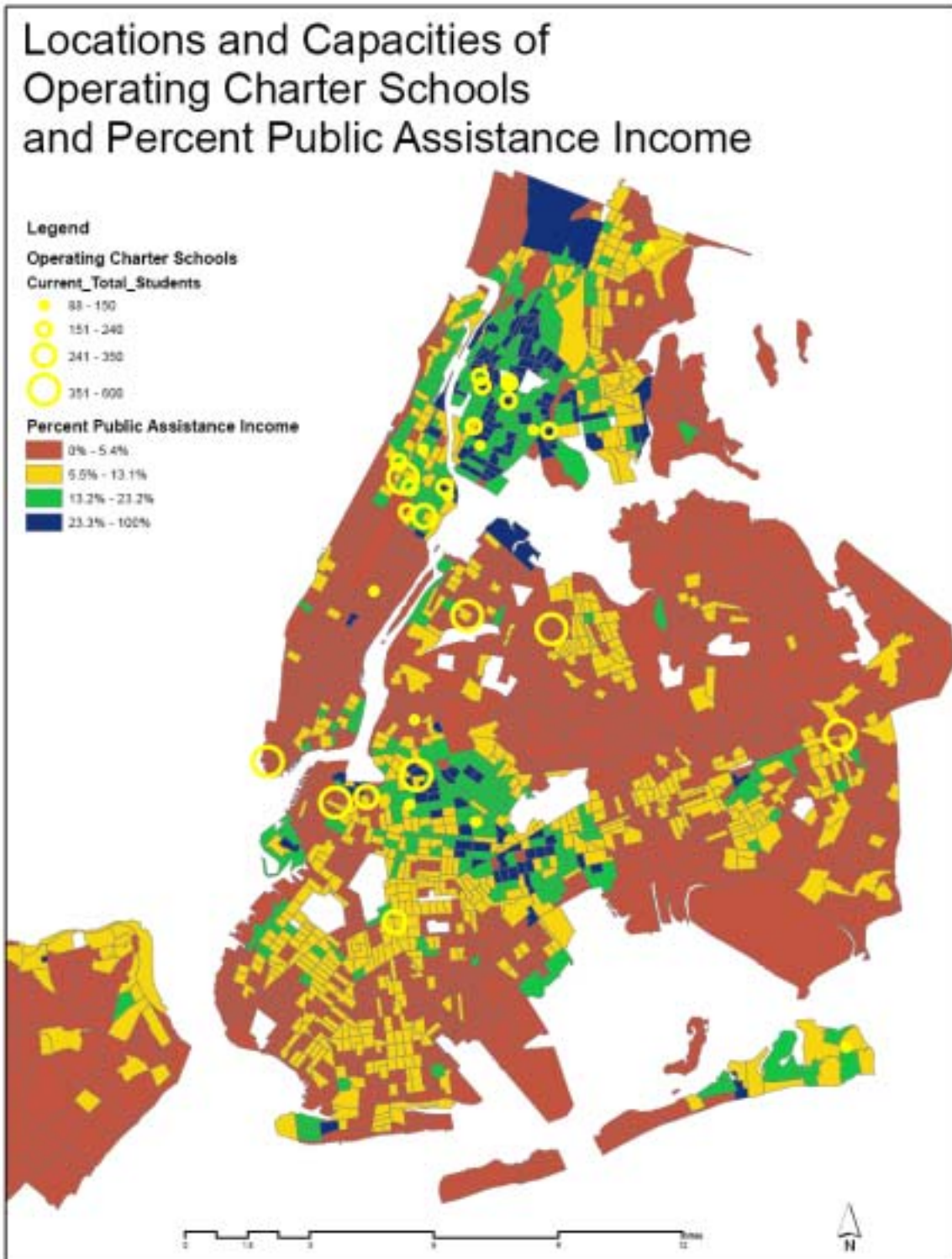




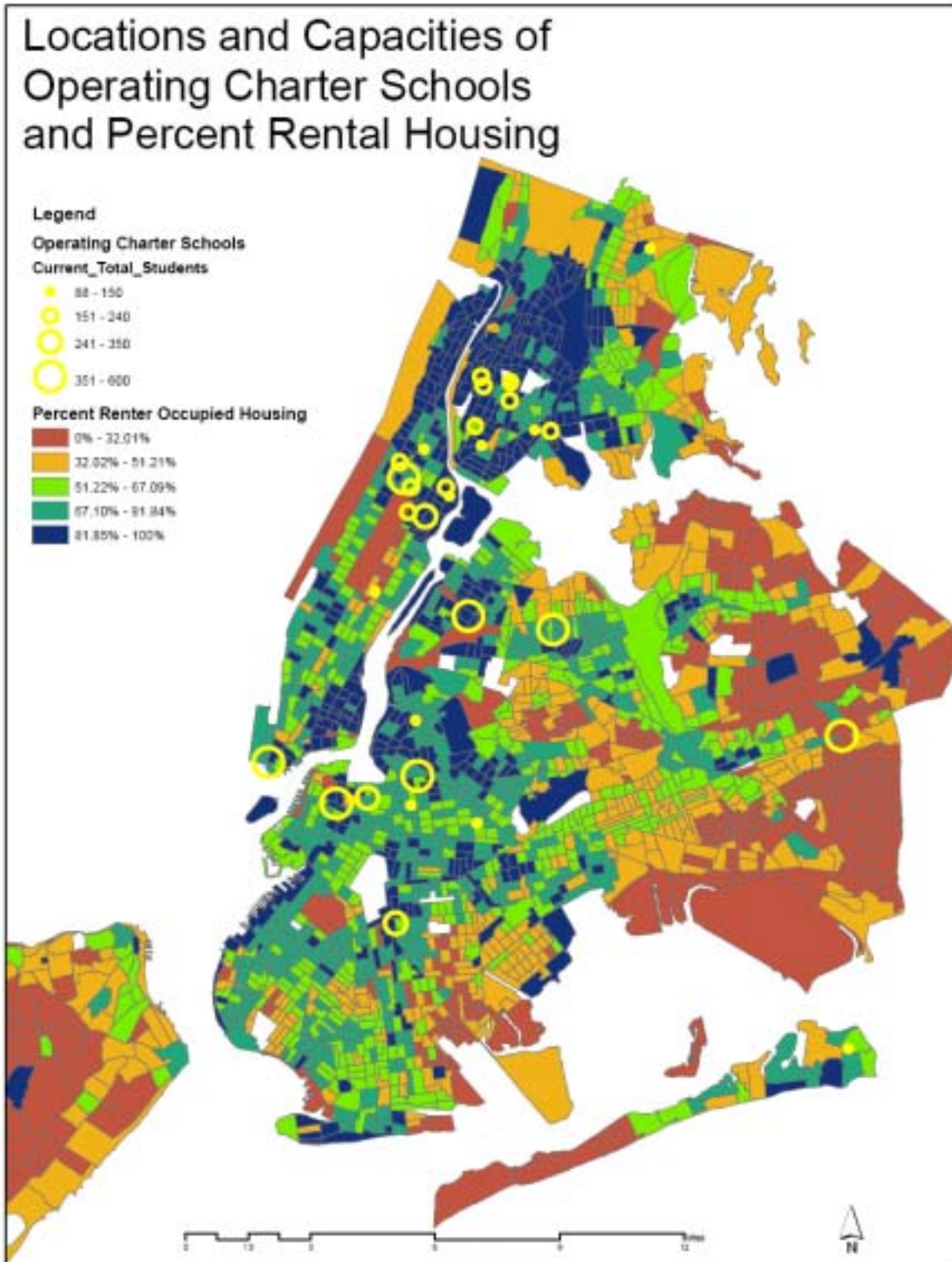
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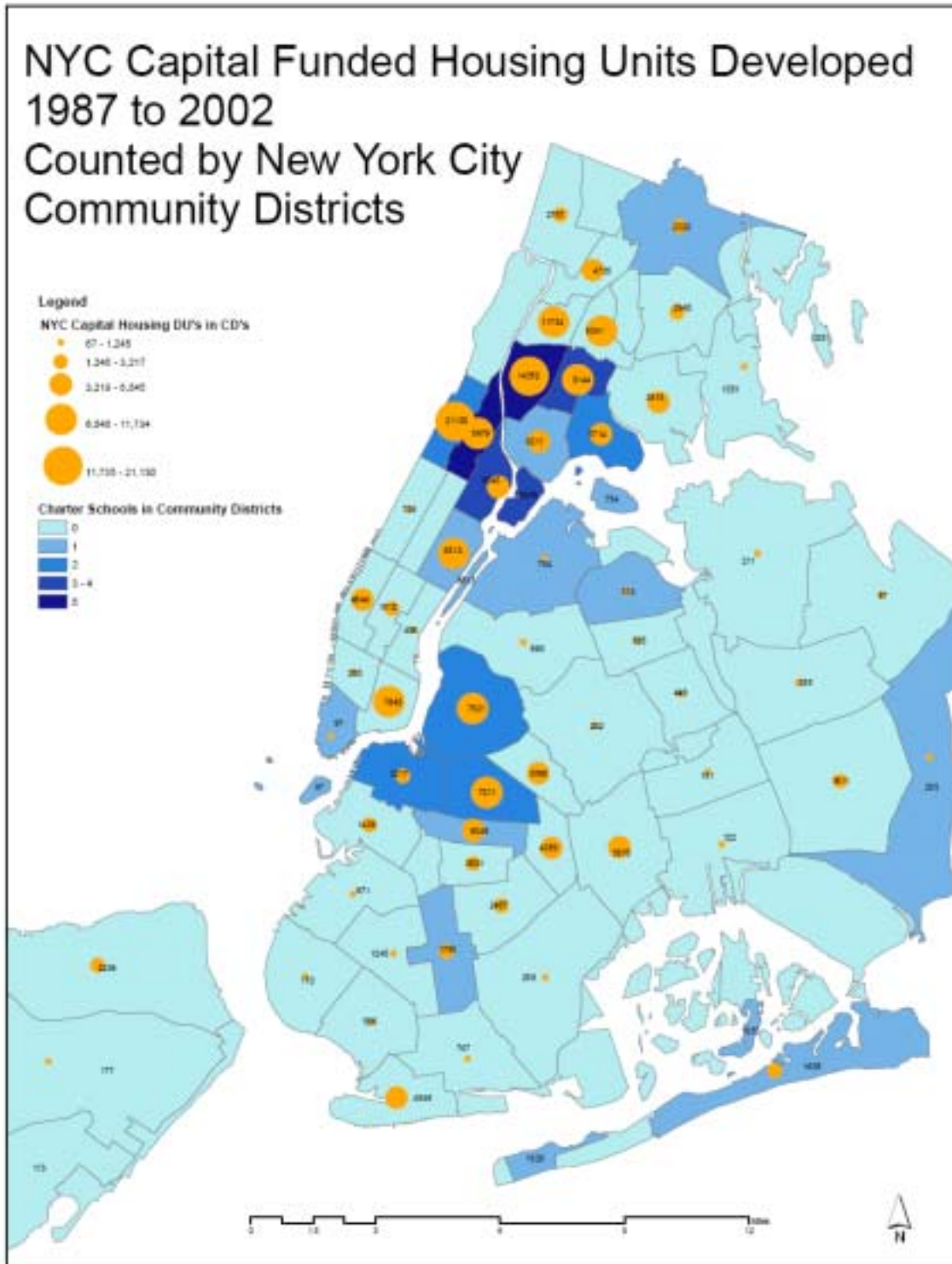
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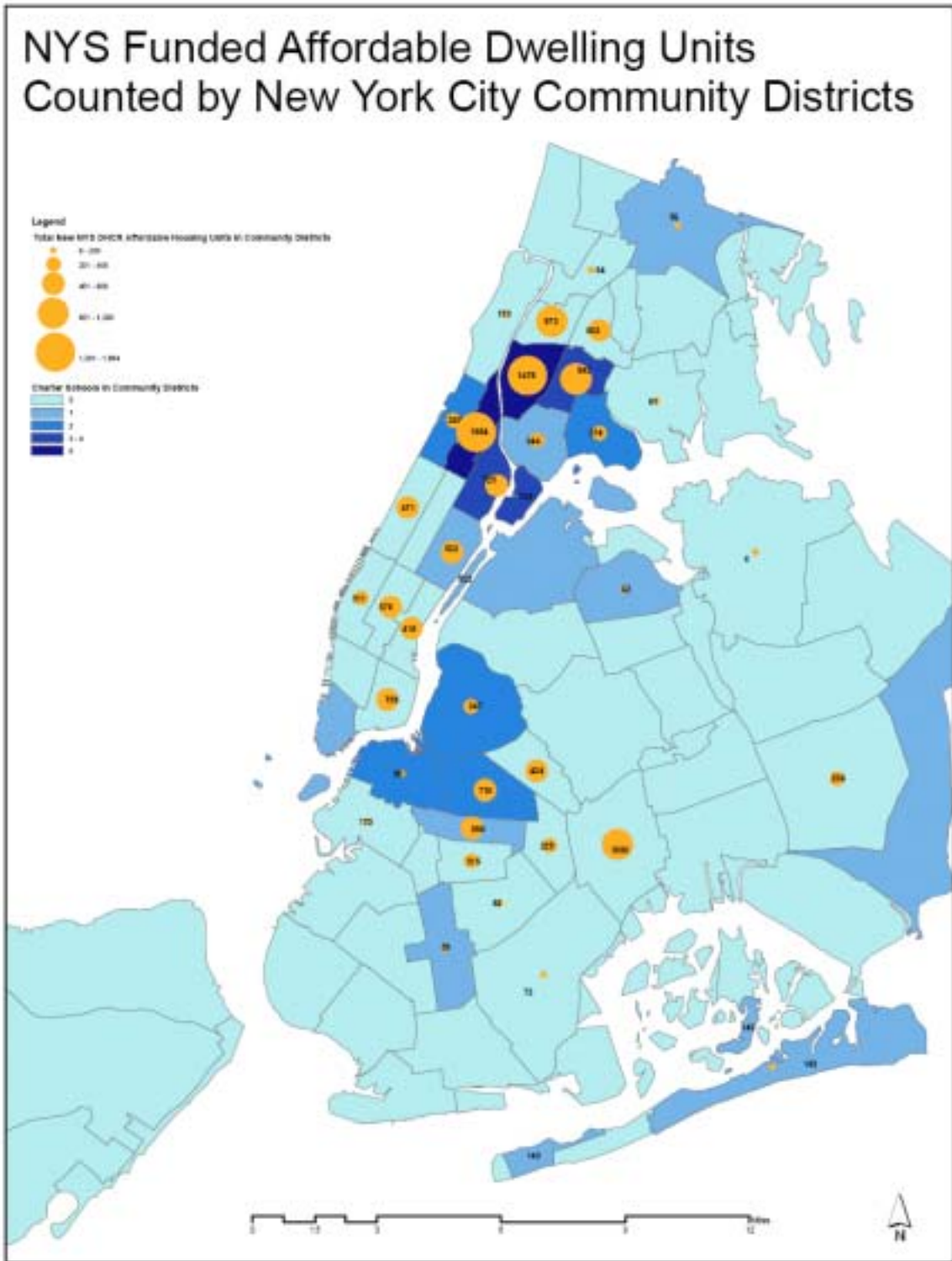
Map 8



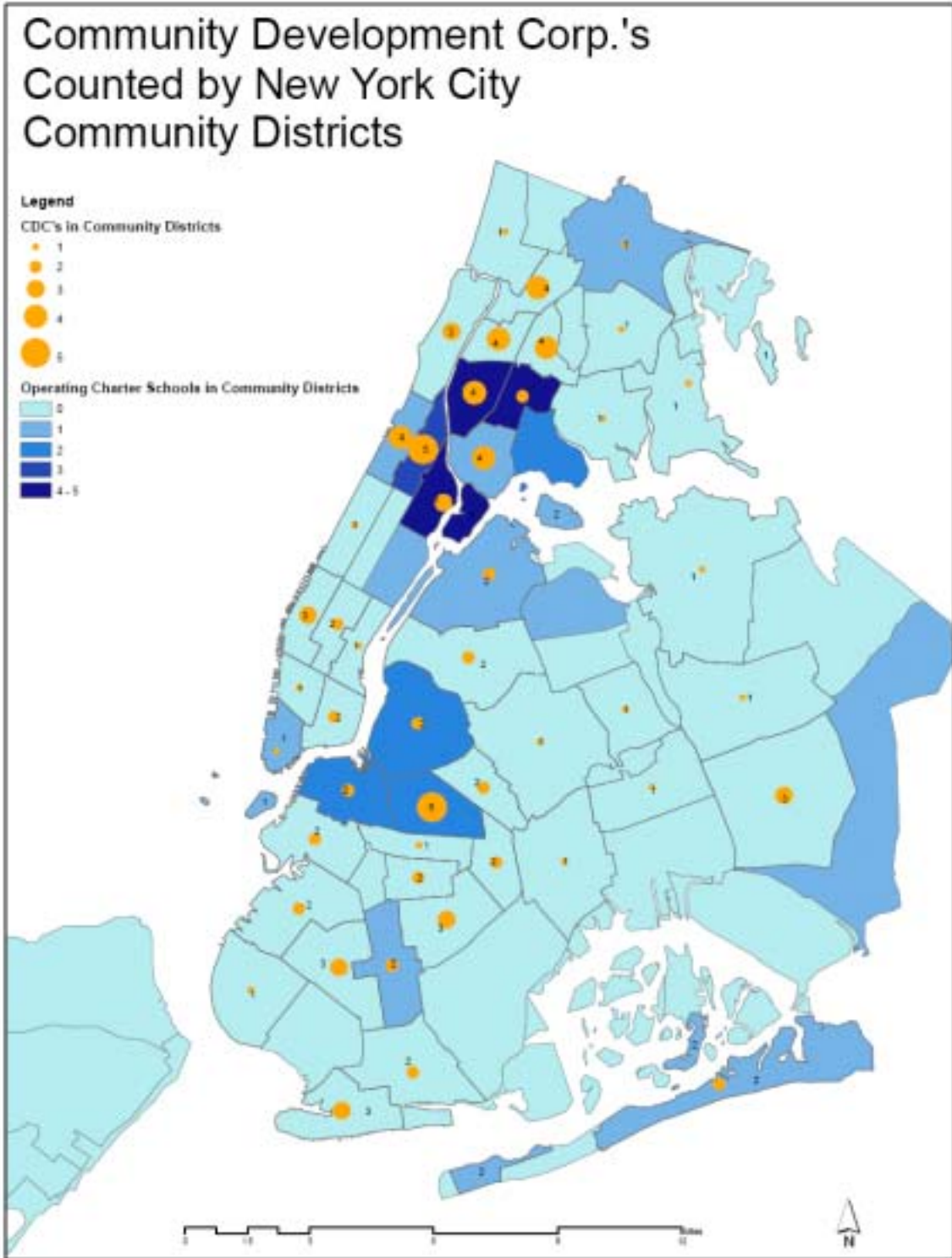
Map 9



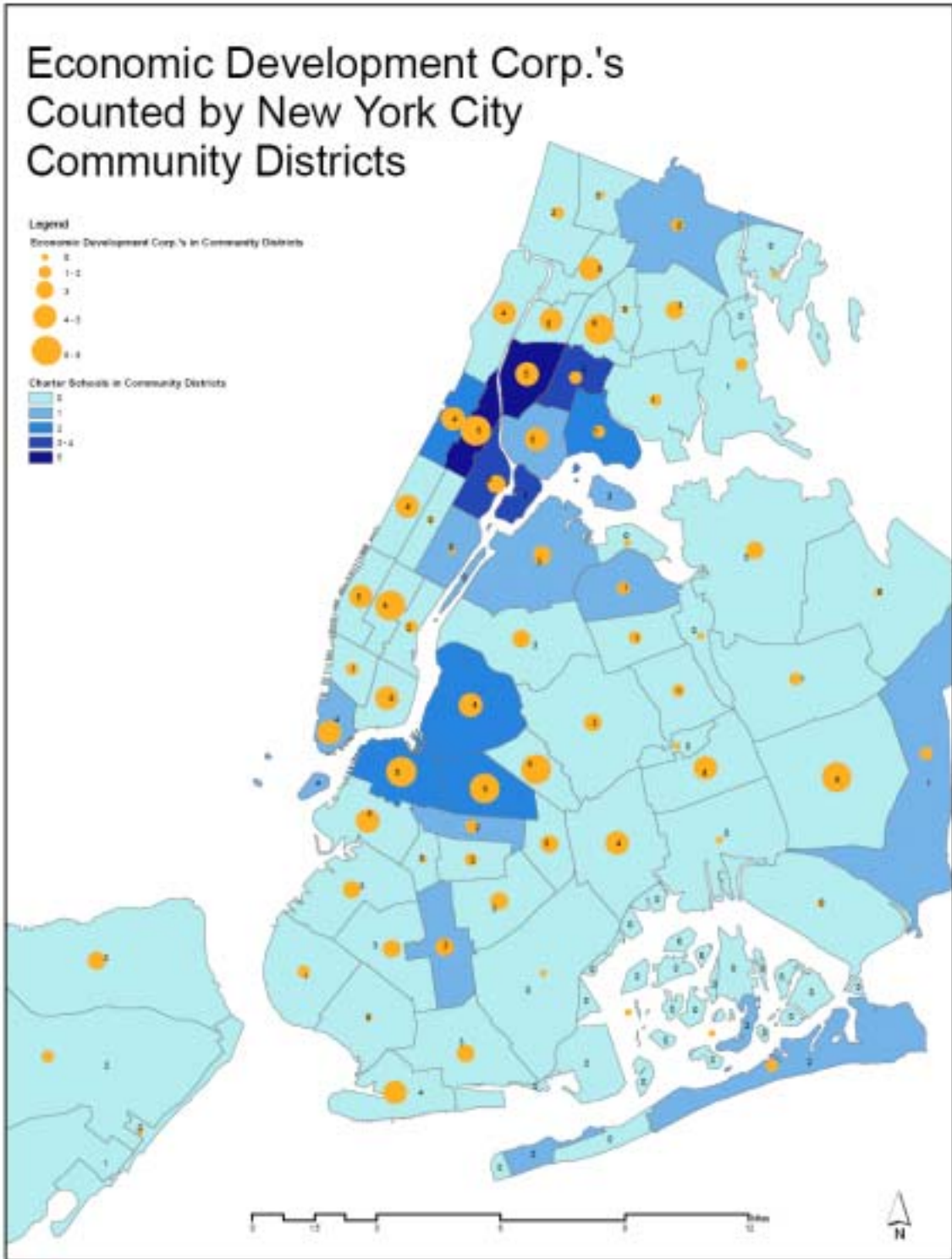
Map 10



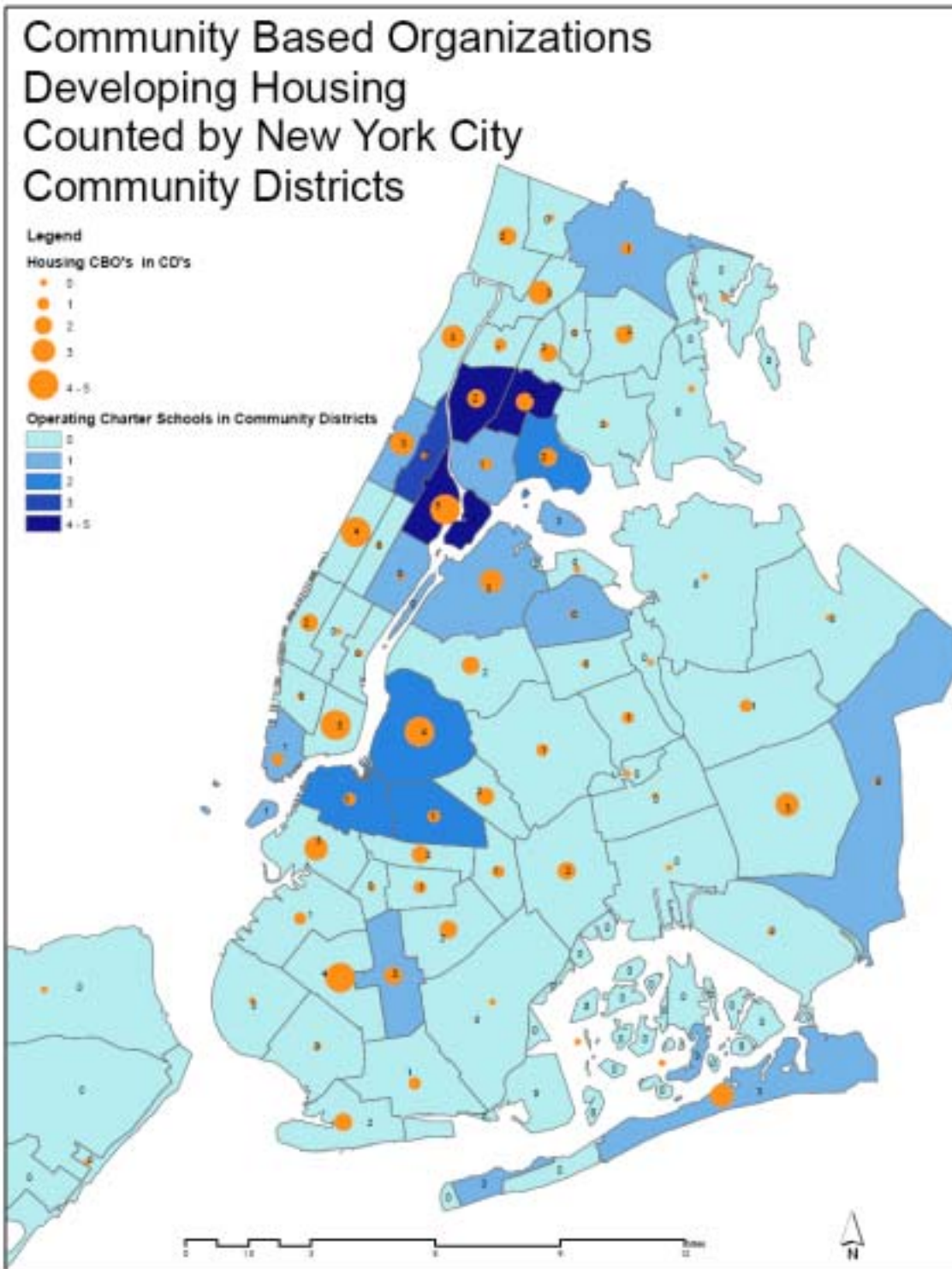
Map 11



Map 12

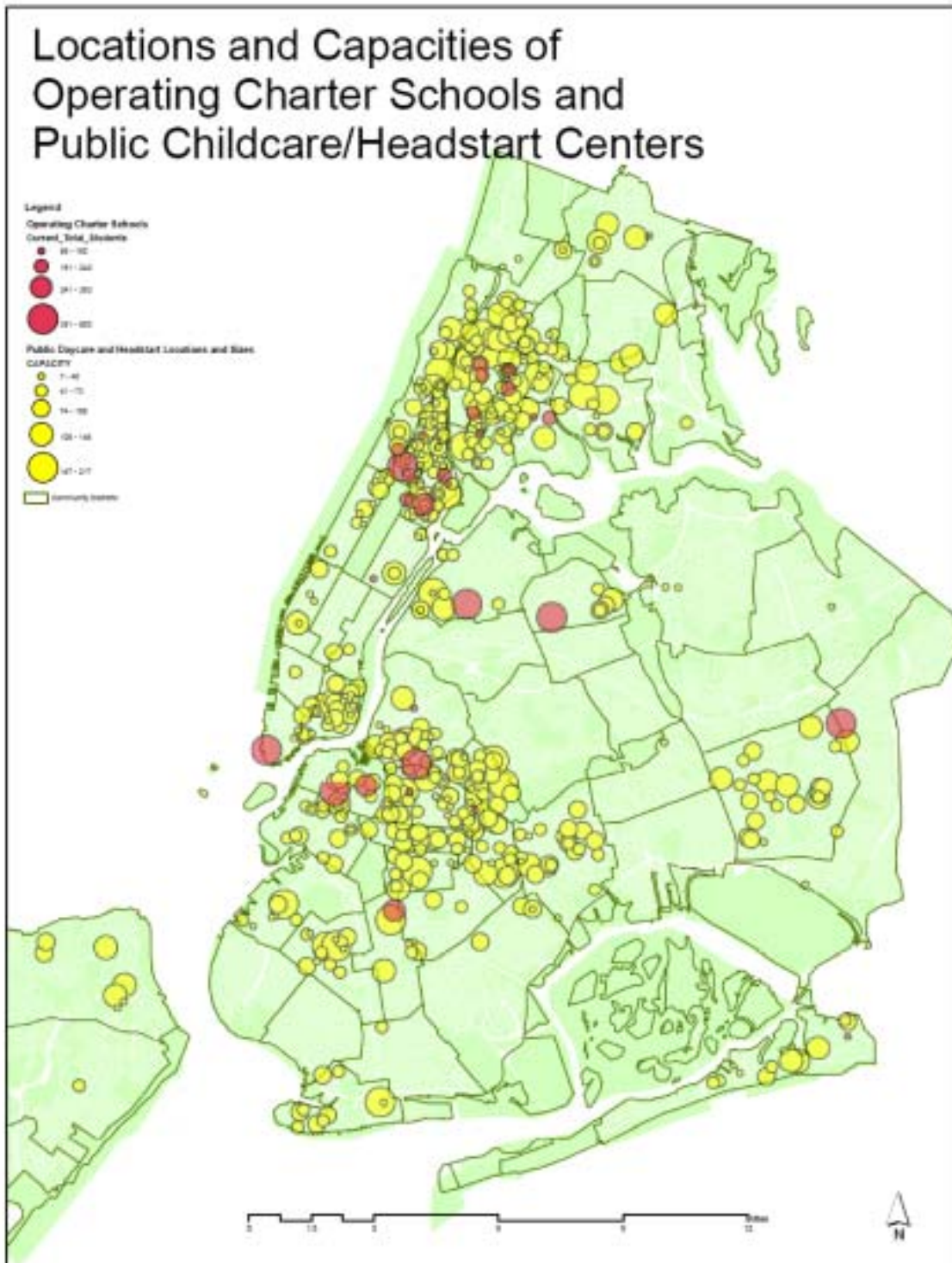


Map 13





Map 14



Map 15

