

School Siting Strategy Paper

**Chicago Metropolitan Agency for Planning
October 2008**

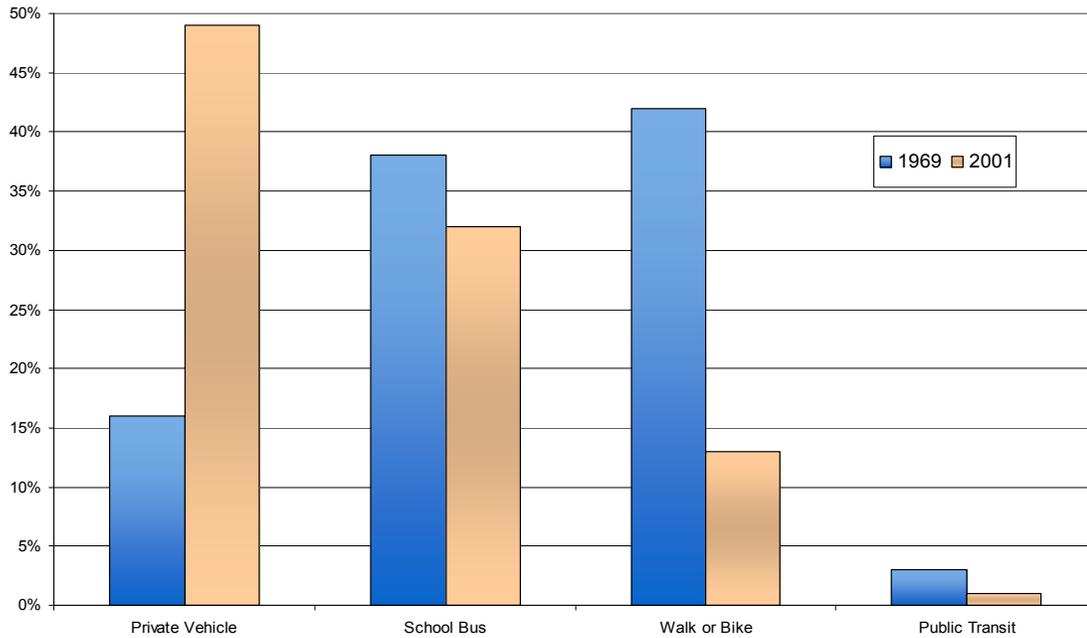


Introduction.....	2
Existing Conditions.....	3
Location of Schools	4
State regulations.....	4
Local regulations.....	5
Impacts of School Siting.....	7
Health Issues	7
Land use and Transportation.....	8
Potential Strategies to Address School Siting.....	11
Appendix 1.....	15
Appendix 2.....	17
Appendix 3.....	18
Appendix 4.....	19

Introduction

Traditionally, public schools in northeastern Illinois were built near the students they served—within walking distance from their homes. They were compact in design and were often viewed as an integral part of the neighborhood or community. As a result, many students were able to bike or walk to school. As development pushed further and further from the urban core, this pattern of development gave way to a trend in which larger schools were often located beyond a reasonable walking or bicycling distance—particularly at the high school level. This trend is not limited to the Chicago region, but is part of a national pattern. In 1969, almost 50% of all U.S. students walked or biked to school. By 2001, that number had shrunk to less than 15% (FHWA, 2001) (table 1). The significant reduction in the number of students who walk or bike to school correlates with an increase in vehicle traffic and congestion contributing to air and water pollution, and carbon emissions that impact climate change (BTS). Furthermore, the reduction in physical activity is likely a major contributor to the rapid rise in youth obesity rates (ICMA). This paper will address the impacts that development of new schools, or redevelopment of older schools, has on land-use, transportation, health, and communities. There will also be recommended courses of action that the region should consider as it plans a future to better integrate school facility planning with other types of planning—particularly land-use and transportation.

Table 1: Mode of Arrival to School by Children Ages 6-12, 1969, 2001 NHTS



Source: NHTS Data Series

Existing Conditions

In the CMAP region, there are nearly 300 school districts (U.S. CDC) that vary widely in the number of students, the number and size of schools, the geographic size of the district and type of district (Elementary (k-8), High School (9-12), and Unit (k-12)). With this many districts building new schools, additions, or renovating, it is not surprising that there is a great deal of variation. Building capacities, size of buildings, what are considered necessities, etc. are all things that can vary from one school district to another, and even within the same school district. In the CMAP region there are high schools with over 4,500 students (Stevenson) and some with less than 700 (Harvard). There are Jr. Highs with nearly 4,000 students (Unity Jr. High in Cicero is the largest Jr. High in the country) and elementary schools with more than 1,000 students. Yet there are school districts with less than 150 students (Rondout). Within the city of Chicago there are some of the largest and smallest schools. Even though variation is a part of the landscape, it does not mean that there cannot be areas of commonality that transcend any one school district.

In the last 10-15 years, two trends have emerged in the CMAP region that greatly impacts the location, size, and footprint of schools. First, a significant amount of the population growth taking place is in the far reaches of the region. The second trend is the spatial redistribution of the population within Chicago and some of the inner suburbs. The response to both trends has been to either add additions onto existing schools or to build new schools.

In the suburbs this has primarily meant adding capacity. Typically voters in various school districts have been asked to increase their taxes (via referendums) to support construction of new buildings or additions. In fact from 2002 through the 2008 primary over \$4.3 billion in school construction bonds were approved by suburban voters to renovate, expand, or build new

schools (appendix 1), which only slightly less than what was spent on road construction in Northeast Illinois (Illinois DOT). Developers in the meantime are increasingly being asked to pay higher impact fees, to reduce density, or both. As will be discussed, one of the primary drivers related to school construction in the suburbs has to do with local land-cash ordinances. Appendix 1 contains a list of all of the school construction bond referendums that have been approved by voters in recent years.

In Chicago and the inner suburbs, there are areas of population growth and decline which have created a spatial imbalance relative to where public schools are located. In Chicago, this has necessitated the reallocation of resources. While some areas of the city have experienced a fair amount of student population growth, other areas have witnessed steep declines in enrollment. This has created a situation in which many schools sit underutilized while others are overcrowded. Since 2001, enrollment in Chicago Public schools has *decreased* by 41,000 students, which has led to nearly 150 elementary schools being at least half vacant (CPS). In 2007 147 out of 417 elementary schools are anywhere from 1/2 to more than 2/3 empty. That compares with 30 or 40 underused schools in 2000 (Chicago Sun-Times). This has prompted Chicago Public school officials to announce that they will likely be closing or combining about 50 elementary schools over the next few years. With the amount of school construction activity taking place in the region, it is important to understand the dynamics that influence factors such as the location and size of schools. In this paper, most of the focus is placed on issues related to new schools, with less attention being devoted to the impacts associated with building additions or modifications.

Location of Schools

The process of determining where to build a new school is influenced by a number of factors but typically lacks a rigorous planning process considering a multitude of factors to determine the optimal location for a new public school. In fact, size, footprint, location, accessibility, walkability, etc. often take a back seat to finding a location that is the most cost effective and that offers the least amount of obstacles prior to development (environmental, storm-water, zoning, etc). While a well-defined planning process may not always be used, there are a number of regulatory requirements that influence the scale, scope, and location of new schools.

State regulations

At the state level there are two main sources of regulation: the School Construction Law (105 ILCS 230/5-1), and the eligibility guidelines put forth by the Illinois Capital Development Board (ICDB). In both cases, the goal is twofold: to prioritize and regulate the awarding of construction grants, and to establish project standards. In Illinois the [Capital Development Board](#) serves as the construction management arm for Illinois state government. Whenever state money is involved in a non-transportation capital project, the CDB typically has an oversight and regulatory role. The CDB sets standards and design guidelines for a project's state funding eligibility. When designing schools, most school districts follow CDB's list of eligible and ineligible items whether or not capital money is available from the state. In a practical sense, the

CDB has created a list of what should and should not be considered part of a school construction project, to receive state funds. Some items that are mentioned by the CDB are contrary to what is found in a numerous examples of “best practices” throughout the country. For instance, it is well documented that schools should be viewed as community centers and designed to be used 24 hours a day, year round (McAnn and Beaumont, Sullivan, National Summit on School Design, Binger Quinn and Sullivan). In fact, research suggests that student learning, school effectiveness, family engagement, and community vitality are significantly improved when schools are designed as centers of the community (Martin, Melaville, and Shah). The CDB however states the following about community centers:

“Community Facilities: Although CDB encourages development of facilities intended for joint use by school and community, CDB’s participation in the funding of such facilities is limited to those items required to meet the needs of the school’s educational and support programs.” (ICDB)

This approach does not encourage school districts to envision schools as community learning centers, an approach that has widespread national support. Furthermore, there is nothing to prevent the CDB from adopting an approach that encourages schools to be designed as community centers, since the grants they make are funded through tax revenues and their charge is not exclusive to building educational facilities. Another area that directly impacts the size and location of a school is acreage requirements. The CDB has established a *maximum* acreage formula (Table 2):

Table 2: Illinois Capital Development Board Acreage Rules

Reasonable Land Acquisition Cost or the Actual Cost (whichever is less) and Associated Legal Fees:

- A. Maximum acreage allowances fundable by CDB are as follows:
 - a. Elementary (PreK-6): 5 acres plus 1 acre per 100 students
 - b. Middle/Junior High (7-9): 15 acres plus 1 acre per 100 students
 - c. High School (9-12): 20 acres plus 1 acre per 100 students
- B. Minimum acreage allowance is 1.5 acres and requires approval from ISBE and CDB.

This formula should have the effect of capping the number of acres associated with a school however many municipalities have enacted ordinances that adhere to different standards.

Source: Joint Committee on Administrative Rules: Title 71: Public Buildings, Facilities And Real Property Chapter I: Capital Development Board Subchapter A: Rules Part 40 Standards for Award of Grants: School Construction Program Section 40.130 Construction Grants

Local regulations

One of the most important regulations, with regard to school sitings, is the municipal land/cash ordinance. The basic concept is that new developments cause or impose demands on public facilities and services. In order to help mitigate that effect, developers are required to

either donate land or cash or both based on a formula adopted by that municipality. Typically the land/cash ordinance will have a formula and chart that states the minimum usable acres for each school classification (Elementary, Jr. High, High School, etc.) and the minimum number of students for each school classification which is used to calculate the land/cash requirement of a developer. Appendix 2, which is the Village of Oswego's Land/Cash Ordinance, is an example.

There are a variety of potential areas of concern associated with this approach and its outcome. The first concern is that the entire premise upon which this formula is based is derived from guidelines that are no longer supported by those who developed the guidelines. The guidelines referenced above were developed by the [Council of Educational Facility Planners International](#) (CEFPI). They had recommended large sites for new schools, primarily as a way to maximize cost efficiencies. The CEFPI's old guidelines called for a minimum of one acre of land for every 100 students plus 10 acres for an elementary school, 20 acres for a middle school, and 30 acres for a high school. Thus an elementary school with 600 students would need 16 acres; a middle school with 900 students, 29 acres; and a high school with 2,400 students, 54 acres (CEFPI). Over time these guidelines or formulas based on these guidelines become codified in municipal ordinances throughout the region. However, in 2004 CEFPI revisited those guidelines and now suggest that school districts use a flexible approach that is based on educational and community needs and not on an acreage formula (CEFPI). Unfortunately, many municipalities in the CMAP region still have a formula in their municipal ordinances that is derived either wholly or partially from an outdated formula.

There are a number of examples of combined elementary and middle schools or Junior High campuses throughout the region. These multi-building campuses help to reduce the total building footprint and can create an environment that is more pedestrian and bicycle friendly. At the same time though, campus sizes of high schools remain a challenge. Many high schools in the suburbs, particularly new ones, are being built on campuses that are often 70 acres or more. A recommended high school size, in terms of acres and building capacity, is not listed in any "best practices" or state law. In fact, it appears to be a byproduct of municipal ordinances associated with the land/cash requirement from developers. School districts also have a desire to have as much land as possible to accommodate possible future growth and to have athletic fields for practices.

Another issue is the variation in the land/cash ordinances from one municipality to another. As Table 3 demonstrates, there is a lack of consistency in both the number of students and acres per school classification. Nearly every school district outside the City of Chicago has boundaries which place a school district in more than one municipality, township, and in some cases county. This creates a scenario in which multiple variations of the land/cash ordinance are at play within the same school district. This can lead to variations in land or cash donations, potentially in school sizes and footprint, and complicates the planning process for a school district.

Table 3: Municipal Land/Cash Formulas: Acreage Requirements

Municipality	Oswego		Carpentersville		St. Charles		Joliet		Elgin	
	Students	Acres	Students	Acres	Students	Acres	Students	Acres	Students	Acres
Elementary	600	15	600	15	600	15	600	11	600	11
Jr. High	900	25	750	30	900	35	900	29	1200	29
High School	2400	80	2500	80	1500	80	1500	45	2500	55
Municipality	New Lenox		Manhattan		Palatine		Grayslake		Matteson	
	Students	Acres	Students	Acres	Students	Acres	Students	Acres	Students	Acres
Elementary	600	11	600	17	600	11	600	11	600	11
Jr. High	900	19	900	34	900	19	900	19	900	29
High School	2500	50	1500	45	4000	65	2300	48	1500	45

Source: Municipal Ordinance for each Municipality (see appendix 3 for citations)

Impacts of School Siting

Health Issues

Some of the newest high schools built in the suburbs, where land/cash ordinances are fairly common, have rather large campuses while those in the city are typically built on compact sites (table 4).



Table 4: Recently Built High Schools (Cost and Acreage)

High School	Capacity	Cost	Year Built	Acres
Nequa Valley	3,000	\$ 62,500,000	1997	75
Northside College Preparatory (Chicago)	1,100	\$ 52,500,000	1999	6.2
Plainfield South	2,400	\$ 40,800,000	2001	75
Bolingbrook	3,600	\$ 103,322,000	2004	70
South Elgin	2,500	\$ 48,608,000	2004	70
Oswego East	2,400	\$ 65,000,000	2004	104
Little Village (Chicago)	1,400	\$ 63,000,000	2005	16.5
Metea Valley*	3,000	\$ 146,240,000	2009	84.1

* Currently being built

Source: Multiple sources (see appendix 4 for citations)

Large campuses can result in high schools that are located in areas that are not bicycle or pedestrian friendly. Schools that are not designed to *encourage* biking and walking contribute to a myriad of health related issues that are becoming increasingly prevalent in today's school children.

From 1980 to 2000, childhood obesity among adolescents aged 12 to 19 more than tripled, increasing from 5% to 17.1% (Ogden, Carroll, Curtin, McDowell, Tabak, Flegal) Children that are overweight are at increased risk for a number of health related issues such as: heart disease, high cholesterol or high blood pressure, bone and joint problems, sleep apnea, diabetes, asthma, and social and psychological problems. As they grow older, these and other health problems only increase.

The Centers for Disease Control and Prevention (CDC) have conducted a number of studies and developed numerous recommendations to deal with significant increases in overweight children. Health concerns of kids, particularly related to childhood obesity, diabetes, and asthma has prompted the U.S. Department of Health and Human Services and CDC to develop a program called [Kids Walk-to-School](#) that specifically addresses and encourages communities to increase physical activity in kids via biking and walking to school. In addition the U.S. DOT has developed a program, [Safe Routes to School](#) that is specifically designed to encourage walking and biking to school by funding projects that make walking and bicycling to school safe and enticing. The federal government provides 100% of the funding for the Safe Routes to School program.

Land use and Transportation

A school's proximity to existing infrastructure, the accessibility of the school by multiple modes of transportation, parking, and proximity to other destinations, etc. all influence traffic patterns and usability of the school. School siting has become such an important issue that the Environmental Protection Agency (EPA) has partnered with CEFPI and developed guidelines and best practices for locating schools, primarily using smart growth principles (CEFPI, EPA). In addition, the EPA encourages schools to be developed as community centers and they generally support building schools on small sites. In fact, they even suggest making multiple-story schools to reduce impact on the land:



“A centrally located school that is easy for students and citizens to walk or bike to can reduce land needed for parking, bus drop-off and circular traffic. Schools can even use the money they save by using a smaller site to build a multistory school, reducing yet again the needed land and associated costs.”(U.S. DOT)

Locating schools close to where people live can reduce the number and length of automobile or bus trips which can lead to a reduction in emissions and an improvement in air quality. The EPA concludes that,

“Schools built close to students, in walkable neighborhoods, can be called neighborhood schools. neighborhood schools would reduce traffic, produce a 13 % increase in walking and biking and a reduction of at least 15% in emissions of concern.”

When schools are located outside of neighborhoods or central areas, they can become educational islands. This is more likely to occur with high schools than with elementary, middle schools, or junior high schools. When a high school is located away from the bulk of the population of a community, it is less likely that the school will function as a community center. Instead, the school will be viewed as strictly an educational facility. Underutilization of schools can contribute to increased air pollution as trips to this facility generally are longer in length and are made using automobiles. Trip chaining, such as combining multiple errands into one trip, can be negatively impacted if a school is not near other destinations and doesn't lend itself to non-automobile modes of travel.

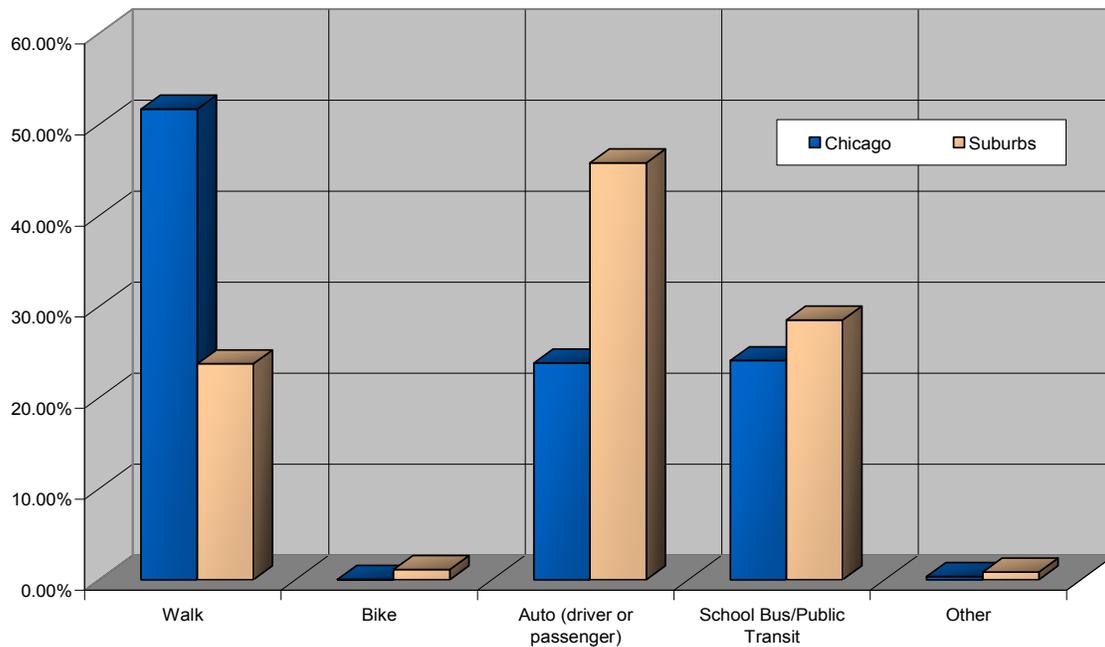
One of the most frequently heard complaints by school administrators has to do with traffic congestion in and around schools during pickup and drop off times. As walking and bicycling continue to decline auto and bus trips continue to rise. As auto and bus trips increase so does congestion. The more congestion there is around a school the more likely it is that cars and busses will spend time idling. Idling, particularly from busses has been shown to be a contributor to air pollution which in turn has been shown to increase the chances of serious health effects, such as asthma or other respiratory illness. The U.S. EPA states that:

“Studies indicate that students can be exposed to high levels of diesel exhaust when they are inside school buses, near idling school buses, and even inside schools (due to exhaust penetration from idling buses). Queuing of buses for pick-up and drop-off and periods of idling during the bus commute itself may be particular problems. Diesel exhaust can aggravate respiratory and cardiovascular disease and existing asthma. It can also cause acute respiratory symptoms, chronic bronchitis, and decreased lung function.” (U.S. EPA)

Parents driving kids to school has risen from 15% of all school trips to about 50% from 1969 to 2001 (U.S. DOT). Data from the recently completed Chicago Regional Household Travel Inventory shows that roughly 22% of all the trips in the region during the morning rush period (6-9 am) are school related. Table 5 shows the breakdown of school related trips during the morning (6-9 am) by mode, for Chicago and the Suburbs. The results of the Chicago Regional Household Travel Inventory clearly suggest that there are significant differences between city and suburban school trips during the morning rush period. Walking comprised over 50% of city school trips but only slightly more than 23% of suburban school trips, made during the morning commute. In the suburbs driving (either alone or as a passenger) is the dominate mode of transportation, comprising over 45% of morning school trips. It is not surprising then that traffic congestion around suburban schools is frequently cited as a major concern of school officials and police departments throughout the suburbs.

Table 5:

School Trips by Mode of Travel during the Morning Peak (6-9am)



Source: 2007-2008 Chicago Regional Household Travel Inventory conducted by the Chicago Metropolitan Agency for Planning (CMAP)

In Illinois, a significant number of children are also bussed to school. In fiscal year 2007, over \$325 million dollars were spent to bus students to and from school in Illinois (not including special education). School districts are reimbursed for about 80% of the cost associated with busing if one of 2 conditions is met: the student lives more than 1.5 miles from the school or the route they would have to travel is deemed hazardous.

In Illinois, nearly 84% (795,164) of the students who are bused live more than 1.5 miles from their school, while 16% (153,478) are bused because the route they would travel has been deemed unsafe by the Illinois Department of Transportation (IDOT). Other than distance, the most common reasons given as to why students do not bike or walk to school are safety related. Concerns about the built environment, traffic, or crime are often given as a justification why students don't walk or bike.

Communities should also consider the costs and benefits associated with renovation versus new construction. The Capital Development board does not differentiate between new buildings, renovations, or additions. As long as overcrowding of students is being addressed, the project will receive a relatively high ranking. Generally speaking, the more over crowded a school is, the higher it is ranked by the CDB. In fact, replacing, renovating, or adding on to an existing school may be cheaper in the long run than building a new school due to reduced land acquisition, infrastructure and transportation cost.

Many of the following recommendations for school siting are derived from case studies and reports, and adapted to fit into the context of northeastern Illinois. Some of the recommendations are planning principles, while others call for a reexamination of how aspects related to selecting a location for a new school or determining the size of a new school are done.

Potential Strategies to Address School Siting

A number of strategies identified in this section are based on the recommendations put forth in the National Governor's Association's (NGA) May 2007 Issue Brief, "Integrating Schools into Healthy Community Design" (Springer). In the brief, the NGA recommends the following:

- Reducing or eliminating minimum acreage requirements for schools;
- Revising school funding formulas to promote renovation or expansion of existing sites;
- Requiring that schools be located in areas designated for growth that already have sufficient existing infrastructure to support school facilities; and
- Creating, funding, promoting, and implementing Safe Routes to School Programs.

As mentioned before, all of the above are relevant to the CMAP region, but need to be tailored to the current situation. The following are potential strategies for addressing issues associated with school siting in the region:

- *Revisiting acreage requirements for schools, particularly High Schools. The state, through the CDB, has set forth maximum acreage guidelines while most municipalities set forth minimum guidelines.*

This inherent conflict needs to be resolved. Furthermore, variations in land/cash ordinances among municipalities can cause unnecessary variations and complexities for a school district with multiple jurisdictions within their boundaries. Since the land/cash ordinance is designed to provide resources for school districts, simply eliminating this requirement is not practical.

A joint commission, comprised of municipal and school district leaders from throughout the region, could be formed to examine this issue and put forth recommendations leading to some regional consistency, which could solve many of these issues. By doing so they would provide school districts with both the resources (land or cash) that they need, while also addressing acreage requirements issues.

- *Create a program that brings together municipal planners, school officials, and other relevant parties to develop and implement a comprehensive planning process for school districts to use when selecting a school site and designing/building a school that is based on established planning principles and current best practices.*

Illinois did put together the School Construction Guideline Task Force to address a number of issues related to school construction in 2000. The results included a report to

“...offer you the guidance of others and, most importantly, encourage you to plan as you consider building new educational facilities. It is not an encyclopedia of school construction; rather it identifies some of the issues and processes that may save school districts time, money and effort on their projects.” (ICDB 2000)

In addition to those items mentioned in the report noted above, there is a number of planning policy recommendations which are commonly referenced in the literature:

- Design schools with compact building designs that lessen the amount of land used. This may involve constructing more multi-story buildings.
- Encourage schools to invest in their existing schools before building new schools. This can be done through financial incentives from the CDB, through waivers or zoning variances from a municipality or county, or through partnerships with other units of local government that will either help financially or via some other means to keep a school located in a site with existing infrastructure.
- Locate schools in areas that will encourage walking and biking.
- Mix land uses (combining schools with park facilities for example) or by building schools near other destinations so that trips may be combined.
- Preserve open space (this can be done by redeveloping old schools or sites that are no longer in use).
- Provide a variety of transportation choices so that cars and school buses are not the overwhelming majority of trips to and from a school.
- Make development decisions predictable, fair and cost-effective so that the process is the same both within a school district and among school districts.
- Encourage community and stakeholder collaboration so that the community has both a say and vested interest in the school. This can help to make it a community centered school.

One way for this to be achieved is for CMAP to establish a program similar in nature to the School and Communities Program (<http://www.atlantaregional.com/html/3372.aspx>) that the Atlanta Regional Commission has established. The program recognizes “the fact that school and community planning are predominantly conducted mutually exclusive of each other, but are inextricably linked...” This program would bring together school districts, local government officials, and municipal planners to develop a comprehensive planning process, provide technical assistance, and share best practices. In addition, it would be useful to have CMAP provide technical assistance to school districts so that they may have a better understanding of planning issues and the relationships that schools have to other aspects of the community.

- *Design Schools to be Community-Centered*

Schools that are community-centered provide numerous benefits, not only to students, but to the community and the taxpayers that often are asked to fund the construction of a school. Some of the benefits include (CEFPI 2004):

- Promoting a sense of safety and security.
- Building connections between members of the school and the community.
- Engaging students in learning.
- Fostering environmental stewardship.

- Promoting economic development.
 - Strengthening neighborhoods.
 - Improving human and environmental health.
- *Create environments that encourage students to walk or bike (IMCA).*

Use the Safe Routes to School programs and work with communities to develop plans that will enhance biking and walking opportunities. This includes using the National Highway Traffic Safety Administration Safe Routes to School toolkit, SR2S ([SR2S Toolkit](#)). The toolkit focuses on four areas: engineering, enforcement, education, and encouragement. Examples include strategies to increase pedestrian safety and access around schools such as:

- Educating children about safe pedestrian skills.
 - Generating enthusiasm among parents and children about the issue
 - Mapping and publicizing designated safe routes.
 - Engineering for traffic calming and pedestrian safety.
 - Patrolling routes and chaperoning children as they travel to and from school.
 - Increased enforcement of traffic laws.
- *Work to ensure that a minimum of 50% of the students can walk or bike to school (Beaumont and Pianca).*

There are a number of ways this can be accomplished including using best practices related to design elements (CEFPI 2004), (Dover, Kohl & Partners and Chael, Cooper & Associates) and by using traffic modeling techniques that can be used to estimate travel modes and patterns (EPA) schools can use alternative analyses to see the potential effects that a different locations can have on automobile traffic, walking, biking, etc. This information can then be incorporated into the site selection process.

With the U.S. Congress poised to provide billions of dollars a year (21st Century Green High-Performing Public School Facilities Act) in new money to build, modernize, and expand schools throughout the county, and with continued talk of a state infrastructure program that would also provide billions of dollars in school construction funds, now is the time to develop a comprehensive school planning process. A well designed planning process can be used to generate outcomes that benefit students, the community, the environment, the region and state as a whole. Some of the desired outcomes that would be a by-product of a comprehensive planning process are listed below:

- Improving the health of students and adults.
- Improving air quality in and around schools and in the region.
- Improving safety around schools.
- Bringing consistency to the planning process for schools districts, the public, and developers.
- Encouraging schools to be developed as community-centered schools.
- Using green building techniques to lessen the environmental impacts of a school.

- Having school planning efforts become integrated with other community planning efforts.
- Enhance educational achievement.

The capital development board has initiated aspects of this process through both their school construction rules and 2 publications. What they offer, however, is guidance and encouragement to plan—but not a requirement to do so. In doing so they are respecting the long established history associated with local control and decision making. The challenge is to have a consistent process so that outcomes and goals are relatively similar, while allowing enough flexibility to incorporate local values and priorities. The planning process should provide a common framework that would yield similar benefits and outcomes throughout the region while enabling enough local variation to occur so that each new school or addition looks and functions in a manner that is a by-product of local preferences.

Acknowledgments:

CMAAP would like to thank Jimm Dispensa, director of school demographics and planning for Chicago Public Schools, Clifford Bender A.I.A. from Healy, Bender & Associates, and Dr. John Harper, Superintendent for Plainfield Community Consolidated School District #202 for their valuable insights.

Appendix 1

Passed Bond Referendums Since 2002 (Source: Illinois State Board of Elections
<http://www.elections.state.il.us/ElectionInformation/ElectionResultsRef.aspx>)

Year	County	District	Amount
2002	Cook	District 155	\$3,000,000
2002	Cook	Chicago Ridge (127.5)	\$14,910,000
2002	Will	Joliet (86)	\$28,000,000
2002	Kane	Kaneland (302)	\$45,000,000
2002	DuPage	Lake Park (108)	\$45,000,000
2002	Cook	District 157	\$8,250,000
2002	Lake	Grayslake (127)	\$50,000,000
2002	DuPage	Winfield (34)	\$8,000,000
2002	Kendall	Yorkville (115)	\$18,500,999
2002	Will	Valley View (365U)	\$143,200,000
2002	Kane	Aurora West (129)	\$59,000,000
2002	Cook	Skokie (69)	\$9,000,000
2002	Kane	St. Charles (303)	\$43,000,000
2002	Will	Plainfield (202)	\$159,900,000
2002	Will	Richland (88a)	\$6,000,000
2002	Cook	Ridgeland (122)	\$24,000,000
2002	Cook	Sandridge (172)	\$1,900,000
2002	Will	Minooka (201)	\$12,000,000
2002	Cook	Oak Lawn (123)	\$25,006,420
2002	Kendall	Oswego (308)	\$155,000,000
2002	Cook	Thornton (215)	\$19,000,000
2002	Cook	Hazel Crest (152-5)	\$1,500,000
2002	Lake	Hawthorn (73)	\$39,500,000
2002	McHenry	Huntley (158)	\$80,000,000
2002	Cook	Lindop (92)	\$5,850,000
2002	DuPage	District 181	\$24,000,000
2003	DuPage	Wheaton (200)	\$72,000,000
2003	Cook	Mannheim (83)	\$8,000,000
2004	Cook	Arbor park (145)	\$13,000,000
2004	Cook	CCSD 181	\$31,000,000
2004	Cook	Ford Heights (169)	\$2,500,000
2004	DuPage	Addison (4)	\$25,000,000
2004	Kane	East Aurora (131)	\$44,000,000
2004	Lake	Milburn (24)	\$15,985,000
2004	Lake	Warren H.S.	\$15,500,000
2004	Lake	Big Hollow (38)	\$29,000,000
2004	Lake	Gavin (37)	\$1,000,000
2004	Will	Crete-Monee (201-U)	\$79,400,000
2004	Will	Frankfort (157-C)	\$41,800,000
2004	Will	New Lenox (122)	\$35,000,000
2004	Kane	Geneva (304)	\$41,185,489
2004	DuPage	Gower (62)	\$1,850,000
2004	Lake	Grayslake (46)	\$34,000,000
2004	Will	Manhattan (114)	\$21,000,000
2004	Will	Minooka (201)	\$15,000,000
2004	Will	Troy (30-c)	\$22,520,000

2005	Will	Beecher (200-U)	\$10,000,000
2005	Will	Richland (88a)	\$10,000,000
2005	Will	Summit Hill (161)	\$39,000,000
2005	McHenry	Wauconda (118)	\$60,000,000
2006	Cook	Glenbrook North (225)	\$94,000,000
2006	Kendall	Oswego (308)	\$450,000,000
2006	Lake	Lake Forest (115)	\$54,000,000
2006	Cook	Ridgewood HS (234)	\$40,000,000
2006	Kane	Central (301)	\$34,000,000
2006	Kane	Dundee (300)	\$185,000,000
2006	Cook	Elmhurst (205)	\$41,000,000
2006	Lake	Freemont (79)	\$22,000,000
2006	DuPage	Glenbard (87)	\$32,000,000
2006	Cook	Lemont (210)	\$29,600,000
2006	Will	Lincoln-Way (210)	\$225,000,000
2006	Will	Minooka (111)	\$52,400,000
2006	Will	Plainfield (202)	\$252,100,000
2006	DuPage	Indian Prairie (204)	\$124,660,000
2006	Kane	Plano (88)	\$28,000,000
2006	Cook	Pleasantdale (107)	\$8,924,930
2006	DuPage	Queen Bee (16)	\$7,950,000
2006	Cook	Riverside Brookfield (208)	\$58,873,861
2006	Lake	Round Lake (116)	\$17,000,000
2006	Will	Wilmington (209-U)	\$32,800,000
2006	McHenry	Woodstock (200)	\$105,000,000
2006	Kane	Yorkville (115)	\$56,000,000
2007	Cook	Kenilworth (38)	\$8,250,000
2007	Cook	Schiller Park (81)	\$19,700,000
2007	DuPage	DuPage H.S. (88)	\$104,700,000
2007	Kane	Batavia (101)	\$75,000,000
2007	Kane	Geneva (304)	\$79,900,000
2007	Lake	Lake Bluff (65)	\$24,400,000
2007	Will	Joliet (204)	\$24,000,000
2007	Lake	Barrington (220)	\$4,400,000
2007	Will	Troy (30-c)	\$20,000,000
2007	Cook	Winnetka (36)	\$47,290,000
2008	DuPage	District 89	\$24,800,000
2008	DuPage	District 200	\$58,000,000
2008	Lake	Grant HS (124)	\$38,500,000
2008	Kane	Kaneland (302)	\$65,000,000
2008	Will	Minooka (201)	\$54,865,325
2008	Lake	Mundelein (75)	\$6,600,000
2008	DuPage	Naperville (203)	\$43,000,000
2008	Cook	Schiller Park (81)	\$22,300,000
Total			\$4,367,272,024

It should be noted that Chicago Public Schools have spent significant amounts of money (likely in the billions) on school construction but do not have to pass a referendum to issue bonds as other school districts are required to.

Appendix 2

Section 000.204 - CALCULATIONS

000.204.010 Criteria for Determining School Site.

The following criteria shall govern the calculation of school site:

A. Requirement and Population Ratio. The ultimate estimated number of students to be generated by the residential subdivision or development shall be the relevant demand unit, and shall be directly related to the amount of land required for a school site. The school site requirement shall be determined by obtaining the product of the following: (1) estimated number of students to be served in each school classification divided by the (2) maximum recommended number of students to be served in each such school classification as established in this Ordinance multiplied by the (3) recommended number of acres for a school site of each school classification as established in this Ordinance. The product thereof shall be the acres of land deemed needed to have sufficient school site land to serve the estimated increased number of students in each such school classification. The school site cash fee shall be the dollar amount equal to the product of the number of acres required for school site times the fair market value of land per acre established in this Ordinance.

B. School Classification and Size of School Site. School classifications and the size of school sites within the Village shall be determined in accordance with the following criteria:

<u>School Classification By Grade</u>	<u>Maximum Number of Students per Classification</u>	<u>Minimum Usable Acreage of Land per Each Classification</u>
Elementary or Grades 0-5	600	15
Junior High or Grades 6-8	900	25
High School or Grade 9-12	2,400	80

Appendix 3

Sources for information contained in Table 3.

Municipal Ordinances referenced:

Carpentersville

<http://municipalcodes.lexisnexis.com/codes/carpentersville/>

Elgin

<http://www.sterlingcodifiers.com/IL/Elgin/index.htm>

Grayslake

<http://www.villageofgrayslake.com/pdf/Village%20Code/Title%2016-%20Subdivisions.pdf>

Joliet

<http://www.cityofjoliet.info/City-Government/documents/SUBREGS040406.pdf>

Manhattan

http://sterling.webinss.com/codebook/index.php?book_id=358

Matteson

<http://www.villageofmatteson.org/departments/villageclerk/pdf/Ordinances/Ordinances/155.PDF>

New Lenox

<http://www.municode.com/resources/gateway.asp?pid=14158&sid=13>

Oswego

<http://www.oswegoil.org/building-zoning/zoning-ordinance.pdf>

Palatine

<http://www.palatine.il.us/publications/Village%20Code/Appendix%20B.pdf>

St. Charles

<http://www.ci.st-charles.il.us/codebook/title-16/T16-CH32.html#110>

Appendix 4

Sources for information contained in Table 4.

Neuqua Valley High School
Indian Prairie School District #204

Northside College Preparatory (Chicago)
National School Boards Association 2001
<http://www.learningbydesign.biz/2001/projects/northside.pdf>

Plainfield South High School
Healy Snyder Bender & Associates
<http://www.isbe.state.il.us/construction/pdf/Plainfield202.pdf>

Bolingbrook High School
School Planning and Management and College Planning and Management Education Design
<http://educationdesignshowcase.com/view.esiml?pid=42&lastsearch=grade%255Fid%3D7%26page%3D3>

South Elgin High School
School Planning and Management and College Planning and Management Education Design Showcase
<http://educationdesignshowcase.com/view.esiml?pid=66&lastsearch=grade%255Fid%3D7%26page%3D4>

Oswego East High School
Kluber, Skahan + Associates
<http://www.learningbydesign.biz/2004/projects/oswego-east.pdf>

Little Village High School (Chicago)
Architects OWP/P
http://www.owpp.com/content.cfm/little_village_high_school

Metea Valley**
Indian Prairie School District 204
http://www.ipisd.org/Uploads/news_17332_1.pdf

** Currently under construction

References:

Atlanta Regional Council, *Linking School Siting to Land Use Planning* (Atlanta, GA: Atlanta Regional Council, 2003), http://www.atlantaregional.com/documents/active_living.pdf

Constance E. Beaumont and Elizabeth G. Pianca, *Why Johnny Can't Walk to School: Historic Neighborhood Schools in the Age of Sprawl*, 2nd edition (Washington, DC: National Trust for Historic Preservation, 2002), http://www.preservationnation.org/issues/historic-schools/additional-resources/schools_why_johnny_1.pdf

Barbara McCann and Constance Beaumont, "Build Smart." *American School Board Journal*, vol.190, no. 10, 2003.

Steven Binger, Linda Quinn, and Kevin Sullivan, *Schools as Centers of Community: A Citizens' Guide For Planning and Design*. 2nd edition National Clearinghouse for Educational Facilities, KnowledgeWorks Foundation, Council of Educational Facility Planners, Building Educational Success Together, Coalition for Community Schools, 2003.
http://www.edfacilities.org/pubs/centers_of_community.cfm

Blank, Martin J., Atelia Melaville, and Bela P. Shah, *Making the difference: Research and practice in community schools*. (Washington, D.C.: Institute for Educational Leadership, Coalition for Community Schools, 2003)

Bureau of Transportation Statistics, National Household Travel Survey, NHTS Version 1.0 CD (Preliminary Release), January 2003.

Chicago Public Schools Press Release, Thursday January 24, 2008.
http://www.cps.k12.il.us/AboutCPS/PressReleases/Jan_2008/turnarounds08.pdf

Chicago Sun-Times Article, "Chicago's Population Decline: Fallout: Nearly 150 Public Schools Half Empty. December 19th, 2007.

Council of Educational Facilities Planners International, "State Acreage Policies," *Issuetrak* (September 2003). http://www.cefpi.org/pdf/state_guidelines.pdf

Council of Educational Facilities Planners International, U.S. EPA, "Schools for Successful Communities: An Element of Smart Growth", 2004.
http://www.epa.gov/smartgrowth/pdf/SmartGrowth_schools_Pub.pdf

Council of Educational Facilities Planners International *Creating Connections: Guide for Educational Facility Planning.*, 2004. <http://shop.cefpi.org/product.esiml?PID=84>

Dover, Kohl & Partners and Chael, Cooper & Associates *Design Guidelines for Pedestrian-Friendly Neighborhood School*.

http://www.raleighnc.gov/publications/Planning/Guides,_Handbooks_and_Manuals/School_Design_Guidelines.pdf

Federal Highway Administration (FHWA), *Transportation Characteristics of School Children, Report No. 4, Nationwide Personal Transportation Study*, (Washington, D.C., July 1972).

ICMA IQ Report Volume 40 Special Edition, Item NO. E-43527 (2008)
<http://icma.org/documents/SGNReport.pdf>

ICMA IQ Report Volume 40 Special Edition <http://icma.org/documents/SGNReport.pdf>

Illinois Capital Development Board, *Build Smart*. 2000 <http://www.cdb.state.il.us/schools.shtml>

Illinois Capital Development Board, Joint Committee on Administrative Rules Section Title 71 public buildings, facilities and real property, Chapter I: capital development board, subchapter A: rules, part 40 standards for award of grants: school construction program, section 40.130 construction grants.

<http://www.ilga.gov/commission/jcar/admincode/071/071000400001300R.html>

Kevin J. Sullivan, *Catching the Age Wave: Building Schools with Senior Citizens in Mind*, (National Clearinghouse for Educational Facilities, October 2002)

<http://www.edfacilities.org/pubs/agewave.pdf>

The National Summit on School Design Report, (American Architectural Foundation and KnowledgeWorks Foundation, 2005)

Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of Overweight and Obesity in the United States, 1999-2004. *JAMA* 2006; 295:1549-1555.

Darren Springer “Intergrating Schools into Healthy Community Design”, National Governors Association, Center for Best Practices Issue Brief, (May 2007)

<http://www.nga.org/Files/pdf/0705SCHOOLSHEALTHYDESIGN.pdf>

U.S. Centers for Disease Control and Prevention, “Barriers to Children Walking to or from School—United States 2004”, *Morbidity and Mortality Weekly Report* (September 30, 2005),

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm>

U.S. Department of Transportation, Federal Highway Administration, “Travel to School: The Distance Factor”, *NHTS Brief National household Travel Survey*, January 2008.

U.S. Environmental Protection Agency, *Travel and Environmental Implications of School Siting* (Washington, DC: U.S. EPA, 2003), http://www.epa.gov/dced/pdf/school_travel.pdf

U.S. Environmental Protection Agency, *IAQ Reference Guide Appendix I - Emissions from Motor Vehicles and Equipment*. (Washington, DC: U.S. EPA, 12/3/2007),

<http://www.epa.gov/iaq/schools/tfs/guidei.html>