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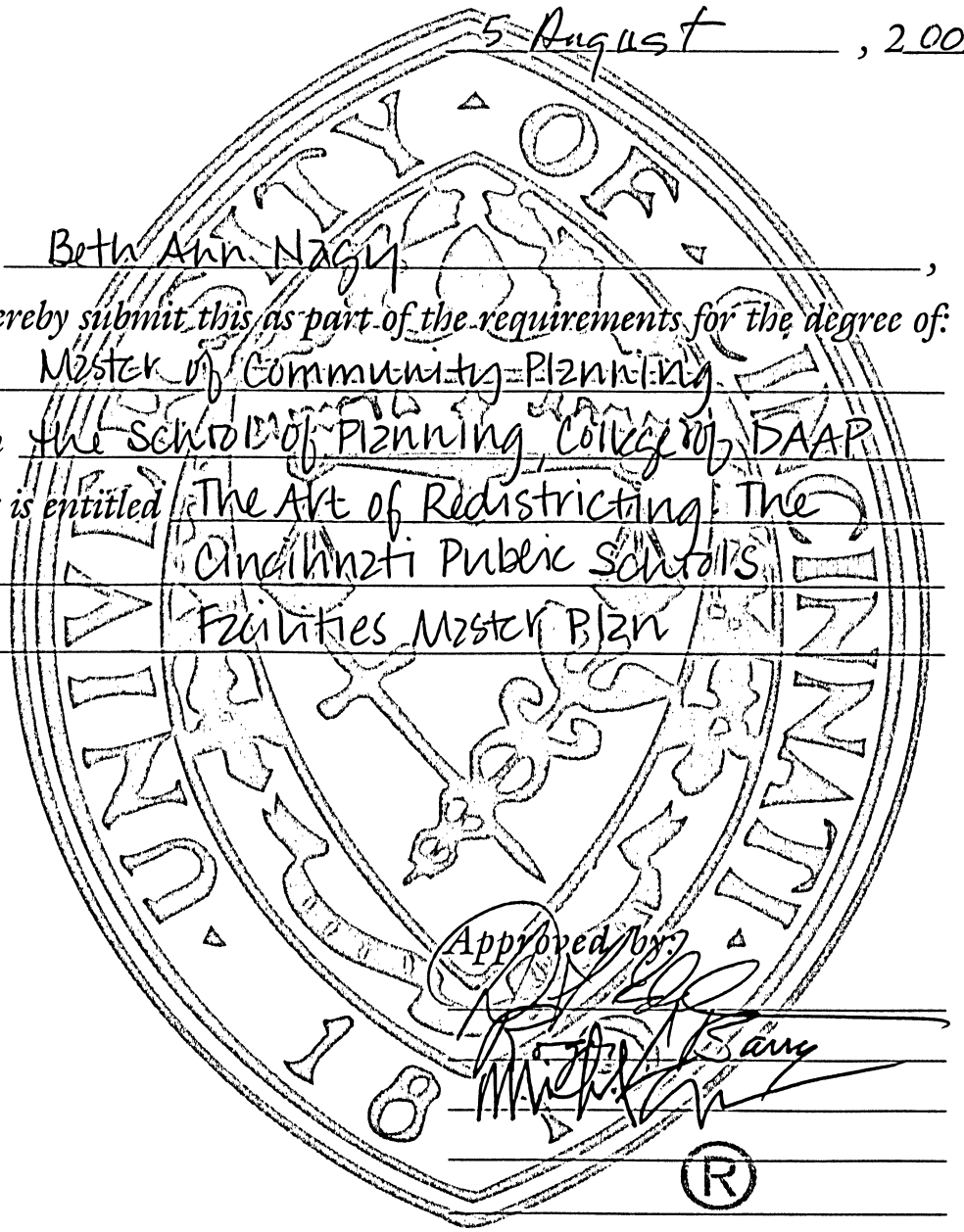

The Art of Redistricting:
The Cincinnati Public Schools Facilities Master Plan

A thesis submitted to the

Division of Research and Advanced Studies
Of the University of Cincinnati

in partial fulfillment of the
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MASTER OF COMMUNITY PLANNING

In the School of Planning
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by

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ABSTRACT

The Cincinnati Public Schools (CPS) Facilities Master Plan (FMP) is a project to improve the efficiency of public education service delivery. It is also the biggest public works project that the city has ever seen (Cincinnati Enquirer, May 2002). The plan is an assessment of all school facilities maintained by the district. It is based on ten years of research by CPS staff, consultants, federal, state and local agencies. The FMP recommendations for each school are driven by facility condition and projected student enrollment, with completion anticipated for 2012. This research has been conducted to determine how best to redistrict the schools and students within the parameters of the CPS FMP.

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ACKNOWLEDGMENTS

This research was inspired by my work with Cincinnati Public Schools. It is a product of three years of professional research that led to a universal process of redistricting for the Cincinnati Board of Education. Thanks to Jennifer Wagner, Director of Student Information Systems, and Michael Burson, Director of Facilities. Without their support, this project would not be complete. CAGIS is also a continuing source of information. Thanks for their dedication to providing accurate information.

Thanks to my friends at work and outside of the office. They kept kicking me in the butt to finish up. Special thanks to Andy, Dina and Alison for making sure I was working on it. My co-workers in Student Information Systems always provided encouragement. Special thanks to Sherry and Theresa for reminding me why I do this work. My family also provides support in my pursuit of continuing education. Thanks Mom. This is dedicated to my late Grandmother, Kay Wheatley.

PREFACE

The buildings where we send our children to learn are as vital to a successful education as the teachers and books waiting within. Classrooms that are comfortable, designed for today's teaching methods and equipped to support technology offer students a place to prosper.

At Cincinnati Public Schools, such buildings are within reach. The district is embarking on a far-reaching, 10-year plan aimed at massive improvements to its scores of buildings. After generations of wear and tear, CPS' aging buildings stand overdue for major renovations and rebuilding.

In early January, district officials unveiled a Facilities Master Plan. Created in partnership with the Ohio School Facilities Commission (OSFC), the plan examines the district's 79 buildings and maps out a future for each. For some, construction of a new building is recommended. For others, large-scale renovations and additions are being proposed. In some cases, reductions in enrollment will require buildings to be closed.

On January 9, 2002, Cincinnati Public Schools' officials unveiled a Facilities Master Plan that will dramatically change the look of CPS' buildings over the next decade.

The plan contains recommendations for the future of each of the district's 79 buildings. Its goal: to bring the district's aging fleet of buildings up to state standards set to create schools ready for 21st-century educational needs.

The culmination of 18 months work, the plan was presented to the Cincinnati Board of Education at a Committee of the Whole meeting. A series of community meetings to explain the plan and

gather input will follow through January and February, with final Board approval expected this spring.

CPS is among the first urban districts in Ohio to embark on a facilities plan in conjunction with the Ohio School Facilities Commission (OSFC), the state agency directing a statewide effort to upgrade all Ohio school buildings to the same standard and quality. The plan is based on assessments by the OSFC, which determine the cost to renovate each CPS building, plus projections on enrollment and a decision on the amount of space the district needs to operate efficiently.

The plan's estimated cost — $996 million — would be covered by local and state money, with the state pledged to contribute 23 percent after the plan is approved by the CPS Board and the OSFC. The local portion would come in part from money paid to the district by the City of Cincinnati and Hamilton County in lieu of property taxes on the two new sports stadiums. Passage of a bond issue also would be needed to contribute to the local share.

In the plan, 34 school buildings are recommended for new construction, with 24 to be built on current school sites and 10 to be built on new sites. Another 32 buildings are recommended for renovation. Several buildings are recommended to be discontinued as schools; by 2012, the district would be operating 14 fewer buildings, according to the recommendations. The district's enrollment is projected to decline by 10 percent over the next 10 years, following a 15 percent enrollment decline over the past seven years. The district's demographics will be studied throughout the 10-year plan, and the number of schools can be adjusted if necessary.

After final approval by the Board, construction work would be phased in over the next ten years in four segments of about 30 months each, with the first segment beginning in July 2002 and the

final segment beginning in January 2008. (Facilities Master Plan, CPS, OSFC, 2001)

1 **INTRODUCTION**

The FMP is a product of multiple agencies' criteria for assessing school facility performance, and the school district is not solely responsible for citing school building shortcomings. The criteria for building performance review came from a State mandate from the Ohio School Facilities Commission (OSFC). In order to obtain maximum funding for each school project, the OSFC made the final decision based on guidelines from the Ohio School Design Manual (OSDM) (Facilities Master Plan, CPS, OSFC, Process Summary, p. 9). This manual cites the state standards that are expected in the creation or maintenance of school facilities. The intention of the OSDM is to enforce school building performance in terms of 21st century technology standards (School Facilities: America's Schools Not Designed or Equipped for 21st Century, GAO Report to the U.S. Senate 1995, p. 1).

The status of the FMP is "in progress". The total cost of the FMP is about $985 million, of which the district is responsible for 77% (Facilities Master Plan, CPS, OSFC, Process Summary p. 9). The district proposed a Bond Issue for the FMP construction in May of 2003. The Bond Issue would raise property taxes in the CPS district. The owner of a $100,000 home can expect an increase of $134 per year (Cincinnati Enquirer, November 3, 2002). Voters defeated this bond issue in November of 2002, when the passage of the issue missed by eight tenths of a percentage point (0.8%) (Cincinnati Enquirer, November 6, 2002). However, six months later the Bond Issue was back on the ballot and passed.

The FMP is organized into four segments of construction. The segments were organized by the following: fixing worst conditions first, location within the district, and the availability of swing space (FMP, CPS, OSFC, Executive Summary p. 6). There are ten geographic areas within the district that are grouped by the FMP. Each area contains from two to eleven schools. High schools are grouped separately. Elementary school proposals range from a proposed capacity (of students) of 350 to 650.

There are options for school construction. Based on the OSFC's Two-Thirds Rule, the cost of a renovation cannot exceed two-thirds of the cost for new construction. Exceptions may be granted if a school has historical significance from an architectural standpoint, it can be renovated instead of replaced. A school building has three options: renovation, new construction or discontinuation. Implied in these options is the use of buildings for swing space. Swing space is needed for temporary housing for students while their permanent school is under construction. Once that temporary facility has served its purpose, it may continue with its own construction plan or be closed. Due to declining enrollment, school closings are necessary for the operational efficiency of the district (Facilities Master Plan, CPS, OSFC, Process Summary p. 6). CPS is reducing the number of buildings from eighty (80) to sixty-six (66).

The FMP planning process included community input. Community meetings were held for each area in the district to inform the residents of the plan (FMP, CPS, OSFC, Process Summary p. 6). The meetings were also held to gain support for the plan. During these information sessions, people affected by

the plan were encouraged to voice their opinions and express their concerns to the district. These meetings were not limited to the planning of the FMP, but will continue throughout the implementation process to address the concerns of the residents.

Segment one of the CPS FMP is underway. Construction began in July 2002. This construction segment is fully funded through an agreement with CPS, the OSFC and money from Hamilton County and the City of Cincinnati in lieu of property taxes for the stadiums. Segment two is cited for a start date of January 2005. Segment three will begin in January of 2007. The final segment (four) will begin in July of 2008. Each segment is about thirty months in length for construction. The district has two years to acquire funding for the next construction phase of the FMP and those that follow. All construction is anticipated for completion in 2012.

The CPS FMP is a capital improvement project. It is a comprehensive building program for the district, which encompasses multiple municipalities (Figure 1-1). The district is comprised of the City of Cincinnati, Cheviot, Silverton and Amberley Village. It also includes portions of Columbia Township, Green Township and Delhi Township. Within Cincinnati, there are over fifty identified neighborhoods, each with its own defining boundaries (Figure 1-2). This makes the planning process even more comprehensive than what the City of Cincinnati Community Development Department manages (Figure 1-3).

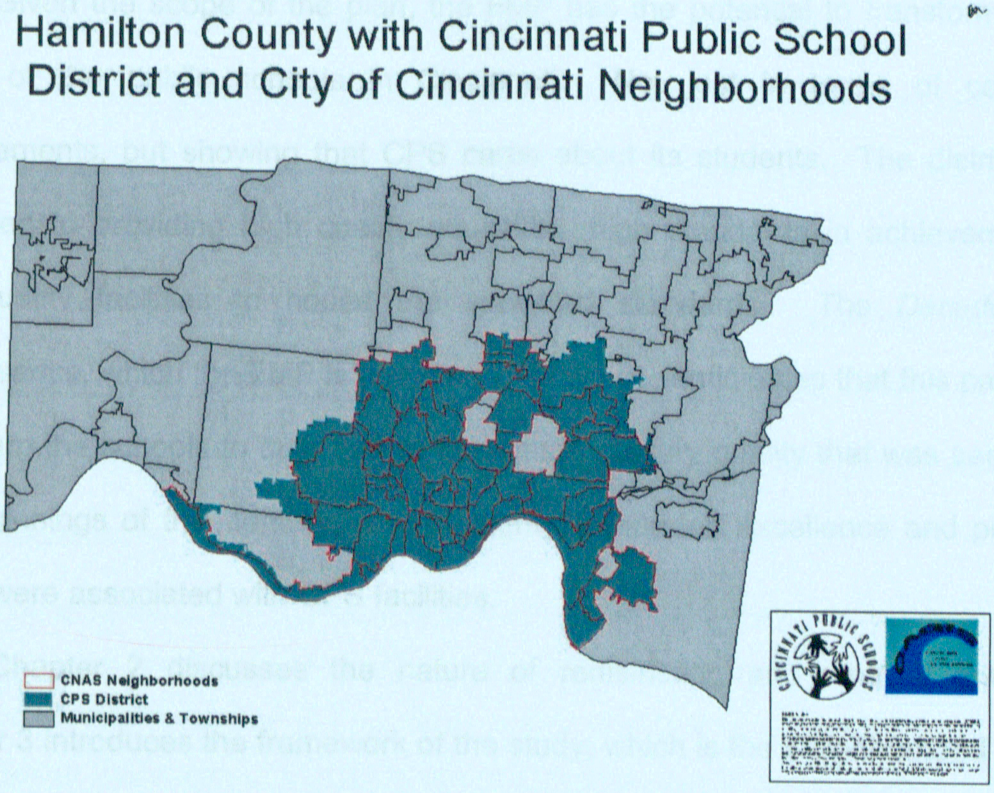


Figure 1-1: Cincinnati Public School District Map
Source: CAGIS

Figure 1-2: City of Cincinnati Neighborhood Map
Source: CAGIS

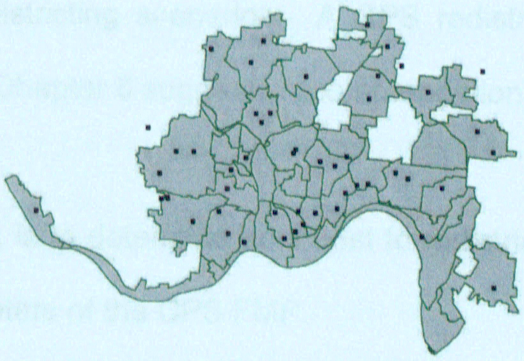


Figure 1-3: Cincinnati Neighborhoods with Neighborhood School Locations
Source: CAGIS

Given the scope of the plan, the FMP has the potential to transform the image of the public schools in Cincinnati. Not just in terms of capital improvements, but showing that CPS cares about its students. The district is dedicated to providing high quality education, high standards in achievement, high quality facilities to house the expected standards. The *Decade of Renaissance*, which the FMP is commonly known as, anticipates that this project will return the schools to their former turn-of the-century quality that was seen in the beginnings of this century, when integrity, character, excellence and public image were associated with CPS facilities.

Chapter 2 discusses the nature of redistricting and what it entails. Chapter 3 introduces the framework of the study, which is the Neighborhood Unit Theory. Within this chapter, relevance of this theory to redistricting is shown. Also in this chapter, other school districts are used to provide an example of redistricting. In Chapter 4, the redistricting process is introduced and explained as the methodology in evaluating redistricting scenarios. A CPS redistricting scenario follows in Chapter 5. Finally, Chapter 6 suggests recommendations and possibilities for future research.

The purpose of this thesis, then, is to determine how best to redistrict the schools and students within the parameters of the CPS FMP.

2 REDISTRICTING

The implied problem of the CPS FMP is the need to redistrict. In order for the capacities of school facilities to make sense, redistricting is necessary to identify the location of students that the schools will serve. In identifying the student's locations, new attendance areas are created to meet the capacity numbers of the new, renovated and swing space school facilities. Thus, it is the objective of this thesis to develop a method of redistricting in support of the FMP.

Redistricting is defined as,

> *The alteration, with formal approval by the school board, of the boundaries of two or more school enrollment areas for the purpose of changing the numbers and/or mixtures of students in two or more school buildings within a school district, in order to attain better performance relative to pre-established goals (Creighton 1994, p. 1-1).*

Enrollment areas (or attendance areas) are defined as,

> *Bounded areas from within which all students in specified programs and grades (except those students having individual exemptions approved by the school administration) are required to attend a particular school building. The term 'defined enrollment area' is sometimes used to distinguish required, geographically-based assignment of students to buildings from various full or partial 'open enrollment' plans such as magnet schools or 'controlled choice' plans (Creighton 1994, p. 1-1).*

Given the nature of the items mentioned, the problem of redistricting is both political and technical, the second of which this thesis deals with. It is a political problem because redistricting deals with moving students, which in turn, disrupts

the family of the child. An example of this would be if a family moved into a particular neighborhood because it was part of an attendance area of School A. School A has a good reputation and an exemplary history of student achievement. However, redistricting is taking effect in the neighboring school attendance area because School B is not operating to full capacity (or operational efficiency). The adjustments to School B's attendance area affects School A's because School B is trying to add more students to reach capacity. This means that part of School A's attendance area will become part of School B's attendance area. The child is now required to move to School B. School B is not as highly reputed as School A. Now the family is angry because School A was the reason that this family chose their home. It must send its child to a "second choice" because the family is no longer within School A's boundary, but rather in School B's. This results in some angry parents, who are also angry voters, and this can affect the decision to implement this redistricting scenario. The final decisions regarding redistricting lie with the School Board, which is supposed to decide in the best interests of the school district as well as the public. This is how politics affects redistricting decisions.

However, redistricting is also a technical problem. Students, schools, guidelines and geography comprise the bulk of technical redistricting. However, such redistricting also comprises efficiently organizing groups with enough logic to convince the school community and the Board that a particular redistricting scenario this is the best way to handle their situation. Redistricting scenarios are

created to identify areas of concern in moving attendance boundaries, what those concerns are and how best to resolve them. (Creighton, 1994, p. 1-4)

Redistricting is community planning in a school environment. The redistricting process reflects public planning theory. It defines the problem, the variables to be considered, the civic element of community as public participation, compromise and problem resolution. It is also an ongoing process that needs to be reviewed periodically to address variables that affect the anticipated outcome. The school district plays the role of an urban planning agency.

Models of Redistricting resemble the rational model of planning. The rational model is an orthodox view of public planning which emphasizes a rational and systematic approach to the process. A rational model for planning contains the following elements:

1. Defining the problem.
2. Clarifying values.
3. Selecting goals.
4. Formulating alternative plans or programs.
5. Forecasting the consequences of the alternatives developed in the previous step.
6. Evaluating and selecting one or more courses of action (alternatives).
7. Developing detailed plans for implementing the alternatives selected.
8. Review and evaluation. (Levy 1997, p. 328)

A school district adheres to a policy and procedural process for decision-making. It is a governmental entity with rules and regulations in the provision of public services. Very rarely can the district use an ad-hoc way of planning. However, a middle-range model can be used.

"Mixed scanning" is an example of middle-range planning models. It is a two-step process: 1) Conducting a general scanning process to get the overall picture and to decide what elements warrant more detailed examination, 2) Conducting detailed examination of those elements chosen from step one. Step one can also be broken down into multiple stages of general scanning depending on the magnitude of what planning problem the analyst is trying to evaluate. This model is generally characterized by a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis detailed in Chapter 4.

In reality, the school district must use a combination of the two models during redistricting. The rational model is an objective, detail oriented process that can be used in each planning scenario. However, each scenario may have its individual problems on a community-to-community basis. This is where the school district can use the mixed scanning approach to identify the problems of the specific neighborhoods in which a redistricting scenario would occur. This can be used to facilitate communication between opposing communities and identify where the beliefs and values differ. This increases the likelihood that the school redistricting scenario is not a problem with the district's approach to planning for the schools, but rather one of culture differences between the communities sending their children to the schools.

Redistricting is about planning boundaries. This may sound inclusive and exclusive at the same time. To look at it from a school district perspective, one must understand the implications of students attending schools. From an executive standpoint, it is about creating well-balanced school composition. From a school services perspective, it is about creating operationally efficient schools. From a transportation standpoint, it is about getting students to their attending school (whether it is a few blocks away to across the city). From a school administration standpoint, it is about making sure that their educational program is successful and maintains the highest amount of funding possible. From a parents' perspective, it is about making sure that their child has everything that they need in order to integrate into society. Herein lie some problems of redistricting.

Redistricting is about communicating the district educational goals while maintaining resources. The public does not know the complications that a district is faced with when a redistricting challenge arises, nor is it illustrated to them. However, the challenge in itself is communicating the possibilities of how a student can reach his or her potential through the delivery of educational services. That is the nature of public education. A wealth of opportunity and potential await, but limitations exist on how to provide it.

3 THE NEIGHBORHOOD UNIT THEORY

Schools in the United States have traditionally been the center of a community. One can even say that a school can determine the extent of a community. A school binds a group of people in a geographic area due to their relationship to that school. When a group of children attend the same school, then the parents and residents tend to think of the school as "theirs". The people within the community take ownership of that school, thus being aware of the impact of that school within their community. The stakeholders are not limited to the parents and school staff

The theoretical framework for this research is based on Clarence Perry's Neighborhood Unit Theory published in 1929. This theory illustrates the rationale for elementary schools being the cohesive glue of a community and how the placement of a school facility can be designed to meet the needs of that community. Chapter 5 applies this theoretical framework to the case of redistricting for Cincinnati Public Schools to come up with the best redistricting plan for the city.

A school's location is the variable determining a community boundary for a neighborhood school. This boundary encompasses people, places and routes. Thinking laterally, the school community is analogized to a neighborhood (community) within a city. Each school community has its individuality.

Each school service area makes up one of the "neighborhoods" of the district.

"Neighborhoods...possess a certain unity which is quite independent of political boundaries. While the neighborhood community has no political structure, it frequently has greater unity and coherence than are found in the village or city and is, therefore, of fundamental importance to society. A very different type of community develops within the heart of the great city. This sort is due to the continual shiftings and relocations of individuals and groups in response to economic, cultural or racial considerations. Like seeks like, and so, gradually, certain central areas acquire different physical characteristics and a more or less distinct group consciousness (Perry 1929, p.22)."

It is with this description in mind that we can visualize a neighborhood school community and the need for redistricting.

...Neighborhoods and local communities are natural constituents of large urban aggregations. Even if the metropolis tends to destroy the communities which it engulfs in the course of expansion, it creates new ones by its own internal processes (Harrison 1929, p.23).

Redistricting, then, has the potential to create and destroy neighborhoods within the metropolitan or city limits.

3.1 Relevance of Neighborhood Unit Theory to Redistricting in Cincinnati

Cincinnati is unique in that the city is divided into a number of different neighborhoods, of which there are fifty-two. However, there are only forty-three neighborhood schools. In these forty-three, three have a component within the school that accepts children from out of the neighborhood boundary (magnet programs). In addition, some of the schools in the district fall outside of the city proper. There are three neighborhood schools that serve small municipalities adjacent to the city.

This situation will continue during and after the implementation of the Facilities Master Plan because of school closings (due to declining enrollment). Upon completion, there will be forty neighborhood schools. This is one school to every 1.3 neighborhoods and this implies that neighborhoods will have portions of adjacent neighborhoods included within their neighborhood school boundaries, thus creating a new neighborhood population to fill the neighborhood school facility to capacity. Given the aforementioned characteristics of neighborhoods within a city, analogized to neighborhood schools within a school district, it can be assumed that dividing neighborhoods is not acceptable to the community.

> *...The difference between communities consists essentially in the kind and amount of association among their residents. The purpose in understanding this inquiry into neighborhood unity and life has been to discover the physical basis for that kind of face-to-face association ...Observation of the most superficial character shows that the materials with which the planner of a city deals – streets, parks, boulevards, approaches, waterways, traffic terminals, zoning – all affect local community life in vital ways...It*

may unwittingly create a new local consciousness simply through setting boundaries and giving definition to an area of like residential quality (Harrison 1929, p. 23).

This is the underlying theme in the art of redistricting: creating new boundaries and redefining neighborhoods.

Clarence Perry's study:

...is a scheme or principle of arrangement of the physical elements of a residential district which he calls 'the neighborhood unit' and which brings into harmonious relation the various conditions that have been observed to favor a safe and satisfying community life (Harrison 1929, p.24). "If then city planning ...does generally have incidental effects upon neighborhood life and interests, it would seem clear that the instrumentality of city planning can be directed consciously and effectively...toward preventing the destruction of neighborhood values already established, and...toward the creation and conservation of these neighborhood interests (Harrison 1929, p.23).

The underlying principle of the scheme is that an urban neighborhood should be regarded both as a unit of a larger whole and as a distinct entity in itself. But there are certain other facilities, functions or aspects that are strictly local and peculiar to a well-arranged residential community. They may be classified under four head[ing]s: (1) the elementary school, (2) small parks and playgrounds, (3) local shops, and (4) residential environment. Other neighborhood institutions and services are sometimes found, but these are practically universal (Perry 1929, p. 34).

Planning for a neighborhood unit consists of four principles. *1. Size. - A residential unit development should provide housing for that population for which one elementary school is ordinarily required, its actual area depending upon population density. 2.*

Boundaries. - The unit should be bounded on all sides by arterial streets, sufficiently wide to facilitate its by-passing by all through traffic. 3. Open Spaces. – A system of small parks and recreation spaces, planned to meet the needs of the particular neighborhood, should be provided. 4. Institution Sites. - Sites for the school and other institutions having service spheres coinciding with the limits of the unit should be suitably grouped about a central point (Perry 1929, p. 34).

According to this theory, there are physical limits of the unit. Attention should be given to its boundaries.

The broad answer is that visible limits enable the public to see a local community as such and to recognize it as a distinct entity…When its boundaries disappear it loses its identity and sinks out of public consciousness (Perry 1929, p. 59).

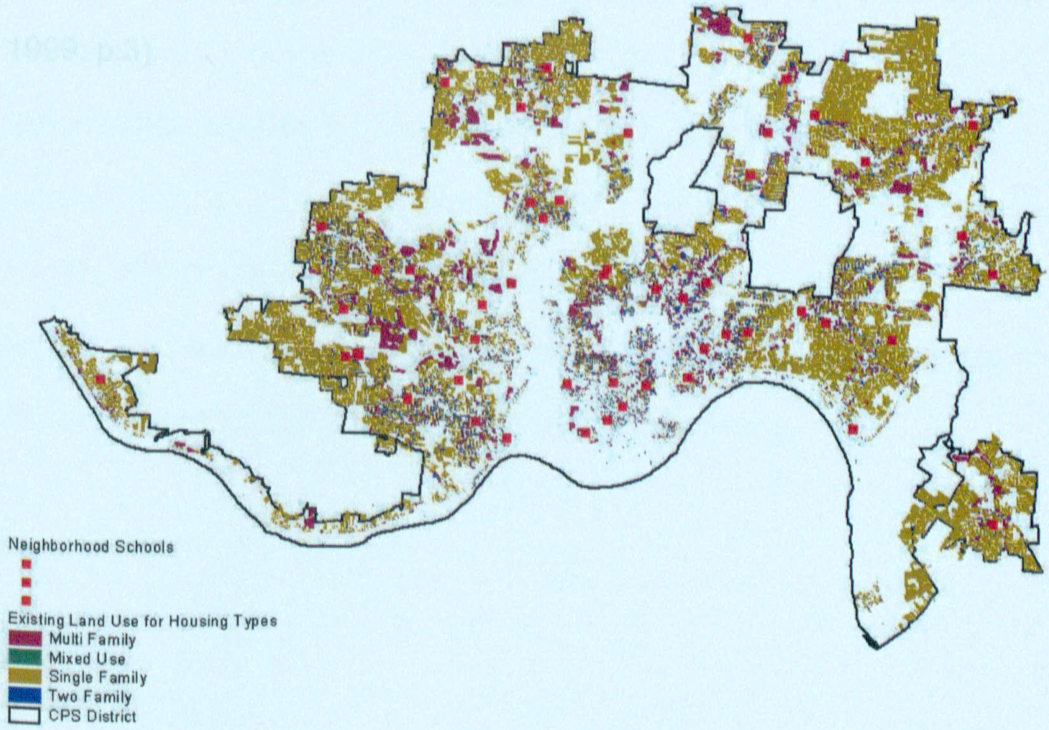


Figure 3-1: Land Use Pattern of Housing in CPS District
Source: CAGIS

The neighborhood unit theory goes into detail about school service areas. Service spheres for neighborhood elementary schools are categorized for single-family, low-cost suburban development, industrial sections, apartment-house units and mixed housing areas. Cincinnati (as probably many central cities do) has a conglomeration of various housing types within the district (Figure 3-1). Using the theory, planning for school aged populations and forecasting for such economic conditions should follow a similar course today. (Perry 1929, p.36)

The FMP planning process evaluated the economic conditions of Cincinnati. The proposed new construction of schools and closing of facilities was driven by birth projections for the city. The proposed capacities also looked at the potential for new housing construction. The service areas (spheres) are driven by school age population figures, which are projected until 2020 (OSFC 1999, p.3).

3.2 PUTTING CINCINNATI'S REDISTRICTING IN CONTEXT

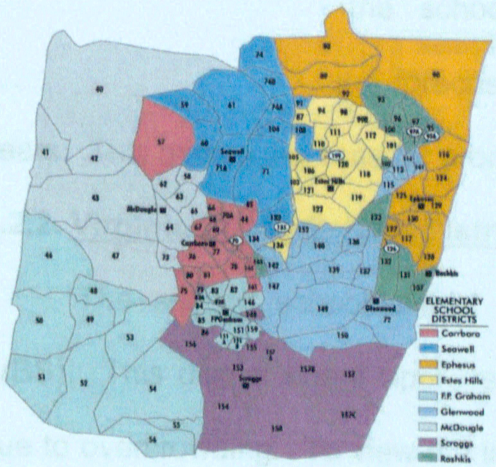
In order to put Cincinnati's redistricting in context, it is useful to look at other school districts. For the purpose of this study, three public school districts with similar characteristics to Cincinnati Public Schools and involved with redistricting are reviewed. This is not limited to school systems that are redistricting based on a FMP. However, when redistricting is proposed, it is usually related to changes in school facilities and contains a plan of action to address a change in the district's composition. Specifically, the author is looking a number of variables that can influence the redistricting process.

3.2.1. Chapel Hill – Carrboro City Schools (CHCCS)

The first school district used is Chapel Hill – Carrboro City Schools (CHCCS). Figure 3-2 shows a map of the CHCCS district. How the schools are organized into neighborhood school units is shown in Figure 3-3. The redistricting situation in CHCCS involves a proposed plan for a new middle school. Figure 3-4 shows this proposal. It identifies which areas that a new middle school would directly affect in the immediate unit. It also draws from the adjacent school units, reducing the number of students within the facilities there. That is essentially the technical goal of the redistricting.

Figure 3-2: Chapel Hill-Carrboro City Schools (CHCCS)
Source: http://www.chccs.k12.nc.us/mapofschools.pdf 05/21/03

The main characteristic of this redistricting example is the feeder system. A feeder system is the movement of children from one set of grades or programs to the facility housing the next set of grades or programs. Here, the movement is from elementary neighborhood schools to middle schools.



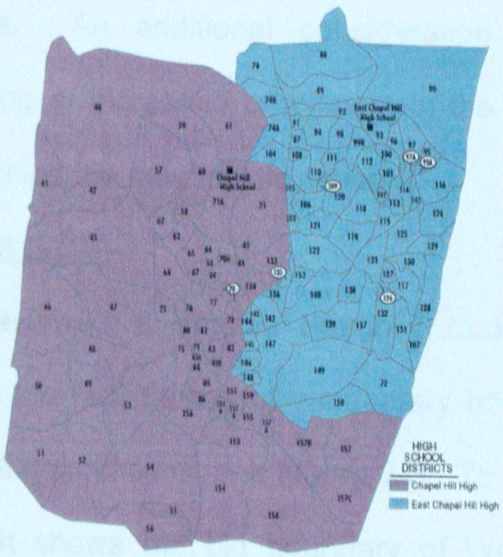


Figure 3-3: CHCCS Elementary Schools **Figure 3-4: CHCCS Middle School Proposal**
Source (2-2, 2-3): http://newsobserver.com/triangle/chapelhill/redistricting/index.html 5/21/03

Model 3 v3L		Segs	Mirror	Enroll	Capacity	Af Am	Asian	Hisp	White	Other	Minority	Diff	SES	Diff	SESW	
SCH1	Carrboro		17	537	525	563	0.17	0.04	0.15	0.56	0.06	0.42	0.02	1.94	-0.44	2.11
SCH2	Seawell		12	475	477	498	0.11	0.18	0.07	0.57	0.06	0.42	0.01	1.92	-0.47	2.34
SCH3	Ephesus		13	450	444	472	0.18	0.10	0.07	0.56	0.07	0.43	0.03	2.38	0.00	2.17
SCH4	Estes		19	523	544	549	0.17	0.17	0.05	0.53	0.06	0.46	0.05	2.58	0.20	2.63
SCH5	FPGraham		21	543	564	570	0.20	0.05	0.11	0.60	0.03	0.39	-0.01	2.14	-0.24	2.14
SCH6	Glenwood		15	424	350	445	0.19	0.17	0.05	0.52	0.05	0.47	0.06	2.67	0.28	2.53
SCH7	McDougle		11	568	598	596	0.17	0.03	0.08	0.68	0.03	0.31	-0.10	2.45	0.07	2.46
SCH8	Scroggs		12	564	590	609	0.09	0.09	0.10	0.67	0.04	0.32	-0.08	2.58	0.20	2.72
SCH9	Elem #9		13	590	468	619	0.16	0.22	0.05	0.51	0.04	0.47	0.07	2.92	0.54	2.60
	Total		120	4674	4560	4921	0.16	0.11	0.08	0.59	0.05	0.40		2.38		
Percentage of Total Moved				0.13	0.18	0.07	0.57	0.05								
Number of students who are moved by this solution:	1015															

Figure 3-5: CHCCS Proposed Changes
Source: http://www.chccs.k12.nc.us/redistricting/3v3L.xls 5/21/03

Each boundary must be adjusted to feed the right number of students to their next school. For example, the new middle schools have a capacity of ***x*** and ***y***. Elementary schools ***A***, ***B*** and ***C*** combined enrollment can meet the operational capacity standards of middle school ***x***. Elementary schools ***D***, ***E*** and ***F*** are too many for middle school ***y***. The redistricting problem is how to divide the students between the schools. An additional consideration for this redistricting situation is the forecasting of increased enrollment in the next ten years. This makes the case for proposing the new middle school.

3.2.2. Virginia Beach School District (VBS)

The second school district reviewed is Virginia Beach School District (VBS). This district board approved the redistricting of elementary boundaries due to overcrowding. To view the initial conditions, see Figure 3-3. To view the proposed changes, see Figure 3-. It shows the old boundary of Woodstock Elementary and adjacent schools. In this case, the revision of Woodstock only affected one other boundary, that with College Park.

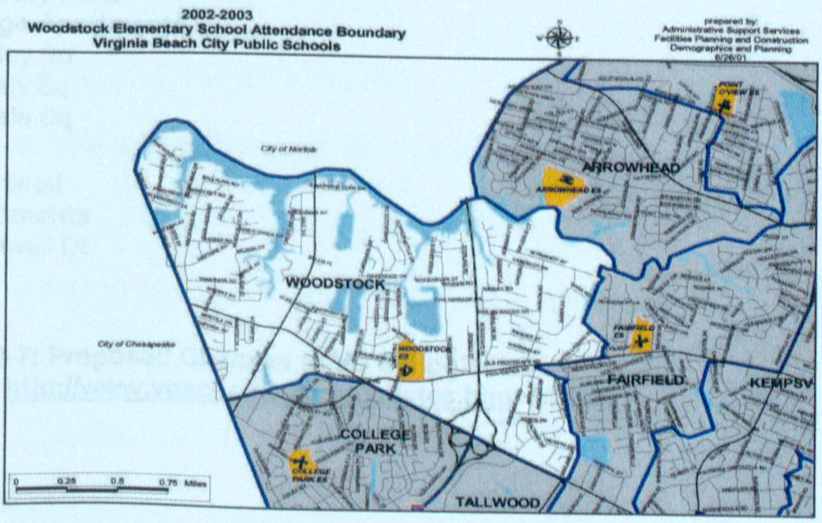


Figure 3-6: Virginia Beach School District Redistricting Area
Source: http://www2.vbschools.com/maps/039.pdf 5/21/03

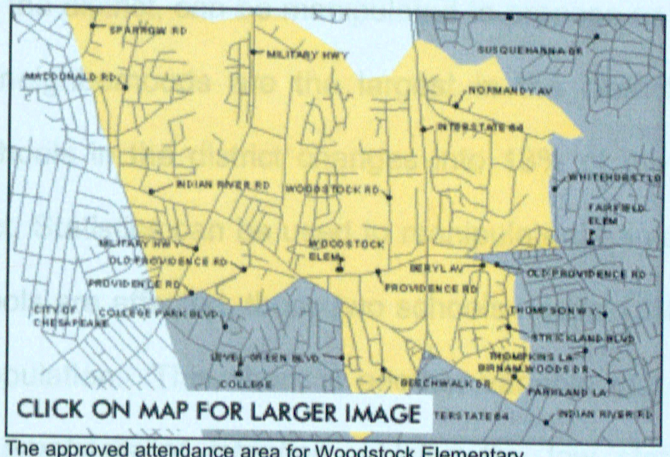
Virginia Beach City Public Schools
Approved Resistricting Changes
College Park Elementary to Woodstock Elementary

Updated November 21, 2002

On February 5, 2002 the School Board approved redistricting changes that will affect students currently attending **College Park Elementary** School. Effective with the start of the 2003-2004 school year, the selected neighborhoods listed below, will be rezoned from **College Park Elementary** to **Woodstock Elementary.**

College Square Apartments
Riviera Dr
Riviera Arch

Level Green, portion of
Beechwalk Dr (5800 block) -east of level green blvd
Borg Ct
Connors Dr
Evert Dr
Goolagong Dr
Love Ct
Newcombe Dr



The approved attendance area for Woodstock Elementary is shaded in yellow.

Woodhaven
Reon Dr -south of Indian River Rd
Trotter Dr
Beechwalk Dr

Banbury Lake Village Apartments
Ardsley Sq
Blakely Sq
Carlisle Sq

Chartwell Apartments
Chartwell Dr

Figure 3-7: Proposed Changes to VB Schools
Source: http://www.vbschools.com/updates.html 5/21/03

The VBS district has fifty-three elementary schools. The board's goal was to relocate the fewest students. This enabled the board to have a relatively easy time proposing and presenting this change. If it only affects two schools, as is the case here, that number can be related to the number of students within the two communities of students that it affects. Those two schools numbers, which is under 4% of the schools in the district, can be manipulated to propose or oppose a plan. Say that those neighborhoods are the largest in the district. The approximate 4% of the schools in the district changes into 13% of the district population within the district. Statistics can be used to manipulate the intentions. Even though only two schools are affected, those two schools house 13% of the school district's student population. This, then, is another variable that comes into play in redistricting: *emphasis of intention*. Using the low statistic of approximately 4% of schools is much more acceptable than using a higher statistic of 13% of students. This plan is more widely accepted by the public if the number affected by the redistricting is lower, thus the manipulation of information (schools versus students).

3.2.3. Westerville City Schools (WCS)

The last district that is used for context is Westerville City Schools (WCS) in Columbus, Ohio. This district is faced with redistricting high school students. As with the previous two examples, the district is also based on a feeder system. Elementary schools "feed" into the middle schools, then from middle to high. Each class of grades has its own boundaries, meaning that each feeder school may not fit into the high school service area perfectly. Some elementary and

some middle school boundaries may be modified in order to fit into the high school areas.

Figure 3-8 shows the WCS proposal for the new high school boundaries. This situation was caused by the need for a newly constructed high school to alleviate overcrowded conditions elsewhere. That is, the district experienced significant growth, which has resulted in the need for a new school. The growth of the district is directly related to the Win-Win Agreement of 1986. The Win-Win Agreement was between the City of Westerville and the City of Columbus on the transfer of property, under which Westerville annexed portions of Columbus. This led to significant student growth and anticipation of higher enrollment. To identify the changes in boundaries, please see the WCS middle and elementary schools redistricting plan (Figure 3-9 and 3-10).

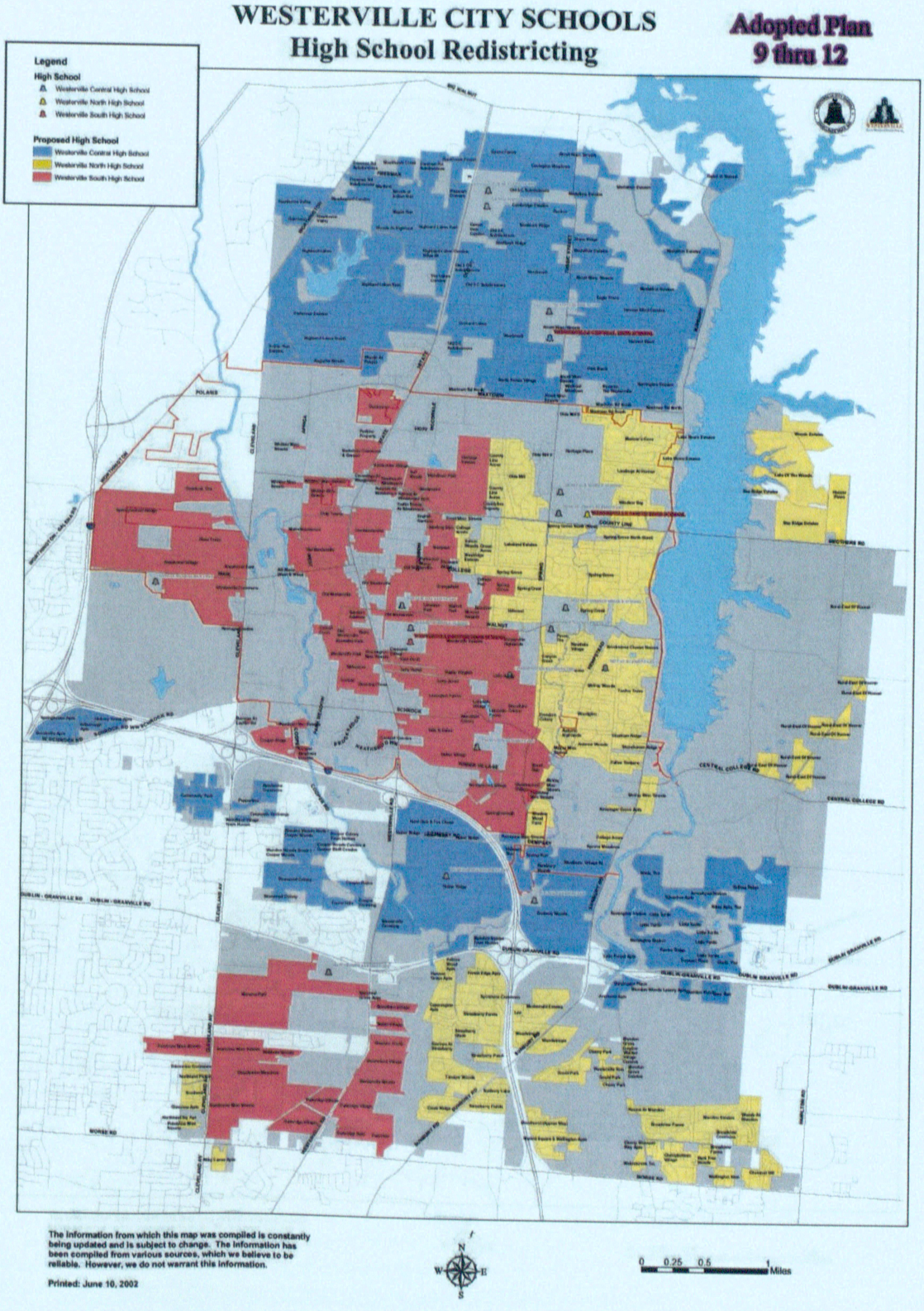


Figure 3-8: Westerville City Schools High School Redistricting Plan
Source: http://www.wcsoh.org/E_FINAL_MAP.pdf 05/21/03

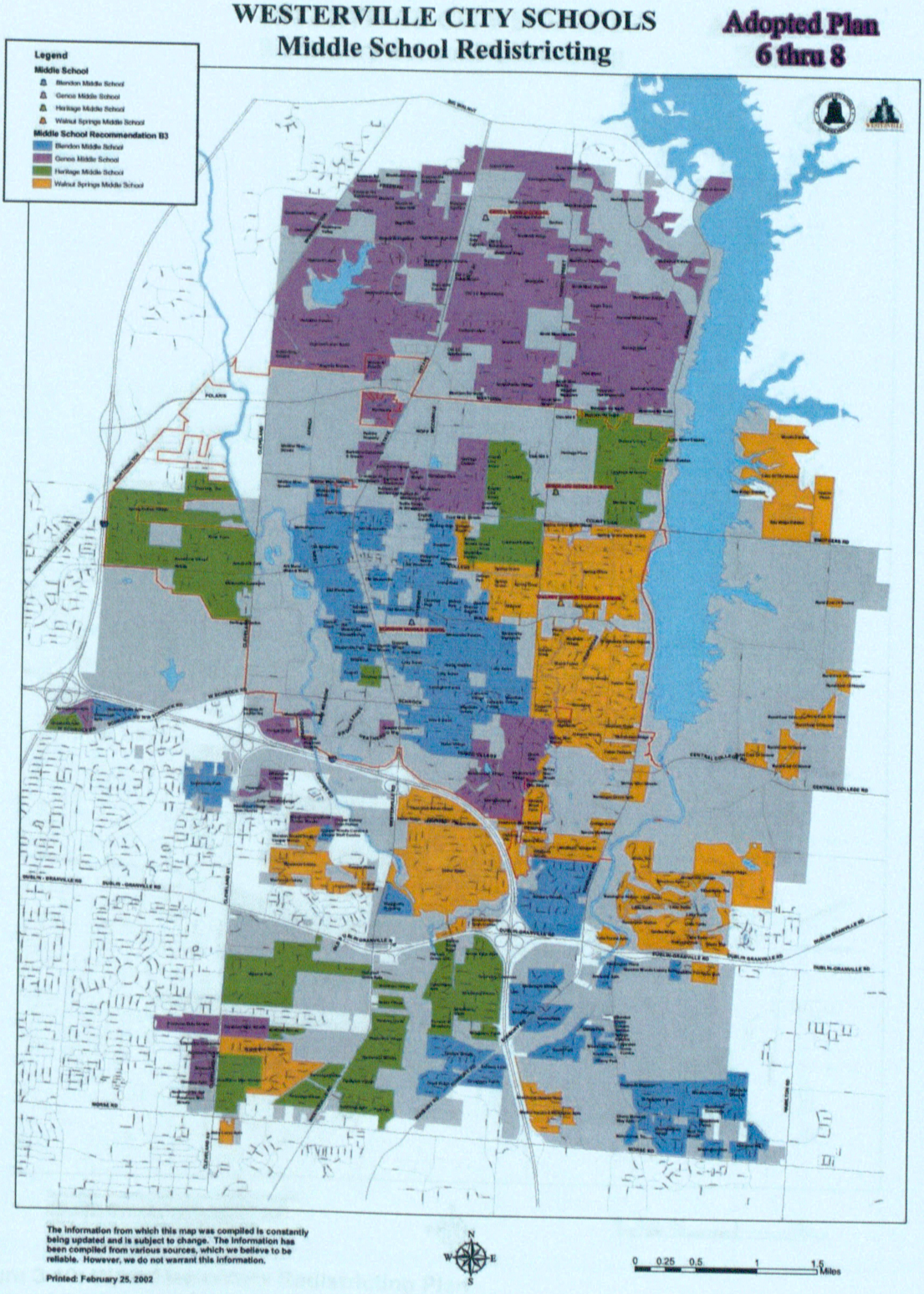


Figure 3-9: WCS Middle School Redistricting Plan
Source: http://www.wcsoh.org/Middle.pdf 05/21/03

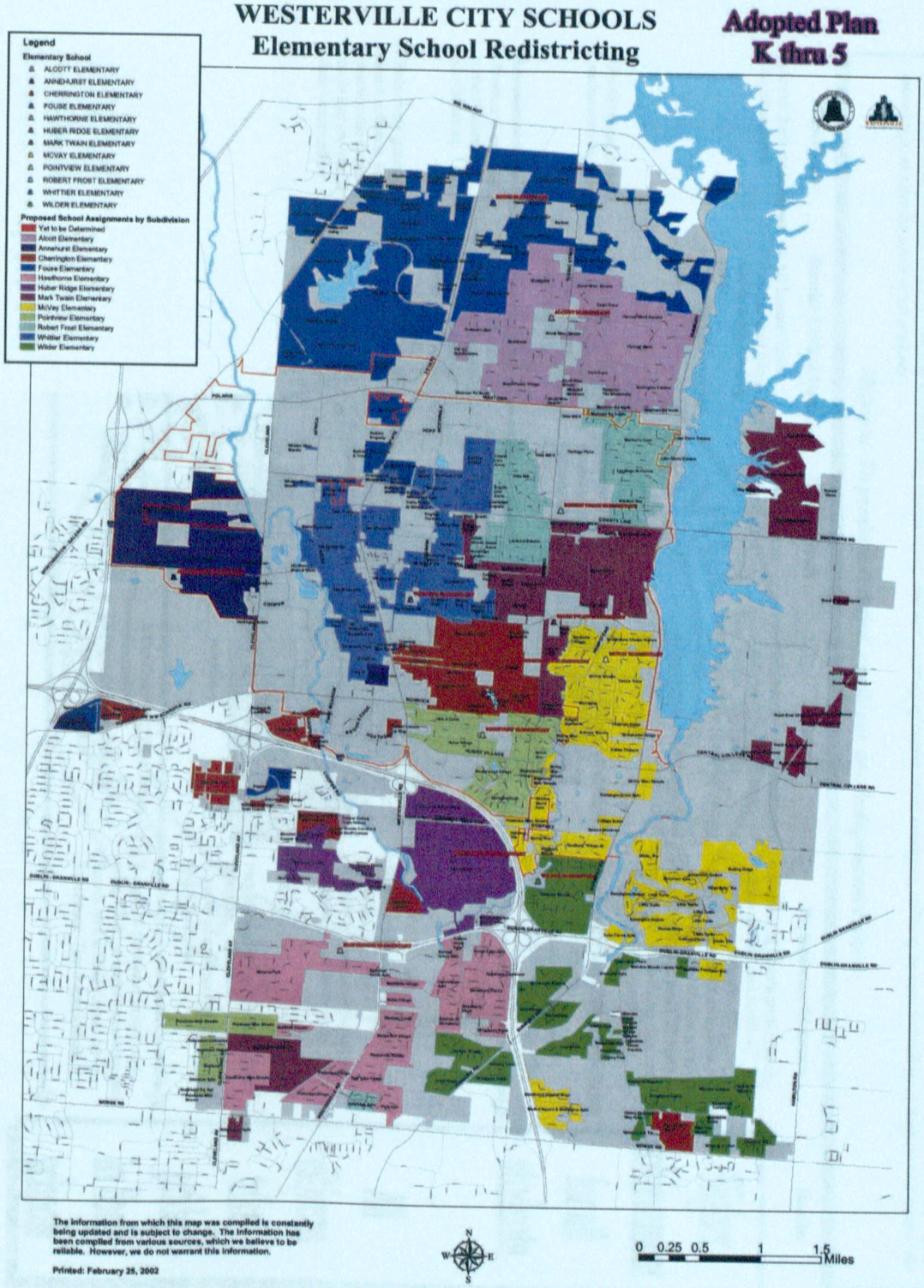


Figure 3-10: WCS Elementary Redistricting Plan
Source: http://www.wcsoh.org/Elementary.pdf 05/21/03

CONTINUOUS IMPROVEMENT PLAN 2002-2003

Vision: *The Westerville Schools will work with the parents and community to become the largest excellent school district in the state of Ohio by 2005; provide a progressive educational program in a safe, inviting and nurturing environment; and use a variety of instructional strategies, utilizing current technology to acquire and expand the knowledge, to meet the needs of all students.*

Mission: To produce creative, confident, and independent citizens

State Goals	District Critical Issues	District Goals	Strategies	Performance Measures	Results
• Assure high achievement for all learners	• All learners must increase their knowledge and develop life-long skills • Close the achievement gap	• **Improve student achievement**	• Align learning expectations with what we teach and assess. Implement Westerville Learning System district-wide • Use data to guide instruction, intervention and professional development	• Number of Ohio's performance standards met and results of district assessments • Parent and student awareness of expectations and student progress • Building/department CIP and action plans indicate baseline data and adequate yearly progress	Higher achievement for all students All citizens take pride in their schools
• Preserve and nurture enthusiasm for learning	• The district needs active support to accomplish highest student achievement	• **Increase family, business, and community involvement**	• Expand **WestervilleReads** • Coordinate and focus volunteers, community partnerships and parent education	• Impact analysis of **WestervilleReads** • Tax issues passed • Number of and time spent by volunteers, partners, and parents	
• Promote a safe and orderly learning environment	• The district and community maintain a positive climate for learning	• **Provide a positive learning environment**	• Ensure a safe and orderly learning environment	• Safety and discipline data	
• Help every generation learn, enhance, and practice the character traits that are valued by their communities		• **Expand and practice the character traits of our community**	• Infuse "Westerville Way", "Don't Laugh At Me", and "I Can" into the curriculum • Encourage student participation in community service	• Impact analysis of character education initiative • Number of students involved in community service projects	
	• The number of WCS students is exceeding the available space	• **Initiate Construction Renovation Plan (CRP) and expand "Schools of Choice"**	• Open two new elementary schools and redesign magnet schools	• Percent of CRP completed and on schedule • Number of students enrolled in magnet schools	
• Support efficient, effective, and continuously improving systems of learning	• WCS strives to be a high performing organization	• **Become the largest excellent Ohio school district by 2005**	• Continue Baldrige training for staff • Submit Ohio Award for Excellence, Tier II application	• Percent of personnel trained and using Baldrige improvement process • Scores on the Ohio Award for Excellence, Tier II application	

Accepted 090902

Figure 3-11: WCS Continuous Improvement Plan
Source: http://www.wcsoh.org/CIP_03_06.pdf 5/21/03

Westerville City Schools based their facilities planning on a continuous improvement plan (CIP) (Figure 3-11). For the purpose of this research, the focus of discussion here is school facility improvements. The CI plan identified the Construction Renovation Plan (CRP) as one of its district goals. Specifically, the CRP named opening two new elementary schools to accommodate district growth and plans for the future.

Redistricting creates a situation of possible resistance from the community and resistance to change affects the acceptance of any redistricting plan. Redistricting takes an emotional toll on those it affects, especially on the residents of a neighborhood school community.

Redistricting requires a public process. That is where the intricacies are within a redistricting proposal in terms of acceptance. The social factors within a school redistricting process override technical studies. These are the variables within a public process that are intangible and hard to weigh in light of the overall composition of a master plan.

How is the public process interpreted? An administration usually views it as an essential piece of satisfying a community's concerns given that the school redistricting proposal is for their benefit. It is created by an entity serving the public interest. However, one cannot please all the people all the time. This is where residents opposing the plan begin the process of resistance, while those residents who feel that their values have been considered in the plan are inactive.

"The Emotional Experience of School Change: Resistance, Loss, and Grief" describes the effects of school redistricting on the community and indicates the negative impacts of resistance.

> *When we ignore or neglect the emotional experience of change, the neglected emotion may sabotage rational planning. If we wish to succeed at reinventing school, we must pay attention to the emotional experience of teachers, administrators, particularly the interplay of resistance, loss, and grief within the change process (Marshak 1996, p. 72).*

Marshak also states that,

> *Over time I became increasingly convinced that most educators, parents, school board members, and bureaucrats significantly underestimate the complexity of school change because we focus almost exclusively on the external, rational, and technical elements of the process...school change processes follow a linear, rational model such as the following:*
>
> 1. *Assess the current conditions and determine the need for change.*
> 2. *Design the change program*
> 3. *Organize and prepare to implement the change*
> 4. *Implement the change program*
> 5. *Evaluate the change program and fine-tune it (1996, p. 72).*

In following a rational model such as the one above, the emotional response is not a variable.

Resistance is the initial response.

How can we resolve this apparent contradiction? Do people resist change, or do they seek it? W can make sense of these conflicting views by perceiving them not as contradictory but as paradoxical. They both convey truth. We act in both of these ways with differing intentions at different times. We seek change, and we resist change. And sometimes we engage in both activities simultaneously, because enacting ambivalence, familiar to all of us, is enacting this paradox (Marshak 1996, p. 74).

Imagine wrestling with this as a redistricting professional. For the administration, it would be much easier to assign the redistricting to someone not afflicted with the profound nature of redistricting. However, if it is to be done right, this cannot be the case.

The resistance to change triggers a sense of loss. How does a person deal with loss? By using the grieving process, loss is accepted. One might trivialize the notion that redistricting has a possibility of generating this type of response. Is it trivial to consider modifying one's way of life and what is important to one? This must be put this into perspective if it is to be understood. "Change does involve loss...the losses that educators fear in the process of change and ... manifest in their resistance are both imagined and actual (Marshak, p.75)."

"In considering the nature of loss, we need to remember that the extent of any particular loss, its power and value, lies not in any objective measure, but in the eyes and heart of the person who is experiencing the losing (Marshak, p. 75)." Losing a school can trigger this loss. Grieving consists of a synthesis of

emotions including sorrow, longing, anger, anguish, regret, fear, guilt, and shame.

> *Grieving tends to follow predictable stages:*
>
> 1. *Shock at the loss, with likely feelings of numbness, denial, panic, and/or anger.*
> 2. *Suffering and disorganization, with the likelihood of some of the following feelings: sadness, a sense of isolation, the exaggeration of loss, hysteria, a sense of impoverishment, a sense of meaninglessness, anger, and sleep disorder.*
> 3. *Eventual reorganization and reinvestment in new forms of living."*
>
> *"Unsuccessful grieving can lead to three equally undesirable and interrelated outcomes: being stuck in an image of the past; the denial of feelings of loss and a resulting inability to re-invest in anything new; and being stuck in the feelings of grief indefinitely (Marshak, p. 76).*

This happens to be the redistricting nightmare complicating the rational process that planners and school district administrators so desire.

Emotional toll must be weighed against technical efficiency in a redistricting proposal. Acceptance of a redistricting proposal is essential to positive school district relations with the public. For example, the VBBS example showed how numbers are manipulated to get wider acceptance of a plan. If the plan called for only two schools to be affected, the remaining 51 schools are unaffected, thus those parents and communities are untouched. However, if the plan called for 13% of the student population to be affected, that turns some

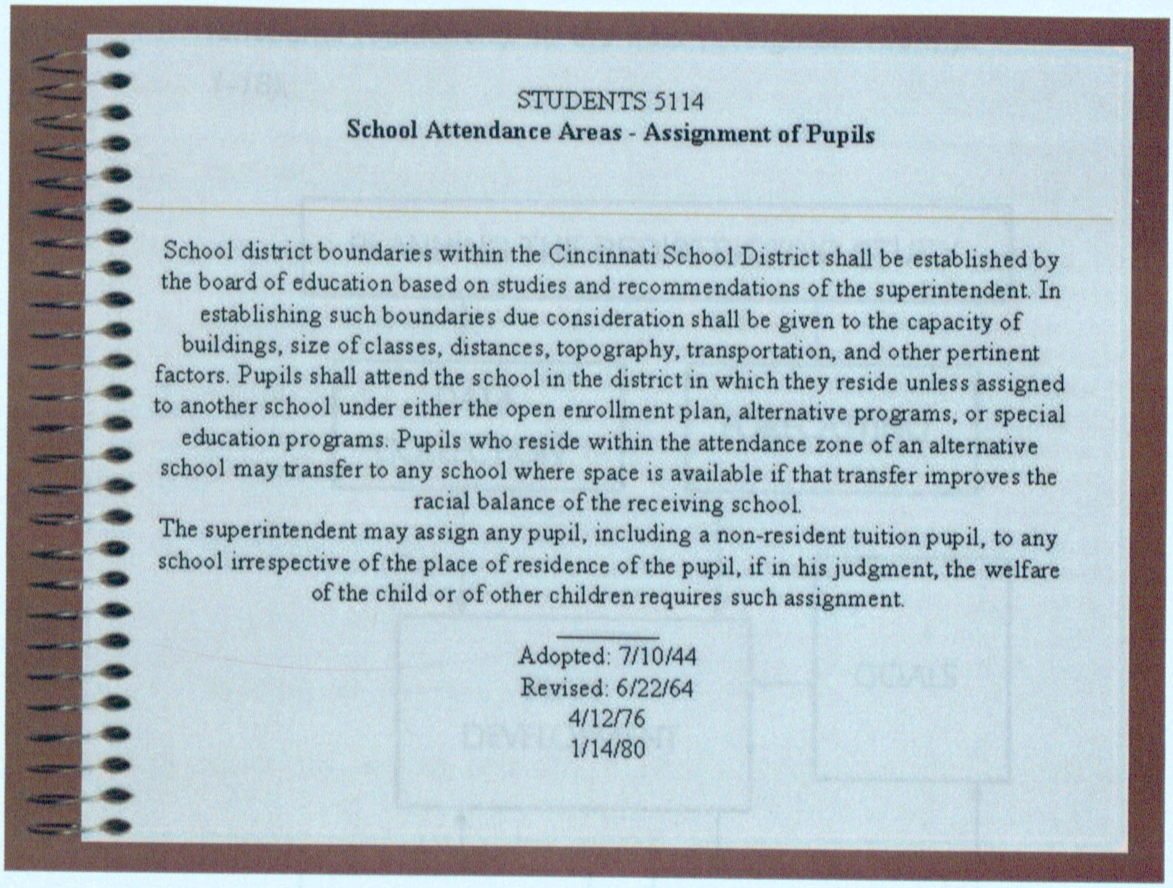
heads and catches attention from the district communities. In turn, this will affect the plan.

4 METHODOLOGY IN EVALUATING THE REDISTRICTING PROCESS

The methodology for this research is based on Roger Creighton's redistricting process, while the underlying theory is that of Clarence Perry and is based on the neighborhood as a unit. Combining Perry's theory and Creighton's process leads to the creation of a scenario of the best possible redistricting solution. The best scenario is evaluated using a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis.

Segment One of the CPS FMP is in the planning and development stage. The information used for this project is based on the most current available through the Cincinnati Area Geographic Information System (CAGIS) and CPS. CAGIS is the local provider of spatial information in Hamilton County. Using a GIS for redistricting analyzes the spatial relationships between students and schools. The community process has been completed for the most part. There are some circumstances where community input is still solicited on a high priority basis for compromise. The community process is also an ongoing one in that the Board revises proposals and the community must agree in principle. This research takes into account the community input solicited by the planning team, but the author does not solicit community input directly. However, some redistricting scenarios will be created without the use of community input. The difference in sequence will be stated in the scenario.

The Board Policy on student attendance areas is used (Figure 4-1).



STUDENTS 5114

School Attendance Areas - Assignment of Pupils

School district boundaries within the Cincinnati School District shall be established by the board of education based on studies and recommendations of the superintendent. In establishing such boundaries due consideration shall be given to the capacity of buildings, size of classes, distances, topography, transportation, and other pertinent factors. Pupils shall attend the school in the district in which they reside unless assigned to another school under either the open enrollment plan, alternative programs, or special education programs. Pupils who reside within the attendance zone of an alternative school may transfer to any school where space is available if that transfer improves the racial balance of the receiving school.

The superintendent may assign any pupil, including a non-resident tuition pupil, to any school irrespective of the place of residence of the pupil, if in his judgment, the welfare of the child or of other children requires such assignment.

Adopted: 7/10/44
Revised: 6/22/64
4/12/76
1/14/80

Figure 4-1: CPS Board Policy for Attendance Areas
Source: CPS Board Policy Handbook

Roger Creighton developed the technical process for redistricting, which is employed here.

> *Redistricting technical studies should be undertaken using a pre-defined, systematic, methodical process. Approached in this fashion, the conduct of a redistricting study can be managed efficiently and in a timely manner. Without method, the different tasks are likely to be undertaken at cross purposes, and the probability of error will multiply. Importantly, the confidence of the public will be increased if it can be shown that an orderly process has been followed, each of whose steps clearly has a productive,*

functional relationship to the next (Creighton 1994, p. 1-18).

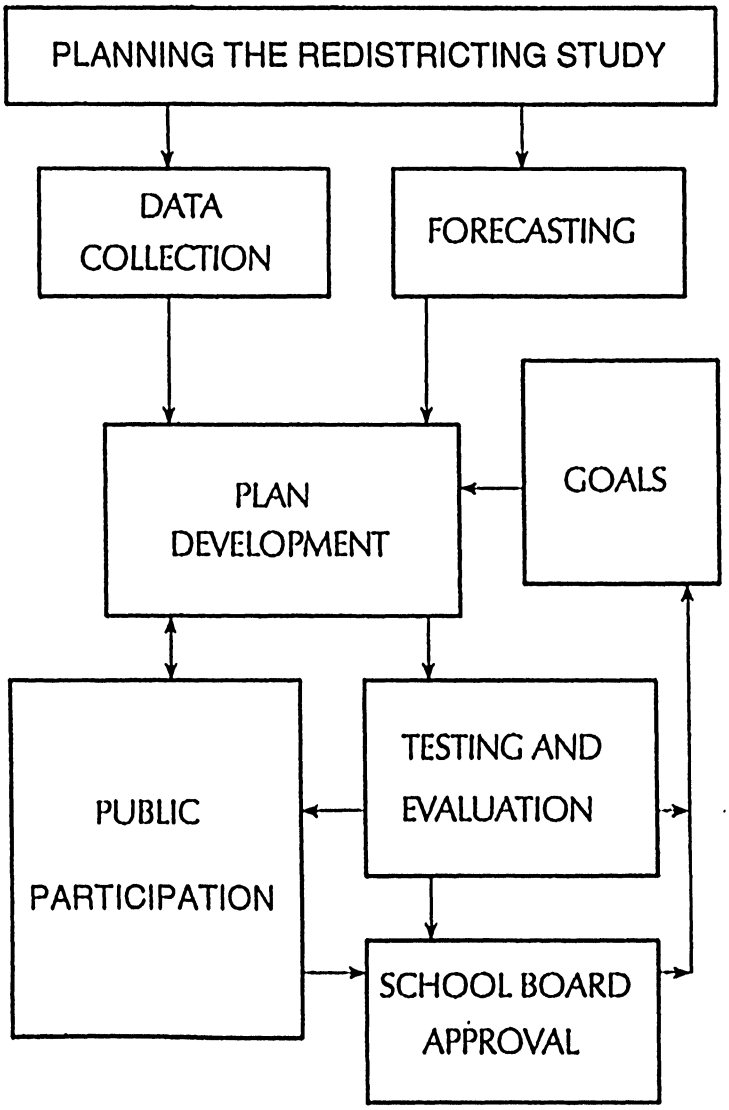


Figure 5-2: Redistricting Process
Source: Creighton, 1995, p. 1-19

The redistricting process consists of eight elements: (Figure 5-2)

1. Planning the Redistricting Study,
    a. Review and selection of a methodology suitable for the district.

b. Assignment of work elements to different persons.

c. Determination of whether, how and when the public is to be involved in the planning process.

2. Data Collection,

a. Road network data.

b. House numbering data.

c. Student data.

d. School building data.

e. Historical enrollments.

f. Existing boundaries, mapped.

g. Plans for school closings, school construction, and additions to existing buildings, by anticipated date of implementation.

h. Optional data: Traffic volumes on arterials and collectors, designations of one way streets, locations of housing projects, land use maps and designation of streets that cannot be crossed legally by students of certain grades.

3. Forecasting,

a. Establishing target years.

b. Establishing control totals for student data.

c. Establishing stratifications and their total controls of student data.

d. Establishing geographic growth factors.

e. Factoring student data (estimates).

4. Goals and planning principles,

a. Educational objectives.

b. School loading goals.

c. Social goals.

d. Transportation goals.

e. Administrative goals.

5. Plan development.

    a. Building scenarios.

    b. Boundary scenarios.

6. Testing and evaluation (SWOT),

    a. Quantitative

    b. Qualitative

7. Public participation or review.

8. School board review and approval. (Creighton 1994, p. 1-18)

"...planning new enrollment areas is highly creative design work; while it does not require artistic skills, it is still very much akin to architecture and city planning (Creighton 1994, p. 7-2)." This research is primarily for designing new enrollment areas according to the CPS FMP facility recommendations.

A SWOT analysis is used to evaluate the redistricting scenarios. For the purposes of this research, the SWOT analysis is broken down into technical solutions and social implications. A strength or weakness of the plan is the technical aspect (quantitative). If the plan logically redistricts students to the closest schools with the appropriate facility capacity restrictions, short-term and long term, then this is strength. The opportunity or threat is the implications of

the proposed changes. The least amount of threat, school community resistance, is considered the best alternative (qualitative). In summary, both the board and the public will favor the most efficient and the least disruptive redistricting proposal.

5 A CPS REDISTRICTING SCENARIO

The West school facilities are overcrowded (Figure 5-1). This portion of the district projects steady enrollment, so the addition and renovation of school facilities is warranted. The schools that are directly affected by redistricting are: Carson, Oyler, Quebec Heights and Whittier. The neighborhoods affected by the redistricting are: West Price Hill, East Price Hill, Lower Price Hill and portions of Sedamsville, Riverside, South Fairmount (Figure 5-2).

Figure 5-1: Location Map
Source: CAGIS

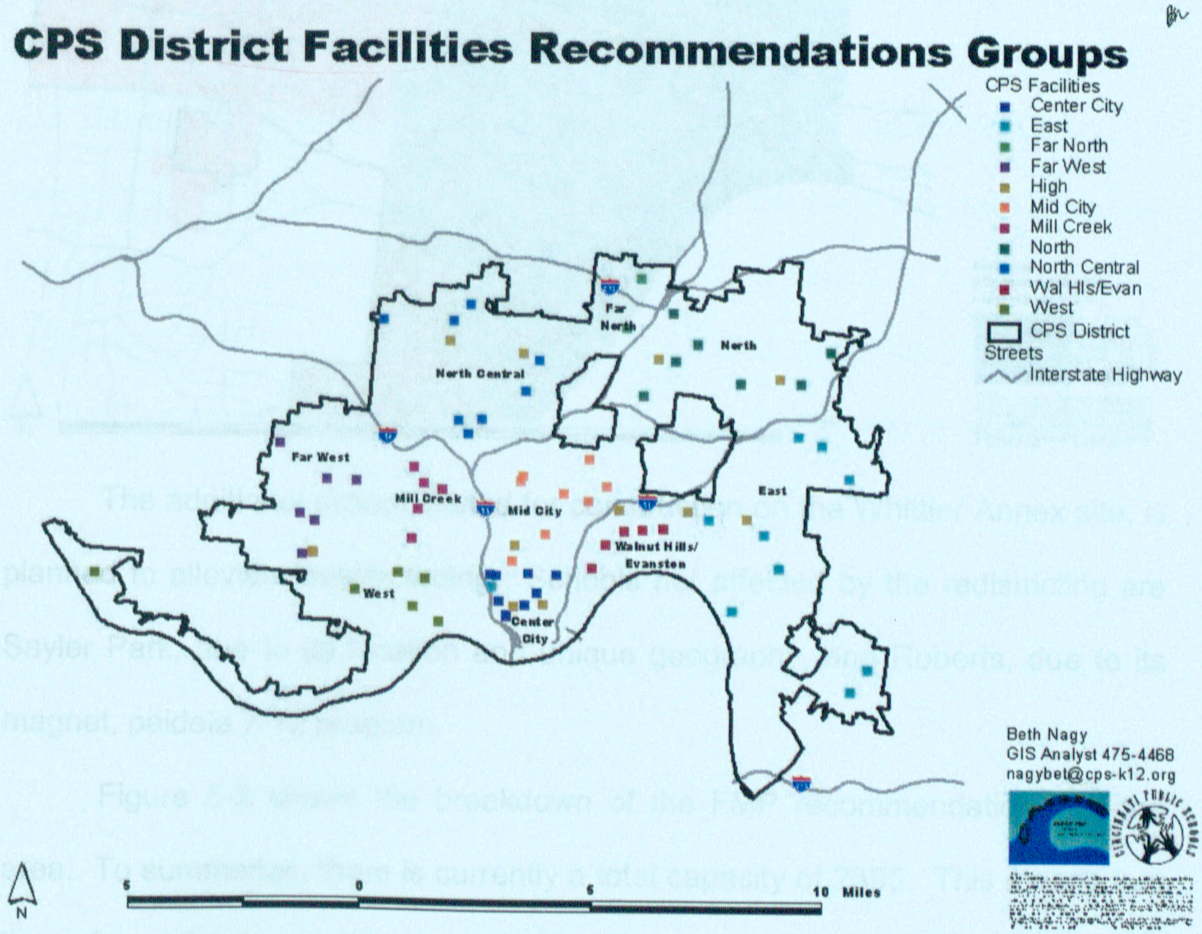
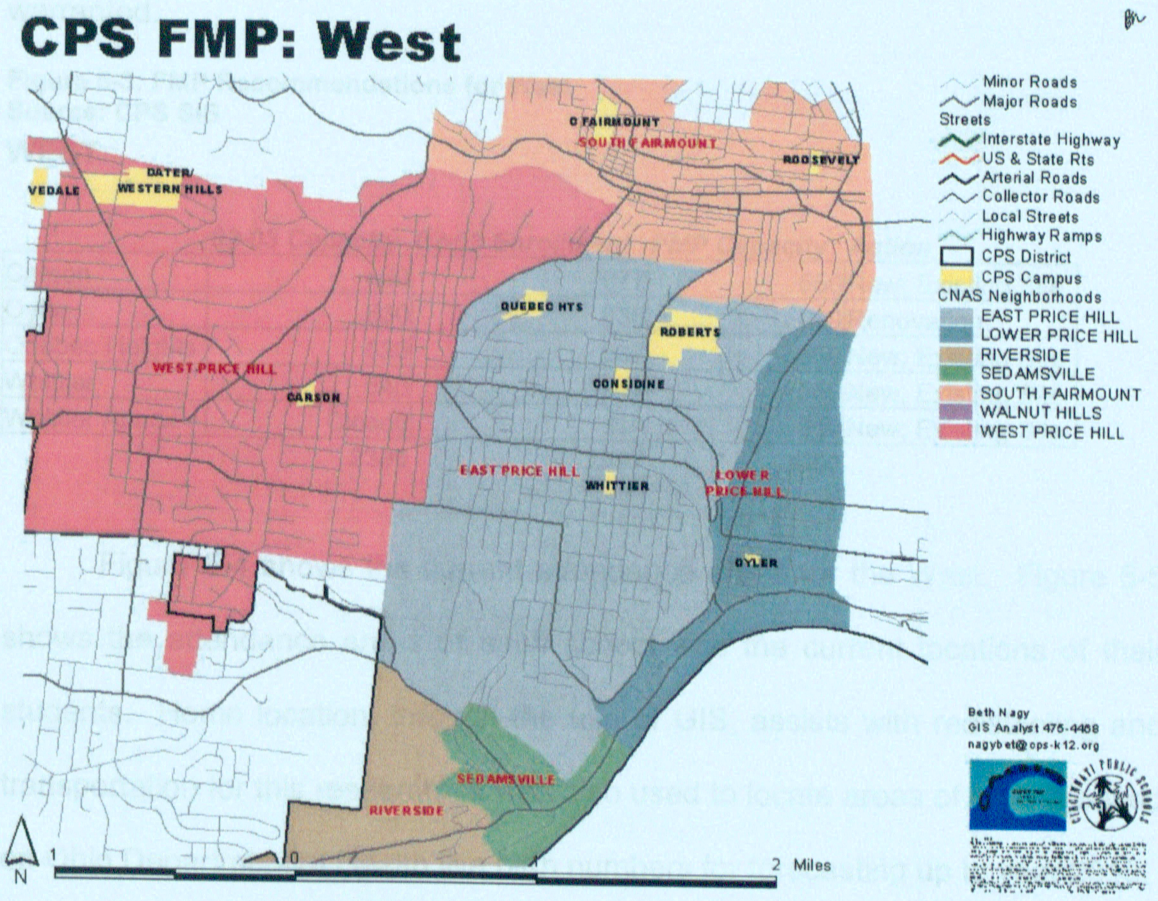


Figure 5-2: Location Map West
Source: CAGIS



The additional school, slated for construction on the Whittier Annex site, is planned to alleviate overcrowding. Schools not affected by the redistricting are Sayler Park, due to its location and unique geography, and Roberts, due to its magnet, paideia 7-12 program.

Figure 5-3 shows the breakdown of the FMP recommendations for the area. To summarize, there is currently a total capacity of 2395. This means that these four schools can house a total of 2395 students between them without the use of temporary classrooms (modular units). There is currently a combined enrollment of 2897. Modulars are on site to accommodate the students currently.

These schools combined are over capacity by 502 students. Over 100 students, except at Carson, overcrowd each school. The addition of a new school is warranted.

Figure 5-3: FMP Recommendations for West
Source: CPS SIS

WEST

	02-03 Capacity	*02-03 Enrollment*	*FMP Capacity*	*Action*
Carson	490	677	550	New; Existing Site
Oyler	630	636	650	Renovation
Quebec Heights	635	837	650	New; Existing Site
Whittier	640	747	550	New; Existing Site
Whittier Annex	Closed	NA	650	New; Existing Site
	2395	**2897**	**3050**	

Figure 5-4 shows the current attendance areas for the West. Figure 5-5 shows the attendance areas of each school with the current locations of their students. Home location, through the use of GIS, assists with redistricting and transportation for this research. It was also used to locate areas of growth based on Ohio Department of Health live birth numbers for forecasting up to year 2010.

Figure 5-4: Attendance Areas for West
Source: CAGIS

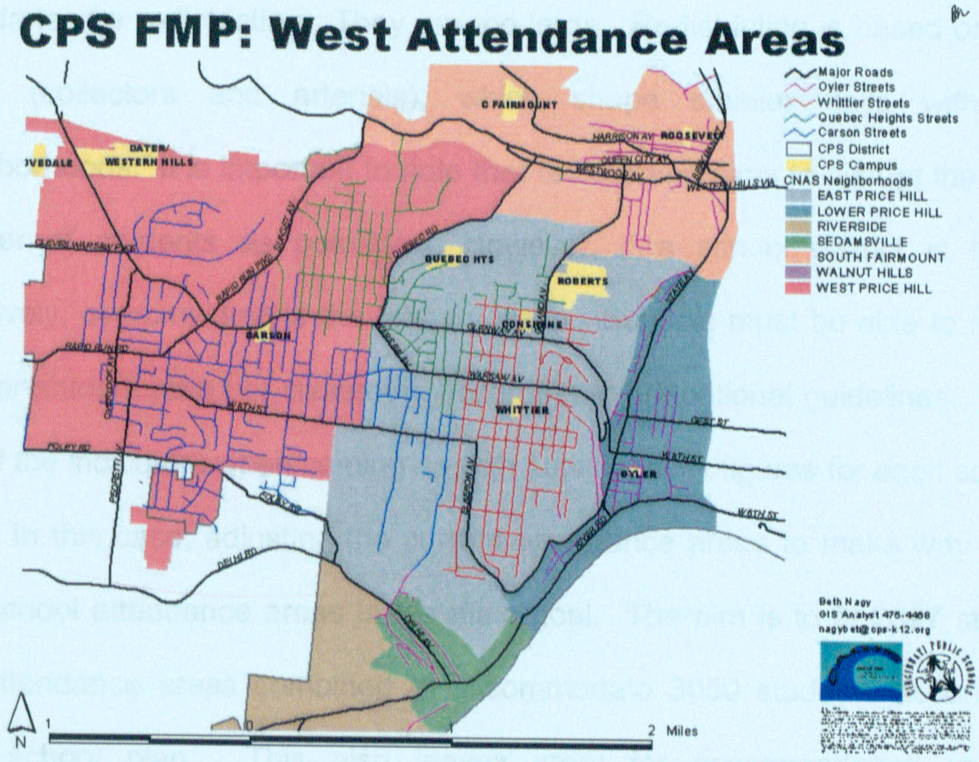
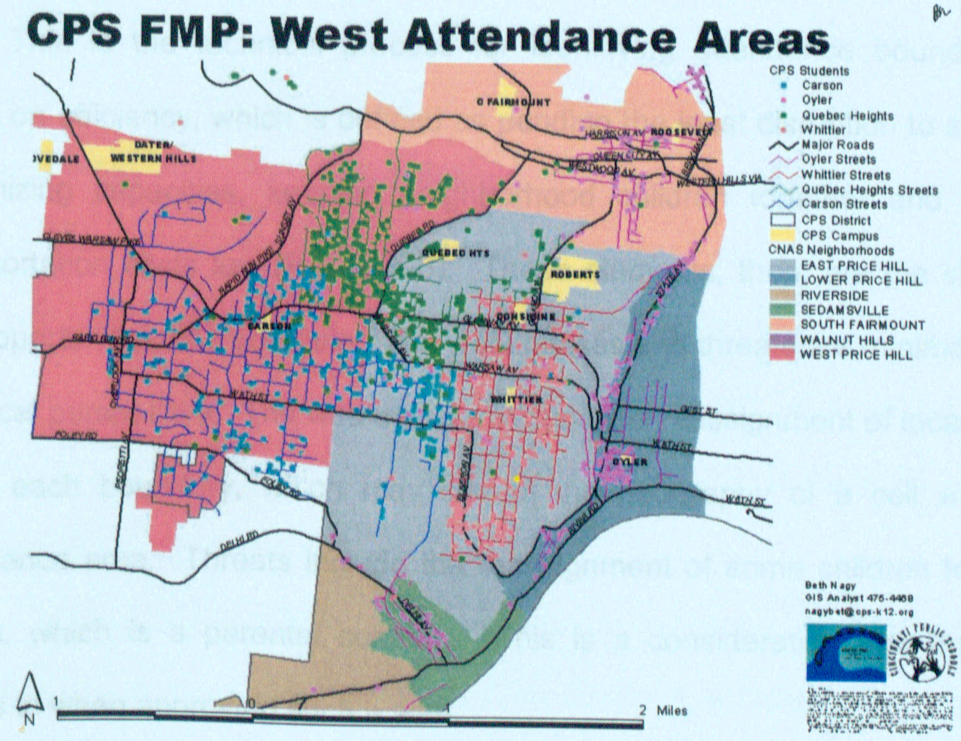


Figure 5-5: Attendance Areas for West with Current Students
Source: CAGIS

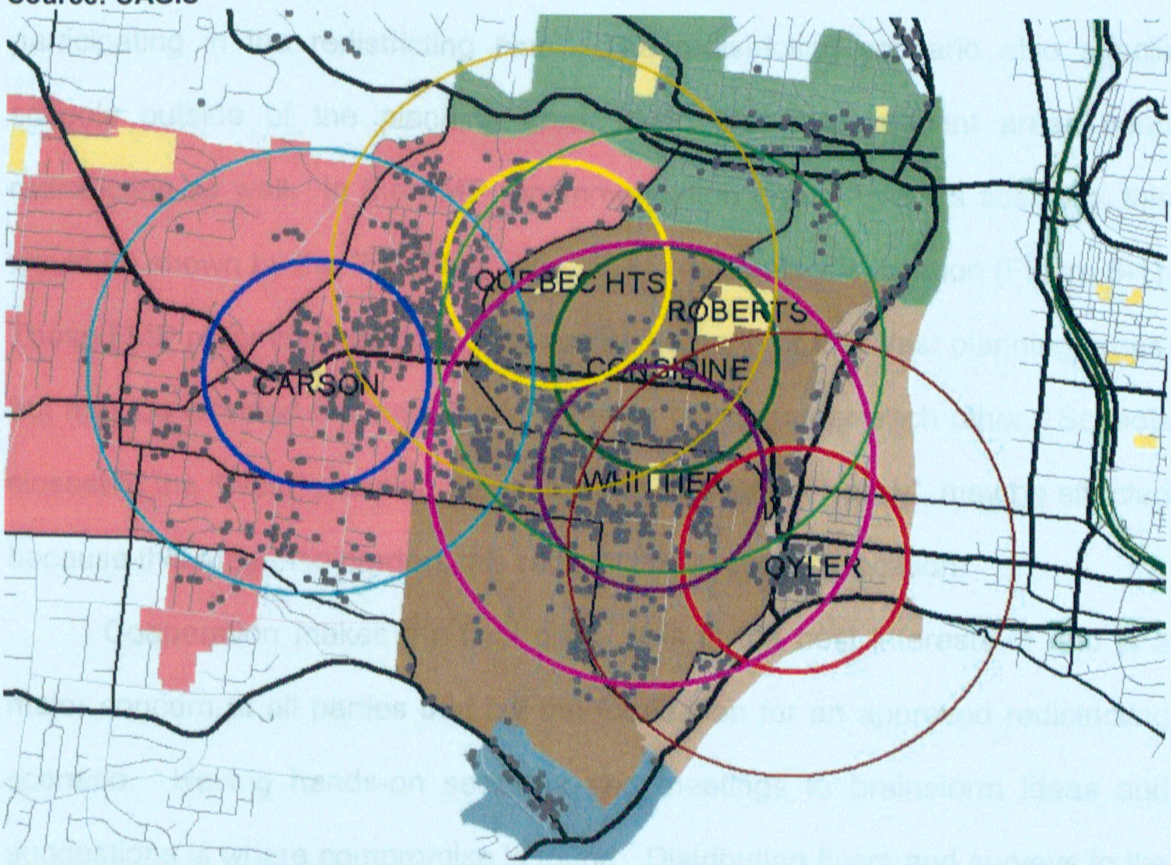


In this situation, the size of the neighborhoods eliminates using their boundaries for redistricting. They are too large. Redistricting is based on major roads (collectors and arterials), which shape smaller cells within the neighborhoods. It is important to note that redistricting aims to disrupt the fewest number of students as possible. However, if a school district is to plan effectively, overcrowding is the primary issue. Schools must be able to retain a teacher-student ratio per classroom according to educational guidelines. That is one of the indicators when coming up with new capacity figures for each school.

In this case, adjusting the current attendance areas to make way for the new school attendance areas is the main goal. The aim is to fit 2897 students into attendance areas combined to accommodate 3050 students according to each school plan. This also leaves room for accommodating changing enrollments per school for each school year in the future.

This is the technical process for identifying attendance boundaries is based on efficiency, which is defined as pending the least disruption to students, maximizing capacities, keeping neighborhood children together and keeping transportation costs low (Figure 5-6). These elements, then, are the strengths and opportunities of a scenario. The weaknesses and threats are minimal from a technical perspective. The weaknesses include the reassignment of local streets within each boundary, which may disrupt the geography of a cell within an attendance area. Threats include the reassignment of some children to a new school, which is a parental concern. This is a consideration that the board figures in when approving such a plan.

Figure 5-6: The Service Spheres
Source: CAGIS



This is as far as the redistricting scenario should go from the technical perspective. This plan is prepared for the community presentation. It identifies the major roads, the neighborhoods, the current situation, the current attendance areas and the service spheres for walking students and for transportation of those outside of the walking parameters. If the school board approves this plan without feedback from the school community, it will not be a public process because the community interest was not represented prior to approval and it will be opposed.

This is the point where community input is solicited. The basic layout for change exists, but is not yet detailed. The details that impact the progression and final presentation are local streets, possible site locations, growth factors,

housing development, civic projects and the overall consensus of who is participating in the redistricting plan. The redistricting scenario also affects schools outside of the planning area, given that the adjacent areas need redistricting as well. In the FMP recommendation group "West"'s scenario, this would be shown by the "Far West" and "Mill Creek Valley"'s location (Figure 6-1). These FMP recommendation groups are to the north of the West planning areas, but may be affected because these planning areas border each other. Schools closest to the "West" planning areas, like the "Mill Creek Valley", may be affected because this area also borders this redistricting scenario's location.

Cooperation makes the final plan. It is in the best interests of and is a major concern of all parties that lay the foundation for an approved redistricting scenario. Having hands-on sessions and meetings to brainstorm ideas and suggestions is where compromise is found. Distributing flyers and surveys to the school community (parents, teachers, administration and residents) can also provide a wealth of knowledge on opinions that were not solicited or represented in the meetings. This, however, is outside the scope of this research.

6 RECOMMENDATIONSAND SUGGESTIONS FOR FUTURE RESEARCH

Using Creighton's process and Perry's theory, the Cincinnati Public School district should utilize this planning technique for the FMP and future redistricting cases. Each planning area in the facilities recommendations will be affected by change. Each area is planned to have: an additional elementary and/or high school, adjusted facility capacity for renovations and/or the loss of a neighborhood elementary school. The process used for this research can be applied to all of these planning areas. It is a universal redistricting process applicable in any redistricting proposal, big or small. Even when the FMP is completed, there will always be a need for redistricting.

The FMP is a long-term project for the district. It is leaving no school untouched, and, in turn, no student unaffected. The Creighton process draws upon proven successful application in school districts and other technical fields such as traffic planning for municipalities. The process is straightforward, logical and invites very few technical problems. Taking the redistricting process one step further, Creighton emphasizes public process and the timing of such within the scenario.

Perry's Neighborhood Unit Theory is applicable as a rationale for location and placement of schools from a socio-economic standpoint. This theory takes social factors and cultural norms into consideration. It is a stable theory as a common sense approach to spatial organization of people and places, relating to school communities in particular. However, its early twentieth century approach needs to be updated.

Consequently, the author suggests a revision of Clarence Perry's Neighborhood Unit Theory to make it more applicable in today's world. Culture, economic status, family types and public school district demographic composition have changed since the 1920's. Socio-economic indicators have replaced the "culture" of families that schools serve. The Neighborhood Unit Theory itself is still applicable, but how it relates to its social beneficiaries differs. An in-depth review of Perry's theory may prove that the variables he used are no longer applicable in the same way. However, for the purposes of this research, it is.

Social policy in public educational institutions varies. For further study, the author suggests a review of social policies within the realm of public education. In particular, redistricting is a topic that incorporates public process (or should). For this reason, the school community is responsible for its civic duties of interest, opinion and suggestion. The school administration and school board are responsible for clearly stating issues that the school community should participate in, how to do so and what the parameters of their inclusion are. It should serve as a guide to the schools and its communities on public process.

APPENDIX A

The Cincinnati Public School Facilities Master Plan (Continued from Page 6)

Facilities Master Plan Links State and District to Improve School Buildings

A partnership with the State of Ohio would help bring dramatic changes to many Cincinnati Public Schools' facilities, creating easy-to-maintain classrooms designed for the district's preferred standards-based teaching method and wired for 21st-century technology.

Members of the Ohio School Facilities Commission (OSFC) described the commission's role in creating CPS' Facilities Master Plan at the Board's November 14 Committee of the Whole meeting. The OSFC is the agency directing a statewide effort to upgrade all Ohio school buildings to the same standard and quality — either through renovation or rebuilding.

It's a massive campaign that is spending an average of $1.75 million a day on school-building improvements around Ohio and opening a new school nearly every week, said Alan Foust, OSFC's project administrator for the CPS plan. The state would pay 23 percent of the cost to upgrade CPS' buildings.

Superintendent Steven Adamowski described the proposed Facilities Master Plan as a document "creating schools for the next 50 years." "We are entering a once-in-a-generation opportunity to bring our school buildings up to high standards," Adamowski said. "For me as a superintendent, it has been very encouraging over the past several months to see this plan develop. It's a very sound plan — thoughtful and very forward thinking."

Cincinnati Public Schools' students will move into upgraded buildings sooner than originally expected, thanks to pressure from CPS officials to convince the Ohio legislature to move urban school districts higher up on the list. The original timetable put CPS into 2010 before state assistance would be available.

Cincinnati Public also is ahead of other urban districts by already having hired a Construction Manager and a Master Architect to work in conjunction with CPS and OSFC officials to formulate the Facilities Master Plan.

"We consider CPS a model for what OSFC wants to happen in city school districts," said Colleen Rezabeck, OSFC's planning manager for the CPS plan.

The basis of the Facilities Master Plan is OSFC's school-by-school assessment, which determines the cost to bring each building up to state standards. If the cost to renovate is more than 66 percent of the cost to rebuild, the state will contribute money only toward new construction. Of CPS' 76 buildings evaluated, only 15 schools scored 66 percent or less, or in the renovation range. Districts may apply for waivers from the 2/3 rule based on compelling causes, such as a building's historic significance.

New construction creates the opportunity to build a school specifically designed for teachers working in teams, the model CPS has adopted as best for ensuring success of the district's new standards-based curriculum, said Associate Superintendent Kathleen Ware.

The district would build new classrooms unlike the lineup of rooms typically found in schools for the past 100 years. The new pod model would cluster four enclosed classrooms around a common extended-learning area, with additional space for restrooms, storage and teacher workstations. Teams of teachers would work with the same group of students for several years, with the goal of all students meeting academic standards.

To meet state guidelines, CPS officials say a 650-student (preschool to eighth grade) school would be the district's best option. Inside the roughly 84,200-square-foot building, each classroom would contain 900 square feet able to hold up to 25 students. (Classrooms now in many CPS buildings average about 600-800 square feet.) Classrooms would be clustered in seven pods, with separate rooms for music (about 1,200 square feet), science, art, special education and spaces for parent, agency or community use. Room arrangements for 550-, 450- and 350- student schools also were presented.

The final Facilities Master Plan will be a "CPS' project," OSFC's Foust said, with the OSFC setting standards and guidelines "to assure all children in Ohio learn in equitable buildings." The standards include stipulations such as all schools will be air-conditioned and every classroom wired for computers. There is flexibility to meet a district's specific needs; for example, the OSFC agreed to allow CPS to build a new school on 4.5 acres instead of the 13 acres it requires in more rural districts.

The OSFC Design Manual, a six-inch thick binder, gives standards for everything that will go into new or renovated school buildings — from furniture to windows to the size of the classrooms and the equipment each classroom contains. The manual ranks items as good, better and best, giving districts the option to pick from the high-, middle- or low-cost range. "We don't site a brand. We don't pick colors," Foust said. "Items make it into the manual based on a 40-year, life-cycle cost analysis."

The standards were developed with assistance from superintendents, teachers, architects and construction managers locally and from around the nation, Foust said.

On December 12, additional information will be presented to the Board about the Facilities Master Plan, with a look at the present condition and capacity of all schools and details of enrollment projections district wide and by neighborhood. The state will not allow CPS to design more space than will be needed for future enrollments.

The complete plan, with a detailed recommendation for each CPS building, is scheduled to be unveiled in early January at a Committee of the Whole meeting. Three weeks of neighborhood meetings will follow in January and February to explain the plan and solicit input from the community. The Board is expected to vote on a final plan in late spring.

What the Facilities Plan Means

- Rebuilt or fully renovated school buildings for all students
- Buildings that meet or exceed high state standards
- Classrooms designed to support CPS' educational programs and teaching practices
- Building capacities of 650, 550, 450 and 350 students for most schools
- Compact, self-contained pod designs of 4 classrooms for 4-5 teachers
- Extended-learning area and restrooms in each pod
- Uniform lighting and environmental sound control
- Injury- and stain-resistant floor covering
- Technology-ready classrooms equipped with voice, video and data ports
- Classrooms fully equipped with:
- Heating and air-conditioning
- Student desks, tables and chairs
- Computer workstation furniture
- Teacher desk and chair
- Filing cabinet and base cabinets
- Coat and storage cabinets
- Sink with drinking fountain and cabinet
- Chalk/marker and tack boards

Recommendations Shaped by Enrollment and Building Condition

The dramatic changes recommended in CPS' Facilities Master Plan stem primarily from three criteria: enrollment projections, an analysis of existing space and an across-the-board goal of creating quality buildings.

Enrollment

CPS' enrollment, now below 42,000 students, has dropped about 15 percent over the last seven years. It is predicted to decrease by 10 percent more over the next decade, based on studies of birth rates and population-migration patterns.

Existing Space

With 79 school buildings (74 now operating as schools) and a declining enrollment, CPS has about 1.8 million square feet of excess space. Maintaining that space is costly — about $3 per square foot, which adds up to about $60 million over ten years. Districts should strive to keep only as much space needed for students, according to guidelines set by the Ohio School Facilities Commission, the agency directing a state-wide effort to upgrade all Ohio school buildings.

CPS' students are not spread uniformly around the district, creating some schools with very crowded conditions and others with room to spare. Timeline decisions often were based on the urgency to relieve overcrowding.

Creating Equity

The Ohio School Facilities Commission, dedicated to bringing all Ohio schools up to the same quality, has designed minimum standards for all renovation and new construction. The standards cover all aspects of what goes into a school, including the size of the classrooms, the number of students assigned to a building, the type of windows and lighting, the floor coverings, technology access and air quality — including air-conditioning in every school and modernized heating systems.

Facility Condition Index

The Facility Condition Index is the percentage assigned by the Ohio School Facilities Commission based on its assessment of a building's condition. The assessment looks at the cost

to renovate a building (keeping it the same size and basic design) versus the cost to build a new school. If renovation costs amount to more than 66 percent of the cost to reconstruct, the OSFC generally will contribute money only toward new construction. The OSFC can grant waivers to the 2/3 rule for such issues as historical significance.

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