City of Chardon

Comprehensive Plan Update

March 13, 2008

(INCLUDES AMENDMENTS THROUGH MARCH 12, 2009)

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City of Chardon

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To Chardon Residents:

I am pleased to submit to the residents of Chardon this updated Comprehensive Plan to guide the future growth and development of our City. This is the first updated plan that has been adopted since 1980. This plan sets forth the City's vision for the future with policies and guidelines for making land use and other decisions in keeping with that vision. It also provides recommendations for how the City can implement the identified policies to achieve the updated goals.

I am grateful for the time and commitment of City Council, the Planning Commission, and staff who regularly met, in well advertised and televised joint sessions in order to complete this update. Additionally, periodic public forums were held to solicit input from Chardon residents and business owners. All participants' comments were considered in the formulation of community goals, policies and implementation strategies.

Copies of this Plan are available in the City Manager's office, online at www.chardon.cc and at the Geauga County Public Library, Chardon branch.

I look forward to the continuation of our work together in achieving our shared vision for the City of Chardon.

Sincerely yours,

Karen Simpson

Karen Simpson
Mayor

ORDINANCE NO. 2452

AN ORDINANCE ADOPTING THE COMPREHENSIVE PLAN UPDATE DATED FEBRUARY 8, 2008.

WHEREAS, the City of Chardon adopted a Comprehensive Plan in 1980.

WHEREAS, the City of Chardon recognizes its obligation and responsibility to revise and amend the Comprehensive Plan to reflect the existing conditions and current trends of the growth and development of the City of Chardon; and

WHEREAS, the City of Chardon retained D. B. Hartt, Inc. to meet with municipal officials and facilitate the revision of the Comprehensive Plan; and

WHEREAS, D. B. Hartt, Inc. has prepared a draft of the revisions suggested by the members of Council and Planning Commission; and

WHEREAS, the Planning Commission has recommended to Council that it adopt the City of Chardon Comprehensive Plan Update; and

WHEREAS, members of Council have reviewed the City of Chardon Comprehensive Plan Update, agree that the Comprehensive Plan adopted in 1980 requires revisions and desires to implement the amendments and changes thereto set forth in the Comprehensive Plan Update.

NOW, THEREFORE, BE IT ORDAINED by the Council of the City of Chardon, State of Ohio, that:

SECTION 1. The City of Chardon Comprehensive Plan Update dated February 8, 2008 is hereby adopted. .

SECTION 2. The Comprehensive Plan Update is incorporated by reference as though fully rewritten as part of the 1980 Comprehensive Plan.

SECTION 3. Except as amended and revised by the Comprehensive Plan Update, the 1980 Comprehensive Plan shall remain in full force and effect.

SECTION 4: It is found and determined that all formal actions of this Council concerning and relating to the adoption of this ordinance were adopted in an open meeting of this Council and that all deliberations of this Council and any of its committees that resulted in such formal action, were in meetings open to the public, in compliance with the law, including §121.22 of the Ohio Revised Code.

SECTION 5. This ordinance shall become effective upon the first date permitted by law.

PASSED AND ADOPTED this 13th day of March, 2008.

Karen S. Simpson
KAREN S. SIMPSON, Mayor
President of Council

Attest:
Amy E. Ray
Clerk of Council

law director rad adopt comprehensive plan

The effective date of Ordinance No. 2515 is April 11, 2009.

ORDINANCE NO. 2515

AN ORDINANCE AMENDING ORDINANCE NO. 2452 AND THE COMPREHENSIVE PLAN OF THE CITY OF CHARDON.

WHEREAS, the City of Chardon is a community member of the Chagrin River Watershed Partners, Inc.; and

WHEREAS, the Council desires to focus upon and encourage economic development and redevelopment in certain areas of the City defined as Priority Development Areas (PDA); and

WHEREAS, the Council desires to encourage open space protection and responsible conservation development of certain areas of the City defined as Priority Conservation Areas (PCA); and

WHEREAS, the Chagrin River Watershed Partners, Inc. recommended the designation of Priority Development Areas and Priority Conservation Areas within the City; and

WHEREAS, Municipal staff has also recommended to Council the designation of specific areas as Priority Development Areas and Priority Conservation Areas; and

WHEREAS, the Municipal Planning Commission has considered and evaluated the recommendations from the Chagrin River Watershed Partners Inc. and Municipal staff and recommends the Priority Development Areas and Priority Conservation Areas be adopted as a component of the Comprehensive Plan; and

WHEREAS, the Council desires to adopt the Planning Commission's recommendation and incorporate the Priority Development Areas and Priority Conservation Areas as part of the City of Chardon's Comprehensive Plan.

NOW, THEREFORE, BE IT ORDAINED by the Council of the City of Chardon, State of Ohio, that:

SECTION 1. The Municipal Planning Commission's recommendations of Priority Development Areas (PDA) and Priority Conservation Areas (PCA) within the City as set forth upon the map attached hereto titled "City of Chardon, Priority Development Areas and Priority Conservation Areas" and marked as "Appendix G" (prepared by the City of Chardon Planning and Zoning Dept, Feb. 12, 2009), are hereby adopted.

SECTION 2. The City of Chardon's Comprehensive Plan, and the "Specific Recommendations" of both the "Open Space" and the "Community Image and Economic Development" therein, are hereby amended to include "Appendix G" and the Priority Development Areas and Priority Conservation Areas set forth therein.

SECTION 3. It is hereby found and determined that all formal actions of this Council concerning and relating to the passage of this ordinance were adopted in an open meeting of this Council, and that all such deliberations of this Council and any of its committees that resulted in such formal action, were in meetings open to the public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

SECTION 4. This ordinance shall take effect and be in force on and after the earliest date allowed by law.

PASSED AND ADOPTED this 12th day of March, 2009.

Karen S. Simpson
KAREN S. SIMPSON, MAYOR
President of Council

Attest:

Kim Foley
KIM FOLEY, CLERK PRO-TEM
Clerk of Council

ROSTER OF CITY OFFICIALS

CITY COUNCIL

Karen S. Simpson, Mayor
Philip G. King, Vice Mayor
Leslie L. Bednar
Jefferey J. Campbell, Jr.
Mary M. Bramstedt
Deborah M. Reiter
Robert Cromwell

PLANNING COMMISSION

Kenneth R. Miller, Chairman
Philip G. King, Vice Chairman
William Niehus
Nancy McArthur
Gary Hanlon
Andrew K. Blackley
Leslie L. Bednar

CITY STAFF

David A. Lelko, City Manager
Randal B. Sharpe, Assistant City Manager
James M. Gillette, Law Director
Jeffrey Smock, Finance Director, Clerk of Council
Gayland Moore, Public Service Director
John J. Sheehan, Planning and Zoning Administrator
Douglas Courtney, C.W. Courtney Co., City Engineer

THANKS TO OTHER DEDICATED PARTICIPANTS

Jan Dyer, Planning Commission
Richard Gahr, Planning Commission
John Park, Mayor
Dr. Walter W. Sargent, Councilman

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INTRODUCTION

"In 1808, representatives from the Ohio General Assembly chose an unpopulated wilderness on a hill for the [Geauga] County Seat..."* That decision not only created a new community, but also helped to shape its future form and character. Two hundred years later, Chardon continues to reflect the prototypical New England town recreated within the 'Western Reserve.' Chardon Square still epitomizes that early form and character, "...with its focus on a central green (or common) surrounded by the most important community institutions, including the courthouse and town hall, churches, and schools. Early inns and stores as well as the homes of prominent residents also surrounded the green."*

While the early 'Western Reserve' included several similar communities, Chardon is now unique in Northeast Ohio. It represents one of the last independent, self-contained examples in the region, escaping the suburban expansion from central Cleveland that long ago engulfed so many of the others. For two centuries Chardon has remained the only community of significant size within the northern half of Geauga County, and the center of population, shopping, government, and jobs for the still largely rural and semi-rural area. Its leaders and a preponderance of its citizens are loyal civic boosters. Together, these attributes and the city's uniqueness within the region combine to create the city's greatest strength, as well as its greatest source of pride.

** Chardon Library Sesquicentennial Celebration Commemorative Edition Brochure & City Website*

PURPOSE OF THIS PLAN

In order to build upon several previous studies, the City has undertaken another step in their ongoing planning efforts which included a 1980 comprehensive plan and a prior 1996 update to that plan which was written but never adopted. This 2008 Comprehensive Plan Update is intended to re-evaluate and update existing conditions at the time of those studies, as well as subsequent changes in those conditions. The results represent a further refinement of the City's vision for the future, with policies and guidelines for making land use and other decisions in keeping with that vision. The Plan also provides recommendations for how the City can implement the identified policies in order to help achieve the updated goals.

THE PLANNING PROCESS

To achieve the intended purposes of this study, the City retained D. B. Hartt, Inc. Planning and Development Consultant to provide professional planning expertise, experience and guidance, as well as to facilitate meaningful citizen participation and input. Essential to the process were regularly scheduled meetings with the Mayor, City Council and the Planning Commission which were well advertised and open to the public. In addition, periodic Public Forums were held, during which a broad representation of Chardon residents and other influential participants provided comments on each stage of the study, and actively participated in the formulation of community goals, policies and implementation strategies.

The Preliminary Draft of the 2008 Comprehensive Plan Update was presented to community leaders in July of 2006, at a scheduled meeting open to the public. It was subsequently presented to residents at an advertised Public Forum in July. The Draft Plan was then refined to reflect a 'consensus' of both City officials and Chardon residents. At that point, further refinements and preparation of the final document for City approval were postponed until the results of two additional studies could be incorporated. An extensive evaluation of existing traffic levels and patterns was undertaken during the summer of 2007, after the Draft Plan had provided the necessary background and tentative decisions regarding future goals and policies, and when weather conditions permitted the attendant survey portion of the study. During that interval, a full evaluation of the City's existing zoning and development code was also completed, and a revised code proposed.

Both studies provided additional information for inclusion in the Final Plan, and identified minor adjustments to the Draft suggested by their results. The traffic analysis also generated a traffic modeling system, designed specifically for Chardon, which will allow the City to provide on-going future monitoring, as well as a level of predictive evaluation of the impacts of proposed development and road improvements. This final Comprehensive Plan Update incorporates the new information and general refinements into the original draft.

While the Plan's completion will occur in 2008, the process it represents should not end there. The Plan cannot be ignored or allowed to become outdated. It should be used everyday as a guide to the City's planning and decision making. To be effective and useful for more than a short time, it should be viewed like a living thing, constantly growing and adapting as it and the City mature. The conditions, circumstances, attitudes and personalities that generated the 2008 Plan, will almost certainly change over time, and the document must change with them.

To remain useful and relevant over time, the data, goals, policies and context should all be reviewed periodically, and amended if and when warranted by changed conditions or circumstances. It should be the responsibility of the Planning Commission and City Council to jointly establish a structured process to re-evaluate the Plan every two or three years, and to conduct a formal update every seven to ten years. A third consideration would be to formulate an annual Action Plan, guided by the Comprehensive Plan, but based on up-to-date City priorities and other factors.

I. EXISTING CONDITIONS

For any community to direct its future, it is first necessary to understand its past, and how that history has shaped existing conditions and current trends in its growth and development. Knowing where you are and how you got there is the foundation upon which to build goals and policies for the future. This is particularly true for Chardon, where so many of the community's basic characteristics are a direct result of its long history and recent past, as well as the regional context in which these events and trends occurred. The following analysis, therefore, identifies and evaluates those conditions the community believes to be significant factors in formulating its plans for the future. Included are Chardon's physical and functional place within Northeast Ohio, demographic trends, existing development characteristics, infrastructure, and the City's current land use and zoning patterns.

A. HISTORICAL CONTEXT

History's impact on the form, character, and significance of Chardon began when its site was made the future County seat in 1808. With that one act, it was determined that there would be a community in this location, and that community would be different from others within the County in substantial ways. From the beginning, public works formed the basis for early development. A courthouse was required, and given the early settlers' predilection to replicate their familiar New England background, it would be built on a central "green," surrounded by all of the other essential public buildings required for a new community. The result was Chardon Square: the determinant of future development patterns; focus of community activity and identity; and arguably the City's single most significant asset.

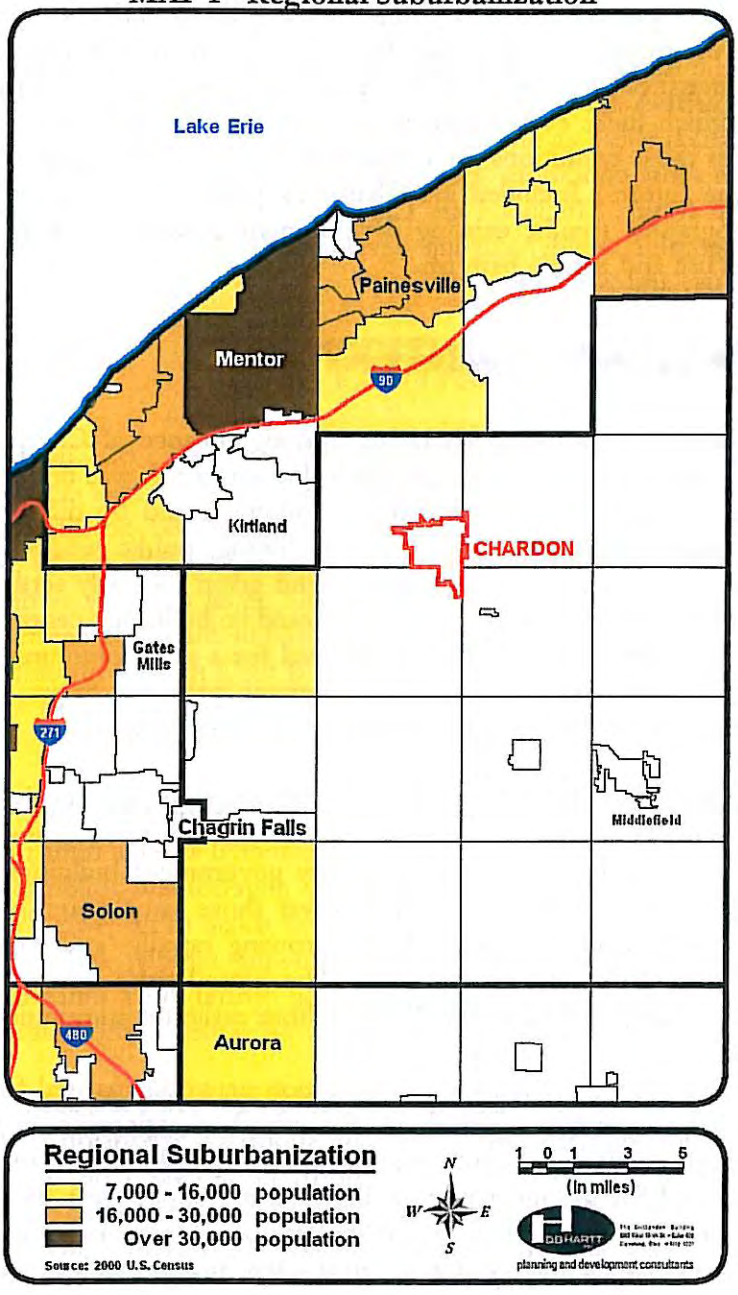
For nearly 200 years little changed in Chardon's form, function, or character. Even when relatively recent changes began to occur, the essential aspects remained – the 'green' and County courthouse, surrounded by City and County government buildings, a public school, a public library, shops, and supporting activities. Over those same years, however, a lot was changing elsewhere in the region. Cleveland was growing rapidly, and to a lesser extent, places like Bedford, Euclid, Painesville, and Akron. The central city's inner ring suburbs began to grow, eventually encircling and expanding beyond those earliest communities.

But for several reasons, including transportation networks, natural features, community barriers, cultural migration patterns and others, the suburban expansion of Greater Cleveland has not engulfed Chardon. It has passed to the north along Lake Erie, to the southeast through Solon and beyond, and for the most part, in between it stopped near the western County line. As a result, Chardon has been able to avoid the fate of so many other early settlements. It is still a relatively self-contained and 'complete' small town, and as much as possible and reasonable, has a strong determination to stay that way. (See Map 1)

In 1980, Chardon officially accepted a Comprehensive Plan prepared by Burgess & Niple, Limited. One of that report's most significant policies was a decision by the City to actively pursue both industrial and commercial economic development and job creation. At that time,

numerous other communities in the region were making similar decisions, reflecting widespread public funding concerns and a highly active development market. Equally important was a clear concern over maintaining a balance between the 'urban' and 'rural' nature of the community, most likely with some recognition of the potential conflict between these two objectives.

MAP 1 - Regional Suburbanization



In addition to housing conditions, a safe and efficient road network, and appropriate public facilities, the report was an early reflection of a serious concern over the availability of adequate utilities. Utility issues were obviously critical to the city's ability to accommodate both economic development and the expected population growth. It may also have been recognized that having

adequate sewers and sewage treatment would give the city a clear advantage over any of the surrounding townships in attracting development.

In 1996, City officials commissioned an update of the 1980 Comprehensive Plan by the primary author of the earlier study. While not officially adopted, it included the results of a city-wide survey of residents, as well as other noteworthy observations. The survey suggested that a high percentage of residents (or at least of respondents) strongly desired the preservation of a 'small town' character, control of taxation levels, and a reduction in traffic and congestion. They also perceived a lack of shopping opportunities and inadequate recreational facilities and programs. And significantly, they appeared to accept the idea of future 'growth,' provided it didn't conflict with the desired 'small town' character.

Beginning about that same year, a number of studies have since been commissioned by the City, focusing on the availability and capacities of the sewer system and the sewage treatment facility. City concerns in these areas reflected the earlier recognition of the need to both accommodate and promote future growth, and to satisfy the existing requirements of the new development that had already occurred since the 1980 Comprehensive Plan.

B. REGIONAL CONTEXT

The City of Chardon is located in northern Geauga County, one of the six counties surrounding Cuyahoga County and the central city of Cleveland. It lies approximately 25 miles east of downtown Cleveland, and 10 miles south of downtown Painesville. More importantly, Chardon is at least 12 miles east of Mayfield Heights, the nearest Cleveland suburb of significant size, with a population of nearly 20,000 in 2000. It is only about 7 miles southeast of Mentor, however, a city of over 50,000 people.

Primary access to the City is provided by two highways, neither of which is a major transportation corridor connecting significant end points. West of Chardon, U. S. Route 6 (Chardon Road) terminates at U. S. Route 20 in Euclid. To the east it meanders through rural areas and small towns until it finally reaches a major population center on the nation's east coast (Providence, R.I.) To the south, State Route 44 eventually connects with S. R. 422, a limited access highway to the west, but merely a designated route to the east. North of Chardon, however, S. R. 44 connects the city with I-90, Mentor, and the other heavily populated communities in Lake County.

Lack of significant highway access may be a detriment in some ways (economic development and/or access for residents to jobs or other destinations outside the City), but it is the primary reason Chardon has thus far avoided the path of greater Cleveland's intense outward migration. That regional growth has primarily occurred along significant interstate and other limited access highways radiating out from Cleveland and its inner ring suburbs. Although current truck and other traffic through Chardon is perceived to be a problem, the relatively limited highway access helps to prevent it from being even worse.

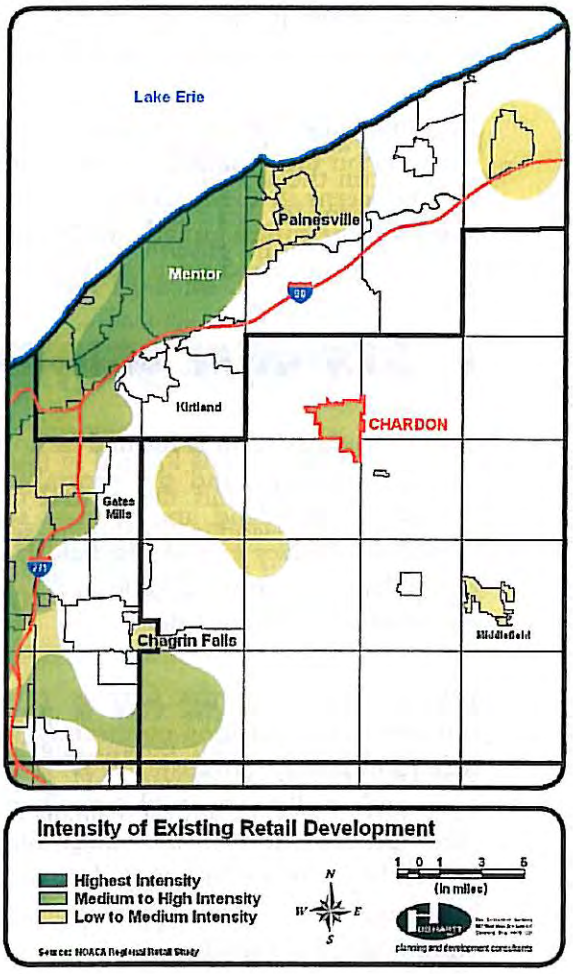
Access issues, however, have not prevented *all* housing development, neither within Chardon, nor in the surrounding townships. Outside the City, that growth has been somewhat tempered by low density zoning, utility issues and other constraints. But Chardon itself has experienced

considerable pressure to accept residential development, including a broader spectrum of housing densities. The result has been an intensification of the historic growth patterns, but so far, still not the intense suburbanization typical of Cuyahoga and Lake Counties. Chardon remains, and is expected to continue to be, the center for northern Geauga County's population, and more significantly, the almost exclusive provider of shopping, employment and other activities. (See Map 2)

MAP 2 - Population Trends



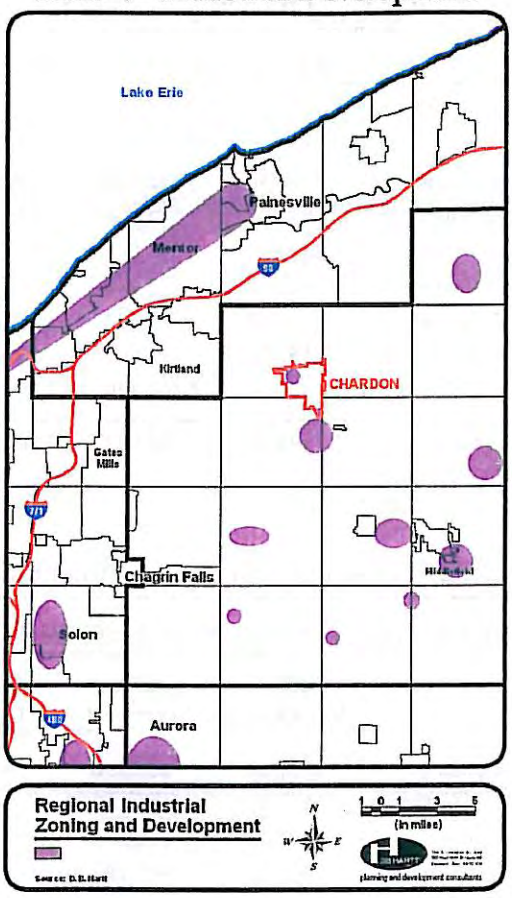
MAP 3 - Retail Trends



Regional trends in retail, industrial and housing development all reflect Chardon's relative separation from suburban Cleveland. The City is the nearest and most significant population center for most of the surrounding area. It also provides, by far, most of the area's retail businesses, employment opportunities, and entertainment/cultural activities. Without a major change in highway patterns, Chardon is expected to remain the center of Northern Geauga County's population and retail growth. (See Map 3)

Continued industrial growth may not be as easy to predict. Too many other communities with much better transportation access have been pursuing the same development. That market has been slowing dramatically for some time, and may not recover in the near future. There may never be enough future 'industrial' development to go around. (See Map 4)

MAP 4 - Industrial Development



C. POPULATION AND HOUSING

Following a trend that began nearly 50 years ago, the total aggregate population of the seven counties surrounding the city of Cleveland is projected to continue virtually unchanged for at least the next 25 years. What *has* changed, and expected to continue, is the way that population is distributed throughout the region. Cuyahoga County has been steadily losing population, due primarily to Cleveland's dramatic decline, and increasingly, to the population loses among the older suburbs. By 2030, the county is expected to lose approximately another 8.5% of its residents. Lake County saw its population increase by more than 30% from 1960 to 1990, but that rapid growth has leveled off considerably in the last 10 to 15 years, with little or no change expected by 2030. Portage County grew by nearly 40% between 1960 and 2000, but is projected to begin leveling off over the next 10 to 25 years. Lorain County experienced modest and somewhat inconsistent growth until a rapid acceleration of housing development over the last several years – a trend expected to continue for some time. Meanwhile, the population of Medina County increased an extraordinary 43% from 1960 to 1990, and nearly another 20% by the year 2000. Projections suggest that recent pace may actually increase further over the next 25 years. (See Tables 1 & 2)

TABLE 1 - Regional Population Trends

POPULATION IN THE REGION SINCE 1960				
	1990	1980	1970	1960
Medina County	122,354	113,150	82,717	65,315
Geauga County	81,129	74,474	62,977	47,573
Lorain County	271,126	274,909	256,843	217,500
Portage County	142,585	135,856	125,868	91,798
Summit County	514,990	524,472	553,371	513,569
Lake County	215,499	212,801	197,200	148,700
Cuyahoga County	1,412,140	1,498,400	1,721,300	1,647,895
7 County Region	2,759,823	2,834,062	3,000,276	2,732,350

Source: U. S. Census Bureau

TABLE 2 - Regional Population Projections

EXISTING & PROJECTED POPULATION IN THE REGION				
	2000 U. S. Census	2030 Projected	Projected Change	Percent Change
Medina County	151,110	206,790	55,680	36.85%
Geauga County	90,890	109,180	18,290	20.12%
Lorain County	284,670	312,530	27,860	9.79%
Portage County	152,100	161,900	9,800	6.44%
Summit County	542,900	564,210	21,310	3.93%
Lake County	227,520	232,360	4,840	2.13%
Cuyahoga County	1,393,990	1,274,030	-119,960	-8.61%
7 County Region	2,843,180	2,861,000	17,820	0.63%

Source: Office of Strategic Research, Ohio Dept. of Development

Geauga County's rate of growth was nearly as dramatic, with a 40% increase from 1960 to 1990, but slowing to about 1% per year more recently. Projections for 2030 indicate future growth will continue at a relatively slow, but steady pace. It should be recognized, however, that in terms of absolute numbers, the change has not, and will not, have the same impact as it would in one of the other counties where the starting point was so much higher. A 20% increase in Geauga County's 2000 population will approximate 18,000 people. The same percentage increase would equal over 30,000 people in Medina County or Portage Counties. (See Tables 3 & 4)

It may also be worth noting that, by and large, growth tends to follow limited access highways and Interstates in particular. In our region, the effects can be seen in regard to I-90 in Lake and Lorain Counties, I-71 and I-271 in Medina County, and I-80 in Portage and Summit Counties. In each case, Interstate completion and the onset of major growth more or less coincided. This could be important for Geauga County, and Chardon in particular. S. R. 422 had a great deal to do with Solon's development, and may have a similar impact on southern Geauga County. But its influence is much less pronounced than an Interstate would be, and should have little or no effect very far north of the townships it traverses.

TABLE 3 - Growth Rates in Surrounding Communities

GROWTH PATTERNS OF CHARDON & SURROUNDING COMMUNITIES

By Cumulative Percentage Increase from 1970 to 2004

	1970	1980	% Change	1990	% Change	2000	% Change	Est'd. 2004	% Change	34 Year Cumulative % Change
Concord Township	5,948	10,335	73.8%	12,478	20.7%	15,220	22.0%	16,138	6.0%	171.3%
Leroy Township	1,759	2,505	42.4%	2,535	1.2%	3,122	23.2%	3,579	14.6%	103.5%
Munson Township	3,569	5,286	48.1%	5,775	9.3%	6,450	11.7%	6,691	3.7%	87.5%
Hambden Township	2,494	2,934	17.6%	3,321	13.2%	4,024	21.2%	4,499	11.8%	80.4%
Kirtland Hills	452	506	11.9%	633	25.1%	599	-5.4%	702	17.2%	55.3%
Willoughby Hills	5,969	8,612	44.3%	8,427	-2.1%	8,668	2.9%	8,524	-1.7%	42.8%
Chardon City	3,991	4,434	11.1%	4,446	0.3%	5,123	15.2%	5,283	3.1%	32.4%
Claridon Township	2,513	2,812	11.9%	3,016	7.3%	3,173	5.2%	3,309	4.3%	31.7%
Kirtland City	5,530	5,969	7.9%	5,881	-1.5%	6,677	13.5%	7,106	6.4%	28.5%
Chester Township	10,388	11,212	7.9%	11,049	-1.5%	10,968	-0.7%	11,008	0.4%	6.0%
Chardon Township	7,171	7,907	10.3%	4,027	-49.1%	4,796	19.1%	4,891	2.0%	-31.8%

Source: U. S. Census Bureau

TABLE 4 - Population Change in Surrounding Communities

GROWTH PATTERNS OF CHARDON & SURROUNDING COMMUNITIES

By Estimated Population in 2004

	1970	1980	% Change	1990	% Change	2000	% Change	Est'd. 2004	% Change	34 Year Cumulative % Change
Concord Township	5,948	10,335	73.8%	12,478	20.7%	15,220	22.0%	16,138	6.0%	171.3%
Chester Township	10,388	11,212	7.9%	11,049	-1.5%	10,968	-0.7%	11,008	0.4%	6.0%
Willoughby Hills	5,969	8,612	44.3%	8,427	-2.1%	8,668	2.9%	8,524	-1.7%	42.8%
Kirtland City	5,530	5,969	7.9%	5,881	-1.5%	6,677	13.5%	7,106	6.4%	28.5%
Munson Township	3,569	5,286	48.1%	5,775	9.3%	6,450	11.7%	6,691	3.7%	87.5%
Chardon City	3,991	4,434	11.1%	4,446	0.3%	5,123	15.2%	5,283	3.1%	32.4%
Chardon Township	7,171	7,907	10.3%	4,027	-49.1%	4,796	19.1%	4,891	2.0%	-31.8%
Hambden Township	2,494	2,934	17.6%	3,321	13.2%	4,024	21.2%	4,499	11.8%	80.4%
Leroy Township	1,759	2,505	42.4%	2,535	1.2%	3,122	23.2%	3,579	14.6%	103.5%
Claridon Township	2,513	2,812	11.9%	3,016	7.3%	3,173	5.2%	3,309	4.3%	31.7%
Kirtland Hills	452	506	11.9%	633	25.1%	599	-5.4%	702	17.2%	55.3%

Note: The population decrease of nearly 50% shown in the tables for Chardon Township during the 1980's is a misrepresentation resulting primarily from annexations and census anomalies. These same issues account for some of the City's apparent growth during that same period. (See Section I – D)

Source: U. S. Census Bureau

Within Geauga County, and nearby Lake County, there has been considerable variation in the growth trends of specific communities and townships. As indicated in Tables 3 and 4, the relative *rates* of growth do not necessarily equate to the absolute population figures. There are further differences in how the growth rates have changed over the 34 year period. Concord Township in Lake County has grown by over 170% since 1970, and in its case, that also reflects the greatest population increase in the surrounding area (over 10,000 people). However, Leroy

Township experienced the *second* highest percentage increase (over 100%), but its actual population grew by less than 2,000 people. In Concord Township, the growth leveled off after the 1970's, and even more dramatically in Munson Township. In Willoughby Hills, the city actually started to lose population after a 44% increase during the 1970's.

Meanwhile, Chardon appears at or below the median in both tables. It has grown by an estimated 32.4% since 1970, representing an increase of approximately 1,300 people. Except for a prolonged period in the 1980's with virtually no change, the City has experienced a relatively constant growth rate in the neighborhood of 1% per year. These figures are consistent with regional trends at the county level. Lake County populations increased rapidly along I-90 during the 1970's and 1980's, but growth has since tapered off or moved east. With a few exceptions, following a peak in migration from Cuyahoga County to Geauga County during the 1970's, the last 20 to 30 years have seen a gradual, but persistent, decrease in those earlier growth rates. Detailed projections for Chardon suggest that future growth will generate service, traffic, economic and/or other issues requiring the City's attention, but that none should present insurmountable problems.

Data and trends regarding the age of residents in Chardon and surrounding communities are inconclusive. As expected, the city has probably seen a general aging of its population similar to that seen in almost all other established communities. However, as new housing continues to be built for young families, that trend, and its significance, will decrease. It is well documented that aging neighborhoods at some point experience an influx of young families, slowly replacing the elderly homeowners. At the same time, Chardon's relatively low percentage of school-aged children could also change with the construction of new housing. If Chardon can maintain its older housing stock to keep it competitive in the market place, and if the city continues to permit new housing, its age demographics will most likely revert to numbers consistent with county, regional and national norms.

While annexations, larger families or other factors may all contribute to population growth, the primary reason for more than a minimal rate of change is generally new housing construction. As expected, therefore, the following table of new dwelling units built in Chardon and the surrounding communities is a direct reflection of the general growth patterns identified for area population changes in Table 3, including the misleading decreases shown for Chardon Township. (See Table 5)

TABLE 5 - Housing Construction in Surrounding Communities

HOUSING CONSTRUCTION IN SURROUNDING COMMUNITIES 1970-2000

	1970	1980	% Change	1990	% Change	2000	% Change	30 Year Cummu-lative % Change
Concord Township	1,552	3,341	115.3%	4,441	32.9%	5,896	32.8%	279.9%
Munson Township	928	1,578	70.0%	1,774	12.4%	2,170	22.3%	133.8%
Leroy Township	494	816	65.2%	886	8.6%	1,105	24.7%	123.7%
Willoughby Hills	1,937	3,989	105.9%	4,235	6.2%	4,299	1.5%	121.9%
Hambden Township	748	998	33.4%	1,214	21.6%	1,506	24.1%	101.3%
Kirtland Hills	124	167	34.7%	196	17.4%	243	24.0%	96.0%
Chardon City	1,289	1,657	28.5%	1,817	9.7%	2,276	25.3%	76.6%
Kirtland City	1,544	1,988	28.8%	2,138	7.5%	2,558	19.6%	65.7%
Claridon Township	808	983	21.7%	1,061	7.9%	1,192	12.3%	47.5%
Chester Township	2,770	3,473	25.4%	3,816	9.9%	4,038	5.8%	45.8%
Chardon Township	2,179	2,838	30.2%	1,441	-49.2%	1,740	20.7%	-20.1%

Source: U. S. Census Bureau

Specific housing characteristics, however, provide more than a verification of growth rates and numbers. The relative age of a community's housing stock has a direct correlation to those population trends, but the information also helps to identify potential issues regarding maintenance, property values, community character, and historic preservation. Consistent with its long history, nearly a quarter of Chardon's housing stock was built before 1940. Those dwellings are now over 65 years old and include a significant number of "century" homes. In the surrounding area, only Claridon Township and Kirtland Hills come even close to that high a percentage of older homes. Over the three decades, however, housing construction in most of the surrounding townships far surpassed what was happening in these same three older and more established communities. As a result, the 47% of Chardon units over 35 years old is only slightly greater than the area average, and the percentages over 25 and 15 years old are actually lower than the surrounding average. (See Tables 6 and 7)

TABLE 6 - Housing Construction in Surrounding Communities

HOUSING CONSTRUCTION BY DECADE																	
	Before 1940		1940-1950		1950-1960		1960-1970		1970-1980		1980-1990		1990-2000		Est'd. 2000-2005		Est. Total
Chardon	568	24%	134	6%	223	9%	194	8%	383	16%	229	10%	545	23%	129	5%	2405
Claridon Township	260	21%	111	9%	120	9%	172	14%	234	18%	109	9%	186	15%	73	6%	1265
Kirtland Hills	56	20%	14	5%	19	7%	27	10%	25	9%	42	15%	60	22%	31	11%	274
Leroy Township	186	15%	46	4%	138	11%	68	6%	291	24%	84	7%	292	24%	101	8%	1206
Kirtland	323	12%	159	6%	493	18%	416	15%	457	17%	225	8%	485	18%	163	6%	2721
Chardon Township	184	10%	36	2%	220	12%	215	12%	452	25%	279	15%	354	19%	76	4%	1816
Munson Township	196	8%	101	4%	240	10%	236	10%	628	27%	267	11%	502	21%	175	7%	2345
Chester Township	316	8%	218	5%	914	22%	985	24%	795	19%	391	9%	419	10%	97	2%	4135
Hambden Township	118	7%	65	4%	224	13%	138	8%	227	13%	321	18%	413	23%	270	15%	1776
Willoughby Hills	241	6%	314	7%	893	21%	912	21%	1146	27%	357	8%	436	10%	NA	NA	4299
Concord Township	215	3%	116	2%	661	10%	676	10%	1503	22%	1229	18%	1496	22%	994	14%	6890
Geauga County	4994	14%	1667	5%	4924	14%	4441	13%	6294	18%	4246	12%	6239	18%	2486	7%	35291
Lake County	10585	11%	6696	7%	19925	21%	15854	17%	17579	19%	10429	11%	12419	13%	NA	NA	93487

Source: U. S. Census Bureau

TABLE 7 - Age of Housing in Surrounding Communities

AGE OF EXISTING HOUSING															
	Over 65 Years		Over 55 Years		Over 45 Years		Over 35 Years		Over 25 Years		Over 15 Years		Over 5 Years		Est'd. 2005
Chardon	568	24%	702	29%	925	38%	1119	47%	1502	62%	1731	72%	2276	95%	2405
Claridon Township	260	21%	371	29%	491	39%	663	52%	897	71%	1006	80%	1192	94%	1265
Kirtland Hills	56	20%	70	26%	89	32%	116	42%	141	51%	183	67%	243	89%	274
Leroy Township	186	15%	232	19%	370	31%	438	36%	729	60%	813	67%	1105	92%	1206
Kirtland	323	12%	482	18%	975	36%	1391	51%	1848	68%	2073	76%	2558	94%	2721
Chardon Township	184	10%	220	12%	440	24%	655	36%	1107	61%	1386	76%	1740	96%	1816
Munson Township	196	8%	297	13%	537	23%	773	33%	1401	60%	1668	71%	2170	93%	2345
Chester Township	316	8%	534	13%	1448	35%	2433	59%	3228	78%	3619	88%	4038	98%	4135
Hambden Township	118	7%	183	10%	407	23%	545	31%	772	43%	1093	62%	1506	85%	1776
Willoughby Hills	241	6%	555	13%	1448	34%	2360	55%	3506	82%	3863	90%	4299	*	*
Concord Township	215	3%	331	5%	992	14%	1668	24%	3171	46%	4400	64%	5896	86%	6890
Average	2663	9%	3977	14%	8122	28%	12161	42%	18302	63%	21835	75%	27023	93%	29132

Source: U. S. Census Bureau

It is also significant that the percentage of single-family, detached dwelling units in Chardon is below 63%. In contrast, nearly 100% of the dwellings in Munson Township are single-family, detached units, approximately 98% in Leroy Township, and nearly 98% in Kirtland Hills. Of the ten surrounding communities in these tables, only the most distant Willoughby Hills had a lower ratio. Chardon is the only significant provider of multi-family units and other alternatives to single-family detached housing in the immediately surrounding area. The current and potential ramifications for the City vary a great deal. The current ratio and number of alternative housing units places a greater burden on services in the City. In some cases, it may impact on property values per unit and resident incomes. At the same time, it may also somewhat relieve Chardon of the responsibility for continuing as the only provider. (See Table 8)

TABLE 8 -
Single Family Housing in Surrounding Communities

PERCENTAGE OF SINGLE-FAMILY DETACHED DWELLING UNITS IN 2000

	All Units	Single-Family Dettached	% Single-Family Dettached
Munson Township	2,170	2,154	**99.26%**
Leroy Township	1,105	1,083	**98.01%**
Kirtland Hills Village	243	237	**97.53%**
Chester Township	4,038	3,830	**94.85%**
Chardon Township	1,740	1,576	**90.57%**
Kirtland City	2,558	2,216	**86.63%**
Claridon Township	1,192	1,003	**84.14%**
Concord Township	5,896	4,450	**75.47%**
Hambden Township	1,506	1,053	**69.92%**
Chardon City	2,276	1,428	**62.74%**
Willoughby Hills City	4,299	2,235	**51.99%**
Geauga County	32,805	28,252	**86.12%**
Lake County	93,487	68,094	**72.84%**

Source: U.S. Census Bureau

The relative amounts, ranges and patterns of housing values are also informative. In Chardon, the 2005 average appraised value per dwelling unit was approximately $150,000. According to the Geauga County Auditor, that is no higher than it was in 2000. This is most likely the result of relatively modest trends off-setting each other. New homes have been constructed with values above the average, but not enough to compensate for an apparent, but minimal, reduction in the value of the existing housing stock. (See Table 9)

TABLE 9 - Chardon Housing Values

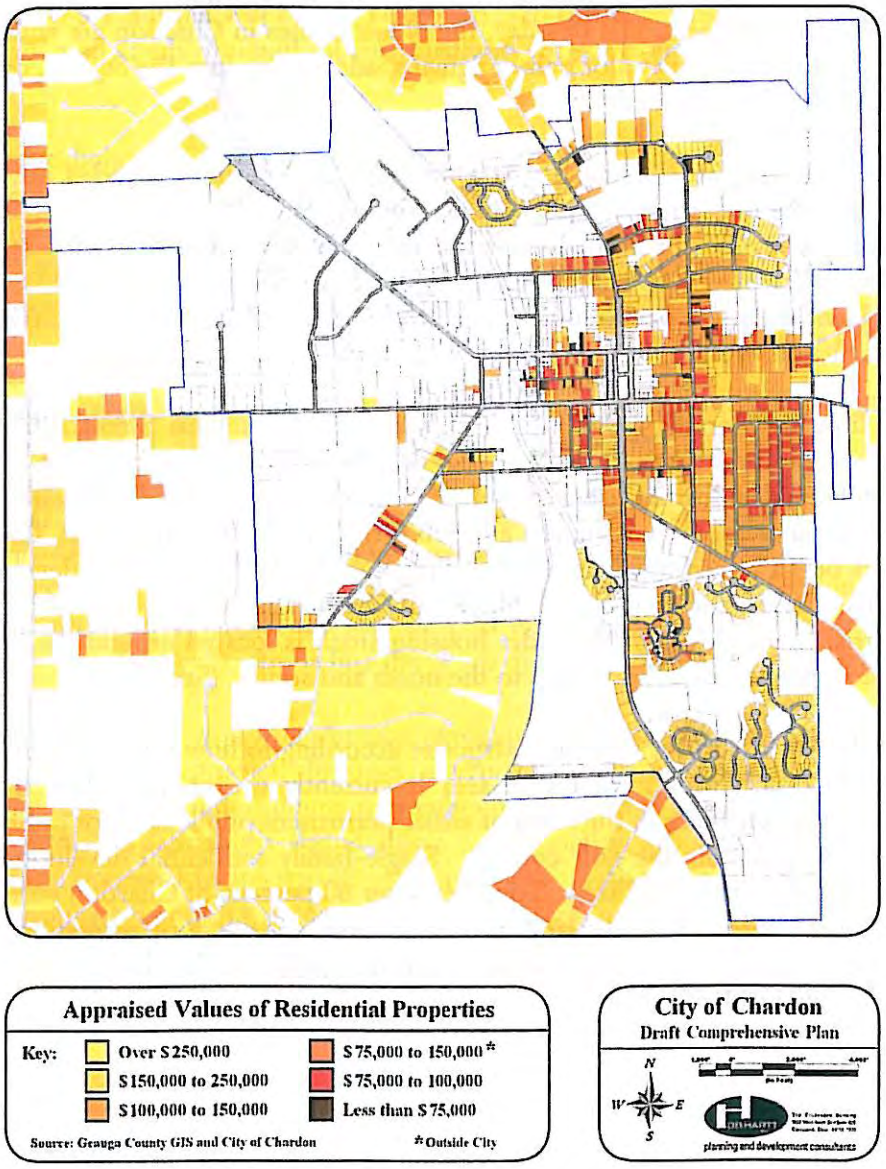
Average Residential Market Value					
2000	2001	2002	2003	2004	2005
$151,738	$153,058	$156,494	$154,494	$158,420	$148,672

Source: Geauga County Auditor

In absolute terms, the range of values for most housing in Chardon is relatively narrow, from slightly less than $100,000 to slighter more than $150,000. New housing developments over the last several years are the exception, with values generally ranging from $150,000 to $250,000, with a limited number somewhat higher. At the same time, the considerable new construction just outside the city is nearly all valued at over $150,000, with the majority over $250,000.

Map 5 on the following page provides a relatively clear and significant pattern, although not necessarily consistent with every dwelling unit. The oldest homes in the oldest sections of Original Chardon tend to have the lowest values. New housing within the city typically have values higher than the older homes, but typically not as high as in the immediately adjacent townships. The pattern results from a combination of housing age, proximity to Original Chardon, lot size, zoning, and the availability of utilities. Mapping of lot sizes and zoning in the following section, therefore, produce similar patterns, as would a mapping of housing age.

MAP 5 - Residential Property Values



D. ZONING AND LAND USE PATTERNS

Existing land use patterns reflect a community's history and past policies. The existing zoning map and codified restrictions identify the community's current intentions for future development. This section examines the current patterns, relationships and implications of land use and zoning in Chardon.

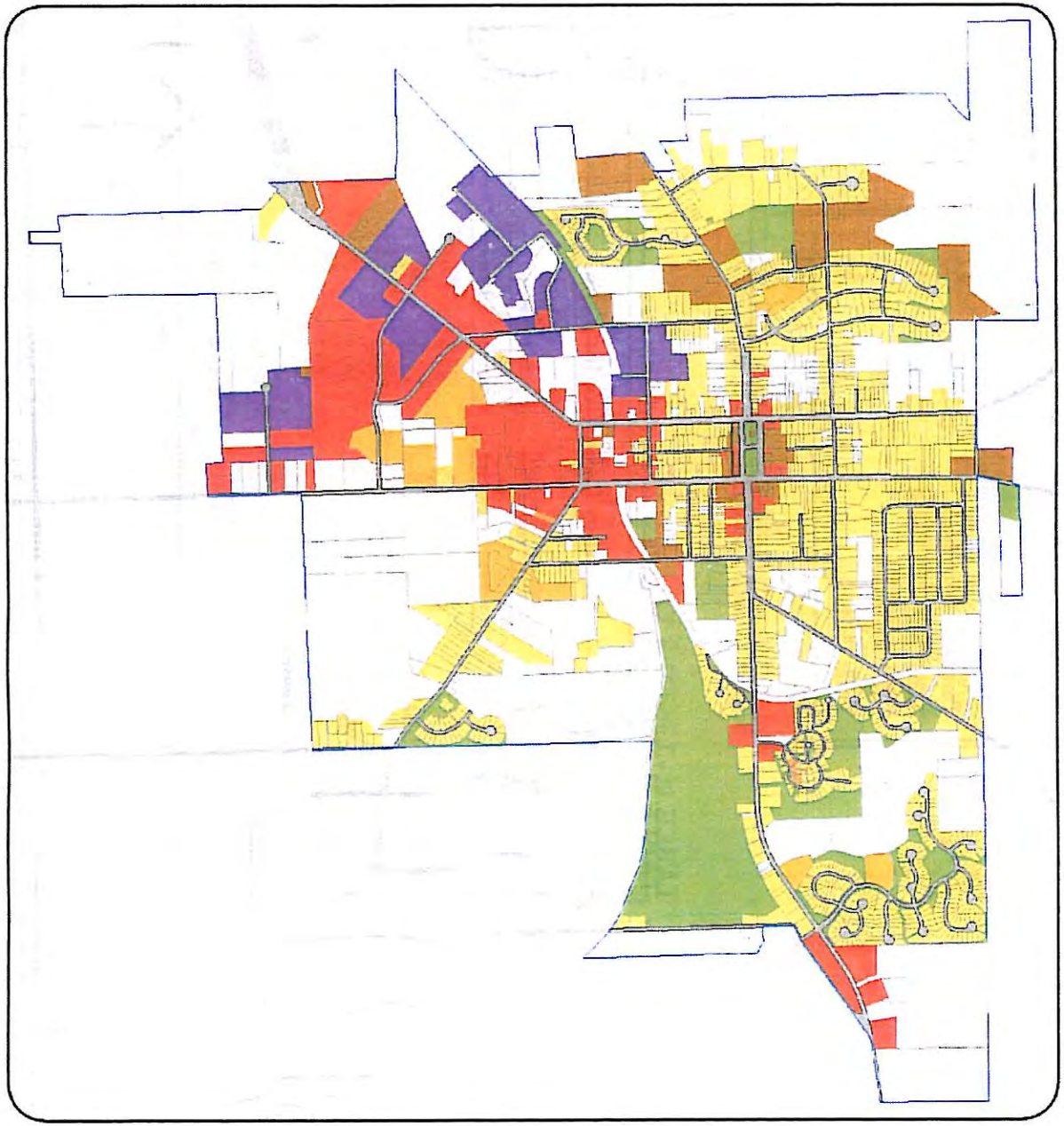
Existing Land Use

The city's present land use patterns do, in fact, clearly reflect its own particular history, and more recent policies. The earliest development began around Chardon Square, and included all of the land use elements necessary for any small, self-sustaining community – housing, retail, and particularly significant in the new County Seat, public facilities. Those same elements are still present on the Square, and for the most part, within the same structures and at the same scale as the original settlement. To this day, the oldest homes in Chardon are within walking distance of the Square, not far away along the original roads leading into the Square, or on the original farms surrounding the community.

For a long time, little changed. At a modest rate, housing expanded outward from the Square and along the major roads, while a limited number of additional commercial establishments were established beyond the immediate Square area. It was not until the last several decades that any significant growth and physical expansion of Chardon began to take place. The second real wave of residential growth occurred primarily to the east, and the most recent construction generally to the north and south.

Very little development was ever built west of Washington Street, which remained primarily farms or vacant land until the last few decades. Eventually, however, public policy began to accept limited industrial uses, as well as newer and more intense commercial development, in return for increased tax revenues and job creation. At the same time, farm and other property owners began to see an advantage to selling their land to commercial developers. As a result, the vast majority of land west and northwest of Original Chardon is now occupied by commercial or industrial users. Most of the older housing stock is located around the Square and to the east, and most of the newer housing is to the north and south. (See Map 6)

Table 10 lists the major land use categories according to how much area they encompass. Nearly one-third of Chardon's total land area is currently vacant, and close to another ten percent consists of open space in the form of either permanent public land, or public and private outdoor recreation (primarily the golf course). Single-family residential development occupies nearly a quarter of the City's land area. Together, over 60 percent of Chardon currently consists of open space in the form of vacant land, protected land, and outdoor recreation. One half of this, or 30% of the land area is private vacant land that could be developed. Another three percent is multi-family residential land.



Map 6 — **Existing Land Use**

Key:

- Single-Family Residential
- Multi-Family Residential
- Commercial
- Industrial
- Public & Institutional Facilities
- Public & Private Open Space
- Vacant

Source: Geauga County GIS & D. B. Hartt, Inc.

City of Chardon

Draft Comprehensive Plan

N W E S

1,000' 0' 2,000' 4,000'

(In Feet)

D.B. HARTT INC.
The Crittenden Building
1202 West Ninth St. • Suite 420
Cleveland, Ohio 44113-1231
planning and development consultants

Of the rest, more than another 19 percent is occupied by public, institutional and utility facilities and rights-of-way. That leaves less than 15 percent of the city's total land area currently devoted to the most intense commercial and industrial uses. The approximately 427 acres that represents, however, is more than twice the land area these uses occupied when the 1980 Comprehensive Plan was prepared. (See Table 11)

TABLE 10 - Existing Land Use

Existing Land Use by Area

	Acres	Percent
Vacant	907.0	31.1
Single Family Residential	661.5	22.7
Commercial	246.5	8.4
Public Right-of-Way	201.9	6.9
Institutional	184.3	6.3
Industrial	180.7	6.2
Public	171.0	5.9
Private Outdoor Recreation	137.2	4.7
Permanent Open Space	121.5	4.2
Multi-Family Residential	87.8	3.0
Public Recreation	13.5	0.5
Public Utility	6.5	0.2
Total Chardon	2919.4	100.0

Source: Geauga County GIS and D. B. Hartt, Inc.

TABLE 11 - Land Use Trends

Existing Land Use by Area

	1980 Comprehensive Plan		2005		25 Year Change	
	Acres	Percent	Acres	Percent	Acres	Percent
Vacant	1593.3	56.4	907.0	31.1	-686.3	-43.1
Single Family Residential	536.9	19.0	661.5	22.7	124.6	23.2
Commercial	108.6	3.8	246.5	8.4	137.9	127.0
Public Right-of-Way	188.6	6.7	201.9	6.9	13.3	7.1
Industrial	88.9	3.1	180.7	6.2	91.8	103.3
Multi-Family Residential	27.6	1.0	87.8	3.0	60.2	218.1
Other	278.6	9.9	634.0	21.7	355.4	127.6
Total Chardon	2822.5	100.0	2919.4	100.0		

Source: D. B. Hartt, Inc. and Burgess & Niple. Lmt. Chardon 1980 Comprehensive Plan

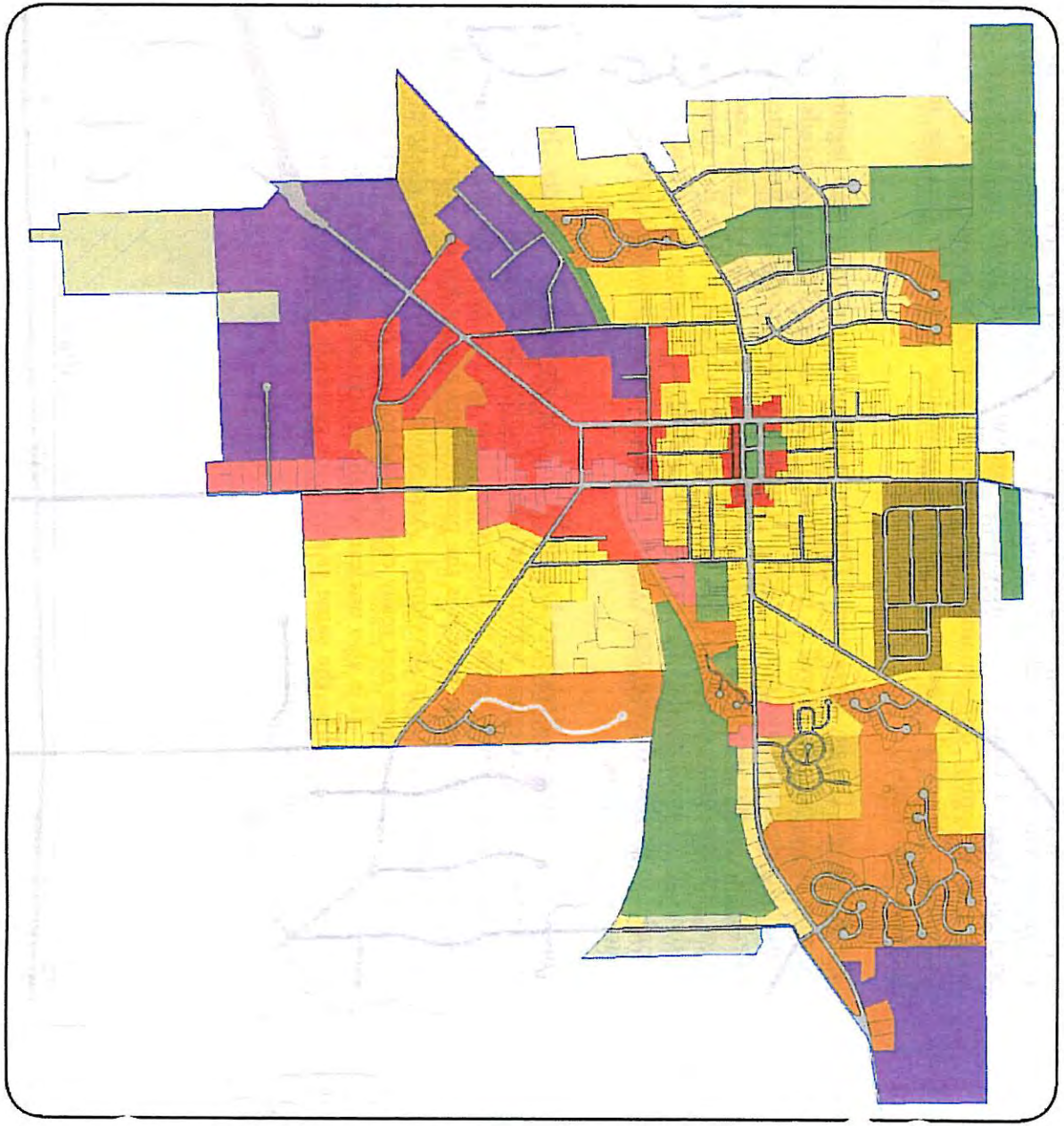
In 1980 vacant land still comprised nearly 1600 acres, well over half of Chardon's total land area. Since then, over 685 of those acres have been developed, a loss of about 43 percent. During that 25 year period, there was nearly 140 acres of new commercial development, an increase of over 125 percent. Industrially developed land also more than doubled, but represented only a little more than 90 additional acres. Although consisting of only about 60 acres, the percentage increase in new multi-family development was the most dramatic, at almost 220 percent. Finally, approximately 125 acres of new single family development was added, representing an increase of less than 25 percent, or under one percent a year.

Existing Zoning

Chardon's current zoning map and district requirements recognize both the City's long history and more recent policy decisions. The C-2 Traditional/Classical Commercial District around Chardon Square and along the southern end of Washington Street reflects a commitment to protecting the City's physical, cultural and retail history within those areas. The C-1 Restricted Business District located primarily along Route 6 to the west attempts to permit the commercial use of land along major highways without compromising the community's character. In part, the C-3 General Commercial District attempts to recognize and legitimize existing commercial businesses within the western edges of Original Chardon that are not necessarily consistent with the historic character of retail areas zoned C-2. The portion encompassing a majority of the land west of Original Chardon is intended to provide for the more contemporary concerns of additional shopping opportunities and increased economic development, at a time when a dramatically increased number of other communities were also deciding to seek the same benefits. (See Map 7)

The R-4 High Density Residential District attempts to recognize and legitimize a significant existing neighborhood, as well as to facilitate specific alternative housing needs. The R-1 Single-Family Residence District can be seen as a way to include another housing alternative within the City, which would also bridge the gap between traditional Chardon lot sizes and the considerably larger new lots being developed just beyond the City's borders. The R-3 district reflects efforts by the City to accommodate the demand for additional housing, but affording greater flexibility in order to produce developments more sensitive to the environment, site characteristics and city policies.

The R-2 Low Density Residence District is an anomaly in some respects. It is the predominant residential zoning category within the older sections of Original Chardon, but a significant number of existing properties in these older areas do not meet the district's minimum lot size requirement. At the same time it is the predominant zoning for the vast residential areas of the City that have not yet been developed. And while the district may be designated "low density," its minimum lot size does not really correspond to how that term is interpreted in most of the region's communities. It is also unclear whether standards appropriate for the older established neighborhoods should be the same as those for currently vacant open space well outside those more historic and traditional areas.



Map 7 — **Existing Zoning**

Key:

	R-C	Rural Conservation
	R-1	Single-Family Residential
	R-2	Low Density Residential
	R-3	Medium Density Residential
	R-3L	Limited Residential
	R-4	High Density Residential
	PUD	Planned Unit Development
	S	Special
	C-1	Restricted Business
	C-2	Traditional Commercial
	C-3	General Commercial
	I	Industrial

Source: City of Chardon

City of Chardon
Draft Comprehensive Plan

N W E S

1,000' 0' 2,000' 4,000'
(In Feet)

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The Crittenden Building
1382 West Ninth St. • Suite 420
Cleveland, Ohio 44113-1231
planning and development consultants

Used as an option to the underlying district, Planned Unit Development (PUD) zoning has been utilized extensively in Chardon, primarily for residential purposes, but also used to a limited extent for commercial, industrial or other mixed use developments. Approximately 300 acres are currently zoned as PUD's, with more than 260 presently developed. The zoning has proven to be a valuable tool for the city, offering extensive pre-planning and coordination with the city. It has allowed for plans that are custom designed to fit the sites' unique needs and circumstances, and environmentally friendly residential alternatives to traditional large lot, one-size-fits-all development. (See Table 12)

Table 12 relates Chardon's current zoning to existing development. It identifies the areas encompassed by each of Chardon's zoning districts, as well as how many of those acres are currently developed, under construction or approved for development, permanently preserved, or still vacant. The table provides a number of informative insights into the city's past, present and future land use issues.

TABLE 12 - Development by Zoning District

Zoning Districts by Area and Development Status

Zoning Districts			Acres						
			Total Land Area	Existing Development	Development App'd or Under Constr.	Un-Developable (4)	Vacant Land Available for Development		
							Full Parcels	Unused (5)	Total
RC	Rural Conservation		105.6	7.8	0.0	19.0	76.4	2.4	78.8
R1	Single Family Residential		320.2	219.7	3.0	0.0	71.9	25.6	97.5
R2	Low Density Residential		864	459.1	10.0	4.0	301.2	89.7	390.9
R3	Medium Density Residential		25.7	18.7	0.0	0.0	0.0	7.0	7
R3L	Medium Density Residential (Limited)		36.8	36.8	0.0	0.0	0.0	0.0	0
R4	High Density Residential		100.8	100.8	0.0	0.0	0.0	0.0	0
PUD	Planned Unit Development(1)	1&2 Family	255.7	227.7	28.0	0.0	0.0	0.0	0
		Multi-Family	27.7	21.5	0.0	0.0	6.2	0.0	6.2
		Commercial	9.3	9.3	0.0	0.0	0.0	0.0	0
		Industrial	6.8	4.4	0.0	0.0	2.4	0.0	2.4
		Total	299.5	262.9	28.0	0.0	8.6	0.0	8.6
S	Special District		366.4	360.8	0.0	0.0	5.6	0.0	5.6
C1	Restricted Business District		124.3	74.2	0.0	0.0	49.1	1.0	50.1
C2	Traditional/Classical Commercial District		25.2	24.7	0.0	0.0	0.0	0.5	0.5
C3	General Commercial District		221.7	119.0	70.0	0.0	32.0	0.7	32.7
I	Industrial District		428.6	205.6	10.0	0.0	203.7	9.3	213
		TOTALS	2918.8(3)	1890.1	121.0	23.0	748.5	136.2	884.7

Notes: (1) Mixed Use District with Multiple Land Use Catagories
(2) Due to Different Data Sources, ROW's are Included in the Total Area of Each District, but Not in the Areas Developed
(3) Due to Different Data Sources and Rounding, the Total Land Area is 0.6 Acres Less than Indicated in Prior Tables
(4) City Land & Geauga County Park System
(5) Portions of Existing Developed Parcels Clearly Not Required or Utilized by Site Occupant

Source: Geauga County GIS and D. B. Hartt, Inc.

In addition to the approximate 300 acres zoned PUD, almost 1350 additional acres are zoned specifically to permit residential uses. All together, over 1,600 acres are devoted to the range of residential zoning districts, representing over 55 percent of the city's total land area. A limited amount of residential use is also permitted in some of the other districts. But compared to most communities, even 60 percent would not necessarily be considered a particularly high figure. There are several likely reasons, including some suggested by other figures in the Table 12.

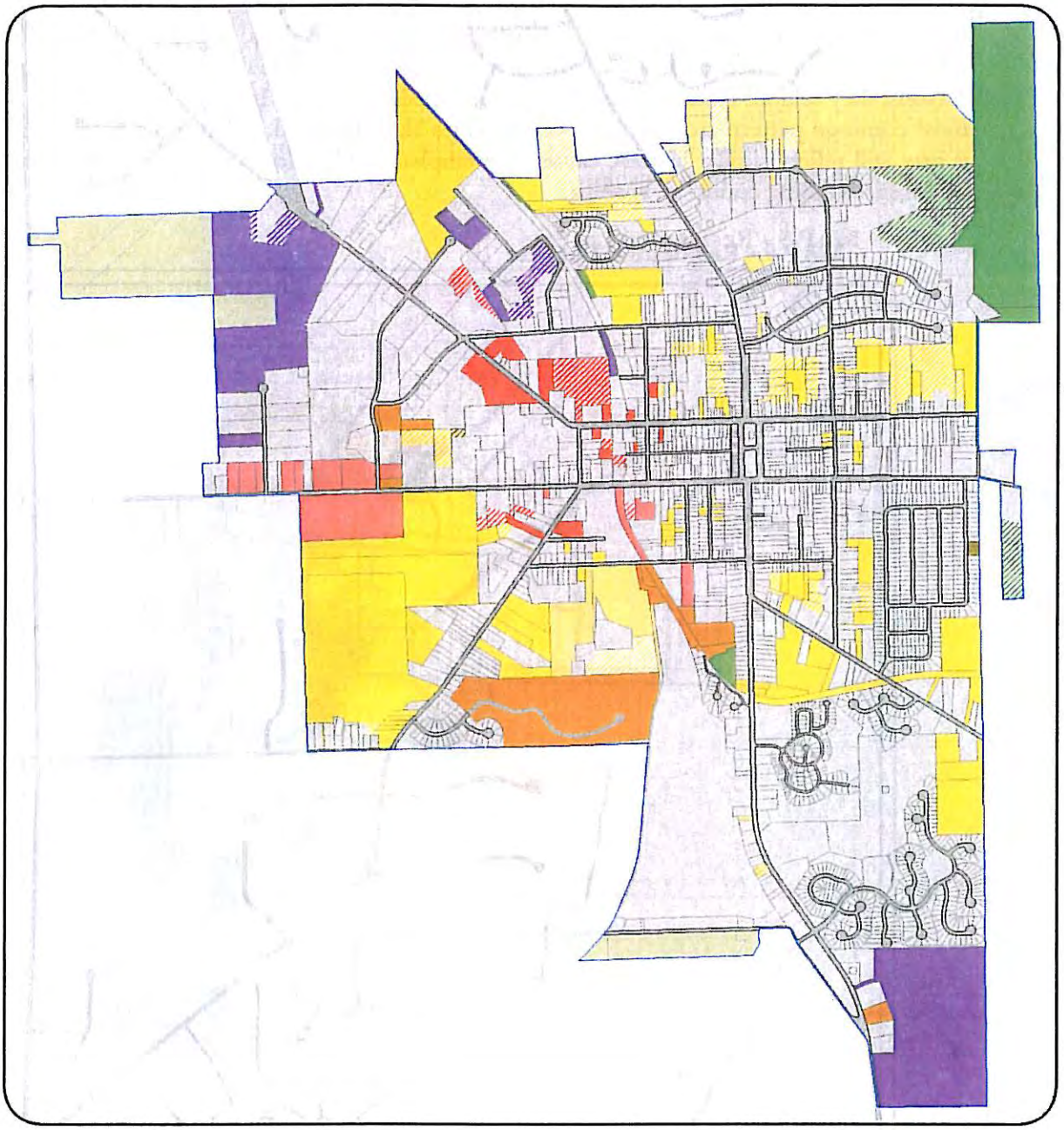
A very substantial 12.5 percent of Chardon is zoned S, Special District, a classification used primarily to recognize and protect current and potential open space uses like the golf course and cemetery, as well as vacant or recreational land owned by the city or schools. Slightly more than another 3.5 percent is zoned RC Rural Conservation, and as intended, less than eight acres of which are developed. Another major factor is the significant commitment the City made by zoning nearly 15 percent of its land area to industrial zoning. That is nearly the same percentage as in Solon, which is considered to have the largest industrial area in the region outside of Cleveland and one or two other larger cities.

Another 12.5 percent or more of the City is zoned for commercial purposes. A large part of this particular commitment is due to Chardon's historical need to provide for both city and county government buildings and related facilities, and to preserving the city's historic commercial areas. Another part results from the need to serve a retail market far larger than the City itself. And some may simply have resulted from issues related to individual property rights.

Areas zoned for medium and high density residential use are almost entirely developed, as are those zoned PUD, Special District, and Traditional Commercial. Nearly 80 acres zoned Rural Conservation and approximately 213 acres zoned for industry are still undeveloped. Efforts continue to market the rest of the land committed to this purpose. Over 80 acres of commercially zoned land are still available, almost all outside of Original Chardon. Currently, the rest of Chardon's vacant land is almost all zoned for residential use, over 390 acres within the R-2 District and almost another 100 acres under the R-1 classification. (See Map 8)

Related to both present development and current zoning are the relative sizes of existing single-family residential lots, particularly within Original Chardon. As one would expect, the general pattern of relative lot sizes closely corresponds to the pattern for property values shown previously in Map 5. One exception includes older homes on major roads with very large older lots that were never subject to re-subdivision. Of more significance, however, are the more recent "clustered" and attached single-family dwellings built under PUD and other special zoning procedures. In such developments, values may be higher than expected for the smaller individual lots. But in most cases, those lot sizes are misleading. The "effective" lot sizes should reasonably include each dwelling's share of the common open space that is normally part of such a project. (See Map 9)

Map 8 - Vacant Land by Zoning District



Vacant Land by Existing Zoning District

Key:

RC	Rural Conservation	PUD	Planned Unit Development
R-1	Single-Family Residential	S	Special
R-2	Low Density Residential	C-1	Restricted Business
R-3	Medium Density Residential	C-2	Traditional Commercial
R-3L	Limited Residential	C-3	General Commercial
R-4	High Density Residential	I	Industrial

Developed (or Approved) Potential (Vacant Portions of Developed Lots)

City of Chardon
Draft Comprehensive Plan

N W E S

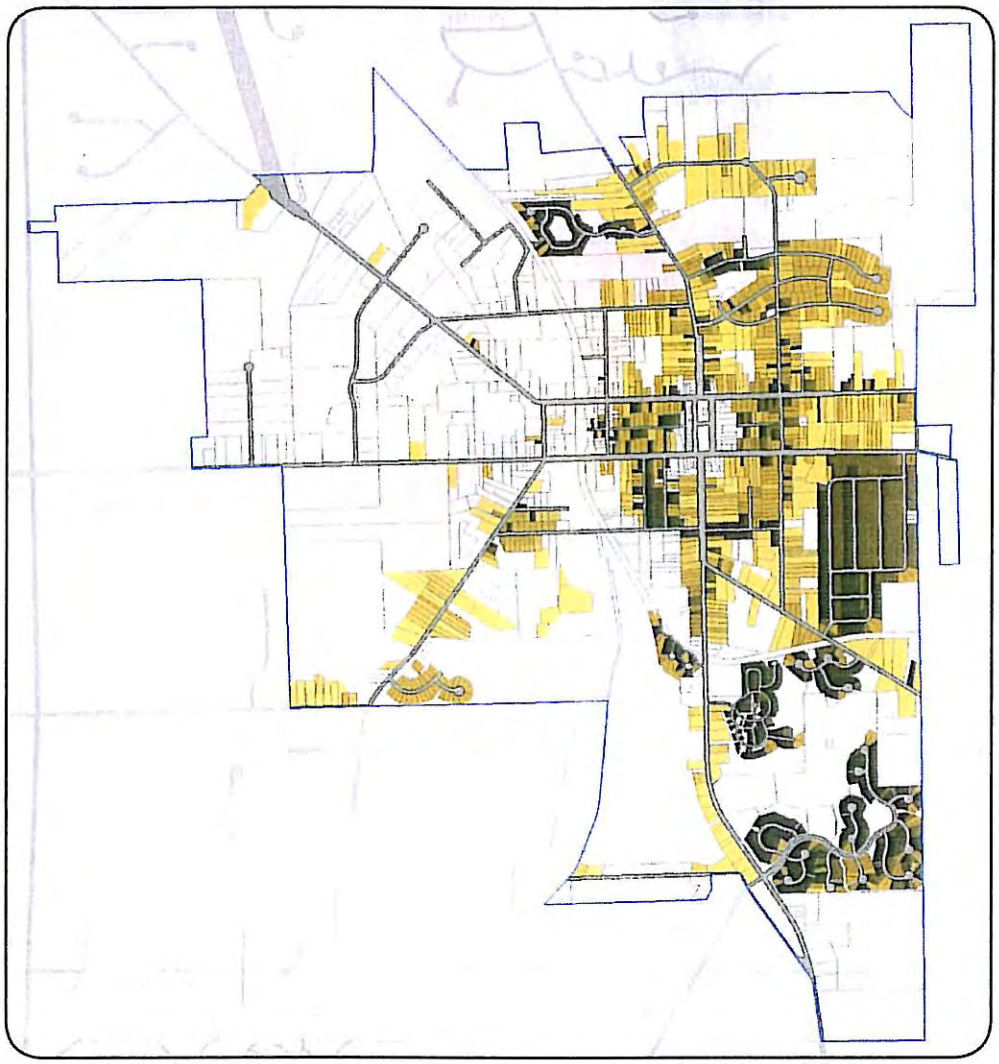
(In Feet)

DB HARTT
planning and development consultants

Lot Size

In Chardon the real or "effective" lot sizes, like property values, generally tend to increase in relation to their distance from Chardon Square and/or Original Chardon. And for various reasons, they seldom reach the sizes of lots just outside the city. It might be noted that this is the most common pattern around major central cities like Cleveland. While on a much smaller scale, it may still reflect similar historic causes and emphasize Chardon's position as the "central city" of the surrounding county townships.

MAP 9 - Residential Lot Size



Existing Residential Lot Sizes

Key:
- Over 1 Acre
- 25,000 sq. ft. - 1 Acre
- 15,000 - 25,000 sq. ft.
- 12,800 - 15,000 sq. ft.
- 11,000 - 12,800 sq. ft.
- Less than 11,000 sq. ft.

Source: Geauga County GIS and D. B. Hartt, Inc.

City of Chardon
Draft Comprehensive Plan

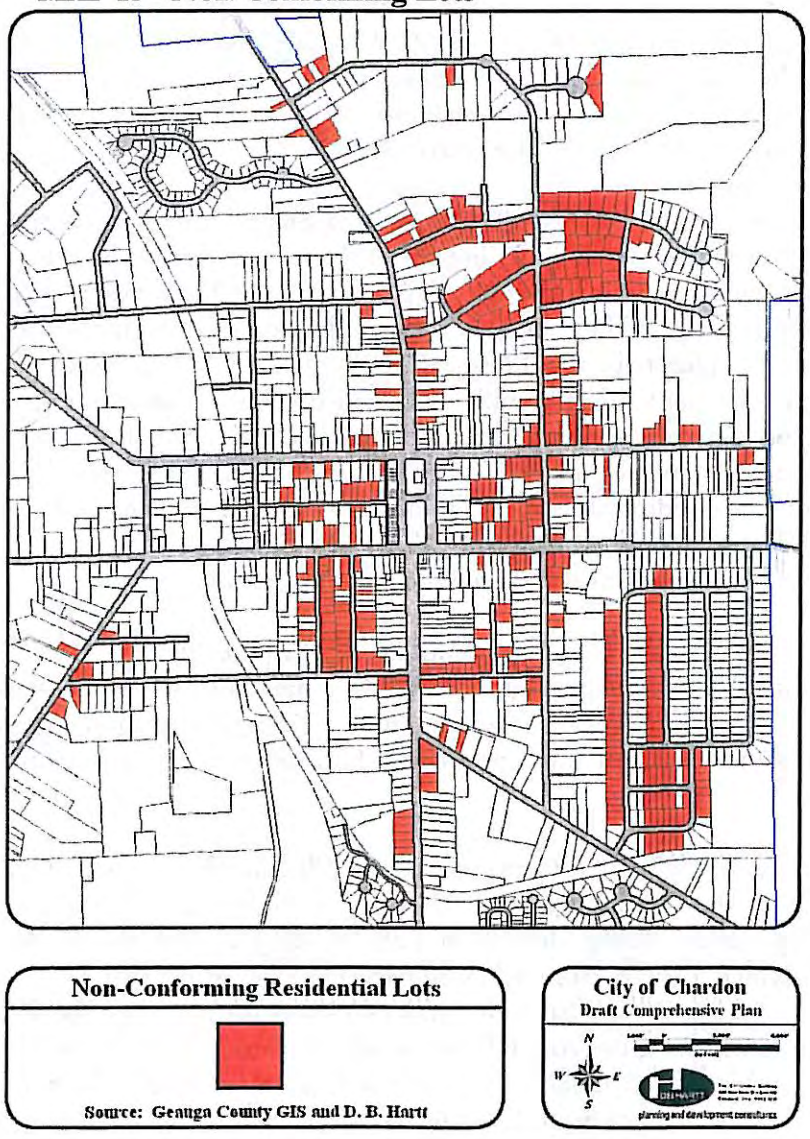
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planning and development consultants

Like most other communities with a significant development history, the City's earliest housing does not always meet the minimum standards more recently established for residential lots. And also like those other communities, that discrepancy can create problems in regard to the property maintenance and re-investment issues that often accompany non-conforming zoning code status. To the extent possible, it is therefore prudent to identify such non-conformities, and determine if remedies of one kind or another are necessary. And most often, if a lot is smaller than the code requires, there is a very good chance it will also not be able to comply with minimum yard, setback or other requirements. (See Map 10)

Properties with non-conforming lot sizes were therefore identified by comparing the sizes of existing residential lots shown on Map 9 with the minimum lot size required within their zoning district. With very few exceptions, the results were a direct reflection of a property's age, and the zoning requirements (if any) at the time the lots were created and developed as home sites. The oldest are cluster within the oldest neighborhoods close to Chardon Square, and along the earliest roads. Almost all are now zoned R-2, but do not meet its 15,000 square foot minimum lot size.

MAP 10 - Non-Conforming Lots



Most of the non-conforming lots are clustered within the oldest subdivisions; between Irma and Karen Drives, and along Chardon Avenue between North Street and Maple Avenue. The first of those areas was zoned R-4, the city's most dense single-family district, presumably in an effort to accommodate their small lots. But many still do not comply with that district's 11,000 square foot minimum. The second area dates back to the 1920's, and do not comply with today's R-1 minimum of 25,000 square feet.

The adjacent concentration of non-conforming lots shown around Allynd Boulevard and Downing Drive was primarily created during the 1950's and 1960's. They are generally at or slightly above one-half acre in size, but still slightly less than the R-1 District's 25,000 square foot minimum. These properties do not warrant the same level of concern as the others.

E. ECONOMIC DEVELOPMENT

Land use and zoning are the primary determinants of a community's financial circumstances - one in the present, and one for the future. Land use impacts a city's revenues and its expenditures, and therefore, the residents' tax rates and levels of service from their city and schools. The four factors are intertwined and interdependent. If revenues increase and/or expenses decrease, taxes can be lowered and/or services can be improved. If revenues decrease and/or expenses increase, taxes rise and/or services are reduced.

In the recent past, conventional wisdom insisted that residential development could not pay for itself. The taxes it generated could not offset the costs for providing them with schools and city services. At the same time, industrial development would generate revenues far in excess of any costs to the city for providing services to that industry. When communities began to subscribe to that consensus opinion in the 1970's and 1980's, there was a rush to embrace and promote industrial development. Communities that had previously committed to an industrial presence capitalized on that prescience and thrived for some time on the revenues generated by new development. Others had no choice because their communities were fully developed, with no land left for non-residential uses. Chardon had a choice, and made it clear by zoning over 420 acres for industry. Commercial development was viewed in a similar way, but without as much confidence that revenues would exceed the costs to the city.

Since that time, there has been nothing to dispute the financial benefits of industrial development. What *has* happened, however, is a dramatic increase in competition for a steadily decreasing industrial market. At the same time, evidence has begun to emerge that suggests not all residential development must necessarily be a financial drain on either a city or its school system.

For calendar year 2005, the effective tax rate in Chardon for residential and agricultural property was 45.4 mils. The City's rate is lower than *any* of the 80 taxing districts in Cuyahoga County. It is lower than every taxing district in Lake County except North Perry Village and Perry Township, which benefit from extraordinary windfalls generated by the Perry nuclear power plant. Only Geauga County has more than two lower tax rates, but the data suggests it is entirely dependent on which of the county's seven school districts a community is within. While every tax district within the Cardinal, Berkshire and Ledgemont school districts has a lower rate than Chardon, the rate for every community in the Kenston, West Geauga and Newbury school

districts is higher – more than 30% higher in the case of Bainbridge Township. The data suggests that as of the end of 2005, the only residents in the three surrounding counties enjoying a lower tax rate either live near the Perry power plant or in another Geauga County school district. (See Table 13)

TABLE 13 - Tax Rates in Surrounding Communities

2005 Effective Real Property Tax Rates for Residential Real Estate

Geauga, Lake & Cuyahoga Counties

(in mils*)

	County	Community	Effective Rate
Highest in	Cuyahoga	Shaker Hts.	96.8
----------	Cuyahoga	Chagrin Falls	69.7
Average for	Cuyahoga	----------	68.7
Highest in	Lake	Kirtland Hills	66.0
Highest in	Geauga	Bainbridge Twp-Kenston	65.5
----------	Cuyahoga	Solon	65.2
----------	Lake	Painesville	57.1
----------	Cuyahoga	Mayfield Village	55.9
Average for	Lake	----------	53.9
----------	Lake	Willoughby Hills	51.1
----------	Lake	Mentor	50.4
Average for	Geauga	----------	49.2
Lowest in	Cuyahoga	Brooklyn Hts.&	48.8
----------	Geauga	City of Chardon	45.4
Lowest in	Lake	North Perry Village	42.7
Lowest in	Geauga	Huntsburg Twp-	39.4

* $1 per $1,000 of assessed valuation and assessed value equal to 35% of estimated real market value

Source: Geauga, Cuyahoga and Lake County Auditors

A related method of measuring the effectiveness of a community's economic development policies and efforts is the relative portions of the total tax burden that must be borne by residents. In 2004 non-residential development in Chardon accounted for 36% of the city's total assessed valuation, a higher percentage than all but a very few communities anywhere in the region, and more than three and a half times higher than the Geauga County total. Due to different effective tax rates, non-residential development assumed over 39% of Chardon's total tax burden. (See Table 14)

More specifically, however, nearly four times as much of that non-residential valuation came from commercial as opposed to industrial development. The relationship between commercial

and industrial development takes on more significance when comparing old and/or historic commercial areas to new development. It is also very important to consider the amounts of vacant commercially and industrially zoned land remaining in the City, and what those, and areas set aside for other land uses, might mean for Chardon's future.

The relationship between the supply side represented by Chardon's retail development, and the demand represented by the city's much wider trade area, has been, is now, and will continue to be, crucial to the community's economic health and its ability to support those old and/or historic commercial areas – particularly around Chardon Square. It was almost essential, therefore, to examine that relationship as it exists today, and how it may change in the future.

TABLE 14 - Assessed Property Values

Residential and Non-Residential Assessed Valuations
Comparisons for Tax Year 2004

	Residential		Non-Residential		Total
	Amount	%	Amount	%	Amount
Chardon City	84,031,340	64%	46,544,230	36%	130,575,570
Solon	688,335,340	69%	303,757,680	31%	992,093,020
Cuyahoga County Total	19,386,378,350	71%	7,931,779,820	29%	27,318,158,170
Painesville	149,750,640	71%	59,952,090	29%	209,702,730
Mentor	1,025,152,330	73%	380,414,630	27%	1,405,566,960
Willoughby Hills	200,215,020	74%	69,942,040	26%	270,157,060
Lake County Total	4,264,555,360	78%	1,199,475,990	22%	5,464,031,350
Portage County Total	2,261,148,210	81%	526,583,050	19%	2,787,731,260
Aurora	414,334,800	82%	93,934,390	18%	508,269,190
Geauga County Total	2,241,432,560	90%	262,675,460	10%	2,504,108,020

Source: Cuyahoga, Geauga, Lake and Portage County Auditors

While some of the results could be deduced intuitively, a commonly accepted analytical methodology was employed to verify and quantify the suppositions. The details of that process are provided in Appendix A, but the conclusions can be summarized as follows. Statistically, Chardon had a 2002 "pull factor" of 5.34. The term is a measure of the ratio between per capita retail sales in a community to the per capital sales in a larger surrounding area. Any result above 1.0 indicates a community is attracting more business than it is losing to outside locations. The next highest pull factor identified in the region was 2.1 for Mentor, a community well known for a preponderance of successful retail development.

Having substantiated the high level of Chardon's retail "pull" it was then necessary to define that primary trade area as closely as possible, and to quantify both the number of households within that area and their expected retail spending. By comparing the predicted spending to actual retail sales in the City, it was possible to estimate how the supply compared to the demand. That comparison was then adjusted to accommodate the considerable amount of new retail space that has been approved and will become available in the near future. (See Map 11 and Table 15)

MAP 11 - Retail Trade Area

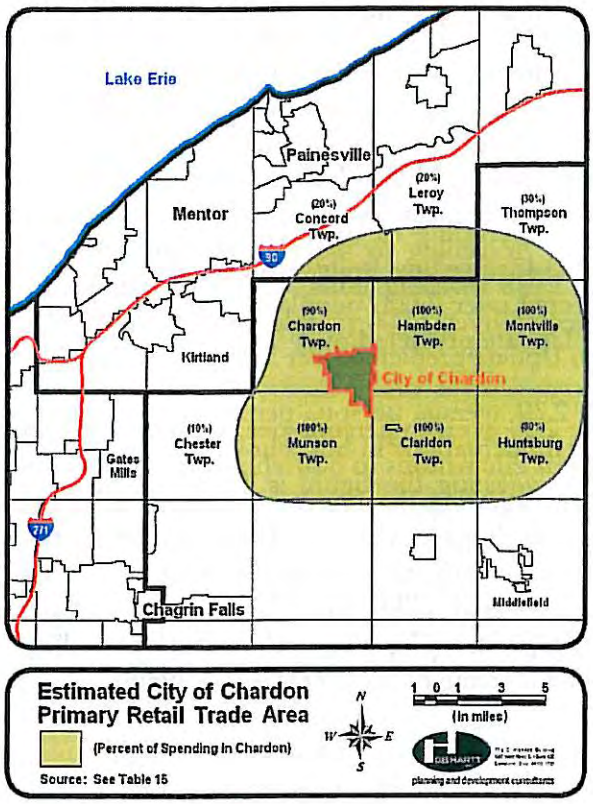


TABLE 15 – Retail Trade Area

EXISTING RETAIL SUPPLY & DEMAND

	Existing Market:	Number of Households
1a	City of Chardon	2,276
1b	Surrounding Trade Area	9,722
1	Total	11,998
2	Size of Market that Could be Supported by the Existing Supply	8,303
3	Existing Market Surplus (Line 1 minus Line 2)	3,695
4	Market Required to Support New Approved Construction *	5,305
5	New Retail Capacity (Line 2 plus Line 4)	13,608
6	New Market Deficit (Line 5 minus Line 1)	1,610

* Primarily Meadowlands

Source: See Appendix A

While even the most sophisticated mathematical formulas cannot assure 100 percent accuracy, the overall results are difficult to dispute. In 2002, Chardon's trade area included nearly 3,700 more households than should be necessary to support its existing retailers. But once the Meadowlands retail development is completed and opened to customers, the retail supply will exceed the buying capacity of the trade area. The analysis suggests the trade area will need to grow by approximately 1,600 households before all of Chardon's new retail market needs are met. Even allowing for a sizable margin of error, it is very likely the City's retailers will soon be faced with a change from an abundance of potential customers to a noticeable lack of adequate market support.

F. PROJECTIONS AND BUILD-OUT ESTIMATES

Previous sections of this study dealt primarily with how Chardon's history and past policies led to the city's current status in regard to land use, economic conditions, housing characteristics and its regional role. The resulting data and understanding of where the City is now provides sufficient information to project how these characteristic will change by the time Chardon is fully developed, with little or no remaining vacant land – commonly referred to as "build-out." Such estimates assume the City's present zoning, policies and basic demographics remain the same, and that all of the present vacant land is made available for development. It is then possible to identify the impacts that expected or proposed changes in existing conditions would have on the projected build-out estimates.

It should probably be noted that the *time frame* for achieving build-out is far more difficult to predict. Rate of growth is highly dependent on trends in the housing market, which cannot be predicted with any degree of certainty. Also, the growth rate decreases steadily as the amount of vacant land decreases beyond a certain point, and difficulties with land assembly increasingly becomes a problem. The final five or ten percent of the ultimate estimates could take a considerably longer time than the preceding growth. Such short term, unpredictable valuables most likely account for the significant over-estimations of future growth in the 1980 Comprehensive Plan and the 1996 Update. According to the U. S. Census, Chardon's 2000 population was 5,123 persons, residing in 2,148 dwelling units, with a resulting ratio of 2.39 persons per unit. The 1980 Plan had projected over 7,000 people by the year 2000, and even though it was only four years away, the 1996 Update predicted over 5,900.

For projection purposes, it was decided the 2.39 average persons per household would be used consistently, under the assumption that cyclical fluctuations in household size tend to balance out over time, and to the lack of any evidence suggesting the figure is likely to either increase or decrease in the future. The decision primarily impacts the population estimates, because the number of dwelling units is relatively fixed by zoning and available land area. The projections presented in Table 16, therefore, were based on dwelling units, with associated populations merely calculated as 2.39 times the number of units. The ultimate number of dwelling units at build-out was estimated by simply adding the following to the 2000 Census figure.

1. The number of currently vacant units. While full occupancy is highly unlikely, this exercise is intended to provide a maximum estimate.

2. The number of building lots developed or approved since the 2000 Census.

3. For each residential zoning district, the amount of land still vacant, multiplied by the maximum permitted density in each district. Unused portions of existing developed properties were included because a maximum estimate should include even the *potential* for development. (See Table 12)

The process resulted in ultimate maximum estimates of 3,758 dwelling units and 8,964 residents, an increase of approximately 75 percent from the 2000 Census. As it turns out, these projections are *nearly identical* to previous estimates by the City and other consultants, providing a substantial level of confidence in their relative accuracy.

Utilizing a similar methodology, it is also possible to predict the potential for ultimate commercial and industrial development, once again assuming both a continuation of the current zoning and full marketing of the vacant land. Full marketing of the City's industrially zoned land, however, is more of a goal than a prediction. Also in this case, rather than converting vacant area to a number of dwelling units, it is used to estimate the potential floor area of commercial and industrial development. The recognized standards within the region are approximately 10,000 sq. ft. of commercial, and 8,000 sq. ft. of industrial building area per acre of land. (See Table 17)

TABLE 16 - Estimated Residential Build-out

Maximum Residential Build-Out Estimate

Assuming Existing Zoning, Full Marketing of Available Land & Full Occupancy

		Acres Vacant	Maximum Permitted Density	Dwelling Units	Total Population	Persons Per Dwelling Unit
Existing (2000 U. S. Census)		-----	-----	2148	5,123	2.39
Existing Vacant Dwelling Units		-----	-----	128	305	2.39
Residential Lots Already Developed		-----	-----	75	179	2.39
Residential Lots Approved		-----	-----	20	48	2.39
Vacant Land Zoned:						
R-1	Whole Lots	71.9	1.7	122	292	2.39
	Potential Lot Splits or Assembly	25.6	1.7	44	104	2.39
R-2	Whole Lots	301.2	2.9	873	2083	2.39
	Potential Lot Splits or Assembly	89.7	2.9	260	620	2.39
R-3	Potential Lot Splits or Assembly	7	3.4	24	57	2.39
RC	Whole Lots	76.4	0.5	38	91	2.39
	Potential Lot Splits or Assembly	2.4	0.5	1	3	2.39
Multi-Family Land Within Existing PUD		6.2	4	25	59	2.39
Maximum Estimates at Build-out				3,758	8,964	2.39
Increase from Existing 2000				1,610	3,841	
Percentage Increase				71%	75%	

Source: D.B. Hartt, Inc.

TABLE 17 - Estimated Non-Residential Build-Out

Maximum Commercial and Industrial Development Build-Out

Assuming Existing Zoning, and Full Marketing of Available Land

	Commercial		Industrial	
	Acres	Sq. Ft. at 10,000 per Acre	Acres	Sq. Ft. at 8,000 per Acre
Existing Development	223.3	2,233,000	212.3	2,123,000
Approved Development	70.0	700,000	10.0	100,000
Appropriately Zoned Vacant Land:				
Whole Lots	81.1	811,000	206.1	2,061,000
Potential Lot Splits or Assembly	2.2	22,000	9.3	93,000
Maximum Estimates at Build-Out		3,766,000		4,377,000
Increase from Existing 2000		1,533,000		2,254,000
Percentage Increase		69%		106%

Source: D.B. Hartt, Inc.

A significant implication of these projections is their impact on the relative level of the Chardon's total property tax burden that will ultimately have to be provided by Chardon residents, as opposed to commercial or industrial sources. Based on the above projections, the resident's share would actually decrease from nearly 61 percent in 2004 to a maximum at full build-out of only about 57 percent. That assumes, however, that all of the City's vacant industrially-zoned land gets developed, and that the City *wants* all of its remaining commercial land to be developed. As discussed previously, neither assumption is a certainty. (See Table 18)

TABLE 18 - Estimated Residential Tax Burden at Build-Out

Relative Residential and Non-Residential Real PropertyTax Burdens - Existing and Projected at Build-Out										
	Existing 2004			Maximum Projected Increase*			Maximum Projected at Build-Out			Change in Tax Revenue
	Assessed Valuation	Resulting Taxes	Percent Share	Assessed Valuation	Resulting Taxes	Percent Share	Assessed Valuation	Resulting Taxes	Percent Share	
Residential & Agricultural	$ 84,031,360	$ 4,169,954	60.94 %	$ 43,012,436	$ 2,134,440	50.99 %	$ 127,043,796	$ 6,304,395	57.16 %	0.51 %
Commercial Development	36,521,205	2,097,484	30.65 %	25,072,551	1,439,965	34.40 %	61,593,756	3,537,449	32.08 %	0.69 %
Industrial Development	10,023,055	575,643	8.41 %	10,642,030	611,192	14.60 %	20,665,085	1,186,836	10.76 %	1.06 %
	$ 130,575,620	$ 6,843,082	100 %	$ 78,727,018	$ 4,185,598	100 %	$ 209,302,638	$ 11,028,679	100 %	0.61 %

Source: Geauga County Auditor & D. B. Hartt, Inc.

In the absolute worst case, which would require all of the remaining commercial and industrial vacant land to be developed for residential use, the ultimate resident's share of the total tax burden could reach as high as 75 percent. But that is equally unlikely. The actual build-out percentage will almost certainly end up somewhere between the 57 and 75 percent extremes.

It should also be noted that the build-out estimates have a major impact on projected increases in traffic volumes. As traffic consultant for this study, URS has projected a 35 percent increase over the next 20 years alone. This is particularly significant in light of the community's clearly expressed concerns over traffic volumes, associated congestion, and routing of traffic through residential neighborhoods. URS has predicted that some roadways within the City may not be able to accommodate future volumes without at least some improvements. (See full findings, conclusions and policy recommendations in Section III-C under Vehicular Circulation and Thoroughfare Plan, and in Appendix F)

G. DEVELOPMENT CAPACITY AND SERVICE COSTS

Before adopting policies that will or might have an impact on either the type or total volume of future development, it is necessary to evaluate the City's ability to accommodate the resulting utility requirements and the costs associated with providing adequate services. The following analysis focuses on the most critical aspects of these two issues:

1. The capacity of Chardon's wastewater treatment plant; and

2. The relative cost/benefits of industrial and residential development.

Wastewater Treatment Plant

Assessing the ability of Chardon's wastewater treatment plant (WWTP) to accommodate future growth has been studied extensively over the past fifteen years. As early as 1993 it was determined that WWTP capacity would have to be dramatically expanded from what was then approximately 1.1 MGD (million gallons per day), or demand would likely exceed that capacity before the year 2000. The target capacity of such expansion fluctuated for several years, but remained consistently between approximately 1.8 and 2.0 MGD. Following further analysis and modifications to prior growth projections, I&I (Inflow and Infiltration), and other factors, it was ultimately decided to expand the WWTP to its present capacity of 1.81 MGD. Although it would be costly, mechanical system changes could further increase capacity to 2.0 MGD if necessary.

Population growth estimates have also been revised several times over those fifteen years. The City's 1980 Comprehensive Plan predicted 7,642 people by the year 2000. The 1996 Plan Update reduced that expectation to only 5,917 people, and projected 7,804 people and 3,097 households by 2015 (2.52 persons per household.) Those 2015 numbers were used in the 1996 Sanitary Sewer Evaluation Survey to set the final 1.81 MGD target capacity for the WWTP.

A 1998 City staff report that explored options for improving the sewer system (updated in 1999), settled on future projections consistent with the 1996 studies, but determined that substantial build-out was not likely until 2024. Still using the 2.52 persons per household ratio, they estimated a 2024 population of 9,048. This 2008 Comprehensive Plan assumed the lower 2000 Census figure of 2.39 persons per household and re-evaluated growth estimates through build-out (see Section F above.) While not specifying an exact year, Chardon's ultimate population is now projected to be 8,964 people (nearly the same as the 1998 staff figure) but with only 3,758 households.

The subsequent WWTP expansion to its current 1.81 MGD capacity was predicated on its ability to accommodate the 1998/1999 estimates for both residential and non-residential development at build-out. The 2008 projections are essentially the same as those prior estimates in every respect, including: ultimate population; acres of residential and non-residential development; projected I&I; and daily usage. There remains nothing to suggest that the original design capacity of 1.81 MGD will be inadequate to accommodate build-out demand - even though there may be little, if any, surplus capacity by that time.

The apparent lack of a safety margin, however, does not take into account the previous WWTP studies that indicated an additional 0.19 MGD could be made available if necessary. Nor does it include the additional surplus that could be created by future projects that can further reduce I&I. Any future land use changes will more than likely involve an increase in residential development and a decrease in non-residential, which would if anything, decrease demand. Finally, it should probably be noted that full build-out may not occur for another 30 to 60 years. With periodic monitoring and re-evaluation of demand trends in the future, there should be advanced warning if any of these projections should begin to appear questionable in any way.

Cost of Services

Planning recommendations which would or could result in significant changes in the City's land use mix have the potential for altering the current relationship between the total revenues generated by each land use and the costs associated with providing City services to those uses. Because future land use decisions would most likely involve a choice between a site's residential or industrial development, a "cost of service" analysis was conducted to compare the costs and revenues for those two land use types. Past studies have generally concluded that revenues generated by residential development at densities of less than three or four units per acre cannot offset the city's costs to provide basic, acceptable services to those dwellings. Conventional wisdom has also held that the industrial development of an equal amount of land will almost always provide substantially more revenue than would residential development. The analysis was intended to test those assumptions against the specific circumstances applicable in Chardon.

Fully developed assessments of revenue and costs are extremely complex and dependent on a large number of variables and assumptions that are less than clear cut. This analysis will, however, provide reasonably reliable estimates that are sufficient to make some judgments about the impacts of future land use decisions. Additionally, the methodology permits further testing of different assumptions/outcomes and how they may or may not alter these initial results.

A hypothetical site totaling 100 acres was used for the analysis, to help avoid potential anomalies that might result from too small a sample. The initial testing compared the industrial development of those 100 acres to residential development at three (3) units per acre, the approximate average for the City's existing residential zoning and development. Chardon's 2005 budget summary was used as the basis for comparisons. Because municipal budgets do not distinguish between revenues or expenses according to land use, it was necessary to estimate the portion of a specific line item in the city's budget (both revenues and expenses) that could reasonably be attributed to each development type. These assumptions were based primarily on the relative existing land areas occupied by major land use types, together with the input of City officials, and past experience working with city budgets.

Expected revenues were calculated for each use based on commonly held standards, assumptions based on current development statistics, and known taxing rates and methods. The resulting total revenue expected from 100 acres of industrial development was estimated at approximately $1.4 million, and approximately half a million dollars ($500,000) for residential development at 3 units per acre. (See Table B-1 in Appendix)

To estimate expenses the City's total budget was broken down by department, and apportioned by the benefiting land use types, as noted above. Based on acres of existing development, "per acre" costs for each fund were estimated for industrial use, and "per unit" costs for residential. These were totaled and multiplied by the hypothetical site's 100 acres. The resulting total cost to provide services to the industrial development option was estimated at $647,965, and $491,554 for the residential option. (See Table B-2 in Appendix)

While the analysis involves a number of assumptions, the results strongly tend to support the original expectations. Industrial development is likely to generate considerably more revenue for the City, and substantially more than the associated costs to provide City services to that industry.

Residential development, however, at a density relatively equal to existing conditions, should be capable of supporting itself within the City's budget. The reasonably supportable implication is that while industrial development might provide considerably more revenues than expenses, if a site's zoning changes from industrial to residential (at an acceptable maximum density), the resulting development will approximately "pay for itself," and should not create a financial burden on the City's budget.

There may also be other mitigating considerations, as well. Little financial benefit is gained from vacant industrial land. And in some circumstances, residential zoning may not always be the only alternative to industrial use. Ultimately, the City needs to be aware of the potential financial consequences of future land use and zoning decisions, even if it cannot predict exact numbers. It should weigh the potential financial rewards of potential industrial development against other factors that may be unique to a particular site, including the likelihood that a residential alternative will not change the existing financial balance within the City's budget.

II. STATEMENT OF GOALS

Chardon is fortunate to have entered into this planning process with a relatively clear and consensus vision for its future. Following extensive review by city officials and the public at large, as well as the evaluation of existing conditions presented in Section I, that vision has been refined and organized into a set of specific goals. It is these goals that provide the foundation and general framework for the community policies, and implementation strategies presented in Sections III and IV. Goals and Policies from Previous Plans are summarized in Appendix C.

A. Maintain and enhance Chardon as a "complete Small Town," clearly defined, economically viable, self sustaining, and commensurate with the community's existing image of itself.

B. Preserve and reinforce Chardon Square as the City's real and emotional "Center" and focus of the community's identity, including historic character, traditional seat of City and County government, viable "main street" businesses, and surrounding housing.

C. Re-establish the area surrounding Chardon Square as "Original Chardon," including its own historic function and character, particularly in support of, and along street corridors leading to Chardon Square.

D. Provide adequate housing options for all segments of the population: diverse in price, size, form, and location; sufficient to support Chardon Square and Original Chardon retail; and generally distributed with density directly related to distance from the "Center."

E. Provide retail development that corresponds to realistic market needs, supports the goals for Chardon Square and Original Chardon, adequately serves Chardon residents, and takes economic advantage of the broader surrounding market.

F. Serve as the "service center" for the low-density and rural areas in the surrounding townships, functioning as their primary source for shopping, jobs, county government concerns, restaurants and entertainment.

G. Provide residents with a full range of essential services (utilities, police and fire, roads, etc.) as well as quality of life benefits and opportunities (parks, recreation, environment and character.)

H. Achieve a vehicular circulation system that maximizes route alternatives in order to reduce concentrated traffic volumes, minimizes traffic through residential areas, maintains adequate access to Chardon Square, and promotes economic development consistent with City goals.

I. Achieve a comprehensive system of pedestrian and bicycle circulation that provides alternatives to vehicular traffic, direct and convenient access to Chardon Square and other prominent destinations, and recreational opportunities.

III. DEVELOPMENT POLICIES

Development policies provide what might be described as the community's "Plan". They represent the general means by which Chardon intends to achieve its vision for the future, as presented in the Section II Statement of Goals, and are built upon the foundation of existing conditions identified and analyzed in Section I. Detailed strategies for implementing the City's goals and policies are described in Section IV. Goals and Policies from Previous Plans are summarized in Appendix C.

At times, individual policies may appear to be in conflict with others, but at the same time, the successful implementation of one may also support and promote one or more others. The potential for overlapping implications between different policies, both positive and negative, must always be considered when determining implementation priorities and strategies, balancing the merits of multiple objectives and finding compromises when necessary.

A. FUNDAMENTAL POLICY PRINCIPLES

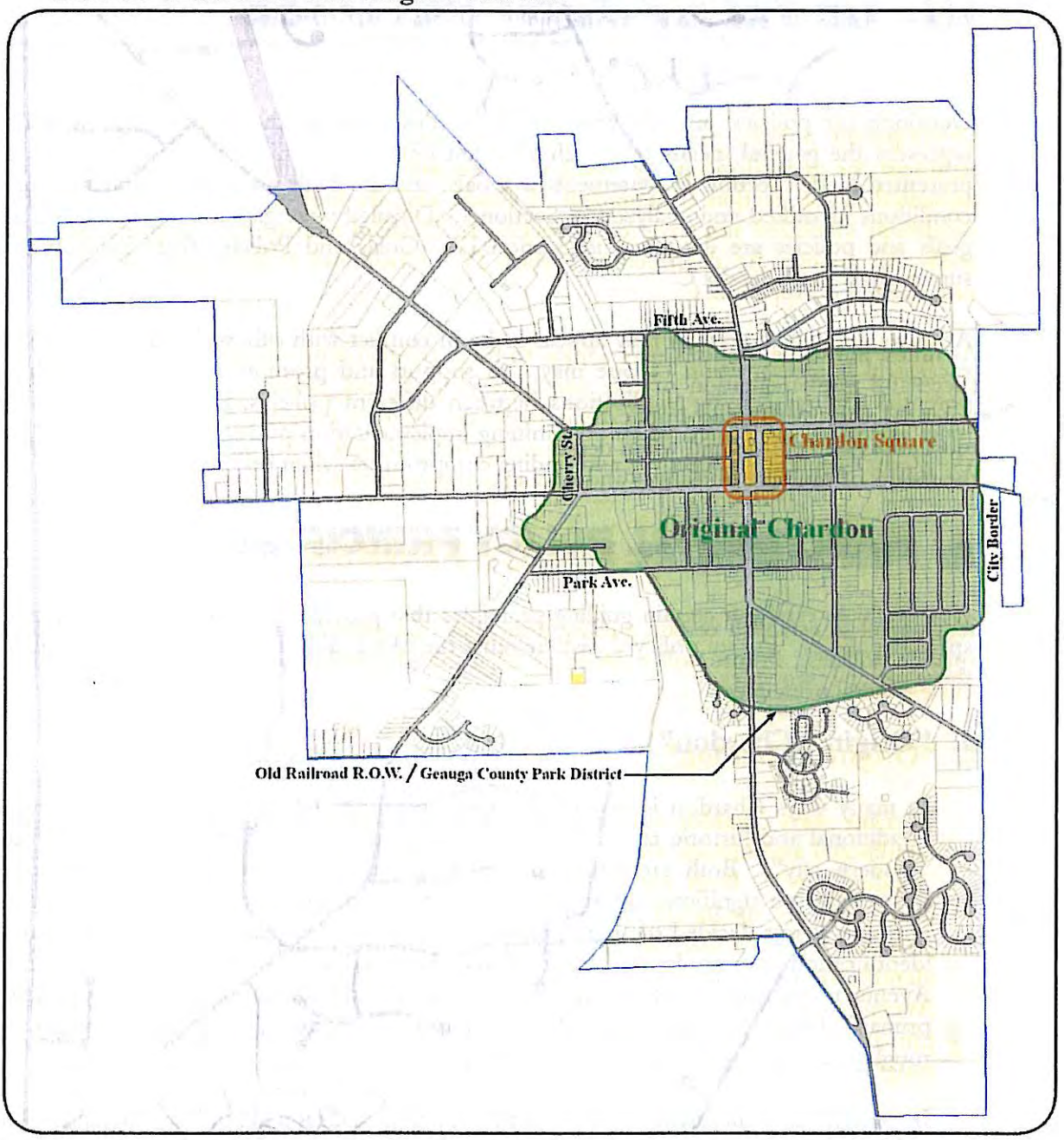
It is useful to establish certain guiding principles that provide an overall context for developing specific policies. Future policy decisions must then be evaluated in terms of their adherence to those general principles.

1. "Original Chardon"

In many ways Chardon is two cities. One surrounds Chardon Square and represents the "traditional and historic city". The second generally surrounds the first and represents the "modern city". Both are Chardon, and both serve important roles. But their distinct differences are significant enough to require different policy considerations. For planning purposes it was decided the inner, older city would be designated as "Original Chardon," an identification commonly used by residents. It includes an area generally bounded by Fifth Avenue to the north, Park Avenue and the abandoned CSX railroad right-of-way now owned primarily by the Geauga County Park System to the south, the city border to the east, and roughly Cherry Street to the west. (See Map 12)

In general, all retail districts located within Original Chardon should be "mixed use" districts, permitting both residential and office uses in addition to retail and quasi-retail businesses. Given the City's significant goal of maximizing the amount and economic viability of commercial businesses within Original Chardon, it follows that the more residents living in immediate proximity to those businesses, the better the chances to meet that goal. Flexibility in use options will also help facilitate reinvestment and new development in the area, another significant goal of the City.

MAP 12 - Area Defined as Original Chardon



Study Limits for Original Chardon

Key:
- Original Chardon
- Chardon Square

Source: D. B. Hartt, Inc. and City of Chardon

City of Chardon
Draft Comprehensive Plan

N W E S

DB HARTT
planning and development consultants

2. Character and Image

Chardon is one of the few remaining communities in the region that has maintained its "Small Town, U.S.A." character and image, a distinction that represents its greatest strength and most valuable asset. All policy considerations should serve the principle of preserving, enhancing and promoting that resource. At the same time, such efforts should be reinforced by a consistent and unwavering public and private attitude that Chardon is truly is a unique and special place, and that it can still improve that public perception.

3. Residential Development

As a general principle, Chardon should maintain and promote the historic trend by which the net residential densities decreases as the distance from the Original Chardon center increases. The existing pattern tends to mass the most residents and general public activity nearest to the businesses and areas most in need of such support and general activity, as well as being consistent with all of the City's most critical goals and objectives. It also promotes a broad variety of housing options for those wishing to live in Chardon, both in terms of affordability for young singles, starter homes or retirees, and those looking for the less dense, rural atmosphere the City can also provide. At the same time, however, future housing growth should continue to follow the recent efforts at promoting clustered developments at the same net densities, in order to preserve open space, protect natural resources and reduce City service costs.

4. Commercial Development

It is essential to Chardon's future goals and identity that retail businesses and office users within the defined Original Chardon area be supported and promoted as much as possible, particularly on and near Chardon Square. Outside of Original Chardon, however, uses which would be in direct competition with those areas and uses being promoted by the City inside Original Chardon should be discouraged, while those not in direct competition are expanded and promoted outside. And recognizing the market realities identified in Section I, the creation of any additional commercial zoning outside of Original Chardon should be prevented as much as possible and reasonable.

5. Industrial Development

Chardon must continue to promote the development of its remaining vacant industrially zoned land. The more land developed for industrial and intense commercial purposes, the lower the residents' share of the total tax burden. The recently increased marketing efforts by the City should be given more time to bear fruit because the financial rewards could be significant. As an adjunct to those efforts, the city should pursue circulation improvements that could enhance the vacant land's marketability, and identify additional permitted uses that might increase the land's development potential. During this period Chardon officials should closely monitor the results of these efforts and re-evaluate their realistic potential for future success.

6. Environmental Issues

The preservation of open space and protection of Chardon's natural resources should be a high priority within the context of all other policies. Natural open space and agricultural land are a significant part of Chardon's history and present identity. The amount and character of accessible open space is a significant quality of life issue. At the same time, Chardon should support "green" policies and developments, in keeping with the City's fundamental goals established in Section II, and recognizing the advantages and long range needs for environmental stewardship and sustainability. Flexibility in the creation and enforcement of building principles, project evaluations and low impact designs will be necessary, as new development considerations and methods continue to emerge.

7. Circulation

Section C includes a detailed Thoroughfare Plan and policies directly related to vehicular circulation, as well as a general concept plan and policies directly related to non-vehicular circulation. The City, however, should also consider how even seemingly unrelated policy or implementation decisions might indirectly impact those circulation objectives, and how vehicular and non-vehicular circulation decisions might impact each other. As an example, the Thoroughfare Plan suggests that a road connection between Park Avenue and South Street might improve vehicular circulation and reduce traffic volumes elsewhere. At the same time the section on non-vehicular circulation suggests that a primary bicycle and pedestrian trail might best be developed along roughly the same path. While both policies are appropriate, decisions relative to their implementation may or may not be in conflict.

The selected policy options should assist with the objectives of stimulating desired economic development, generally reducing congestion, creating pedestrian and bicycle alternatives to vehicular usage, limiting truck traffic around Chardon Square, and preventing all unwanted traffic within residential neighborhoods.

8. Utilities and Other Infrastructure

Policy decisions must be consistent with the city's abilities to provide more than adequate public utility and infrastructure service, particularly water supply, storm drainage, sanitary sewers, and wastewater treatment. Concern must be given to impacts on both the costs of providing service and keeping demand within the capacity limits of available resources.

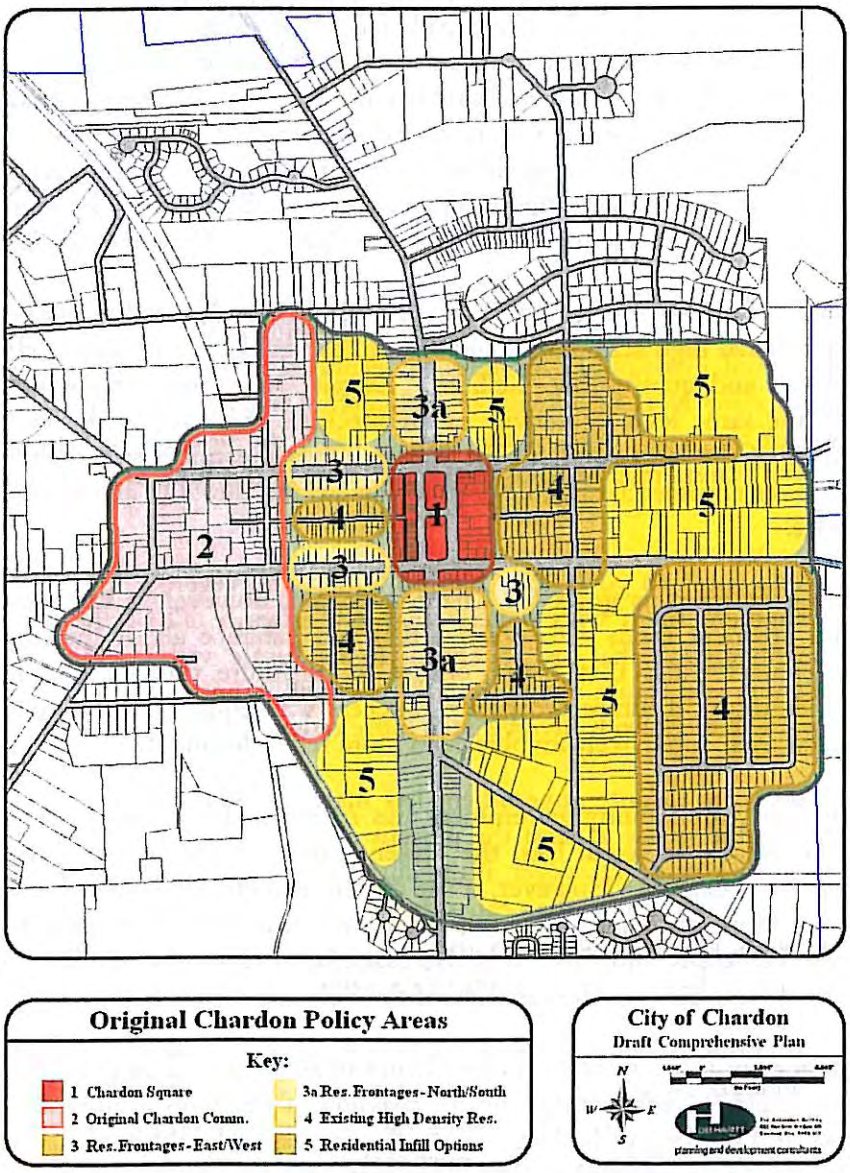
9. City Finances

While it may be obvious, all policy decisions must consider their relative potential costs to the City (or savings if possible). Land use policies and actual resulting development can certainly impact tax collections and rates, as well as the costs of providing services. Other policies can have financial implications where they involve building and maintaining infrastructure, utilities, other public facilities, or even parks.

B. POLICIES FOR ORIGINAL CHARDON

The Original Chardon area was defined for special planning consideration because it is so distinct from the rest of the City. Within Original Chardon there are also sub-areas having their own unique differences in terms of historical significance and character, density and intensity of use, form and function, specific needs and objectives, and other criteria. The sub-areas and their distinguishing characteristics were identified by the amalgamation of information gathered from the analysis of existing conditions, the formulation of overall goals and policy principles, and numerous discussions with city officials and the public. As a result, the following Policy Areas have been established for individual planning, analysis and policy formulation purposes. (See Map 13)

MAP 13 - Original Chardon Policy Areas



Policy Area 1 – Chardon Square and Functionally Adjacent Properties

Chardon Square is by far the single most significant and critical geographic, functional and symbolic location within Original Chardon, greater Chardon, and even the surrounding region. Other Policy Areas are important, but the ultimate fate of Chardon Square could be crucial to the City's future. The Square is the exact site of Chardon's founding, its historic center of population, retail trade, public activities and regional government, and a continuing symbol of Chardon's public identity, image and character. Chardon's top priority, therefore, must be to preserve all aspects of the Square's significance to the community, assure its continuation in all its roles and functions, and to enhance those roles through carefully considered redevelopment and other efforts. (See Map 14)

As you would expect in a "Small Town, U.S.A.," Chardon Square has always been a dramatically mixed use area, despite its relatively small size. Part of its charm and historic integrity derive from the generally small street-front retailers that remain on the west side, with an almost monolithic physical appearance, and architectural features that have remained unchanged, or at least maintained the major characteristics of the original construction. The presence of the County Seat is Chardon's *Raison d'être.* Together with its support facilities, the continuing government complex is a very significant presence on the Square. Its employees also provide a daytime market for the restaurants and other retailers, as well as generally heightened activity.

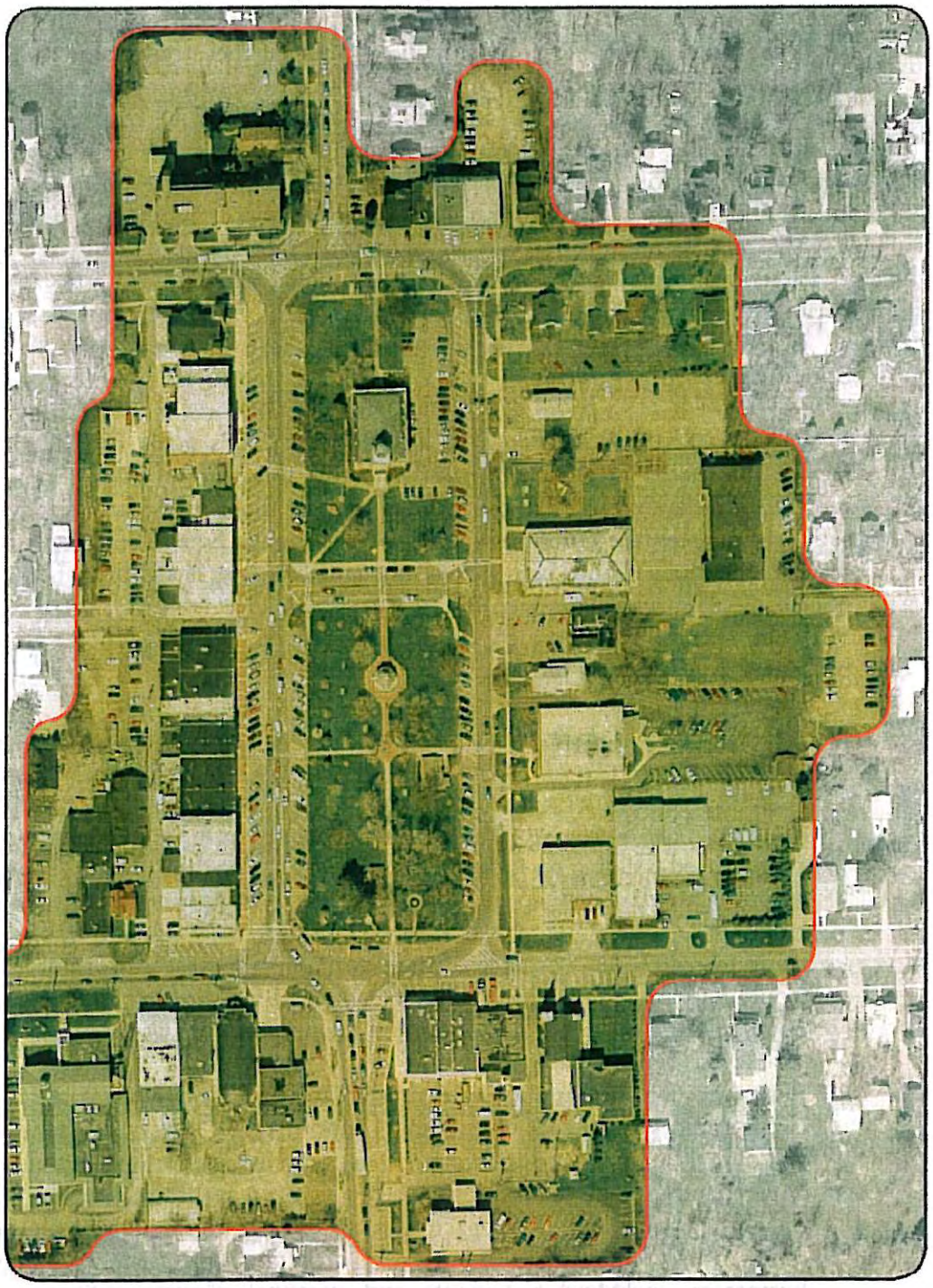
The east side of the Square has always been more or less devoted to institutional uses, including Chardon's original high school and auditorium, the public library, and a changing assortment of smaller public and quasi-public facilities. Despite some imposing structures, however, it no longer has the same level of activity or architectural character as the west side. City facilities occupy most of the land south of the square, while the north side includes a few smaller and relatively newer commercial buildings generally lacking the bulk and character of either the east or west sides.

If the City is to meet its goals for Chardon Square, however, it must expand its preservation efforts and augment them with policies that can enhance all of the physical, functional and economic characteristics that are so critical to its future viability, and in turn, to Chardon's continued identity and future prosperity. Success will require at least some redevelopment, and greater success will most likely involve even more redevelopment.

For nearly 200 years County government has maintained a strong presence on the Square. It would be preferable to see at least the present extent of the County's utilization of the Square continue or even expand. However, if the current presence is ever reduced, it must be replaced with one or more occupants that can offer the same or even greater levels and varieties of benefits for the Square and City. It is also essential to retain the existing retail businesses, and if possible, to expand them to the east side of the Square.

Equally important is the need to address issues of form, including general physical character and appearance, building architecture, and the massing of buildings around the Square. The current architecture and massing of buildings along the west side should be the benchmark for the entire Square frontage, particularly along the entire east side. The desired changes in both use and form along the east side cannot be achieved without redevelopment whether through public or private investment, or a combination of both.

MAP 14 - Chardon Square Policy Area

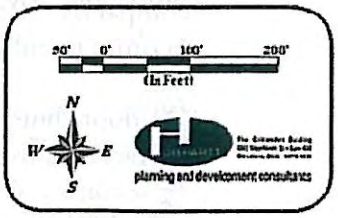


Policy Area 1

Chardon Square

City of Chardon

Draft Comprehensive Plan



All sides of the square should be considered as opportunities to reinsert the historic housing tradition into the land use mix. It would provide an additional customer base for Square retailers, increase after-hour and weekend activity, and add a unique housing option for a potential niche market that is rarely accommodated. Additional efforts should be directed toward providing adequate public parking, reducing truck traffic around the square while maintaining optimal levels of potential customers for Square businesses, improving circulation patterns around the Square, and reducing congestion and confusion for Square visitors. While not often a subject for planning studies, in this instance the City should not overlook the potentially significant role that publicity, attractions, civic functions and general public relations can play in increasing the Square's viability and success.

Specific Recommendations

It is likely that the best chance of attaining the City's goals for Chardon Square will require the successful achievement of all of the following policies. Some are obviously more critical than others, and the inability to meet those particular objectives would most seriously threaten the community's goals for both the Square and City. If certain other recommendations cannot be realized, substantial success is still probable. The remaining policies lie somewhere between the two extremes. Nevertheless, every effort should be made to accomplish as much of the program as possible, thereby maximizing the prospects for Chardon's future.

1. The extent and quality of the County's utilization of the Square must at least be maintained or replaced. In either case, it would be preferable to significant expand utilization on the east side, perhaps through a joint City/private sector redevelopment program. The Square would benefit significantly from more occupied floor area, and an increased building mass; including second and/or third floors. The redevelopment required for that new space would provide the opportunity to build ground floor retail space. Together, the new uses, building massing, and architecture could be made to match the west side of the Square. An increased workforce on the Square would help provide additional market potential for the new retail development. The potential for a niche housing option on the upper floors would increase that potential.

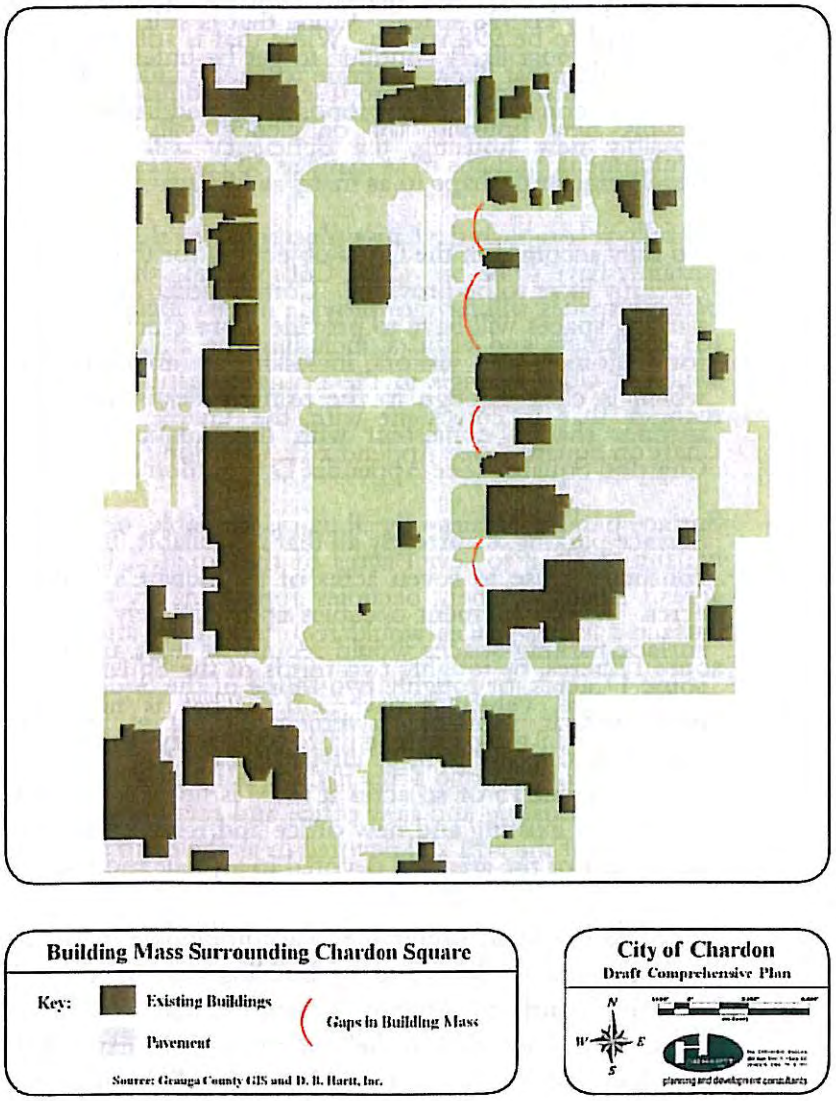
2. A new zoning district should be created to specifically address the Square's unique circumstances and needs, permitting a mix of retail, offices and residential uses that will directly support and promote the desired character and economic viability of the Square, and exclude or limit those uses which can and should be located elsewhere in the City. Ideally, first floor space fronting directly on the Square should be restricted to retail uses appropriate in scale and character to current and traditional Square businesses, including restaurants and personal services. Some exceptions for compatible office or limited other commercial uses, however, may have to be allowed in order to enhance the ability to maintain full occupancy.

   Outdoor dining and similar activities should be encouraged to promote the desired character in front of the ground floor businesses. As much as possible, building areas on second and third floors, or even behind the retail businesses, should be devoted to office and/or residential occupancy. Uses with only occasional occupancy or use (i.e.

funeral homes), "unique" use patterns (i.e. hospitals and service facilities), and other uses in conflict with the intended policies for the Square, should be prohibited anywhere within the new zoning district. A more specific summary of use recommendations is provided in Section IV, Plan Implementation, and full details in the Proposed Zoning Code.

3. The physical character and visual effectiveness of Chardon Square would be significantly enhanced by infill development, particularly along the east side of Chardon Square, literally filling the current vacant spaces between separated structures with new construction of a similar height and architecture as both the existing adjacent buildings and the entire west side of the Square. If the issues of marketing and financing such undertakings can be successfully addressed, even to the extent of limited public participation, much can be done to assure the appropriate form and character of the new construction. (See Map 15)

MAP 15 - Chardon Square Building Massing



Front setbacks can be required to conform to those of adjacent buildings, with possible exceptions to promote outdoor dining or small courtyards. Requiring new construction to occupy a minimum percentage of a lot's with, requiring maximum side setbacks, permitting zero setbacks, and/or allowing physical connection to neighboring structures are all potential methods for achieving the desired monolithic bulk and massing that currently characterizes the west side. The more the Square is physically and visually "enclosed," the more effectively it will reflect the "sense of place" that best characterizes the desired charm and appeal. New construction can also be required to include at least two floors, and permitted or encouraged to provide three or even four where appropriate. Also, it is unlikely the desired results can be achieved without substantially increasing the maximum building coverage for lots within this district from the current 30 percent limit.

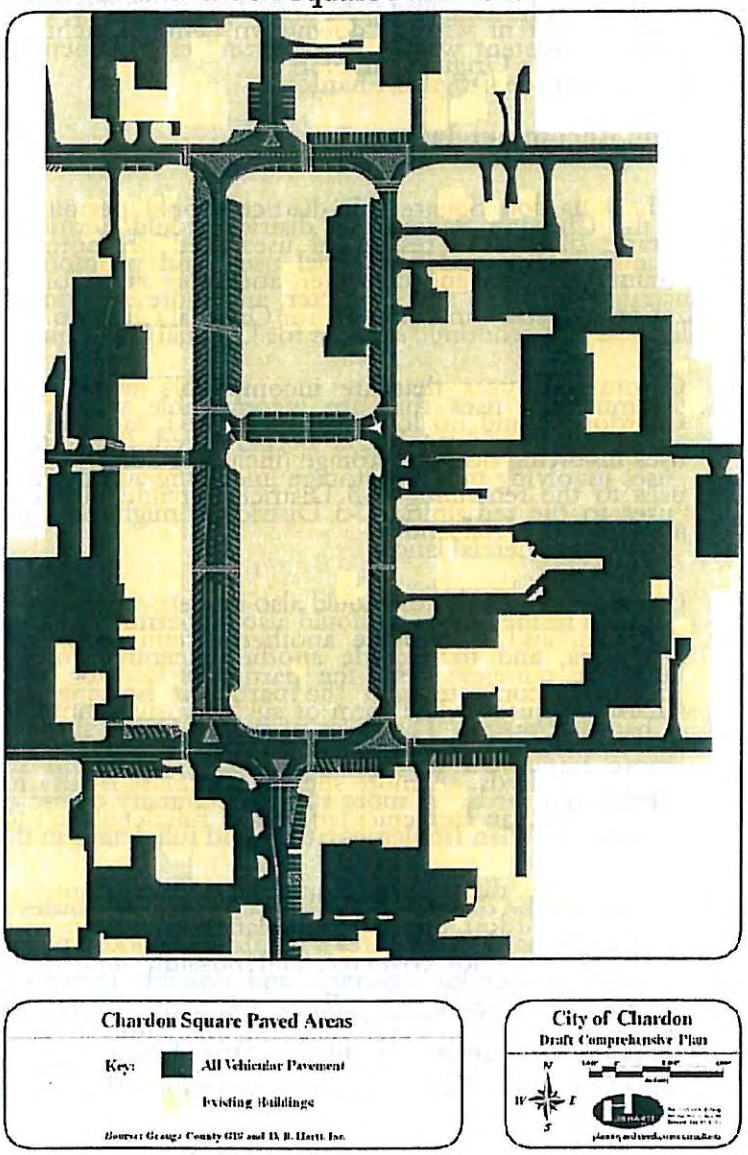
4. Based on a detailed parking analysis, there are 953 parking spaces available on and around Chardon Square. With existing building usage, the current code would require 1,638 spaces. As the analysis explains, however, a more reasonable need is only estimated to be 998 spaces. While that is still 45 more than the available supply, the area could most likely continue to get by unless demand increases. But if additional space is constructed as proposed for additional county offices, more retail, and possibly new housing, the deficiency will increase in proportion to that new development, perhaps to as many as 583 spaces.

5. To fully accomplish the City's objectives for the Square, additional parking will almost certainly have to be provided. Complicating the issue, both existing and any addition parking spaces will have to provide more efficient utilization and greater convenience for customers and visitors, including the ability to find an available space, and one which is close enough to the primary destination. It must also be provided in a manner that is consistent with the unique character and design constraints of Chardon Square. (See Appendix D, Chardon Square Parking Analysis)

   Surface parking is currently all that is available, both on and off the streets. It already consumes close to seven acres of the Square's limited land area of about 25 to 26 acres. Road pavement occupies approximately six acres. An additional 500 to 600 surface parking spaces would require at least another three and a half acres. In all, some 17 acres, or roughly two-thirds of the Square's total land would be taken up by hard surface, vehicular pavement. That is far from the kind of environment experienced in the past, or envisioned for the future. Pavement could be kept close to the current 13 or so acres if there is no new construction, but that could result in the loss of existing and new office and retail occupants and space, while still leaving about half of the area still devoted to asphalt and concrete. (See Map 16)

   It would be clearly preferable to accommodate the increased demand the desired new construction would create by building one or more multi-level parking structures, available jointly to employees, visitors, and the Square's business customers. The most logical location is behind new retail, expanded offices and new residential development on the east side, particularly if the parking structure(s) can be coordinated with, or made part of, that new construction.

MAP 16 - Chardon Square Pavement



6. Regardless of the degree of success in implementing the preceding policy recommendations, city codes, procedures and fees should all be made as businesses-friendly as possible, particularly for Square merchants. Special attention should be paid to upgrading public and private landscaping, streetscaping and other amenities through code requirements, public projects or other means.

Policy Area 2 – Remaining Original Chardon Commercial Area

Following the principle that there should be a distinction between policies appropriate for Original Chardon and those more appropriate for the rest of the city, it is suggested that separate commercial policies and zoning be established for this Policy Area. A new zoning classification should be created for existing retail development and certain under-utilized commercially zoned land within Original Chardon that are not part of the Chardon Square Policy Area which requires even more specificity in terms of permitted uses and design standards. This area will have fewer

constraints relative to historic and "character" compatibility, but with densities and development intensities more consistent with a "downtown" environment than the remaining C-3 District commercial areas outside Original Chardon.

Specific Recommendations

Like the Chardon Square this district should permit a flexible mix of general retail, restaurant, office and residential uses, and promote redevelopment, but with fewer constraints on form and character, and more attention to efficient and productive land utilization and economic support for Original Chardon.

1. Commercial uses that are incompatible with the desired character of Original Chardon should no longer be permitted, including most non-retail businesses and uses involving outdoor storage (including automotive products). By restricting those uses to the remaining C-3 District, it might also increase the marketability of *that* area's commercial land.

   Certain residential uses should also be permitted to help stimulate the marketability of the area, and to provide another incentive for redevelopment. It should not, however, compete with the particular housing options being promoted around Chardon Square. The form of such housing should be restricted to townhouses or more traditional multi-family development with restricted heights, densities and design standards. A more specific summary of use recommendations is provided in Section IV, Plan Implementation, and full details in the Proposed Zoning Code.

2. To reflect the different form and character attributes preferred for within and outside Original Chardon, this area's regulations should permit smaller setbacks than the C-3 district, greater lot coverage, and possibly increased building heights. Front yard parking can still be permitted, but with greater setbacks and stronger screening requirements than currently. Shared driveways and parking areas should be encouraged, including the necessary enabling legislation.

Policy Areas 3 & 3a – Primary Street Frontages

The major street frontages within Original Chardon have always been occupied primarily by residential dwellings, many of which have strong historical and/or architectural value to the community. City policies must include efforts to preserve those structures and retain the residential character of those streets. At the same time it should be recognized that at some point the adverse impacts of heavy traffic volumes and other negative circumstances may present challenges to their continued residential use, marketing and reinvestment potential, and/or sufficient incentive for their continued maintenance at traditional and desirable levels. Most consistent with these concerns are the homes fronting on the east-west streets through Original Chardon – Policy Areas 3 (including Center, Water, North Hambden, and South Hambden) where there are already signs that some land use relief might be beneficial. Policy Areas 3a, fronting on North and South Streets, may not require immediate attention, but should be monitored for signs of concern in the future.

The most acceptable solution may be to create a new zoning classification specifically designed to provide a highly controlled and very limited number of non-residential, or quasi-residential use options, while retaining the residential structures, or at the very least, maintaining a clear and well defined residential character. As a matter of policy, such a new district should essentially still be considered residential.

Specific Recommendations

Properties fronting Route 44, for a specified distance both North and South of Chardon Square and referenced on Map 13 as Policy Areas 3(a), may or may not need to be addressed differently than those fronting Center and Water Streets, depending on how well district standards can be defined to insure the desired control of the form and character of permitted non-residential uses, and whether or not those controls can be made to serve the needs and desired results for all street frontages equally.

In either instance, single-family dwellings will continue to be the only alternative to open space permitted by right, with any other potential use permitted only upon full compliance with a pre-established set of conditions that will insure the least possible change in the residential form and intensity as viewed from the street.

1. Requests for non-residential uses should be limited to a small list of conditional and/or quasi-conditional uses predetermined to be consistent with policies and objectives, but including the possibility of an exception for an unanticipated use which could be reasonably expected to meet the conditions for approval. City policies suggest that the list should be more restrictive along the designated portions of Route 44, perhaps even to the extent that a Bed & Breakfast should be the only acceptable reuse. But there are a number of other potential reuse options that could be equally compatible and acceptable if held to sufficient controlling standards (i.e. boarding house, two story-two family dwelling, home occupation, residence above a non-residential use, small inn, funeral home, group home or others).

   At the same time, there are uses which might need to be limited to the east-west street frontages only (i.e. personal services, veterinarians, antique shops or similar retail). A more specific summary of use recommendations is provided in Section IV, Plan Implementation, and full details in the Proposed Zoning Code.

2. Every code requirement, review process and other conceivable legal means should be directed toward forcing, or very strongly encouraging, the retention of existing structures: whether to continue as an adequately maintained single-family residence with voluntary reinvestment when required; or to assist with a financially motivated conversion to a permitted non-residential use. Where it is simply not feasible to reuse an existing structure for either purpose, new construction may be permitted if guarantees can be provided that it will replicate the form, character, design, and site configuration as the former structure, or in the alternative, the adjacent or other surrounding properties.

3. To help create opportunities necessary to accommodate the purpose of these Policy Areas, some additional structural flexibility should also be provided. Single-family

homes should be permitted to become two-family structures if there is sufficient floor area, two stories, suitable methods for making it work internally, and if it will continue to look like one unit or like two attached, but independent, units.

Where deemed necessary and appropriate, the attachment of smaller adjacent structures should be permitted to create one new and larger structure with guaranteed conformance with the size, form, character, design, and site configuration of the majority of properties within close proximity. Code adjustments should also be made to minimize non-conformities which tend to deter adequate maintenance and reinvestment.

4. The floor area of any approved building addition should not exceed a maximum area, or in the alternative, a maximum percentage of the existing floor area, and maintain the original structure's location on the property, architecture, or other characteristic determined to be essential to maintaining the original or desired appearance and character. Non-residential parking within a new or existing front yard is one of the surest ways to destroy a property's residential character, and should be prohibited. Likewise, no side yard parking should be allowed that is not reasonably but adequately screened from the fronting street all year.

Policy Areas 4 – Established High-Density Residential Neighborhoods

A number of older, well established and defined residential neighborhoods exist within Original Chardon, some much older than others, but all reflecting standards no longer part of the City's zoning code. This is a common occurrence in communities with major housing development dating back more than 40 to 50 years. And like those other communities have experienced, Chardon's older neighborhoods have lot sizes, setbacks or other conditions that do not and cannot comply with even the most generous current requirements.

The result is a large number of existing legally non-conforming conditions. (See Map 10 in Section I) Unlike many of those other cities, Chardon has not yet experienced the noticeable and problematic reduction in maintenance and reinvestment incentives that are very common to non-conforming older properties in those communities. But it is unrealistic to suppose the same issues will never surface in Chardon. It is incumbent upon the City, therefore, to create legislative zoning code solutions that will minimize such non-conformities, while continuing to maintain the integrity of Chardon's current residential zoning standards.

Specific Recommendations

1. All of the neighborhoods significantly impacted by code non-conformance issues are currently zoned R-2 and R-4. The R-4 zoning within Original Chardon may have been partially intended to address specific the neighborhoods' existing smaller lot sizes, and succeeded for the majority of those properties. But R-4 zoning was primarily intended to be a multi-family district, and its current standards do not quite provide legal legitimacy to many single-family lots, nor do they resolve a very large number of non-conforming setbacks throughout the other Policy Area 4 neighborhoods.

2. Most of the problem neighborhoods, however, are currently zoned R-2, the city's most extensive residential classification, and include extensive areas not relevant to this issue, both inside and outside of Original Chardon. To satisfy the significantly different needs and purposes within the R-2 district would require different zoning designations, most logically for the problem areas. Rather than creating another new zoning category, it would be far easier and more appropriate to extend the R-3 zoning into these problem areas. The R-3 district is already intended to permit higher density development, and would likely increase the number of homeowners receiving relief from their current non-conforming impediments to continued maintenance, financing and reinvestment incentives.

3. The R-3 zoning might also be amended, if necessary, to more specifically reflect existing conditions within the affected neighborhoods, and match those conditions with just enough code relief to minimize the non-conforming situations for only those existing properties in need of that assistance. Simply stated, current conditions that previously met the City's standards at the time of construction might be legally "grandfathered". In addition, properties with sufficiently similar characteristics as surrounding lots entitled to those reduced standards should also receive the same considerations.

Policy Areas 5 – Potential Infill Housing Locations

Existing zoning and subdivision regulations permits the assembly of vacant R-2 district properties and parts of developed properties in excess of the district's minimum lot size requirement. That is particularly significant in those areas within Original Chardon with considerable undeveloped backland of either or both types. The possibility already exists for such contiguous land to be assembled into sites suitable for re-subdivision into new residential developments. When a community reaches the point that housing demand exceeds the supply of easily developable land, the potential for such efforts increases among developers and land owners. While this has not yet occurred in Chardon, significant success in achieving its proposed policies could make such a market situation a realistic possibility in the future.

Where assembly and re-subdivision of vacant backlands does occur, it very often produces less than acceptable results for both the surrounding homeowners and the City. Code requirements that serve well for large tracts of vacant land fronting major streets are not always adequate for the complications and difficulties frequently presented by development behind and among existing dwellings, with access to major streets forced to go through and between those residences, and plans impacted by sometimes very irregular boundaries. At the same time, many of those difficult sites can produce acceptable and even desirable results if the City has sufficient legislative control, adequate flexibility to adapt when necessary to circumstances that are unique to each situation, and the means to insure optimal planning solutions and maximum sensitivity to potential impacts on the surrounding existing neighborhoods.

There are several options for providing the City with such planning controls, but because it may only be a precautionary measure, there is probably no need to re-invent a methodology that may already be available. Chardon's current PUD, Planned Unit Development District has been used frequently with considerable success, and already provides most of the required controls, offers considerable flexibility, and allows for case-by-case planning solutions. With or without some

minor modifications, it should be possible for the current PUD zoning to accommodate the desired needs for this Policy Area if and when it becomes necessary. It is also possible, however, that in the future the different and sometimes greater problems for both the City and developers in these situations will require additional incentives, one of which might be an attached single-family housing option.

C. CITY-WIDE POLICIES

The considerable emphasis placed on goals and policies for Original Chardon is necessary and appropriate for the numerous reasons cited previously, but there are also several significant subjects and issues relating to other areas and to the entire City of Chardon. These include traffic and circulation (vehicular and non-vehicular), parks and recreation, open space, land use outside Original Chardon, and broad community image and character issues. The following policies address each of those concerns.

Vehicular Circulation and Thoroughfare Plan

Deficiencies in Chardon's existing road system and problematic circulation patterns have both contributed to a number of concerns, including: traffic through residential neighborhoods; truck traffic and general traffic volumes around Chardon Square; a too high percentage of total traffic restricted to too few streets; road access to industrial areas that does not do enough to promote development or accommodate current commuter traffic; and traffic routes and controls that increase rather than reduce congestion. There is a great deal that can be done to improve the system in all of these problem areas, provided there are sufficient financial resources, as well as political and other support from both within and outside Chardon. In some instances the potential exists for financial participation by private developers, or for outside grants or similar government assistance. Other measures could have little or no associated costs.

The idea of creating a "loop" or "ring" road arterial encircling the entire City has been widely discussed and debated for some time, including within previous planning studies. Based on the current analysis and extensive feedback from City officials, in retrospect it appears those previous suggestions may have been overly ambitious, too impractical, potentially harmful to Original Chardon businesses, and perhaps unnecessary. In conjunction with this planning process, traffic engineers from URS Consulting conducted the most comprehensive and detailed traffic analysis yet undertaken within Chardon. The results have identified several alternative approaches which should offer even more positive results, with a considerably greater potential for implementation.

With extensive and up to date traffic counts provided by the City, and their own field observations, URS created a computer model of existing traffic conditions utilizing a computer modeling program called Synchro 5, Traffic Signal Coordination Software, Trafficware, 2001. Data was collected during the school year, and after existing road projects had been completed, including the opening of Meadowlands Drive. Traffic volumes during both AM and PM peak hours were collected for 76 different road segments within Chardon, and for all turning movements and signal timing at 20 different intersections.

The program was then used to record and analyze all of the data, and to produce a precise model of existing conditions, with the ability to test the impacts of different changes in the input

variables. It also provided a level of service (LOS) ranking (A through F) for each intersection as a whole, and for each traffic movement at those intersections. Based on the completed modeling, Chardon's roads and intersections are currently operating efficiently, with most at an acceptable LOS (A through C). A few intersections, however, operate at an overall level D, and several individual traffic movements at LOS D or lower.

Although the traffic model should continue to be utilized for further and ongoing testing of real an projected changes in the future, URS has already tested the impacts of an across-the-board traffic increase of 50% at all of the intersections. Based on the projected future growth estimates in Section I, an assumed 50% increase in traffic should be sufficiently generous to accommodate what will likely occur through build-out. The results of that testing was summarized by URS as follows:

> *Analysis from the modified traffic model indicates that in many locations traffic will continue to operate efficiently with the increased traffic. There are some intersections, however, that will experience degradation to unacceptable levels of service, that is, LOS D or lower. A check of those intersections shows that minor improvements, such as revised signal timing, changes to signal phasing, or additional turn lanes will allow the intersections to operate at a LOS C or better. There was no indication that additional through lanes are needed along any of the major roadways of Chardon with a 50% increase in overall traffic.*

It can be reasonably be expected, therefore, that together with relatively minor intersection improvements, the more substantial improvements identified and recommended below may be sufficient to reduce the existing deficiencies and maintain the City road system's integrity and adequacy well into the future, and perhaps even to full build-out. (See Map 17, Table 21, and Appendix F)

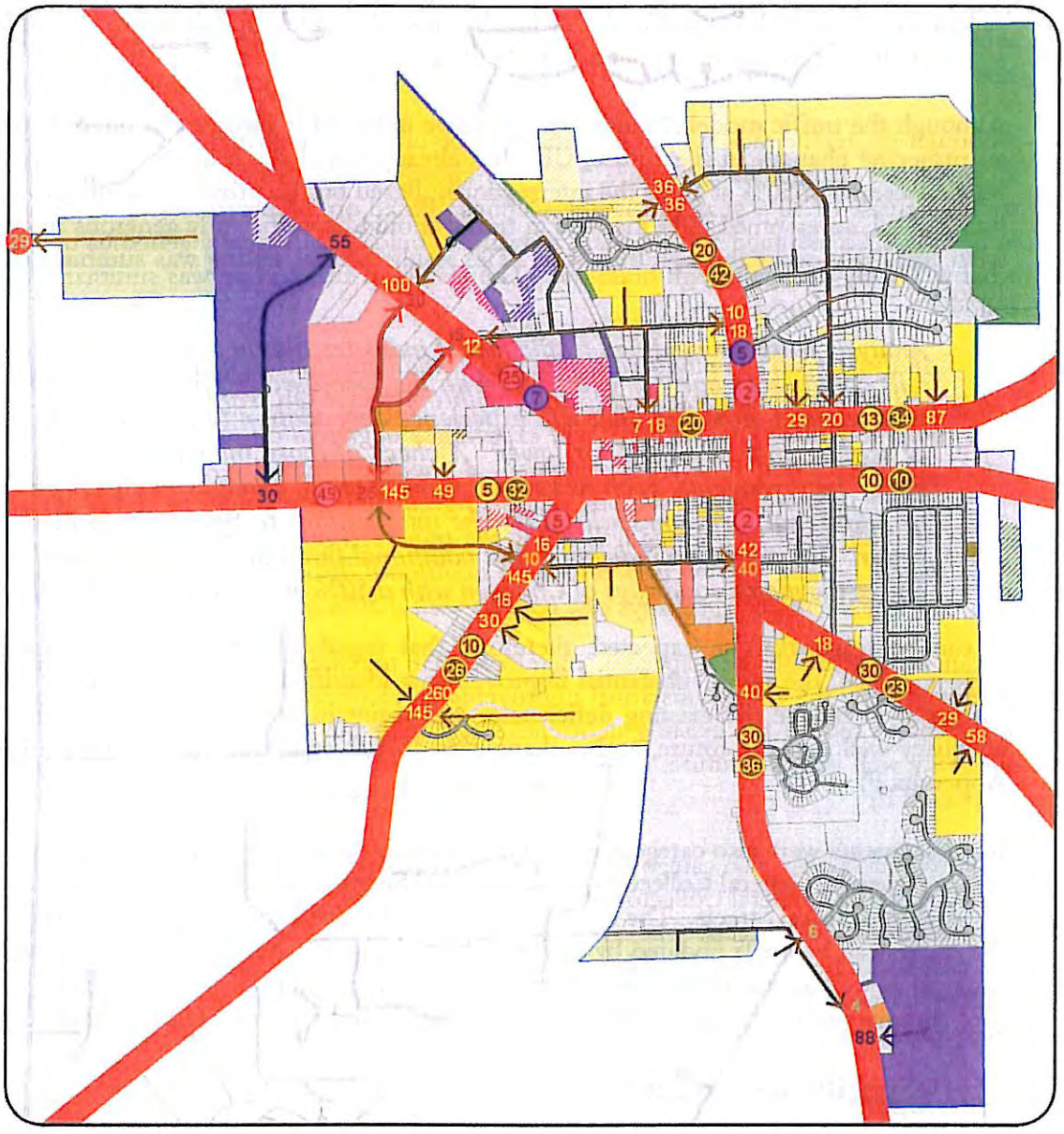
Road segments were also categorized by type of road, based on volumes and functions, including Minor Arterials, General Collectors, General Local Streets, Residential Collectors, and Residential Sub-collector Local Streets. The model was provided to the City, along with training in its use, so the results can be easily updated by staff to reflect changes in traffic volumes, patterns, and signal timings, as well as the ability to estimate the probable impacts of potential future development. (See summary of the 'Syncho/Traffic Modeling' study and report by URS in Appendix F)

Specific Recommendations

1. The most cost/efficient policies involve little more than administrative actions by the City or other levels of government:

    a. The City has already determined that a change from one-way to two-way traffic on Center/North Hambden and Water/South Hambden Streets, both north and south of Chardon Square, will likely improve traffic circulation around and through the Square area, possibly a great deal. Half of the trucks and other vehicles on each street, whose only purpose is east-west travel, will no longer be forced to circle the Square. The results should achieve far less, unnecessary, north-south traffic through the Square, less confusion and fewer conflicts with other traffic movements. (See Map 18)

MAP 17 - Future Traffic Impacts



Number of Future Dwelling Units

Area Specific

- RC Zoning
- R-1 Zoning
- R-2 Zoning
- R-3 Zoning
- PUD Zoning

Scattered Lots / Sites

- Potential
- Current Vacant & Approved

Number of Acres

Area Specific

- Commercial Zoning
- Industrial Zoning

Scattered Sites

- Commercial
- Industrial

* Background Is 'Vacant Land by Existing Zoning District' Included in Draft Comprehensive Plan with Minor Modifications Based on Recent Zoning Changes

TABLE 19 - Future Traffic Impacts

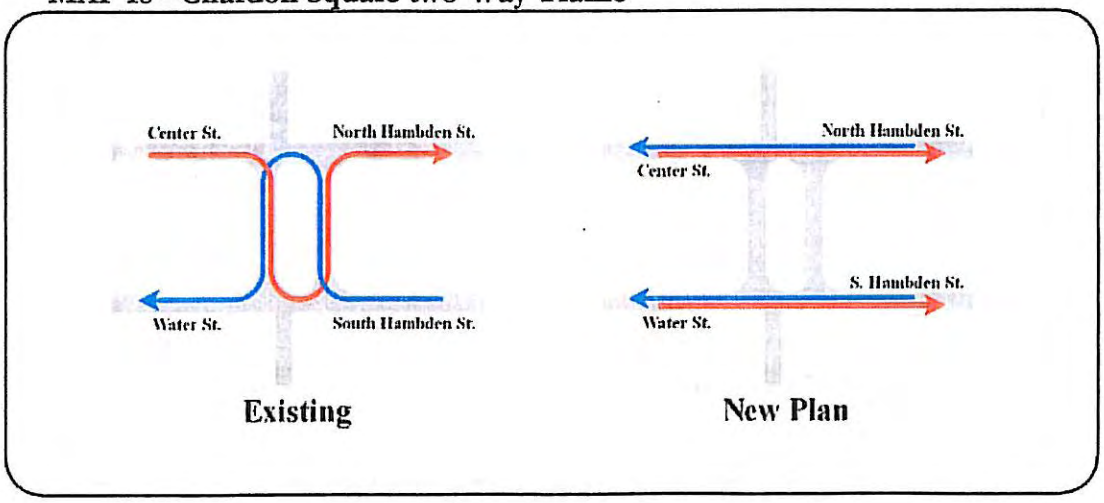
Future Traffic Distribution

Estimated Distribution of Future Traffic Generated by Projected New Dwelling Units at Buildout

Primary Street	Dwelling Units								
			R-2						
	RC	R-1	Area Specific	Misc. Scattered	R-3	PUD	Vacant & App'd	TOTALS	
North Street	0	72	10	20	18	0	42	162	9.0%
South Street	10	42	40	30	0	40	36	198	11.0%
Center Street	0	0	19	0	118	0	20	157	8.7%
Water Street	0	0	145	5	24	25	32	231	12.9%
N. Hambden Street	0	20	116	13	0	0	34	183	10.2%
Wilson Mills Road	0	32	580	10	0	10	26	658	36.6%
Claridon Road	0	0	105	30	0	0	23	158	8.8%
Auburn Road	29	0	0	0	0	0	0	29	1.6%
S. Hambden Street	0	0	0	10	0	0	10	20	1.1%
	39	166	1015	118	160	75	223	1796	100%

Primary Street	Commercial		Industrial	
	Acres	Percent	Acres	Percent
North Street	2	1.3%	5	2.7%
South Street	2	1.3%	88	47.6%
Center Street	70	45.8%	62	33.5%
Water Street	74	48.4%	30	16.2%
N. Hambden Street	0	0.0%	0	0.0%
Wilson Mills Road	5	3.3%	0	0.0%
Claridon Road	0	0.0%	0	0.0%
Auburn Road	0	0.0%	0	0.0%
S. Hambden Street	0	0.0%	0	0.0%
	153	100%	185	100%

MAP 18 - Chardon Square two-Way Traffic

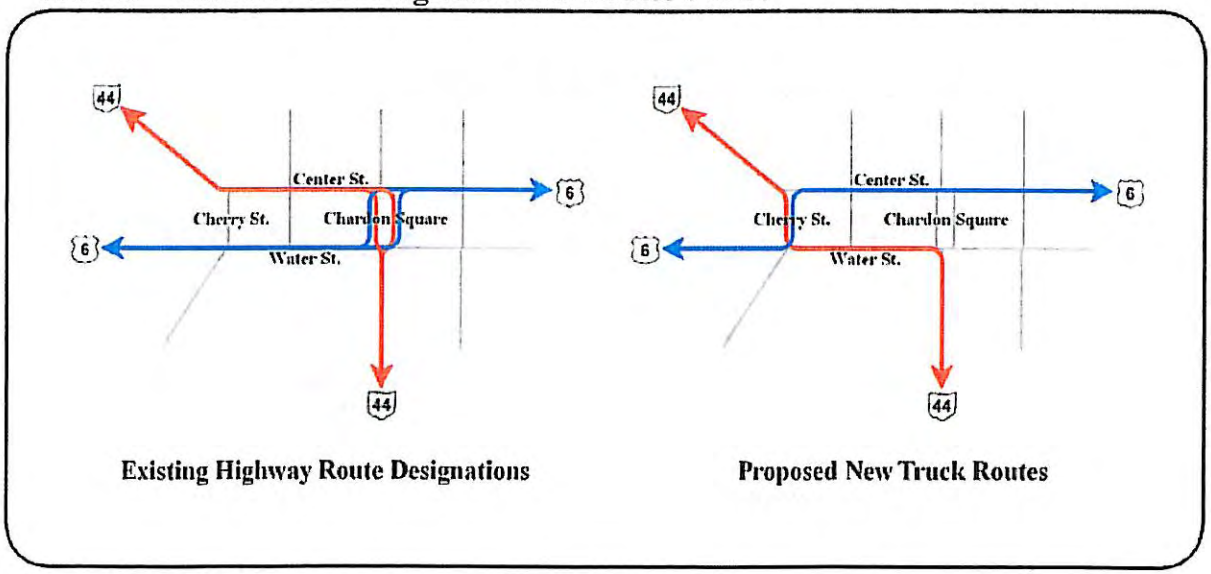


b. Despite the anticipated improvements expected from the above, the entire remaining circulation pattern around the Square, including current street striping for parking, lanes, permitted traffic movements, and possibly in some cases, with no discernible purpose, will still need to be re-evaluated. While the existing configurations have been considered numerous times in the past, additional improvements can most likely still be identified. (See Preceding Map 16, Chardon Square Pavement Areas)

c. One of the most significant improvements in city-wide traffic circulation could be the creation of new, designated "truck routes" for both U.S. Route 6 and State Route 44 which would direct most of the City's truck traffic between Center and Water Streets to use Cherry Street instead of going through Chardon Square. Other vehicles, including potential customers and visitors, would most likely continue to use the Square route. Cherry is already a heavily commercial street, more accustomed to, and more appropriate for trucks. Current volumes for turning movements through the impacted intersections appear low enough to permit most or all of the anticipated increases the changes would produce. (See Map 19)

Because Routes 6 and 44 are State highways, the City will need to work with the Ohio Department of Transportation and other government officials in order to make this happen. Eventually, some new construction may also be necessary to enlarge the intersections and/or to add lanes or lane widths. But Cherry Street is not very long, and the anticipated benefits could be substantial. Determining the extent and specifics should probably wait until there is State approval, users adapt to the changes, and new traffic counts can be entered and tested in the Synchro 5 model.

MAP 19 - Truck Route Designations for Routes 6 & 44



2. Other improvements would require construction of new roads, road extensions or new connections. Depending on length and other criteria, costs could be considerable. Some may have to be relegated to the status of long-range objectives, but all of the following have sufficient benefit potential to warrant consideration and to explore financing by private developers and/or financial assistance from outside sources. In most of the following instances, the exact routes can be adjusted to accommodate specific engineering, land acquisition or other circumstances that may be identified in the process of implementation. The Thoroughfare Plan suggests the approximate range of optional configurations that would still satisfy the particular policy objectives. (See Thoroughfare Plan Map 20)

   a. The missing road connection between the current Seventh Avenue cul-de-sac and Park Drive to the northeast should be constructed. The R.O.W. already exists, and the connection will create a much needed second means of access to the entire industrial area north of Fifth Avenue. Because Seventh Avenue is directly opposite the northern end of the new Meadowlands Drive, industrial traffic would have a major new alternative route through a major portion of the City, and every additional route alternative reduces traffic volumes on the previously available option(s).

   b. At the opposite, southern end of Meadowlands Drive, the City should follow through with previous suggestions to extend Meadowlands south across Water Street, and then continuing east to a new connection with Wilson Mills Road, directly opposite the current western end of Park Avenue. Together with the above, there would then be a direct new connection between southbound S.R. 44 and nearly all of the city's industrial and commercial traffic outside Original Chardon. While it would raise traffic volumes on Park Avenue, it should significantly decrease traffic through Chardon Square and the residential neighborhoods east of the Square. It appears to represent a trade off that is appropriate, even if it is not an entirely win-win solution.

      This is also a good candidate for developer participation, particularly if access to all of the vacant residential land south and southwest of the proposed new road is restricted by the City to that new road and Wilson Mills Road. (See Optimum Access Points from Major Roads Below)
      available option(s).

   c. If a new road connection is constructed between Park Avenue and Water Street, directly opposite the southern end of Cherry Street, another north-south travel option would be created, further diluting traffic intensities on the other route alternatives. It might also provide an alternative for the proposed new truck route between Cherry Street and S.R. 44.

   d. The current intersection of Cherry and Water Streets with Wilson Mills Road is already somewhat confusing and difficult to accommodate with traffic controls. Adding an extension of Cherry south of Water Street would add significantly to those existing problems. But that same connection to Park Avenue could provide an opportunity to relocate the northern terminus of Wilson Mills Road from its

current highly congested intersection with Water and Cherry Streets, to a new right-angled, independent intersection with that extended new road well south of Water Street.

e. The current Parker Court cul-de-sac does not provide adequate access to all of the City's industrially zoned land to the north and northwest of its current terminus. It also requires all businesses on the street to have only one means of access, which is particularly difficult and inconvenient for any employees or other traffic coming from the north via S.R. 44. It also forces whatever traffic may be coming from that direction to go through Cherry Street, and very possibly, discourages development, even along the existing road.

   If Parker Court was extended to Center Street, however, all of the above concerns could be addressed. More industrially zoned land would be available for development - possibly even more if a spur were to be created off the new road connection (e-1). There would be two ways in and out, vastly improved access from the north, and far less industrial traffic forced into Original Chardon. All of these improvements to the marketability of that vacant land might at least provide some incentive for an owner or developer to undertake development of such a new road.

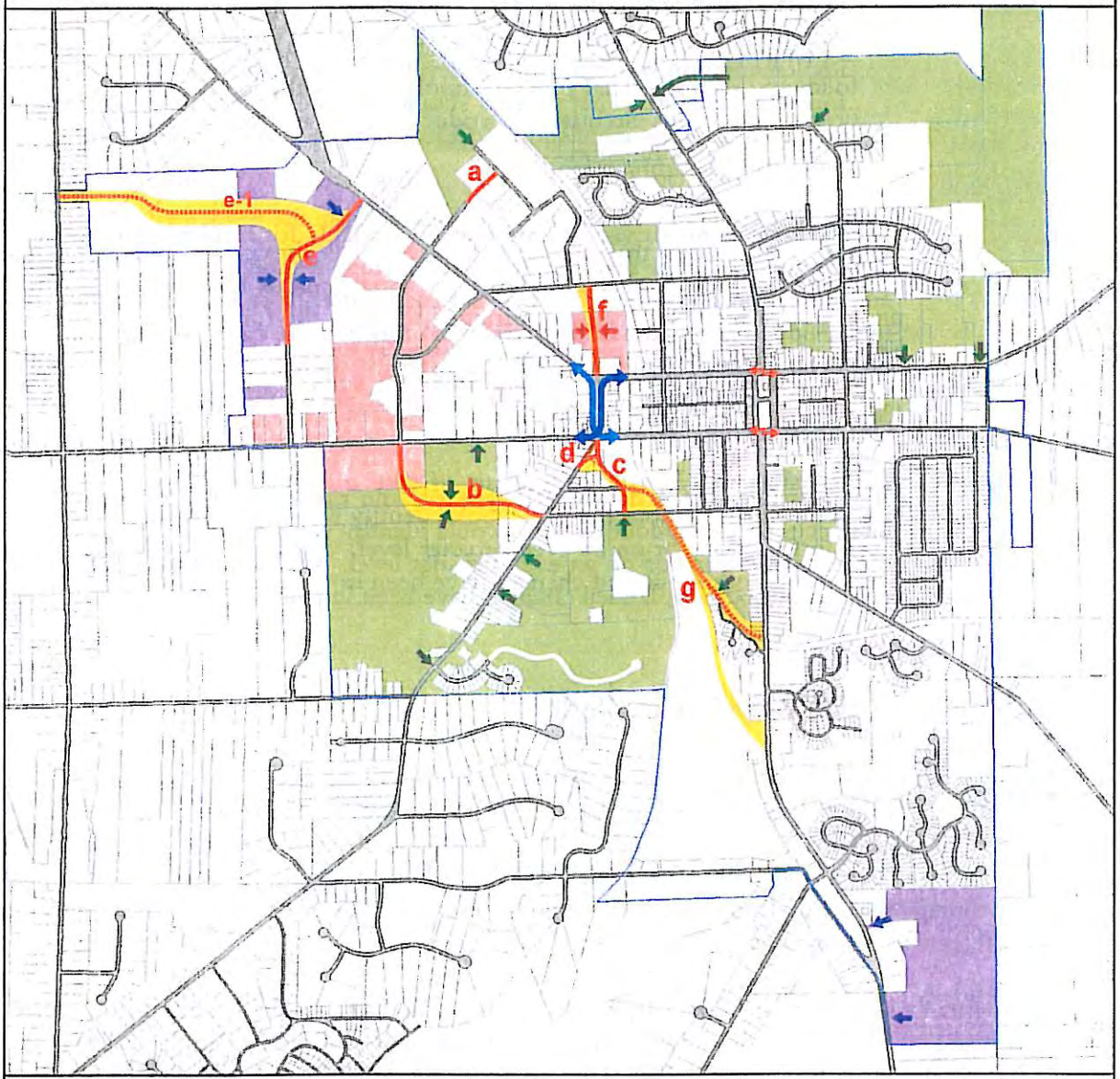
f. If Cherry Street was also extended to the north, beyond the Center Street intersection to Fifth Avenue, another route option would be available for industrial traffic from Industrial Parkway and Fifth Street itself. In particular, it has considerable potential for alleviating much of that traffic that currently runs east to North Street and south to and through Public Square. While it would be even better if the northern terminus of the extended Cherry Street could be located directly across from Industrial Parkway, that would likely be prohibited by existing development.

g. A final consideration could significantly minimize the anticipated increase in traffic volume on Park Avenue that would likely be produced by the above recommendations. If instead of terminating at Park Avenue, a new road running south from Cherry Street could continue to a connection with S.R. 44 much further to the south, it would provide a much more direct alternative to using Park Avenue.

   It could begin at the intersection of the proposed Cherry Street extension with Park Avenue, wherever that might be, and then follow the abandoned railroad R.O.W. as much as possible, until intersecting with S.R. 44. An alternative to much of that distance might be through, or at least along the eastern edge of Chardon Lakes Golf Course. Either route, however, would likely involve extensive, difficult and/or expensive land acquisition. The golf course option might elicit land owner participation because it would potentially enhance access to the property for new development opportunities. That, in turn, would mean the loss of the considerable open space currently provided by the course, and should argue against this route unless its development becomes imminent or inevitable.

MAP 20

Proposed Thoroughfare Plan



Proposed New Road Connections
a-g Comprehensive Plan Text Reference

Potential Road Connections Requiring Additional Analysis

Flexibility in Location of Connections

Vacated Roadway

Convert to Two-Way Traffic

Revised Truck Routes

Suggested Access Points for Significant Future Development

Single Family

Commercial

Industrial

Pursuing this particular road option may also conflict with what may be the most logical route for a primary pedestrian and bicycle trail; as indicated on Map 21, Conceptual Non-Vehicular Trail System. Subsequent to the completion of this Comprehensive Plan, a more detailed analysis, plan refinement and implementation strategies will be developed for such a system, as described in the following section. That process should specifically include an evaluation of how best to utilize this circulation corridor – future road, non-vehicular trail, or some multi-modal combination.

3. Several large tracts of vacant land are still available for residential, industrial or other development. Other than the new road segments shown on the Thoroughfare Plan and described above, specific internal road patterns or locations within those large undeveloped areas should be determined through the future approval process. It is, however, appropriate to anticipate and suggest preferred access points to those areas from adjacent main arteries. Where there are such preferences, they have also been identified on the Thoroughfare Plan.

4. It is possible that a detailed analysis of lane markings and turning movements at intersections throughout the City would identify ways to improve circulation through those intersections or on an even broader level. Such an effort, however, should be delayed until other planned changes have been in place long enough for their impacts to be included.

Pedestrian and Bicycle Circulation

There are two, more or less different, aspects to both walking and cycling. In one sense they can both be considered alternatives to the automobile as modes of "transportation." Or they can serve as recreational activities. While the two are frequently combined for individual participants, and there is considerable functional overlap, there remains a public policy distinction. Encouraging and assisting pedestrian and bicycle circulation serves a public purpose that is different from providing additional recreational opportunities.

Potentially significant benefits can be gained by giving both residents and visitors attractive and convenient alternatives to driving from one location to another. People walking or riding a bicycle do not contribute to traffic volumes or road congestion or require a place to park. They are far more likely to window shop, stop for a cup of coffee, enter an interesting store or otherwise contribute to the economic health of multiple businesses along their original route. Their presence suggests interest, activity and vitality, rather than noise, smells and annoyance.

People understand the problems and annoyances, but there are still logical reasons for an individual to prefer driving, and most are so ingrained in peoples minds it is difficult for them to recognize what may be equally compelling reasons for the alternatives. The real key is to identify ways to make walking or biking, around or to Chardon Square and other Original Chardon locations, a more desirable prospect than driving. To do so requires: making the alternatives *more* convenient; adding attractive paving, landscaping, or other amenities along the way; and finding ways to bring it all to people's attention.

For longer distances, the overlap with recreational objectives is much greater. A common goal for non-wilderness hiking and biking trails is to connect specific popular destinations, which serves equally well for trails intended as transportation alternatives. These more clearly dual-purpose trails are therefore addressed in the following section.

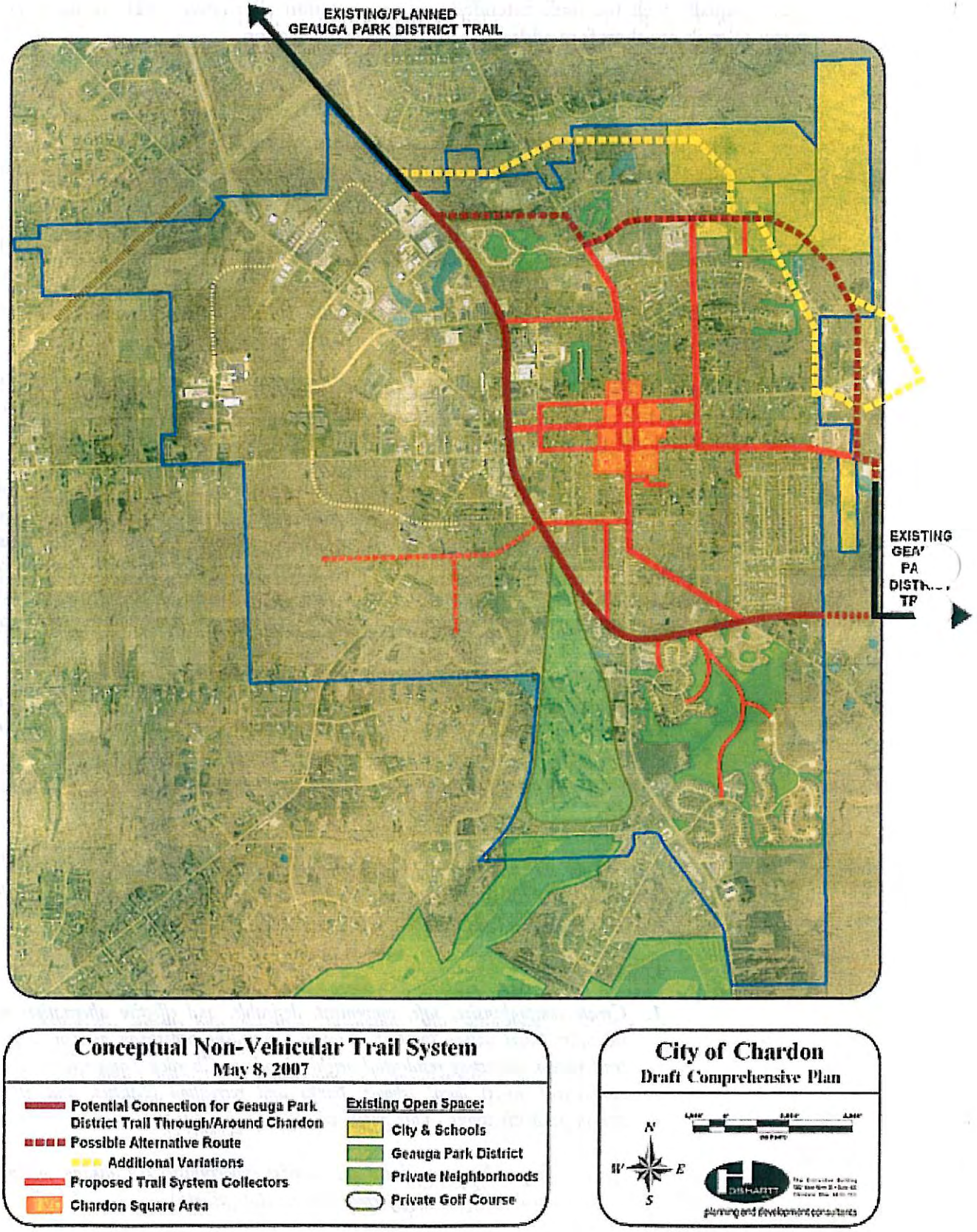
Specific Recommendations

The higher residential and business densities within Original Chardon provide the best opportunity as well as the most need for getting people out of their cars. The existing streets already offer safe, convenient and often attractive public sidewalks, and their maintenance should be a high priority. There are, or could be, other locations for walkways that directly and conveniently connect residential and business neighborhoods. Bike lanes, on or off the streets, can also be provided in many instances, and public areas can be made more accommodating for bike riders with convenient bike racks and methods to minimize conflicts with pedestrians.

The first effort to draft a conceptual plan for providing a comprehensive trail system was initiated during the draft phases of the comprehensive planning process. (See Map 21) Subsequently, interest continued to grow among City officials to further refine the initial trail plan, and to move forward with efforts toward its implementation concurrently with finalization of the overall Comprehensive Plan. It was soon determined that development of a detailed, non-vehicular trail plan would be beyond the scope of the Comprehensive Plan work program. The City, therefore, applied for a "Transportation for Livable Communities Initiative" (TLCI) grant to fund a separate study to develop a detailed plan that was sufficient to enable implementation. The following statement of the purpose and goals for the proposed study is taken from the ensuing grant application:

> *The purpose of the planning project is to provide a plan that identifies where multi-modal pathways, bike path gap closure and sidewalk improvements are needed in the City. The plan will test the feasibility and refine connections of various non-vehicular paths throughout the City. Expected outcomes are for the identified projects to be prioritized and for construction cost estimates to be provided for the highest priority projects.*
>
> *The need for this project is a direct outgrowth of the needs identified in the Draft Comprehensive Plan for the City of Chardon – (funded through a TLCI grant in 2005). The proposed goals in the Draft Comprehensive Plan state:*
>
> *Proposed Goals*
>
> 1. *Create comprehensive, safe, convenient, desirable, and effective alternatives to vehicular travel within the City through a web-like pedestrian and/or bicycle trail system connecting residential neighborhoods to Chardon Square (and other commercial areas), local schools, parks and recreation facilities, and other significant destinations. This system will offer the benefits of:*
>
>   a) *Expanding recreational and exercise opportunities (i.e. hiking, jogging, cross-country skiing, formal exercise stations, etc.)*

MAP 21 - Conceptual Non-Vehicular Trail System



b) *Reducing traffic congestion, associated nuisances and parking needs within public areas, and reducing vehicular traffic within residential neighborhoods.*

c) *Placing more people on the street (sidewalk, trail) within public areas, thereby increasing general activity, interest, vitality, and the potential for business patronage.*

d) *Increasing public open space, even though pedestrian and bicycle trails may be narrow and linear in nature.*

2. *Provide residents with superior parks, open space, and recreational opportunities, both quantitatively and qualitatively, and with optimal accessibility.*

3. *Provide all residents with new and well-maintained public sidewalks.*

Presently, a comprehensive non-vehicular plan to provide connectivity from neighborhoods, shopping centers, Chardon Square, the schools and the Maple Highlands Trail does not exist. The Bicycle & Pedestrian plan will provide a bike path gap closure by determining a connection between the current north and south ends of the Geauga Park District's countywide Maple Highlands Trail in the City.

In the City, bicyclists share the City roads, as if they were another vehicle. The plan will identify where an alternate bike path / trail system could be constructed. Additionally, it will identify and provide a plan for implementation of bike paths, bike lanes and share the road locations.

The plan will analyze the existing sidewalk system to identify deficiencies and gap-closure needs. An expected outcome is for prioritized sidewalk projects to be recommended with a timeline for implementation.

Parks and Recreation

There is no magic formula for recreational facilities that is appropriate and adequate for every community. Though extensive research has been undertaken that sets national standards and preferences, these guidelines cannot apply equally to the enormous range of wants, needs, and unique circumstances found across the Country. Each community must seek its unique approach to this quality of life issue.

Chardon will need to determine answers to several questions in order to wisely provide parks and recreation to its residents and service area. What do residents need? What do they want? What is adequate for our community? What is the City's responsibility to provide parks and other facilities and how should these be distributed throughout the City? After extensive conversations with the current City leadership and community residents, it is obvious that answers to these questions are important to the community.

According to the most reliable national guidelines, 58 acres of city park land would be required to adequately serve the estimated ultimate population of approximately 9,000 residents. Currently the City owns 14 acres of recreational land including the Chardon Square "commons" and Mel Harder Park. This is a sizable increase that must be weighed against other City priorities. Existing facilities at Mel Harder Park include ball diamonds, a playground, gazebo, picnic tables, and grills. In the northwest sector, the City owns and operates a swimming pool, skateboard park, volleyball courts, and a sledding hill that includes the Chalet, a building available for private reservations.

Chardon is also fortunate to have access to additional ball fields, tennis courts, and other facilities located on both institutional and School Board properties. While there is currently no reason to suspect those arrangements will ever change, it would be prudent to examine their potential permanence, and develop contingency plans for replacing lost facilities if necessary.

The City's Park & Recreation Board provides oversight and recommendations for facilities, programming and goals, in collaboration with the City's Recreational Director and under the auspices of City Council. In its advisory role, it may prioritize and identify community recreational needs and propose expansion of opportunities as is appropriate to financial restraints and land limitations.

Significant parkland and open space in the greater Chardon area enhances City-controlled parks and recreation areas. Though these do not necessarily replace what the community can provide to its residents, these resources do add to the quality of life in the City. Public comment reveals that some residents feel their own yards serve as personal parkland. While this circumstance helps some, many still need to have adequate facilities made available to them beyond their own property. Efforts to connect with these externally controlled resources could leverage how the City provides adequate park and recreation opportunities for its people.

Specific Recommendations

Development of a comprehensive plan for recreational facilities, parks, and general open space will be critical for wise planning to meet the needs of the community. Chardon Park and Recreation Board can play a role in this prioritization process including a review of its current list of goals.

Land acquisition for recreational purposes will need to be prioritized for expansion of services and/or facilities. Current parkland cannot support such expansion beyond very limited activities and, as is true in any growing community, land must be set aside while it is still available. This may be one of the most urgent considerations in the face of the current pattern of land development.

Examination of the inherent risks of relying on non-City owned recreational facilities must be considered and adequate contingency plans should be developed where access could be lost. Examination of opportunities for partnerships with other entities to collaborate with programs or linkages may assist the City in determining the investments it needs to address within the community.

Open Space

Open space issues are similar, but not necessarily the same as those related to city park land. All park land is open space, but not all open space is parkland. As noted previously, residents at the public forums expressed little or no concern over the size or number of City parks. Attitudes toward open space would at first appear to be much the same, but there are differences if "parks" and "open space" are defined as separate issues. Chardon residents do appreciate "open space," even perhaps, when they don't realize it.

The community would like additional ball fields and similar facilities, which represent open space, even if not in its natural state. The City supports existing and expanded pedestrian trails, and while linear in nature, such trails also represent open space. The City created a Planned Unit Development district to promote clustering as a way to preserve open space within subdivisions, and many of the most recent housing developments reflect its success. Residents value the rural nature of the surrounding townships and see it as a major part of Chardon's character as a small town. They appreciate the golf course, as well as the nearby County and State parks as open space providers. And the community particularly enjoys and identifies with the open space that defines Chardon Square.

There are many other very significant reasons, both objective and subjective, to preserve and promote open space in all its forms. Perhaps the most personally and genetically fundamental is simply that people "like it." It just "feels good," even if you don't know why, or don't realize it's having that effect. In Chardon the proximity of natural, man made, and agricultural open space are all part of the City's history, and a significant "quality of life" issue for those who choose to live here.

For the most part, once open space is gone, it isn't coming back. Only rarely can a piece of the man-made environment be removed and the land's natural condition restored. This concept does not need to be philosophical or political dogma, but it does need to be a reminder that decisions regarding open space have consequences, and they are most often permanent. In Chardon, residents must decide if they want their legacy to include the same kind of environment they inherited. Either way, it should be a conscious decision.

There are also far more pragmatic reasons to preserve open space. Perhaps the most important is managing storm water runoff. Quite simply, natural ground absorbs and dissipates rain water, while pavement and rooftops do not. Adding to the area of impervious surfaces adds to the City's need to provide sewers and drainage projects. Storm sewers tend to be designed for 50 or 100 year storms that seem to occur every six months in this region. The right open space in the right place could prevent flooding. Replacing open space with a new structure, regardless of its specific use, will also increase the need for sanitary sewers and waste water treatment capacity. Fees paid by the new users may cover much of these addition costs, but very rarely all of them. Treatment plant capacity is limited by the ability of available water courses to accept the outflow, and the costs can seldom be covered by what the users can or should have to pay. Where relevant, open space can also help to protect well water and the proper functioning of septic systems.

Specific Recommendations

Chardon should continue to enable and promote clustering in return for permanently preserved open space in future housing developments. Recently approved projects have shown that as long as net density limits are maintained, the benefits are significant and there are few if any negative impacts. The City must also try to avoid the loss of vacant land that does not have to be developed for economic, legal or other reasons. The economic justification for existing private open space uses should be protected to the extent possible and legitimate for City government. Chardon should discourage the redevelopment of such land for non-open space purposes through zoning restrictions or any other reasonable means at its disposal.

City officials have already expressed a desire to consolidate its facilities wherever feasible for purposes of functional efficiency and reduced expenses. If also done in the most land-efficient ways, it might be possible to convert some of the resulting unused land into open space. And while the City does not anticipate acquiring land for the sole purpose of preserving open space, opportunities that present themselves should not be overlooked if there is a clear expectation that the benefits would exceed the cost. Such instances can occur, and particularly in a "small town," they can often be identified and pursued. Once vacant land is under City ownership, officials can decide what they choose to do with it: create public parks; preserve as permanently protected natural open space; or simply put off a decision by creating a land bank for future needs that are not yet undetermined.

It is also in the City's best interests to consider land acquisition where it would facilitate its ability to provide the desired pedestrian and bicycle trails and connections between Original Chardon locations. Landscaping and other amenities along trails and paths which run through dedicated and publicly owned open space could greatly enhance the experience and its appeal; and perhaps make it a preferred alternative to the time, annoyances, and costs of driving.

Community Image and Economic Development

Public perceptions are not often a topic for land use planning studies, except where they impact on economic development concerns. Chardon is one of many cities that decided over the last several decades to pursue the financial rewards of an industrial tax base, and zoned large tracts of vacant land accordingly. Only some of those communities recognized the potential benefits of including public awareness and marketing as part of their efforts to promote themselves as an attractive industrial location. More often than not, it helped when they did so, sometimes significantly.

A few older communities with little or no vacant land available for industrial development, did have a significant commercial base and some of those also achieved a measure of success by promoting themselves in those terms. Still others have both industrial and commercial development and the potential for continued growth in both. Often, however, the desire to achieve successful industrial development has limited promotional efforts to that task only, overlooking the possible benefits of actively marketing the commercial side. Chardon has one of the best track records for successfully promoting both, but it also has a particularly critical stake in maintaining or improving that level of success.

Maintaining and improving the economic and cultural health and vitality of Chardon Square is particularly essential, and self-promotion needs to play a major role. This is not a totally new idea. Community efforts in this regard have been ongoing for a long time. But one of the most intense and wide-spread concerns expressed at the public forums related to the need for, and the importance of, increasing those efforts. City officials and other residents have already put a great deal of thought into the subject, and have offered numerous suggestions, some of which were mentioned repeatedly. A full record of citizen input at the public forums is provided in Appendix E. Comments relevant to this particular topic are summarized below, along with a few additional thoughts.

Specific Recommendations

A specific marketing plan should be developed for preserving and enhancing Chardon's image as one of the few remaining, real "small towns" in the region; an attractive and inviting place to shop; and an entertaining and enjoyable destination for visitors. The plan, and everything else that is publicly associated with the City, should be predicated on two very consistent, always apparent and unwavering attitudes: Chardon is truly a wonderful place; and the realities can still become even closer to the ideal public perception. Neither would be intended for public expression: the first would sound too much like hyperbole; and it would be counter-productive to share the second with the intended target market. They should instead be the community's common public persona and the motivation for public policy.

Such a marketing plan should aggressively promote the City's attractions and appeal through planned public relations, media exposure, literature, slogan, logo or any other outreach effort that can be identified. It should begin and end with Chardon as "Small Town, U.S.A.," and maximize the number and type of scheduled events and activities which reflect and reinforce that image and appeal. A primary focus should advertise Chardon's central location and proximity to so many State and County parks, other popular attractions, and even private recreational activities. That and/or other concepts might also help broaden the City's appeal to more demographic groups. Expanding publicity for the attractions beyond the local region could stimulate a need for the development of expanded overnight lodging opportunities within the City.

Inherent portions of the plan should include or reflect previously proposed policies. A trail system that interconnects City locations while also connecting them to attractions outside the City should be a strong marketing opportunity. Protecting and improving Chardon's historic and aesthetic appeal will also help. To that end, consideration should be given to increasing efforts to maintain and expand the City's "forest canopy," reinforce current design standards for Original Chardon target areas, and aggressively provide or promote landscaping, streetscaping, property enhancement (awards?), and the maintenance of private properties, roadsides, and public land and facilities.

IV. PLAN IMPLEMENTATION

A comprehensive land use plan is of little value without a clear strategy for its implementation. This Chapter identifies specific actions the community can take to achieve its goals and implement the policies established in Chapter III. These proposed actions consist of zoning amendments (both text and map) and administrative measures. Often zoning text and map amendments are presented separately, but in Chardon the two are particularly interdependent and are therefore discussed together below.

A. PROPOSED ZONING AMENDMENTS

Zoning is by far the most important and predominant tool for implementing land use and related policies. In Chardon, the following proposed amendments are essential to that process. The City's circumstances and needs are unique and require zoning specifically tailored to those characteristics. The different characters defined by Original Chardon and the rest of the City necessitate a broader range of zoning options, particularly for the sometimes subtle distinctions between different retail areas, as well as certain residential areas. As a result, the suggested overall zoning strategy includes more district classifications than might normally be expected, requiring both new districts and modifications to some already in place. This section summarizes proposed zoning amendments for both the suggested new districts and for amendments to existing districts. Detailed amendments are currently being developed as part of a complete Zoning Code Update. Table 22 summarizes the proposed zoning district changes as discussed below, and as currently proposed in the Draft Zoning Code Update.

Commercial Use Districts

The primary purpose of the suggested commercial changes is to create distinct markets for each of the five districts proposed - or six if the industrial district is considered. To succeed, retailers on Chardon Square or elsewhere within Original Chardon cannot be forced to compete directly with larger, newer commercial areas in other parts of the City. At the same time, if the City reduces the options available in those other commercial areas to avoid such competition, it is necessary to add new options where possible to help maintain *their* marketability. To carry the concept further, the marketability of both commercial and industrial land outside original Chardon would benefit from greater flexibility and sharing of permitted uses.

The end result is a coordinated hierarchy of retail, commercial and industrial zoning districts, with Chardon Square representing the highest degree of mixed use, specialty retail and design constraints, and the general commercial and industrial areas outside Original Chardon offering a location for uses which are least appropriate closer to the Square. In general, all retail districts located within Original Chardon should be "mixed use" districts, permitting both residential and office uses in addition to retail and quasi-retail. Given the City's significant goal of maximizing the amount and economic viability of commercial businesses within Original Chardon, it follows that the more residents living in immediate proximity to those businesses, the better the chances

to meet that goal. Flexibility in use options will also help facilitate reinvestment and new development in the area, another significant goal of the City.

TABLE 20 - Recommended Zoning District Changes

Existing Zoning Districts		Proposed Zoning Districts	
RC	Rural Conservation	RC	Rural Conservation District
R-1	Single-Family Residence	R-1	Single-Family Residence
R-2	Low Density Residence	R-2	Low Density Residence
R-3	Medium Density Residence	R-3	Medium Density Residence
R-3L[1]	Medium Density Residence	R-4	Multi-Family Residence District[5]
R-4	High Density Residence	PRD	Planned Residential District[6]
PUD	Planned Unit Development	R/LC	Residence/Limited Commercial[7]
C-1	Restricted Business	C-1	Restricted Business
C-2	Traditional Classic Commercial	C-2	Chardon Square Mixed Use[8]
C-3[2]	General Commercial	C-3	Traditional Classic Commercial[9]
I	Industrial District	C-4	General Commercial[10]
I-2	Industrial Essential Services[3]	I	Industrial District
S	Special District	S	Special District
	WTTO [4]		

NOTES:

1. An R-3L, Medium Density Limited Residence District remains only on the Zoning Map
2. A C-4 Commercial District is referenced in places but became the new C-3 district when the previous C-3 ordinance was repealed
3. Eliminate as redundant
4. An overlay district exists to regulate telecommunication towers (WTTO)
5. Reserved for multi-family housing only
6. Reserved for residential purposes only
7. New district for primary roads leading into square area
8. To accommodate the unique and critical mixed use needs of Chardon Square.
9. Revised to encompass remainder of Original Chardon
10. Revised to provide additional but different development options outside Original Chardon

1. New Chardon Square Mixed Use District (C-2)

Create a new district intended solely for properties fronting on the four streets surrounding the Square, and certain adjacent properties necessary to support desired development and redevelopment within the new district (See Policy Area 1). The permitted uses and development standards for this new, mixed use district are intended to preserve and enhance the unique form and character of the Square, as well as its historic, cultural and economic significance to the community.

a. Permitted uses should include a mix of residential, retail, and office uses which will directly support and promote the existing character and economic viability of

the Square, and exclude or limit those uses which can and should be located elsewhere within the City.

- Permit a residential option for second and third floors, and perhaps for the first floor of buildings or spaces that do not front directly on the Square. Strongly encourage (but not require) that first floor space directly on the Square be limited to retail and related uses, including restaurants and personal services.

- Prohibit many of the conditional uses which currently may be approved on the Square, but that would preferably or more appropriately be located elsewhere in the city, including funeral homes, residential group homes, and veterinarians.

- Permit additional uses with conditions that would make them acceptable, including townhouses not fronting on the square, day care which doesn't require drop-off on the Square, a hotel on upper floors or around the corner (i.e. New Orleans' French Quarter), and outdoor dining or other spaces designed to enhance Square policies.

b. Development standards must focus on protecting and reinforcing the existing size, form and massing of buildings and spaces around the Square.

- Establish a maximum front setback at the right-of-way line, with exceptions available for outdoor seating, plazas or other controlled and approved open space needs that generate activity, but do not are not contradict the desired spatial relationships.

- Require maximum side setbacks at the side property lines, with exceptions where required for fire safety and planned and approved access or open space needs.

- Do not require a minimum lot size or maximum building coverage, but require site plan approval dependent on fire safety, appropriate access, and a parking plan consistent with a recommended City plan for parking on Chardon Square.

- Require buildings that front directly on the Square to have at least two stories, permit a maximum of three stories, and allow exceptions up to four stories for plans approved as compatible with the desired spatial relationships and economic policies for the Square.

- Include architectural design standards similar to, or even stronger than, those existing for the current C-2 District.

- Adjust minimum parking requirements to reflect the more realistic needs for Chardon Square identified in Appendix D and discussed in Chapter III, Section B, under Policy Area 1.

- Require adherence to an application and review process for exterior building and/or site plan changes that includes architectural review and approval by the Planning, but only within the limits of what can be required without discouraging reinvestment.

2. Revised Traditional Classic Commercial District (C-3)

Revise the existing regulations to incorporate the specific commercial needs which do not require the same level of specificity in terms of permitted uses and design standards as the Chardon Square, nor the limited commercial alternatives acceptable for the Policy Areas fronting certain major streets, but which still require more use, size and character limitations than the current C-3 District, and excluding those more appropriate and acceptable outside Original Chardon (Policy Area 2).

a. Permitted uses should include a mix of residential, retail, and office uses, with different forms and characteristics than other Original Chardon mixed use districts, but still appropriate to a small 'downtown' area, and still sufficient to stimulate redevelopment of underutilized areas within the district.

   - Permit residential options that will add to the retail market for Original Chardon businesses, supplementing, but to the extent possible, not directly competing with residential options permitted within the other districts.

   - Permit, to the extent possible, retail form and scale which are more intense than those in the other Original Chardon districts, but not as intense as those permitted outside Original Chardon.

   - Prohibit non-retail commercial uses that do not promote the City's policies for Original Chardon, but would add to the marketability of commercial properties outside the area.

   - Prohibit outdoor storage and other property uses incompatible with the preferred pedestrian and other 'downtown' characteristics.

b. Establish development standards less stringent than those proposed for the Chardon Square and Washington Streets Policy Areas, but still reflecting and enforcing a small 'downtown' character, and distinct from the proposed modifications to C-3 regulations outside Original Chardon.

   - Permit front yard parking, but with greater setbacks and stronger screening requirements.

- Provide incentives to share driveways to and from major streets (and possibly parking areas) with adjacent properties.

- Do not require a minimum lot size, but control overbuilding with minimum setbacks and other constraints.

- Consider reducing the minimum parking space requirements to reflect a small "downtown' environment.

- Require compliance with a minimum level of architectural standards to reflect Original Chardon's history, without the need to replicate styles and forms more essential to other Original Chardon districts.

c. Establish minimum guidelines within the code for Site Plan Approval by the Planning Commission and possibly design/architectural review and approval by a separate review board.

3. New Residential/Limited Commercial District (R/LC)

Create a new, modified residential district along street frontages for particular portions of certain major streets within Original Chardon, more consistent with the original purposes of the C-1 Restricted Business District. While the C-1 District as currently defined must be maintained along Water Street west of Original Chardon, the proposed new district should be applied only within the City's core area, where high traffic volumes have or will have negative impacts on the maintenance and marketability of residential properties (Policy Areas 3).

a. Permitted uses should forcefully continue residential as the primary and preferred permitted use, but with carefully selected (likely conditional), semi-residential and non-residential options which can retain most or all of an existing residential structure, maintain the residential appearance and character of the street and neighborhood, and at the same time, help promote marketing options and economic incentives for property maintenance and re-investment.

   - Consider naming the district to reflect a residential district with certain non-residential exceptions.

   - Probable and possible use exceptions to residential include bread and breakfasts, funeral homes, professional offices totally within converted residences, and even certain small retail businesses that can comply with all of the district's development standards, particularly those relating to building design, parking and general neighborhood character.

b. Development standards should emphasize maintenance of a "converted house" character, with regulations that insure a view from the street as close as possible to that of a residence.

- Prohibit non-residential front yard parking, and to the extent reasonable, no side yard parking visible from the street.

- Restrict any building additions to the rear, or in the alternative, duplicating the current dwellings front setback and architecture if permitted on a side.

- Consider permitting adjacent residential structures to be connected to create a larger building footprint if done in a way that maintains the required residential appearance and scale.

c. Establish minimum guidelines for Site Plan Approval by the Planning Commission and possibly design/architectural approval or recommendation by a separate review board.

4. Revised Planned Residential Development District (PRD)

Modify and rename the current PUD regulations to make it a viable alternative where current zoning permits the assembly of unused or under-utilized portions of adjacent properties for re-subdivision and single-family development, but does not provide sufficient means or incentives to achieve optimal planning efforts or the required sensitivity to surrounding neighborhoods. Conceptually, the revised district would provide a zoning option for those seeking development of such assembled and/or re-subdivided land which would offer flexibility in development standards in return for greater City control of the planning process and protection of adjacent property owners.

At the same time, there would be no change in the underlying district's maximum permitted density, nor in the restriction to only single-family dwellings. In addition to protecting the City and neighborhoods from the potentially undesirable consequences of the minimally controlled land assembly and development permitted by existing zoning, such a district could also serve to promote other public policies for Original Chardon.

a. Permitted residential uses should remain the same as those permitted by the underlying zoning, with legislative assurances that development will meet the district's purpose of neighborhood compatibility.

b. Development standards should be established that optimize the protection of surrounding neighborhood(s) from unintended and/or unacceptable plans or plan elements, by controlling density, arrangement of units, and access through existing neighborhoods, with some level of flexibility to complement the specific adjacent neighborhood characteristics.

- Permit no greater net density than underlying zoning.

- Require a minimum project site area.

- Assure at least two means of access and egress that do not adversely impact neighbors.

- Require adequate setbacks and screening where necessary.

c. Application of this district designation would have to be requested through a detailed application, limited to specifically designated areas, and with a clearly defined approval process including compliance with strict standards of evaluation.

d. Establish minimum guidelines within the code for both rezoning to the overlay district and site plan approval by the Planning Commission and possibly design/architectural approval or recommendation by a separate review board.

5. Revised General Commercial District (C-4)

Amend and rename the current C-3 District to only include commercial areas outside of Original Chardon, and accordingly, less restrictive in terms of use and design, and to the maximum extent possible, with clearly distinguishable uses and requirements that reduce or eliminate direct competition with Original Chardon businesses.

a. Permitted uses should de-emphasize, or alternately and to the extent possible, prohibit small scale retail businesses, while striving to maintain marketability with expanded commercial uses not in direct competition with Original Chardon areas, and permitting wholesaling, warehousing, and other borderline commercial uses more typically reserved for industrial districts.

- Restrict or limit to the extent possible, through controls on form and character, district retail to large-scale uses like building material sales, discount stores, and warehouse stores.

- Continue to prohibit outdoor storage, or alternatively, provide strict controls to minimize or eliminate the possible adverse impacts of such undesirable uses.

- Consider other code amendments that would permit existing businesses no longer listed as permitted uses, or simply allow those businesses to continue as non-conforming uses.

- Consider allowing parks, agriculture, cemeteries, nurseries or other typically open space uses. If a property owner is willing to use C-3/4 land for those purposes, why not? It would be just that much less land generating high traffic volumes, retail competition for Original Chardon, or other less than desirable alternatives.

- Allow drive-through services not appropriate elsewhere.

b. For the most part, current C-3 development standards can continue, with only minor changes to minimize any negative impacts from new permitted uses, and to help promote the large-scale form and character of desired uses.

- Consider increasing the minimum lot size and the minimum lot width.
- Establish minimum front, side and rear parking setbacks with landscaping and screening requirements specific to the adjacent uses and site location.

Other Use Districts

1. Apply the R-3 district zoning to more of the smaller developed lots within Original Chardon neighborhoods that approximate the size within the single-family allotment currently zoned R-4, which should help to address the existing setbacks and other characteristics of such lots through reduced requirements that more nearly match those existing conditions. Alternatively, create language that provides exemptions for existing properties that predate existing requirements that cannot be met, with the purpose of reducing or eliminating non-conforming conditions and making maintenance and reinvestment a more viable economic option for property owners.

2. Amend the current Industrial District to include more quasi-industrial, and/or related uses, in order to broaden the marketability options for land owners. Consideration must still be given to determining which use options will help property owners market their land without adversely affecting the revenues provided for the city and schools, and/or or negatively impacting the desirability of surrounding sites for more beneficial users.

3. At the same time, unless there remains some particular reason for the I-2 Industrial District, consideration should be given to removing it from the code. The permitted uses are hardly different from the I Industrial District, and the development standards are identical.

Zoning Map Amendments

The proposed new Zoning Map on the following page incorporates recommended amendments to the current map. Specific *changes* are geographically defined and summarized within the full Zoning Code Update. (See Map 22)

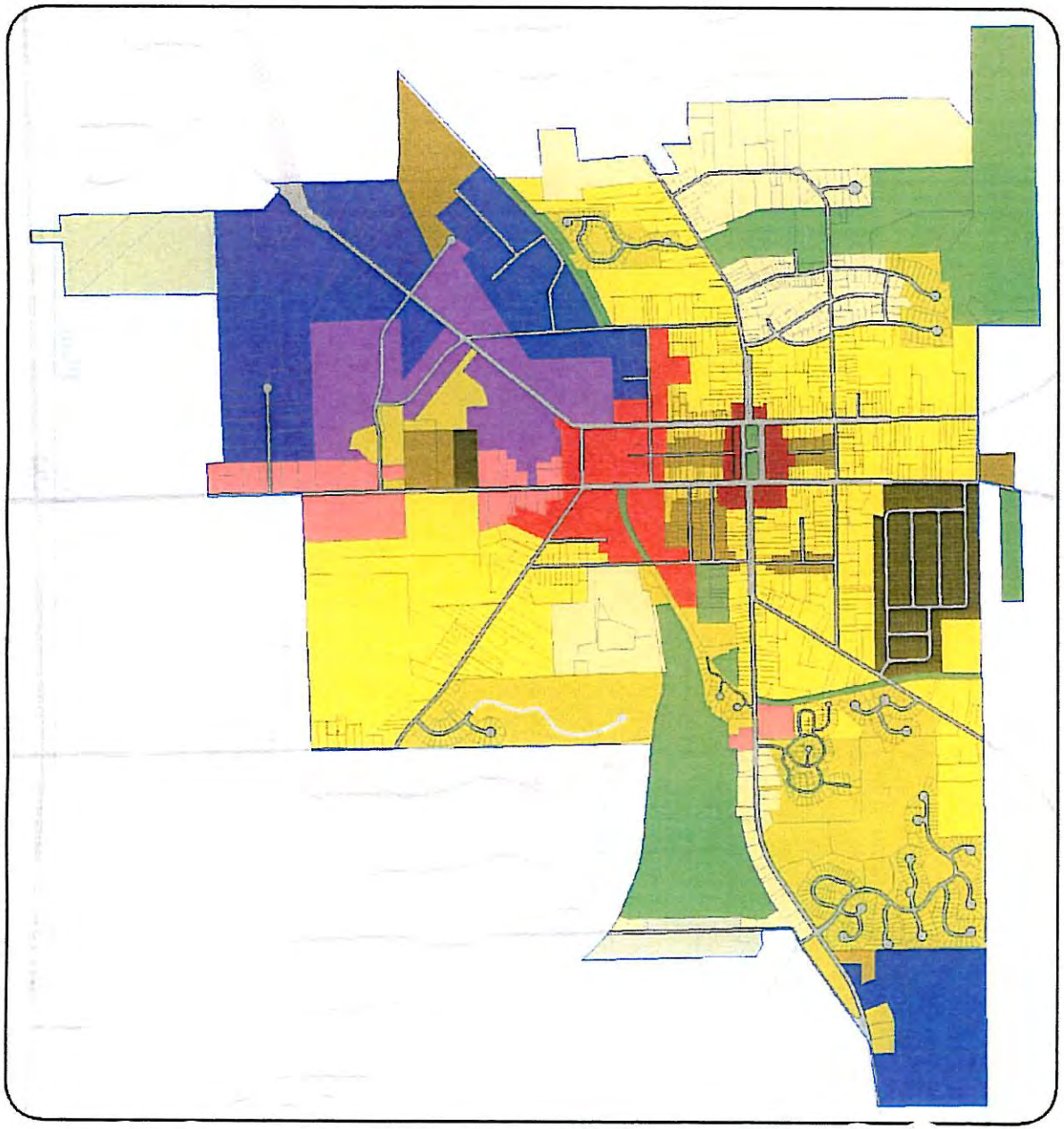
Administrative Zoning Procedures

The following represent particularly significant considerations for procedural and jurisdictional modifications to the current administration of the City's Zoning Code. Specific *changes* in these and other procedural matters are defined and recommended for adoption in the proposed Zoning Code Update.

1. **Development Plan Review:**

a. Clearly state the procedures for Planning Commission review of development plans. Apply the process to all "non-single family" developments – either new developments or site renovations (above a certain size threshold.).

b. Clearly establish the Zoning Administrator's authority to reject incomplete applications.



Map 22 — **Proposed Zoning**

Key:

S	Special
RC	Rural Conservation
R-1	Single-Family Residence
R-2	Low Density Residence
R-3	Medium Density Residence
R-4	Multi-Family Residence
PUD	Planned Unit Development
R/LC	Residence/Limited Commercial
C-1	Restricted Business
C-2	Chardon Square Mixed Use
C-3	Traditional Classic Commercial
C-4	General Commercial
I	Industrial

City of Chardon

Draft Comprehensive Plan

N W E S

1,000' 0' 2,000' 4,000'

(In Feet)

DB.HARTT INC.
The Crittenden Building
1382 West Ninth St. • Suite 420
Cleveland, Ohio 44113-1231
planning and development consultants

2. **Equivalency Provision:**

Permit the Planning Commission to "waive" certain numerical requirements when it determines that the purpose of a zoning standard has been satisfied in a "unique/creative" and acceptable manner. Sample language follows:

"The Planning Commission may find that the site design plan either adheres or is equivalent to the requirements of this Code. The Planning Commission may consider a site design plan equivalent if:

a. *The proposed site design plan substantially complies with all specific requirements and with the purposes, intent and basic objectives of the zoning district; and,*

b. *Through imaginative and skillful design in the arrangement of buildings, open space, screening, streets, access drives and other features, as disclosed by the application, the proposal results in a development of equivalent or higher quality than which could be achieved through strict application of such standards and requirements; and*

c. *The development, as proposed, will have no adverse impact upon the surrounding properties or upon the health, safety or general welfare of the community.*

It shall be the responsibility of the applicant to demonstrate to the Planning Commission that the provisions of this Section have been satisfied. When evaluating the application with respect to this Section, the Planning Commission shall make any finding of equivalency in writing that explains how and why the proposal has satisfied on the above criteria. When making such a finding, the Planning Commission may approve the proposed application as if the application were in strict compliance with the standards and requirements in this Zoning Code.

Approval under this sub-section is not a variance. Instead, this sub-section allows applicants to satisfy zoning requirements in ways not anticipated by the City."

3. **Conditional Use Review:**

Shift the responsibility for reviewing Conditional Uses to the Planning Commission rather than the Board of Zoning Appeals. Generally, if a use has been listed as a "conditional use" the City has accepted the impacts. Therefore, the review and approval process is more of a planning function than a quasi-judicial function that is the typical purview of the BZA. When reviewing the conditional uses the process is intended to "best manage" the potential impacts; the role of the BZA is to consider "granting relief" from the regulations. The City should also consider requiring a public hearing before review by the Planning Commission. Each conditional use should have specific development standards and criteria which need to be satisfied. If they are reasonably satisfied, the use should be approved.

4. **Establish Design Review/Criteria and Process:**

Establish a design review component to the approval process with an Architect retained by the City to review plans and make recommendations to the Planning Commission, which makes the final determination.

B. OTHER IMPLEMENTATION CONSIDERATIONS

Capital Investments

In order to maximize its ability to implement its Comprehensive Plan and accomplish the goals set forth in Section II, the City should be prepared to consider capital investments in a number of areas, including:

1. **Thoroughfare Improvements** - As discussed in Section IV, several road projects should be considered to reduce existing deficiencies in the existing capacity and proper functioning of the system. As anticipated growth occurs, it will also be the City's responsibility to effectively accommodate the additional demands placed on the system.

2. **Streetscapes & Other Amenities** - Spending in this area may be particularly critical to Chardon's ability to preserve and enhance the appearance and image so critical to its unique character, particularly within Original Chardon and the approaches to the historic center.

3. **Public Parking & Parking Structure(s)** - If Chardon Square is to thrive, the adequacy and convenience of public parking will be a critical element. If the desired redevelopment of the Square's east side is to be achieved, it may require the City's financial participation in providing multi-level parking - in conjunction with private investment.

4. **Land Acquisition** - It is likely the City will find a number of reasons to acquire additional property both now and in the future. Road improvements and bike trail development almost certainly require at least some right-of-way acquisition. More land may also be needed or desired for expanded municipal facilities and usage (perhaps including general open space preservation and/or recreational land and/or other needs related to goal attainment.)

Administrative Actions

1. **Permitting Procedures** - Overly rigorous, confusing and/or unnecessary procedures for both plan and permit approvals can be a significant deterrent to attracting and maintaining desired development. It is very much in the City's interest to make the process as 'user-friendly' as possible and legitimate.

2. **Economic Development** – The recently intensified structure for attracting and retaining economically advantageous development must be maintained.

3. **Marketing** - Serious and professional public relations and development of a strong marketing plan may be critical to the future of Chardon Square, Original Chardon and the City as a whole.

4. **Further Detailed Studies**

    a. Chardon Square - Although it has been studied extensively in the past, the street striping, parking locations and configurations, circulation patterns and the overall appearance

these elements create, could all still benefit and likely be improved through a detailed design study that goes beyond only engineering considerations.

b. Parks and Recreation Plan - Further and more in-depth consideration should probably be given to developing a comprehensive plan for recreational facilities, parks, and general open space, that goes beyond the overview in Section IV.

APPENDIX A
RETAIL MARKET

Table A-1 – PULL FACTORS

	1997			2002		
	Estimated Population	Retail Trade Sales	Pull Factor	Estimated Population	Retail Trade Sales	Pull Factor
State of Ohio	11,186,331	$102,938,830,000		11,404,651	$119,778,409,000	
Cuyahoga	1,386,803	$12,622,922,000	0.99	1,372,770	$15,483,267,000	1.07
Solon	19,060	$359,585,000	2.07	22,092	$389,486,000	1.56
Mayfield Heights	19,791	$386,755,000	2.15	18,907	$434,848,000	2.04
Cleveland	503,981	$2,378,305,000	0.52	468,126	$2,307,009,000	0.44
Geauga County	87,913	$565,031,000	0.70	92,672	$603,414,000	0.62
Chardon	**5,003**	**$151,310,000**	**4.71**	**5,214**	**$181,214,000**	**5.34**
Lake County	223,715	$2,831,227,000	1.38	230,265	$3,173,982,000	1.31
Kirtland	6,507	$12,354,000	0.15	6,929	$11,522,000	0.12
Painesville	15,961	$96,270,000	0.48	17,661	$87,140,000	0.36
Mentor	50,949	$1,316,314,000	2.04	50,740	$1,466,132,000	2.10
Willoughby Hills	8,703	$152,434,000	1.38	8,577	$158,654,000	1.34
Portage	150,792	$1,117,940,000	0.81	153,387	$1,328,797,000	0.82
Aurora	11,942	$184,163,000	2.08	14,137	$210,906,000	1.72

Data Sources – US Census Bureau's Economic Census 2002 and Population Estimates

Table A-2 - TRADE AREA ANALYSIS - Using 40%* of Gross Median Household Income as Retail Expenditure

	Sales		Households			
			Existing - In Primary Trade Area (1)	Required to meet Sales	Surplus	Deficit
TOTAL	**$181,214,000**	**(2)**	**11,998**			
EXISTING CONSUMER BASE						
Chardon	$41,945,770	(3)		2,276		
Surrounding Communities	$139,268,230	(4)		6,027		
TOTAL	$181,214,000	(2)		8,303	3,695	
CONSUMER POTENTIAL TO MEET NEW CONSTRUCTION						
	$122,598,750	(5)		5,305		1,610

NOTES

* - Consistent with Figures from 2003 Average Annual Expenditures – Bureau of Labor Statistics

(1) - Sum of Households in the City of Chardon and those from surrounding communities - See Table on the next page for surrounding communities and their consumer base derivations

(2) - From US Economic Census 2002- US Census Bureau

(3) - Using the Median Household Income of $46,074

(4) - Using the Median Household Income of $57,773

(5) - Using the new Meadowland Construction that will add 490,395 sq. ***ft at the national average of the $250 in sales per sq. ft. per year***

Table A-3 - PRIMARY TRADE AREA BOUNDARY

	Med HH Income	Total Households	Percent of Households Accounted For in the Trade Area *	
Leroy Township	$61,100	1082	216	20%
Thompson Township	$48,750	877	263	30%
Chardon Township	$63,094	1675	1508	90%
Hambden Township	$52,294	1459	1459	100%
Montville Township	$54,808	690	690	100%
Chester Township	$66,977	3969	397	10%
Munson Township	$69,024	2094	2094	100%
Claridon Township	$50,524	1137	1137	100%
Huntsburg Township	$50,927	857	686	80%
Concord Township	$69,256	5745	1149	20%
Aquilla Village	$48,750	123	123	100%
TOTAL	**$57,773**		**9722**	

Data Sources – US Census Bureau

* Estimated by D.B. Hartt Inc.

APPENDIX B
COST OF SERVICES CALCULATIONS

Table B-1 City Revenues By Land Use

Revenue Estimates for 100 Acres of Industrial & Residential Development		
	Industrial Development	Residential Development
Development Assumptions		
Assumed Building Area Per Acre of Land (sq.ft.)	8,000	———
Total Building Area for 100 Acres (sq.ft.)	800,000	———
Assumed Square Feet per Employee (sq.ft.)	500	———
Total Number of Employees	1,600	———
Assumed Residential Units Per Acre	———	3
Number of Units/Households	———	300
Assumed Taxable Income Per Employee	$40,000	———
Assumed Taxable Income Per Household	———	$60,000
Assumed Household Place of Employment:		
Chardon	———	35%
Community with No Income Tax	———	25%
Community with 1.5 % Tax Rate	———	20%
Community with 2.0 % Tax Rate	———	20%
City Income Tax		
Household Tax Rates:		
Number of Households Place of Employment		
Chardon	———	105
Community with No Income Tax	———	75
Community with 1.5 % Tax Rate	———	60
Community with 2.0 % Tax Rate	———	60
After Credit Household Tax Rates (%)		
Chardon	———	2.00%
Community with No Income Tax	———	2.00%
Community with 1.5 % Tax Rate	———	1.25%
Community with 2.0 % Tax Rate	———	1.00%
After Credit Taxes		
Chardon	———	$126,000
Community with No Income Tax	———	$90,000
Community with 1.5 % Tax Rate	———	$45,000
Community with 2.0 % Tax Rate	———	$36,000
Employee Tax Rate (%)	2.00%	———
Total Income Tax Receipts	$1,280,000	$297,000
Inheritance Taxes		
Existing Average Inheritance Taxes Per Household	———	$113
Total InheritanceTax Receipts	$0	$33,900
Real Property Taxes		
Assumed Value Per Sq. Ft.	$80	———
Assumed Value Per Dwelling Unit	———	$275,000
Total Real Property Value	$64,000,000	$82,500,000
Total Assessed Valuation (35%)	$22,400,000	$28,875,000
Effective Tax Rate (per $1,000 of assessed valuation)	$52	$45
Total Real Estate Taxes	$1,164,800	$1,299,375
City Share (11.8%)	$137,446	$153,326
Plus Estimated "Rollback/Homestead"	———	$18,093
Total City Real Property Tax Receipts	$137,446	$171,419
Personal Property Taxes*	$0	$0
TOTAL CITY TAX REVENUES	$1,417,446	$502,319

TABLE B-2 Service Costs by Land Use

Cost of Service Estimates for 100 Acres of Industrial & Residential Development
Based on 2005 City Budget & Assumes Expenditures Equal Revenues

		Spent on Services to Industrial Development			Spent on Services to Residential Development		
Use-Related Departments	Total Budget	Percent	Amount	Per Acre for 181 Existing Acres of Development	Percent	Amount	Per Unit for 2370 Existing Residential Units
Fire & Ambulance	$713,649	20%	$142,730	$789	60%	$428,189	$181
Police	$1,093,447	20%	$218,689	$1,208	60%	$656,068	$277
Parks & Recreation	$186,991	0%	$0	$0	100%	$186,991	$79
Trash Day	$13,817	0%	$0	$0	100%	$13,817	$6
General Administration	$4,330,348	20%	$866,070	$4,785	60%	$2,598,209	$1,096
	$6,338,252		$1,227,489	$6,782		$3,883,274	$1,639
Per Acre Total Times 100 Acres				$678,171			-------
Per Unit Total Times 300 Units				-------			$491,554

ESTIMATED TAX REVENUES (See Table B-1)	$1,417,446	$502,319
ESTIMATED COST OF SERVICES	$647,965	$491,554
ESTIMATED SURPLUS	$769,481	$10,765

APPENDIX C
GOALS & POLICIES FROM PREVIOUS PLANS

1980 Plan

Goals & Objectives

Community Development

Goal: Support the Village's share of Geauga County's growth and development

Objectives:

- Encourage availability of adequate developable land within the corporate area to accommodate anticipated development
- Provide an atmosphere conducive to community expansion and diversification
- Encourage expansion of existing industrial, commercial, and service employers through cooperative effort
- Assure development in a manner which recognizes capabilities, limitations, and opportunities inherent in the natural environment

Employment and Economy

Goal: Diversify and expand local employment opportunities

Objectives:

- Determine sectors of the economy likely to expand and encourage new employers in those sectors
- Support existing employers and encourage their expansion
- Encourage development of skills to support anticipated industrial requirements
- Encourage diversification in the employment and tax base emphasizing those businesses which will not excessively burden existing and proposed utility systems at the public's expense

Land Use

Goal: Develop an integrated land use pattern which achieves a balance of urban and rural character, recognizing capabilities of the land, infrastructure requirements, and heritage preservation

Objectives:

- Provide adequate but not excessive land area for each major land use category
- Encourage development in accordance with usability and adaptability of land
- Encourage spatial distribution of land uses in a compatible non conflicting manner
- Provide adequate infrastructure to enhance and guide development to desirable areas
- Develop and conserve residential areas in a physical environment that is healthy, safe, convenient and attractive
- Encourage and stimulate desirable are revitalization through public facility/utility investment and grant and loan programs here possible
- Preserve through regulatory means, purchase, or lease, land areas which for reasons of outstanding historic, aesthetic, or natural features are worthy of preservation

Housing

Goal: Provide safe, sanitary shelter for every resident

Objectives:

- Support programs designed to preserve and rehabilitate the existing housing stock
- Eliminate poor housing conditions and encourage replacement of poor quality units with standard units
- Promote innovative housing and subdivision designs which emphasize natural area characteristics, safety, and energy efficiency
- Encourage balanced distribution of housing types at locations and at costs reflective of community income limitations and household sizes
- Provide residential areas which are easily accessible relative to centers of employment, shopping, recreation and culture

Transportation

Goal: Develop an integrated network of transportation facilities capable of providing safe, quick, and economical travel throughout the village and which relates to major county, state, and national transportation networks

Objectives:

- Develop a balanced transportation system which complements proposed land uses and integrates with existing systems
- Encourage upgrading of all thoroughfares and bridges that are below acceptable standards of right-of-way and pavement width
- Eliminate existing traffic flow problems
- Reduce the frequency of accidents through improved design and redesign of current high accident locations where necessary
- Develop a transportation network that reduces travel time, energy consumption, and vehicle operating costs
- Identify needs for alternative transportation facilities such as mass transit, bikeways, etc.

Community facilties

Goal: provide an appropriate and accessible system of schools, recreational facilities, public buildings, and utilities for residents

Objectives:

- Encourage elementary school sites in close proximity to concentrations of elementary school age children so as to reduce travel time, enhance safety, and provide local educational and recreational opportunities
- Encourage a system of middle schools and high schools to develop competence, skills, character, and educational abilities
- Encourage optimum use of public facilities for community and recreational activities
- Protect, maintain, and enhance existing park and recreational facilities
- Reserve for open space or recreational use those tracts of land which, as a result of significant natural limitations or uniqueness, are either not generally suited for development or are of significant value in the interest of public health and welfare
- Provide the types of recreational facilities desired by the public in accessible location
- Expand or develop public utility systems that provide for current requirements and supports desirable community growth
- Eliminate sewage and other waste disposal practices which may cause environmental degradation or which threaten public health and welfare
- Assure sufficient public building area to adequately support community government, operations, and maintenance, as well as to enhance cultural development, public health, and safety

1996 DRAFT Land Use Plan Update

Goals and Objectives

Conclusions from resident survey and Goals based on community analysis

- Residents appreciate the small community image and characteristics values and desire the small town character of the Village to be maintained
- The highly accessible location of the Village relative to major employment and retail center will continue to encourage growth and development. The Village must accommodate growth while maintaining the small town character
- To a minimum, the present level of community services (police, fire, library, snow removal, etc.) should be maintained
- The supply and quality of recreational facilities provided for residents should be improved

- Costs of utility services, property and income taxes are a concern to residents. Controlling costs, while providing the current high level of services should be a long term objective
- Worsening traffic congestion is a concern of the majority of residents. New development should include adequate vehicular, pedestrian and bikeway circulation systems with the developer sharing costs in direct relationship to development related impacts
- Substantial portions of residents feel that a lack of shopping is a concern. This lack of shopping opportunities causes many residents to make retail purchases outside the Village. Substantial retail land use area occurs in the Village, while only a limited amount of vacant retail zone area exists. Much of the existing retail land use area suffers from obsolescence. Retail uses should be encouraged to expand through redevelopment of existing retail zoned areas, through infill development on existing retail zoned sites, and through limited expanded retail zoning
- Significant proportions of homeowners and renters wish to have a variety of housing choices (rentals, condominiums, singe-family homes). Housing choice should be expanded by encouraging the development of various sizes, styles and prices and prices of new housing and by encouraging rehabilitation of older existing units

APPENDIX D
CHARDON SQUARE PARKING ANALYSIS

Herein is a summary of the methodology and the findings from the parking analysis that we conducted based on information that was provided to us and that was available from the City/County records.

1. **PURPOSE:** To verify the adequacy of existing parking spaces on and around the Square for existing and anticipated building floor area.

2. **DATA PROVIDED:**

   a. Number of existing parking spaces on and around the Square including proposed spaces (Attachment A).

   b. Floor areas of buildings on and around the Square (Attachment B).

3. **METHODOLOGY:** Process undertaken in conducting the parking analysis.

   a. Excluded Churches and a portion of the buildings across from City Hall that is expected to be demolished (Ref # 30, Map 1).

   b. Determined the total floor area for the general land use categories (retail, offices and others) on and around the Square based on the information provided.

   c. Calculated the parking spaces required based on the current zoning regulations for each land use. Below are the current standards:

All non-residential uses	- 5 spaces for every 1,000 sq. ft of floor area
Schools	- 2 spaces per classroom
Theater	- 1 space per 4 seats

   d. Calculated the parking spaces required to show as an example that spaces required would be reduced if 'shared' between the different uses based on the current zoning regulation for each land use.

   e. Calculated the parking spaces required based on reasonable modifications to the regulations for each land use. This is based on:

   f. Reasonable mix of retail and office developments to meet market requirements which are:

Offices	- 3 to 3.5 spaces per 1,000 sq. ft.
Retail	- 4 spaces per 1,000 sq. ft.

g. Adjusting to recognize that the floor areas for older retail spaces do not have the "efficiency" of new retail. This results in 3 spaces per 1,000 sq. ft. for both office and retail.

h. Adjusting for the shared parking potential

i. Determined the proportion of parking spaces "adjacent" the buildings on the west side of the Square based on current and proposed regulations.

j. Alternatively, considered the number of additional spaces that will be required if, say, 200,000 additional square feet of floor area were developed that included the County offices (100,000 sq. ft.), retail (50,000 sq. ft.) and residential (50,000 sq. ft. averaging 1,600 sq. ft per unit).

4. FINDINGS

a. There are 953 parking spaces on and around the Square including the existing spaces and the proposed parking spaces.

b. The existing floor area of buildings around the Square considered for the analysis is approximately 324,000 sq. ft.

c. Total number of parking spaces required on and around the Square for the existing floor area based on the current regulations is 1,638 and 1,592 if 'shared' (See Table 2). There is a deficit of 639 spaces.

d. Total number of parking spaces that is reasonable on and around the Square for the existing floor area based on proposed regulations is 1,038 and 998 if 'shared' (See Table 2). There is a deficit of 45 spaces.

e. The current distribution of parking spaces "adjacent" to the buildings on the west side of the Square:

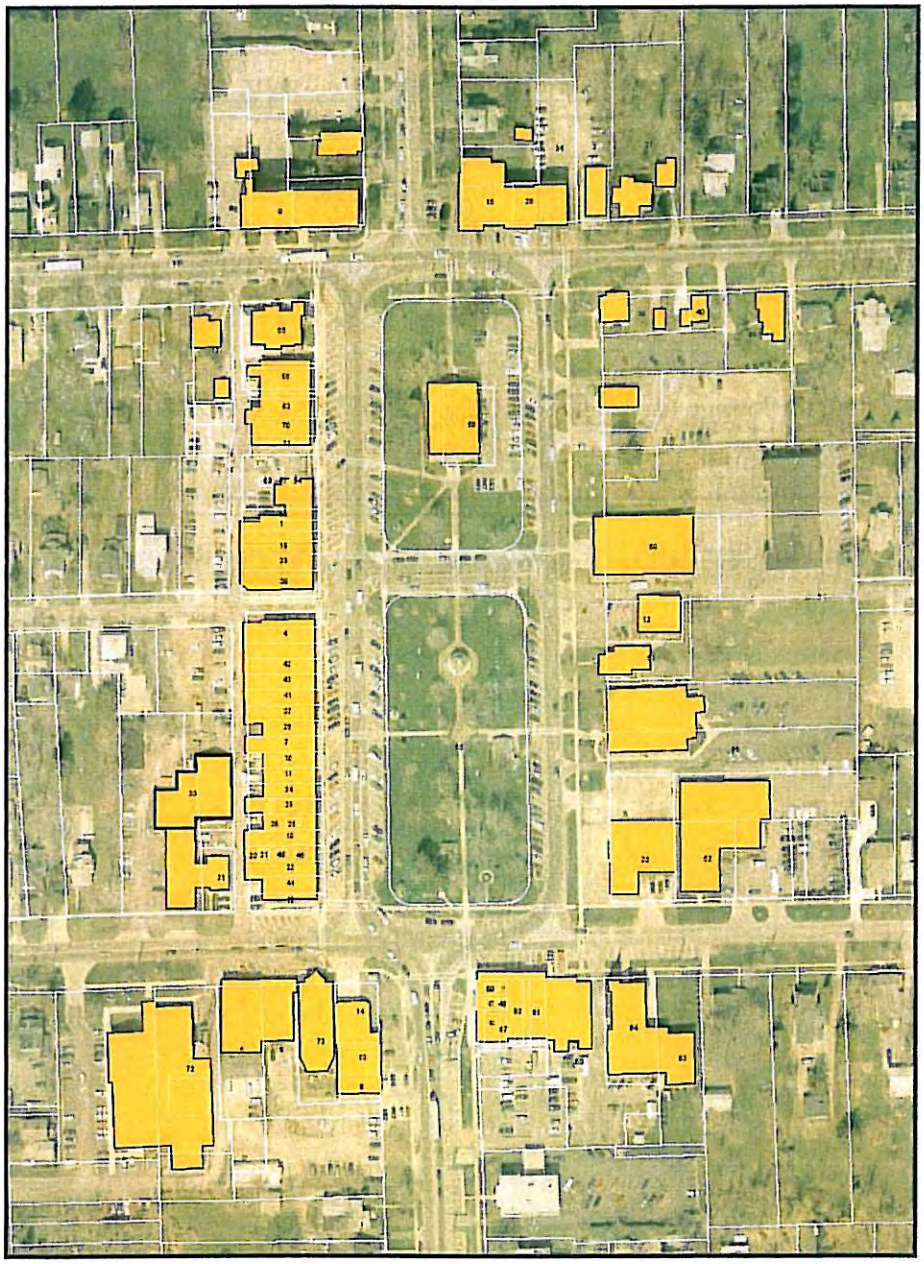
- The floor area comprising of offices and retail uses is approximately 123,000 sq. ft.
- The number of parking spaces that are adjacent to the buildings are 270.
- Using the current parking standards, about 44% of spaces are currently adjacent to the buildings
- Using the proposed parking standards, about 73% of the spaces are currently adjacent to the buildings

f. Total number of parking spaces to accommodate an additional 200,000 sq. ft. of floor area added on to the Square based on:

- Current regulations is 813 and 788 if 'shared' (See Table 3)
- Proposed regulations is 563 and 538 if 'shared' (See Table 3).

g. The total parking spaces required with the 'shared' concept at full development of approximately 524,000 sq. ft. is 1,536 parking spaces on and around the Square. This is an additional 583 spaces.

MAP D-1 - Chardon Square Building Identification



Map 1 - Building Identification

LEGEND

Buildings on the Square

TABLE D-1 - Shared Parking Calculations

General Land Use Classification	Weekdays			Weekends		
	1:00 a.m.-7:00 a.m.	7:00 a.m.-6:00 p.m.	6:00 p.m.-7:00 a.m.	1:00 a.m.-7:00 a.m.	7:00 a.m.-6:00 p.m.	6:00 p.m.-7:00 a.m.
Office	5%	100%	5%	0%	15%	0%
Retail sales and services	0%	100%	80%	0%	100%	60%
Restaurant (not 24 hours)	20%	70%	100%	30%	100%	75%
Residential	100%	60%	100%	100%	75%	95%
Theater	0%	60%	100%	0%	80%	100%
Hotel						
Guest rooms						
Restaurant lounge (in hotel)	100%	55%	100%	100%	55%	100%
Conference rooms	0%	100%	100%	0%	100%	100%
Religious institution	0%	25%	50%	0%	100%	50%

Source - Parking Standards, APA Planning Advisory Service Report No.510/511

TABLE D-2 - Existing Floor Areas

Land Use	Floor Area Sq.Ft.	Standards from Spaces from Code			Required Spaces Based on current standards	Required Spaces Based on current standards If parking is 'shared'	Proposed Standards for Spaces			Required Spaces Based on proposed standards	Required Spaces Based on proposed standards If parking is 'shared'
Office	275,986		5	per 1000 sq. ft.	1,380	1,380		3	per 1000 sq. ft.	828	828
Retail	13,398		5	per 1000 sq. ft.	67	67		3	per 1000 sq. ft.	40	40
Restaurants	10,598		5	per 1000 sq. ft.	53	37		3	per 1000 sq. ft.	32	22
Library	8,590		5	per 1000 sq. ft.	43	43		5	per 1000 sq. ft.	43	43
School	9,928	10 class rooms*	2	per class room	20	20	10 class rooms*	2	per class room	20	20
Theater	5,499	300 seats*	1/4	per seat	75	45	300 seats*	1/4	per seat	75	45
SUB -TOTAL	323,999				1,638	1,592				1,038	998
Percent decrease in total spaces required						3%					4%

TABLE D-3 - Additional Floor Areas

County offices	100,000	5 per 1000 sq. ft.	500	500	3 per 1000 sq. ft.	300	300
Retail	50,000	5 per 1000 sq. ft.	250	250	4 per 1000 sq. ft.	200	200
Residential	50,000	2 per du	63	38	2 per du	63	38
SUB - TOTAL	200,000		813	788		563	538
Percent decrease in total spaces required				3%			4%
TOTAL	**524,000**		**2,450**	**2,379**		**1,600**	**1,536**

ATTACHMENT D-1
EXISTING PARKING SPACES - DATA PROVIDED

Parking on & around the Square 4/20/06

# of parking stalls per marking plan sheet SR 6/6DA/44 - 2/23/05

Center St. west-south side: 5
North St./Center St. both sided: 11
N. Hambden north side: 16
N. Hambden end cap: 6
Main Street both sides: 101
Water Street north side: 6
S. Hambden south side: 9
S. Hambden end cap: 5
East Park St.: 49
Short Court both sides: 14

SUBTOTAL: 222

Approximate #'s of other parking

Water Street south side: 6
S. Hambden by Pilgrim Christian Church: 11
East Park/S. Hambden: 0 **(proposed): 10** [lose 15 with two-way traffic implemented]
South St. by Old Village Hall: 8
Old Village Hall: 30
Municipal Center: 44
South St. south of Old Village Hall: 17
Nolan; City-owned paid parking lot: 31
Current private lot: 25 **(proposed): 85**
Lot behind the Geauga Lyric Theatre Guild 43 **(proposed): 69**

SUBTOTAL: 215 SUBTOTAL: with proposed 265

Other approximate #'s of parking stalls

County lot off E. Park: 40
Wilbur House lot – if improved: 75
Library: 53
Kirby Building: 20
Alley off street: 12
Bank One: 64
Williamsburg Building: 26
County lot off Alley St.: 55
Newman & Brice: 17
Zulandt: 12
Kenney House: 6
Alltel: 60
Park Elementary School: 26

SUBTOTAL: 466

GRAND TOTAL: 903 PROPOSED: 953

ATTACHMENT D-2
EXISTING BUILDING AREAS AS PROVIDED (Refer Map D-1)

REF. NO.	PARCEL ID	BUILDING SF
1	10-002400	1,496
2	10-011900	2,054
3	10-016500	4,050
4	10-016600	1,530
5	10-021300	6,200
6	10-021400	3,716
7	10-028400	1,710
8	10-030300	1,836
9	10-032300	8,860
10	10-036650	1,890
11	10-036660	1,526
12	10-044200	2,382
13	10-048720	2,014
14	10-048730	1,748
15	10-056600	3,050
16	10-062500	3,027
17	10-066900	1,958
18	10-070600	2,046
19	10-071540	1,518
20	10-071550	1,980
21	10-071570	1,452
22	10-074900	1,980
23	10-082600	6,636
24	10-087600	1,452
25	10-087700	924
26	10-092700	2,508
27	10-092810	1,148
28	10-099600	2,090
29	10-105250	1,998
30	10-107200	1,500
31	10-111500	1,608
32	10-113850	2,000
33	10-116300	1,550
34	10-120920	2,475
35	10-122300	1,386
36	10-122400	1,890
37	10-128650	1,710
38	10-138300	2,146
39	10-143900	1,808
40	10-144000	648
41	10-144600	1,530
42	10-152900	1,620
43	10-153200	1,710
44	10-157700	2,070
45	10-164805	1,518
46	10-165316	2,904
47	10-165432	800
48	10-165433	800
49	10-165439	800
50	10-165509	800
51	10-165653	2,440
52	10-601300	12,446
53	10-700100	2,640
54	10-700200	3,939
55	10-700300	4,396
56	10-700400	2,004
57	10-700600	2,892
58	10-700900	4,768
59	10-701600	9,928
60	10-701900	5,722
61	10-702000	2,709
62	10-702100	1,892
63	10-702300	9,420
64	10-702400	5,400
65	10-702500	1,176
66	10-702600	8,590
67	10-704910	2,000
68	10-707000	980
69	10-707100	3,939
70	10-707200	1,875
71	10-707300	2,064
72	10-709575	21,624
73	10-709591	5,499

Areas given were doubled to account for two floors
Area given was tripled to account for three floors

APPENDIX E
SUMMARY OF COMMUNITY INPUT AT PUBLIC FORUM

A. Chardon Square & Original Chardon

1. Issues/Problems

a. Movement of trucks, noise generation causes disturbance to homes abutting the square
b. The center is used for non-residential parking
c. Multiple ownership of parcels
d. Dead on weekends because County offices are empty

2. Suggested Solutions

a. Alternative housing on square
b. Allowing retail on ground floor
c. Encourage tourism that is 2-3 hours away
d. Regulate architectural standards for buildings
e. Provide financial incentives
f. Market the theater which is a big asset
g. Ease in regulations that govern the opening of a new business
h. More signage
i. Charging impact fee
j. Convert court house to a museum
k. Allow for pubs

B. Economic Development

1. Issues/problems

a. Changing Industrially zoned land to residential
b. Relocation of County offices/large businesses

2. Suggested Solutions

a. Working with County/landowner
b. Extend Parker Ct. – 7th Avenue
c. Promote Industrial/Commercial Tourism?
d. Implement with tax abatements and incentives
e. Development of East side of the square with County offices

C. Traffic and Circulation

1. Issues/Problems

a. Truck traffic around the square
b. Lack of parking in the square
c. Sidewalk repair
d. One-way streets
e. Jaywalking

2. Suggested Solutions

a. Truck bypass
b. Construction of new roads
c. Allowing truck traffic on Cherry Street
d. Allowing two-way traffic north and south end of the square
e. Allowing sidewalk connections

D. Character and Housing

1. What we feel

a. Well kept secret (+)
b. Isolated (+)
c. Home family friends
d. Maple syrup
e. Has a square
f. Historic Charm
g. Small town to city (-)
h. Try to keep what we have (+)
i. Loss of historic
j. We are now commercial (-)/(+)

2. What needs to be done to continue/enhance the experience

a. More architectural control
b. Neighborhoods accessible, Where we can walk to
c. People care and are friendly
d. County Seat

3. Facilities/policies needed

a. Small Community Center Basketball/Swimming
b. Independent senior housing
c. Public transportation
d. More nature facilities ie: trails
e. Town housing cluster home
f. Better continuum of housing choices

g. Place like Breckenridge
h. Bed/breakfast
i. Redevelopment of old areas
j. Something to draw people to old Chardon Ampitheater
k. To draw younger families to older homes
l. Model like Cleveland Warehouse District
m. Keep current homes nice
n. Community feel
o. More foot traffic
p. Planning and flexibility
q. More options to shop specialties
r. Keep property nice
s. Square parking and county must stay
t. "people make Chardon"
u. Must facilitate development
v. Do not be a road blocker
w. Try to make it positive
x. East side of the square
y. Plans take time
z. Spread community resources - More rec – spread out
aa. Wider options for zoning with limits
bb. Why did we move here?
cc. More planned communities look at quality and character

APPENDIX F
SYNCHRO/SIM TRAFFIC MODELING

Synchro/Sim Traffic Modeling
Prepared for the City of Chardon, Ohio
by Kevin P. Westbrooks, URS Corporation.

Summary for the Comprehensive Plan

Purpose: URS was retained by the City of Chardon to utilize traffic volumes for 76 different road segments provided by the City, and the computer software Synchro 5, to model existing traffic conditions within the City and to make the model available to Chardon for their future use in monitoring traffic conditions in the future.

Methodology: URS conducted field inspections of 20 intersections identified by the City, and collected data such as lane usage, speed limits, traffic control devices, and turn lane lengths. Aerial photographs were used to determine lane lengths where high traffic volumes and other field conditions prevented adequate field collection. Signal timings of most intersections were provided by the City, while those for the remaining intersections were estimated based on traffic volumes and signal phasing at nearby intersections. The analysis included the planned conversion to two-way traffic at the north and south ends of Chardon Square and the proposed realignment of Fifth Avenue. Traffic volume data was used to develop both AM and PM peak hour volumes at each intersection. A base map of the City was created using the Synchro 5 software, including lane configurations and speed limits, and the peak hour volumes were then entered into the model.

URS Summary:

The finalized models were prepared to best represent traffic conditions in the City of Chardon during the AM and PM peak hours. After collecting data, the AM and PM basemapping was prepared to simulate what will exist in the field after the modifications are made to the square to provide two-way traffic at the north and south ends, as well as the Fifth Avenue Realignment. The traffic volumes are indicative of current volumes and were modified to best approximate the future two-way traffic patterns and the re-routing of traffic currently using "cut-through" routes. The signal timings within the models were also updated to match the new traffic patterns where applicable and the existing timings where no modifications are proposed. The Synchro 5 models will help the City of Chardon analyze the existing traffic conditions within the city. The models may also be easily updated to reflect changing traffic patterns and signal timings or to evaluate traffic conditions in the future.

Review of the level of service (LOS) information produced by the model gives an indication of how the intersections currently operate. The LOS criteria for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption,

and increased travel time. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. These service conditions are defined by the letters "A" through "F", with "A" being excellent (no delay) traffic conditions, and "F" equating to congested, unstable traffic flow with excessive delay.

The model indicates that most of the City's intersections currently operate at an acceptable level of service during the peak hours. For purposes of this study, LOS C or above is considered acceptable. It should be noted, however, that at unsignalized locations no overall intersection level of service is computed. The approaches operating under stop conditions may have lengthy delays. There are also some signalized intersections where the overall LOS is acceptable, but one or more movements experiences significant delay. During the AM peak hour, the intersection of North Hambden Street and East Park Street operates at an overall LOS D, with the westbound through movement at LOS D. The intersections of North Hambden Street/Maple Avenue, Center Street/North Street, and Park Avenue/South Street all operate at an overall LOS B, but have individual movements at LOS D or lower. In the PM peak hour, the intersections of Center Street/Cherry Avenue and Park Avenue/South Street operate at an overall LOS D, with one or more movements at LOS D or lower. The worst movement is the southbound through movement at Park Avenue, which operates at LOS F. There are five other intersections that operate acceptably overall but have individual movements with excessive delay. Those are: North Hambden Street/East Park Street, Water Street/Cherry Avenue, North Hambden Street/Maple Avenue, Center Street/North Street, and Center Street/Washington Street. Overall the City's roadways and intersections operate efficiently, but improvements may be warranted at specific locations.

Preliminary Traffic Forecasting

In order to evaluate the effect of growth on the City's roadway network, traffic volumes throughout the City were projected to reflect increases expected as a result of new development. In order to make a comprehensive evaluation without detailed information on the exact sizes or locations of future development, an assumption was made that traffic could potentially increase by 50% throughout Chardon. This assumption was based on the fact that the City is approximately two-thirds developed.

The Synchro model was modified to reflect both the new roadways and roadway extensions discussed below, as well as future growth. No changes in lane usage or signal operation were assumed at existing intersections, except where a currently nonexistent movement will be available due to new roadways. In those cases, no new lanes were considered on existing roadways, but the new traffic movements were allowed on existing lanes. Traffic volumes at all intersections previously analyzed were increased by 50%, with changes in traffic patterns due to new roadways also included. On some new roadway links small, place holder volumes were input, which can be updated as new roads are actually constructed and development occurs.

Analysis from the modified traffic model indicates that in many locations traffic will continue to operate efficiently with the increased traffic. There are some intersections, however, that will experience degradation to unacceptable levels of service, that is, LOS D or lower. A check of those intersections shows that minor improvements, such as revised signal timing, changes to signal phasing, or additional turn lanes will allow the intersections to operate at a

LOS C or better. There was no indication that additional through lanes are needed along any of the major roadways of Chardon with a 50% increase in overall traffic.

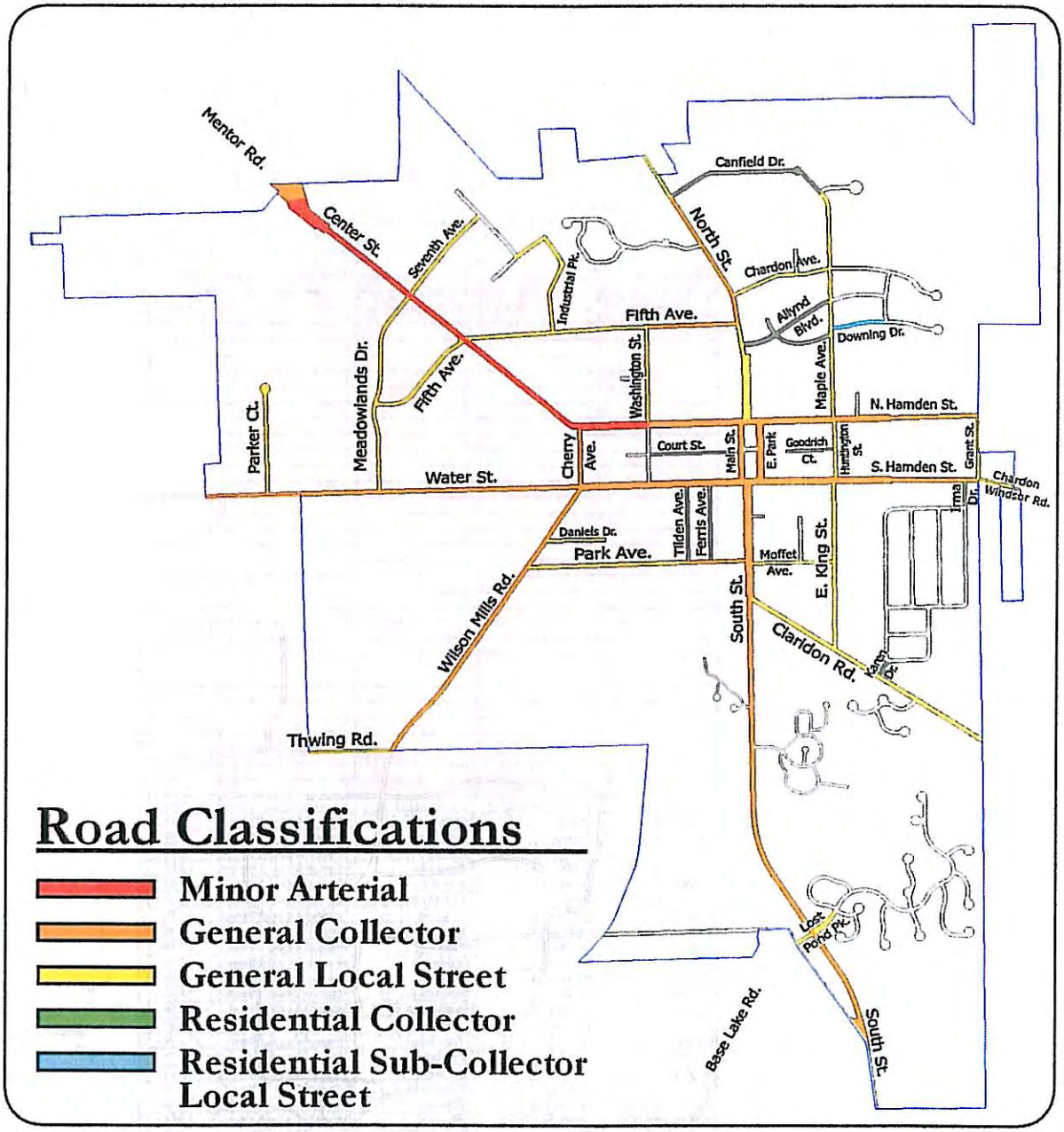
Road Classification

At the City's request, each of the 76 road segments were also classified on the basis of road type and traffic volume. The results are represented by the following table and map.

TABLE F-1 - Road Classification & Traffic

Chardon Road Classification & ADT				
Street Name	Limits From	Limits To	Road Classification	ADT
SR 44 (Center St)	Mentor Rd	Meadowlands Dr	Minor Arterial	14,778
SR 44 (Center St)	Meadowlands Dr	Fifth Ave	Minor Arterial	17,002
SR 44 (Center St)	Fifth Ave	Cherry Ave	Minor Arterial	15,438
SR 44 (Center St)	Cherry Ave	Washington St	Minor Arterial	15,539
Cherry Ave	Center St (SR 44)	Water St (US 6)	General Collector	9,691
E Park St	Center St (SR 44)	Water St (US 6)	General Collector	6,880
Fifth Ave	Washington St	North St	General Collector	6,413
Main St	Center St (SR 44)	Water St (US 6)	General Collector	6,380
Mentor Rd	City Limit	SR 44	General Collector	11,745
North St	Canfield Dr	Bridgewater Ln	General Collector	1,356
North St	Bridgewater Ln	Chardon Ave	General Collector	6,237
North St	Chardon Ave	Fifth Ave	General Collector	8,070
Park Ave	Tilden Ave	Ferris Ave	General Collector	5,211
Park Ave	Ferris Ave	South St (SR 44)	General Collector	5,954
S Hambden St	South St (SR 44)	E Park St	General Collector	6,890
S Hambden St	E Park St	E King St	General Collector	5,836
S Hambden St	E King St	Irma Dr	General Collector	5,938
S Hambden St	Irma Dr	Grant St	General Collector	6,294
SR 44	City Limit	Mentor Rd	General Collector	11,290
SR 44 (Center St)	Washington St	North St	General Collector	9,860
SR 44 (Center St)	North St	E Park St	General Collector	10,570
SR 44 (Center St)	E Park St	Maple Ave	General Collector	7,480
SR 44 (South St)	Water St (US 6)	Burlington Oval Dr	General Collector	11,750
SR 44 (South St)	Burlington Oval Dr	Lost Pond Pk	General Collector	12,674
SR 44 (South St)	Lost Pond Pk	Woodlebrook Rd	General Collector	8,606
US 6 (Water St)	City Limit	Parker Ct	General Collector	2,377
US 6 (Water St)	Parker Ct	Meadowlands Dr	General Collector	7,614
US 6 (Water St)	Meadowlands Dr	Cherry Ave	General Collector	7,868
US 6 (Water St)	Cherry Ave	Main St	General Collector	11,550
US 6 (Water St)	Main St	South St (SR 44)	General Collector	12,180
US 6 (N Hambden St)	Maple Ave	City Limit	General Collector	9,061
Wilson Mills Rd	City Limit	Park Ave	General Collector	9,772
Wilson Mills Rd	Park Ave	Daniels Dr	General Collector	13,353
Wilson Mills Rd	Daniels Dr	Water St (US 6)	General Collector	10,783
Bass Lake Rd	Woodlebrook Rd	South St (SR 44)	General Local Street	5,065
Chardon Ave	North St	Maple Ave	General Local Street	2,234
Chardon Windsor Rd	Grant St	City Limit	General Local Street	5,528
Claridon Rd	South St (SR 44)	E King St	General Local Street	4,181
Claridon Rd	E King St	Karen Dr	General Local Street	4,668
Claridon Rd	Karen Dr	Fox Pointe Dr	General Local Street	4,172
Claridon Rd	Fox Pointe Dr	City Limit	General Local Street	3,491
Daniels Dr	Wilson Mills Rd	Chardon Plaza	General Local Street	880
E King St	S Hambden St	Moffet Ave	General Local Street	2,333
E King St	Moffet Ave	Claridon Rd	General Local Street	1,106
Fifth Ave	Meadowlands Dr	Center St	General Local Street	965
Fifth Ave	Center St	Industrial Pk	General Local Street	4,861
Fifth Ave	Industrial Pk	Washington St	General Local Street	3,646
Grant St	N Hambden St (US 6	S Hambden St	General Local Street	2,603
Huntington St	Center St (SR 44)	S Hambden St	General Local Street	1,739
Industrial Pk	Park Dr	Fifth Ave	General Local Street	923
Lost Pond Pk	South St (SR 44)	Pine Hollow Ct	General Local Street	2,153
Maple Ave	Canfield Dr	Downing Dr	General Local Street	2,473
Maple Ave	Downing Dr	N Hambden St (US 6	General Local Street	2,138
Meadowlands Dr	Center St (SR 44)	Fifth Ave	General Local Street	3,941
Meadowlands Dr	Fifth Ave	Water St (US 6)	General Local Street	2,992
Moffet Ave	South St (SR 44)	Carson Dr	General Local Street	1,530
Moffet Ave	Carson Dr	E King St	General Local Street	1,412
North St	Fifth Ave	Allynd Blvd	General Local Street	5,265
North St	Allynd Blvd	Center St (SR 44)	General Local Street	3,600
Park Ave	Wilson Mills Rd	Chardon Plaza	General Local Street	3,996
Park Ave	Chardon Plaza	Tilden Ave	General Local Street	4,813
Parker Ct	Beginning	US 6	General Local Street	1,125
Ravenna Rd	City Limit	Canfield Dr	General Local Street	4,953
Seventh Ave	Center St (SR 44)	Park Dr	General Local Street	2,774
Thwing Rd	City Limit	Wilson Mills Rd	General Local Street	1,656
Washington St	Fifth Ave	Center St (SR 44)	General Local Street	3,460
Allynd Blvd	North St	Maple Ave	Residential Collector	1,301
Canfield Dr	North St	Maple Ave	Residential Collector	1,132
Court St	Beginning	Washington St	Residential Collector	886
Downing Dr	Allynd Blvd	Maple Ave	Residential Collector	1,340
Ferris Ave	Water St (US 6)	Park Ave	Residential Collector	717
Goodrich Ct	Beginning	Huntington St	Residential Collector	598
Irma Dr	S Hambden St	Hillfop Dr	Residential Collector	1,372
Karen Dr	Claridon Rd	Crocker Blvd	Residential Collector	1,160
Tilden Ave	Water St (US 6)	Park Ave	Residential Collector	1,160
Downing Dr	Maple Ave	Basquin Dr	Residential Sub-Collector Local Street	329

Map F-1 - Road Classifications



APPENDIX G
BALANCED GROWTH PLAN

City Council has designated the highlighted areas shown on this map as Priority Development Areas and Priority Conservation Areas. The Comprehensive Plan is amended to include Appendix G through Ordinance No. 2515, passed and adopted March 12, 2009.

MAP G1

