A
COMPREHENSIVE PLAN
FOR THE
WESTWOOD COMMUNITY

Prepared for the
Kalamazoo City Commission
by the
Kalamazoo City Planning Department
Kalamazoo Traffic Engineering Department

9/13/66

About This Report.....

Although the original impetus for this study stemmed from the proposal to close Academy Street to through traffic between Bulkley and Catherine Street to facilitate construction of a mall which would serve to unify the Kalamazoo College Campus, it was soon realized that a much larger perspective should be taken.

Therefore, the entire Westwood Community was chosen as a frame of reference for study purposes since the problems found in the study of the Kalamazoo College proposal are not only found, but indeed amplified, throughout the entire Westwood Area. Probably the most rapidly developing area in Kalamazoo, this community is experiencing most of the problems accompanying rapid growth - traffic volumes in excess of thoroughfare capacity and condition, instability of residential growth patterns, as well as a general inadequacy of community service facilities such as parks, fire stations, and shopping areas. Added to these considerations is of course the exploding growth of Western Michigan University resulting in serious traffic conflicts along the portion of West Michigan Avenue surrounded by the Western Michigan University Campus, as well as generally unstable residential neighborhoods lying adjacent to the campus. These areas

are adversely affected by the rather abrupt changes in residential character as well as the possible future University expansion.

This, then, is the Comprehensive Plan for the Westwood Community. Practical actions can be taken now to move Westwood forward to a more attractive, more stable, and more stimulating community.

The Westwood Community is an area of tremendous significance to the City because:

- Within it lies the campuses of both Western Michigan University and Kalamazoo College, both recognized centers of higher learning.
- Five residential neighborhoods are contained within its boundaries; more than 17,000 citizens make their homes there.

Publication of the Plan report at this point is a part of the continuing planning program having two objectives:

1. To provide a planning reference book. The results of the surveys and analyses are presented in tables, charts, and maps for citizens' use and as references on matters related to planning.
2. To outline development guide lines for community action. The Comprehensive Plan recommends a number of pertinent actions for the continuous orderly growth and development of the area.

While this study has gone into considerable detail in analyzing some of the major forces and trends affecting the area, the resulting Plan is based upon community goals rather than area trends. It is prepared with the con-

viction that in our affluent society and advanced technology, these goals are attainable as long as there is continuous effort and persistent faith on the part of the citizens and businessmen in the area; the goals set forth will be further strengthened as long as there is determination by the University and College administration as well as the City Council that they will be attained; there should be recognition by all that these goals must be attained if we are to build a truly great community.

The Plan does not attempt to provide blueprints or cost estimates for specific projects. These details will be developed by private interests and public agencies in charge of public facilities. Rather, it presents a set of relationships and a system of organization in which every element and every section of Westwood plays a significant role.

It is important to emphasize that the plans developed for Westwood are integrated and coordinated with the remainder of the urban area.

Summary of the Report

Since the physical environment of the Westwood Community plays a dynamic role in the welfare and enterprise of its citizens, the main purpose of this Comprehensive Plan is to "foster a desirable community for residences, institutions and economic enterprise."

For historical and geographical reasons, the Westwood Community has always been an area subject to a multitude of urban forces, forces that present a continuous challenge to the stability, order and beauty of the Community. Among them, three seem to dominate:

(1) Proximity to the colleges and downtown has brought mixed blessings. While this proximity has kept the area land value high and housing market promising, it has also produced heavy traffic congestion and land use conflict.

(2) With these mixed blessings, the area has gained nearly 38% in population since 1960. The composition and distribution of the population is also changing, thus causing new demand for schools, parks, and other community facilities.

(3) Railroads and arterials have caused physical divisions in the community and make planning more difficult. For example, Western Michigan University and Kalamazoo College have the unity of their campuses compromised by elements of the Community's road network. Much of the traffic congestion in the eastern extremities of the Community stems from the conflicts created by three major east-west arterial thoroughfares intersecting a main railroad line at grade on adjacent locations.

It is true that these forces have created many difficult problems for the Community, but there is promise of a rewarding future for the Westwood Community, for no other community in the City possesses this combination of assets:

- Proximity to the expanding University and College Campuses, which have increased their enrollment rapidly during the last decade and will probably increase at a significant rate during the forseeable future. Thus increased enrollments have enabled both facilities to build educational centers Kalamazoo can truly be proud of, stressing both quality and quantity in education. Increased educational facilities, research complexes and cultural activities could make it attractive for even more homes, institutions and industries to be located nearby, a condition clearly evident in communities around other universities in the country.
- Nearness to the revitalized downtown, where Kalamazoo will undergo the most dramatic change in its history. The Central Parkway South Project, for example, symbolizes the change and redevelopment that will serve to enhance the downtown area as the nerve center for the metropolitan area. Its efforts will not be limited to downtown only, for as downtown is strengthened, so the Westwood Community being accessible to it will benefit. Many people will find it convenient to live in Westwood and work downtown.
- Accessibility to various sections of Kalamazoo. Completion of the much needed Howard Street extension as well as Drake Road will provide rapid and convenient links between Westwood and major residential areas to the south.

- Inherited natural setting and man-made environment. Many sections of the Westwood Community, with their unique topography, represent some of the most naturally attractive sections of the Kalamazoo Area. Perhaps even more so are the heterogeneity and diversity of the community, reflected in housing and population.
- Citizens with strong identification with the Community and dedication to its improvement. Throughout its history, the Westwood Community has been the object of numerous challenges to its continuous order and beauty. Such challenges have tended to unite rather than to divide, for on each occasion, the Community has risen to meet the challenge. Although it may not have "won" its case every time, its citizens have always united in an unyielding, persistent, dedicated force. Such a force - the total of residents, businessmen and educational leaders - is the power that keeps the Community alive. As long as there is such a force, Westwood will never be allowed to decline; its people - proud of their Community's heritage - will never permit it.

In summary, the Westwood Community has locational advantages and inherited assets, both natural and man-made granted to few communities within our City. Its citizens are intensely dedicated to their Community's heritage and economic prosperity.

It is true that the community has its liabilities, but its residents recognize them and accept them, determined that present problems shall be solved. Such dedicated attitudes can have but one result: Because its people believe and work for the Community, its future is bright.

As an aid to those who live, work and operate businesses in Westwood, to achieve their goal of building a better community of homes, institutions and economic enterprise, the Planning and Traffic Engineering Departments, at the request of the City Commission, have made a study of existing conditions that burden the area, and offer the recommendations which follow:

1. The residential and commercial quality of the Westwood Community be strengthened through effectuation of the proposed Land Use Plan.

   A) Residential

   To accommodate both the quantity and variety of housing facilities needed in the forseeable future by Westwood residents, substantial amounts of land are shown developed into low or medium residential density that are now either undeveloped or developed at a lower density. Generally higher density residential facilities are proposed in the eastern position of the Douglas Neighborhood with medium density areas outlined in the Knollwood Neighborhood south of W. Michigan Avenue as well as in areas adjacent to West Main Street. Every effort should be made to tastefully integrate higher density residential complexes with adjacent single family areas through the use of man-made or natural topographic features.

   B) Commercial

   Commercial facilities are strengthened through additional depth of the convenience shopping area along West Main Street within the Pinehurst Neighborhood as well as the complex north of West Michigan Avenue from Burrows Road to Stone Street. Such depth

facilitates ease of ingress and egress as well as adequate planned off-street parking space, thus freeing adjacent residential streets from this nuisance as well as removing potential traffic conflicts along major thoroughfares.

Additional neighborhood shopping complexes are recommended adjacent to Nichols Road and Alamo Avenue as well as in the vicinity of Drake Road and West Michigan Avenue.

2. A system of neighborhood parks should be developed in the following areas:

   A) Within the Arcadia Area north of the present Arcadia Plat in conjunction with a proposed Junior High School site.

   B) Within the Westwood Neighborhood, north of Croyden Avenue adjacent to the plat of Stewart Downs.

   C) Within the Pinehurst Neighborhood, east of Nichols Road and north of Grace Road, adjacent to Westwood School.

   D) Adjacent to both the Pinehurst and Douglas Neighborhoods in conjunction with a proposed elementary school site, located north of North Street, adjacent to the Memorial Park Sanatorium.

   E) Recognizing available land limitations in the Douglas Neighborhood, a relatively small park is recommended on a 1.4 acre site between Summit and North Streets, east of Denner Street. It is also recommended that some limited park facilities might be provided in the one acre Jones Park adjacent to Grand Avenue.

3. A system of improved arterials and collector streets is recommended, highlighted by:

A) West Main Street expanded to a five lane facility from West Michigan Avenue westward to US 131.

B) West Michigan Avenue expanded to four moving lanes plus a fifth lane forturning movements at key intersections throughout its entire length from Stadium Drive to US 131 with consideration given to the construction of a depressed portion adjacent to Western Michigan University's central academic area.

C) The Howard Street extension linking the present Howard Street facility at Stadium Drive to West Michigan Avenue near Rankin Street.

D) Kendall Avenue and Nichols Road should be fused together at West Main Street through construction of a new roadway segment and linked with the aforementioned Howard Street extension.

E) Construction of an approximate 1000' segment linking Drake Road with Colony Farm Road to the south, at Oshtemo Road.

F) Provision of a major north-south collector facility for the Arcadia Area, providing access to West Main Street on the north and Stadium Drive on the south. A proposed 10,400' alignment is indicated from Winchell Avenue northbound to Waldo Avenue.

G) The extension of West Lovell Street westward to provide traffic access to the northern portion of the Western Michigan University Campus, as well as the Arcadia and Knollwood areas.

4. Priority should be given to the location of a senior high school within the Community and study be undertaken toward the future location of another junior high school as well as expansion needs of elementary schools.

5. In recognition of fire protection needs of present college and residential complexes as well as future major development patterns, the locational significance of a proposed site adjacent to Kendall Avenue and the proposed Howard Street extension is pointed out.
6. Anticipated future space demands by Western Michigan University be met by limited land expansion, generally encouraging building "upward" rather than "outward".
7. Immediate priority be given to the restricting of through traffic conflicts to the campus unity of both Kalamazoo College and Western Michigan University through the vacation of Academy Street and the provision of circulation alternatives which would alleviate traffic volumes now passing through Western's central academic area.
8. A more positive program for improved campus traffic circulation and control be adopted in the near future by Western Michigan University.
9. All practical means be employed to obtain a convenient and efficient mass transit system which will complement the major street plan, as well as reinforce the transportation needs of both college complexes, thus facilitating a balanced transportation system serving the Westwood Community.

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I WESTWOOD TODAY

- Present Land Use
- Traffic and Circulation
- Community Facilities
  - Schools
  - Parks and Playgrounds
  - Libraries
  - Fire Stations
- Growth of W.M.U.

Present Land Use

The Setting

Boundary - The study area is bounded generally by the New York Central Railroad on the north and east, Stadium Drive on the south and US 131 on the west.

Topography - The Westwood Community comprises a comparatively high plain located in its northwest section, falling off in two distinct depressions to the south. These depressions are relatively steep as is the elevation change distinguishing this area from the western boundary of the Kalamazoo River flood plain in its eastern portion.

Present Land Use

The most dominant feature of the Westwood Community is of course the rapidly expanding Western Michigan University complex, comprising some 337 acres in this area alone. Kalamazoo College, also located here, adds an additional 48 acres to the institutional land use category.

The Western Michigan University Campus serves as a separation between two rather distinct residential use patterns in this area. Generally speaking, the eastern portion, located north of West Main Street embodies rather intensely developed residential land consisting of numerous older structures converted into apartment use as well as older duplexes and multi-family structures originally constructed for this use.

The area west of the campus, however, is of a much lower residential density comprising more recently developed single family structures constructed upon subdivided land located generally north of W. Michigan Avenue. The area

immediately west of the University, however, although still of a predominantly single family nature, has recently been affected by the demand for living facilities adjacent to the campus. This trend is reflected by recently developed apartment complexes as well as numerous requests for multi-family zoning within the area.

As in most communities within the City, older commercial locations are found in strip patterns along major thoroughfares while the newer developments are clustered in the more modern shopping center concept, complete with more than adequate parking facilities, in most cases.

The study area is serviced by two community shopping centers serving a market area radius of a mile and a half, and four smaller neighborhood commercial areas, serving an area up to a half mile radius. The Westwood Community Shopping Center, located at West Main Street and Drake Road contains the widest variety of stores for consumer use in the Westwood Study Area. Its service area includes an effective market primarily to the east and north. Its potential market should increase in the near future, with the completion of large apartment complexes now being constructed to the south and southeast.

Serving the eastern portion of the Westwood area is the Thrifty Acres (grocery-department store) located at Paterson Street and Douglas Avenue. In effect, the mile and a half radius extending from the community shopping center includes most of the residential areas within the Westwood Community not served by the West Main Plaza.

All four neighborhood shopping centers in Westwood have service areas that are partially within the service area of the larger Thrifty Acres complex, while the Westwood Plaza service area cuts through two of the neighborhood service areas.

Two of the smaller neighborhood centers are located along West Michigan Avenue and cater to large portions of the university population. The older of the two is located between Western's East Campus and West Campus. The small neighborhood center at North Street and Douglas Avenue and another along West Main Street, between North Prairie Avenue and Campbell Avenue, consist of older groupings of local stores. Business in these stores has been maintained with the addition of off-street parking facilities, although additional spaces are obviously needed.

Public and semi-public uses, excluding the Western Michigan University and Kalamazoo College complexes occupy relatively little land in the Westwood Community. These uses, generally consisting of schools, parks, churches, hospitals and cemeteries, occupy only 6.8% of the total study area. Since one rather sizable cemetery facility is located in this area, the relatively small amount of land devoted to "community serving" activities is emphasized.

Industrial activities in this community are confined to the eastern boundary along the New York Central Railroad right-of-way.

Three major thoroughfares serve the major portion of east-west traffic flow through this community. They are namely, West Main Street, West Michigan Avenue and Stadium Drive. At the present time, Drake Road forms the only clearly defined north-south connection through this community; however, Douglas Avenue serves this function to some degree in the eastern portion, through the Douglas Neighborhood. As in other communities, the older, centrally located portions of this community contain local streets constructed in a grid pattern while the more recently developed portions in the western area contain many streets designed in closer relationship with the topography of the land.

The table following this section highlights the amount of land developed into each major land use category, within the Westwood Study Area.

Certainly the areas of major concern in this community are those adjacent to the Western Michigan University complex on both the northeast and west. Of particular concern is the Douglas Neighborhood, affected not only by the housing demand generated by the University, which stimulated a number of structures to be converted into apartment units, but also because of the generally older homes and lack of adequate parking facilities. Other factors disturbing the residential unity of this neighborhood are the number of major thoroughfares dividing the area as well as the rather steep topography which is generally incompatible with the grid pattern of street design.

Increasing demand has been generated for additional rental housing units in the Knollwood Neighborhood south of West Michigan Avenue. Lack of off-street parking as well as traffic congestion will become increasing problems if adequate measures are not taken shortly, while the problems are still manageable.

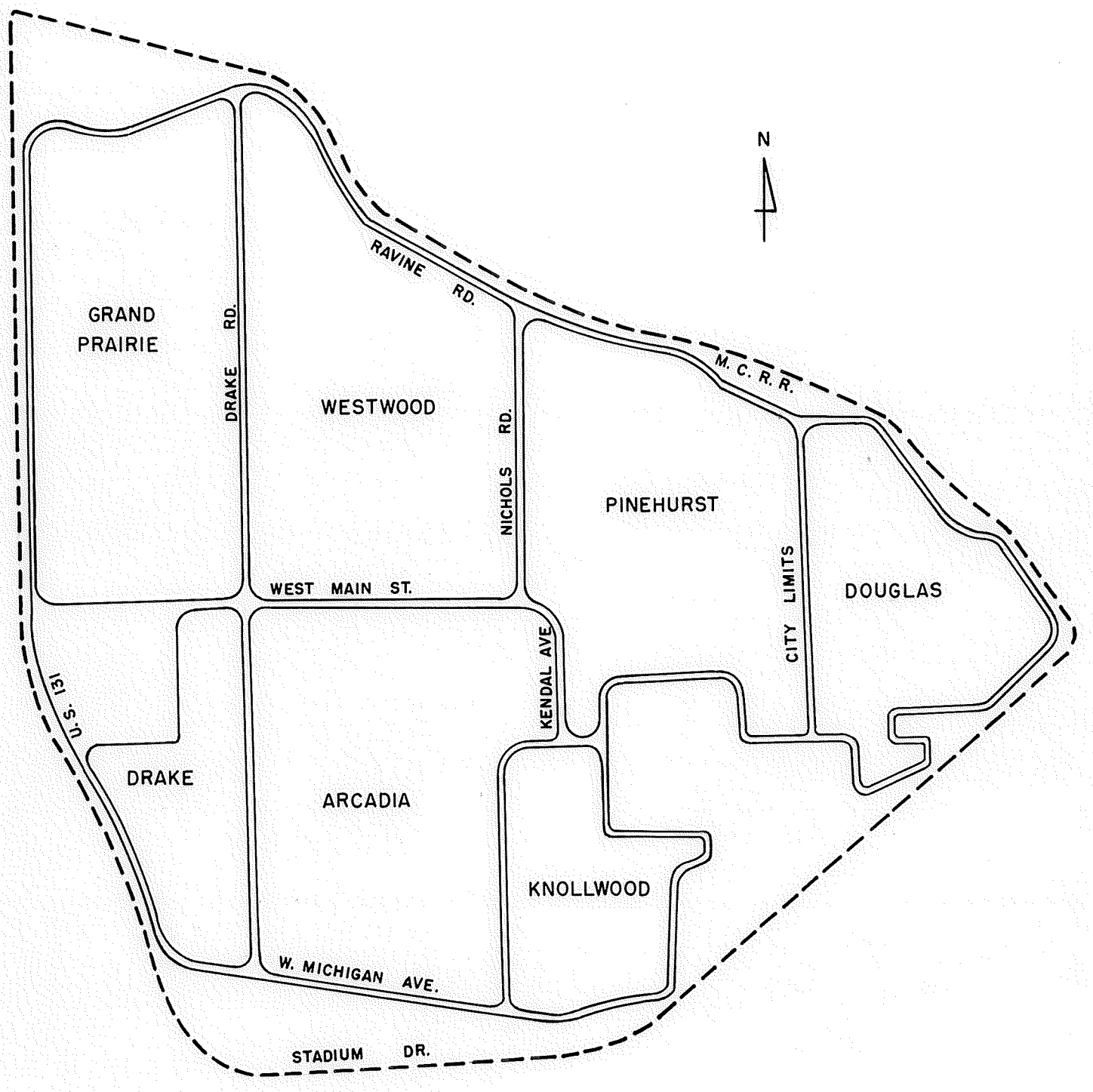
Existing and potential problems pertaining to areas adjacent to the University and College complexes are highlighted in the section dealing with the growth of Western Michigan University.

As pointed out in the present land use summary, only 32 acres or 0.5% of the study area is devoted to park use. Even this meager park acreage is reduced in effect when one considers that 6.4 acres of this total is composed of Little League ball diamonds, thus offering only a specialized recreational facility for the surrounding neighborhoods. Of the remaining acreage, only 20.5 acres can truly be termed neighborhood parks, as the remaining park sites are either undeveloped or completely lacking in park facilities. The overall community is thus extremely limited in both neighborhood and community park facilities.

In fact, based upon recent studies of existing park service areas it has been determined that nearly 90% of the area is inadequately served based upon recognized and accepted neighborhood park standards.

Much of the Pinehurst and Arcadia Neighborhoods suffer from a decided lack of convenience shopping facilities. As expected, when population growth takes place within the western portions of the areas, the problem will of course be intensified.

Consideration should be given as well to residents located within the southwestern portion of the study area, north of Stadium Drive. This area, detached from the remainder of the area to the north by railroad right-of-way must rely for convenience shopping on facilities one half mile to the east along heavily travelled Stadium Drive. Commercially zoned vacant land closer to the trailer park is available along Stadium Drive.



WESTWOOD STUDY AREA

WESTWOOD STUDY AREA

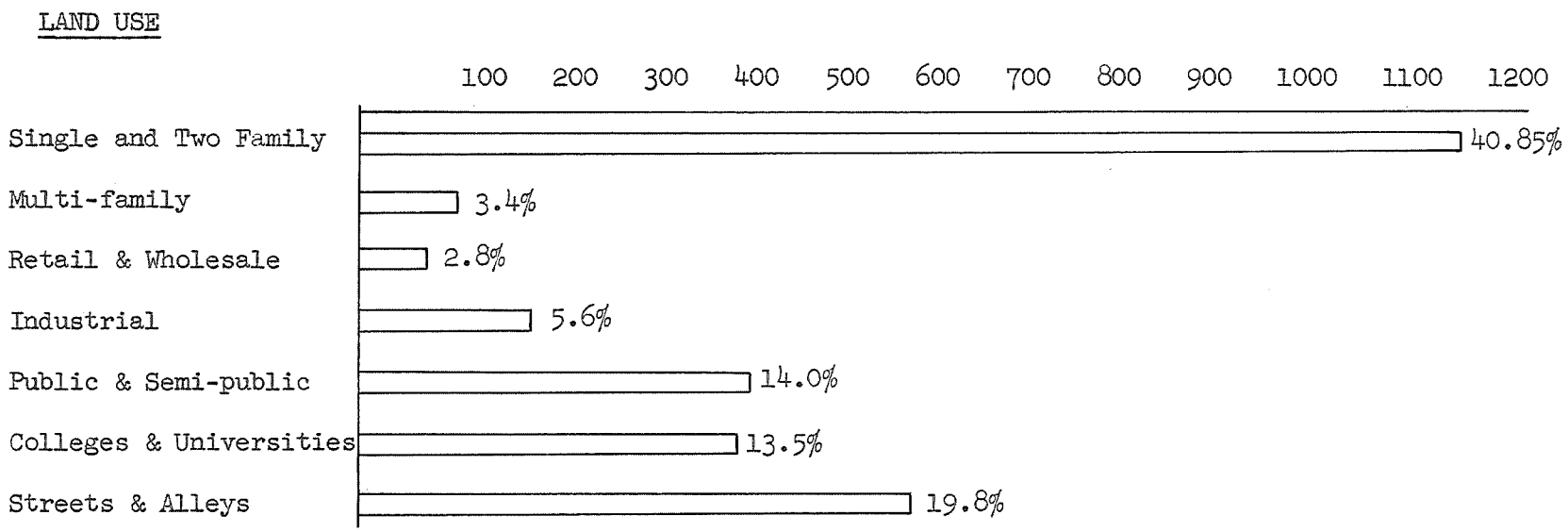
Comparison of Existing Land Use

Land Use Classification		No. of Acres	Percent of Study Area	Percent of Developed Area
Undeveloped		3015.40	51.51	--
Residential		1257.41	21.48	44.28
Single family	1077.74*			
Two family	51.36			
Multi-family	97.75			
Farm houses	4.65			
Trailers	25.91			
Commercial		78.78	1.35	2.78
Industrial		157.64	2.69	5.56
Public & Semi-public		397.49	6.79	14.00
Colleges - Universities		384.55	6.57	13.54
Streets and Alleys		563.17	9.61	19.84
GRAND TOTAL		5854.41	100.00	100.00

*Acres

WESTWOOD STUDY AREA

Existing Use of Developed Land



Total developed land 2839.04 acres = 48.49%

Total undeveloped land 3015.40 acres = 51.51%

Total area 5854.41 acres = 100.00%

Traffic and Circulation

Traffic Generation

As the site of Western Michigan University, Kalamazoo College as well as numerous large apartment complexes, the Westwood Community has become one with an especially heavy volume of traffic. Estimated registration of vehicles with the Westwood Community alone is some 12,600 autos.

Traffic Increase

Traffic has steadily increased in the Westwood Community. Traffic studies undertaken by the Department of Traffic Engineering estimate that between 1960 and 1966 traffic has increased some 40%. With a few exceptions, most major thoroughfares have experienced an increase in traffic. The traffic volume map in the appendix indicates relative traffic volumes on major thoroughfares within the Westwood area. The width of the band represents volume of average daily traffic flow in vehicles per day.

Existing Street Widths and Capacities

Although most of the local streets within the residential neighborhoods of the Westwood Community have adequate right-of-ways and pavement widths to serve their restricted traffic carrying function, a problem does exist along certain portions of major arteries within the area. Analysis of present traffic volumes with the practical traffic carrying capacity of these thoroughfares reveals that the following portions of major thoroughfares have reached or will soon reach their rated capacity:

A) West Main Street

B) West Michigan Avenue

For purposes of clarification, the practical capacity of a street as used represents the approximate number of vehicles which can pass a given point (usually an intersection) in an hour without producing unreasonable delays, hazards or restriction of a drivers freedom to maneuver or requiring waiting for more than one signal cycle. Therefore, traffic congestion can be expected at peak hours where traffic demands indicate a requirement for additional roadway width.

With the substantial population increase projected within the Westwood Community as well as generally throughout the Kalamazoo area combined with expected land development patterns, the future traffic volume within the study area will expand accordingly. The present thoroughfare capacity will be evaluated further in light of future traffic volumes within the proposed circulation plan.

Existing Street Design

Most of the streets in the Westwood Community follow a gridiron design, except for the Arcadia area in which curvilinear streets dominate. Gridiron patterns, though efficient during the era of the trolley car, are somewhat less than satisfactory within the modern community.

A primary difficulty with the street network in Westwood is lack of a pattern of collector streets. A helter-skelter arrangement of minor streets intersect with West Main, West Michigan, etc. Other than Alamo Avenue, Drake and Nichols Road, there are no collector streets to accumulate traffic to deliver it to these arteries in sufficient volumes to create major intersections. Thus West Main and West Michigan actually act as collector streets as well as

arterials. Because of arterial volumes, it is difficult for minor street traffic to enter upon, or cross their many points of intersection. A well designed street network provides minor streets (residential) with access to collector streets of moderate volume, accumulating traffic to a point of intersection with an arterial, where it interchanges or continues dependent upon its destination. Proposed in this report is the development of a collector street system within developed and underveloped portions of Westwood.

Modern traffic engineering practices have done much to improve and regulate the use of streets. Throughout the City the Traffic Engineer's office has installed a system of traffic signs and signals for more efficient traffic movements. Through streets are generally protected by stop signs.

Nevertheless, the ever increasing volume of traffic has created congestion accompanied by accidents. (see traffic accident map in the Appendix.) Furthermore, the gridiron street pattern in Westwood does not encourage any variety of street functions. When arterials are overcrowded or otherwise become inconvenient, some neighborhood streets, particularly in the eastern portions of the community, are used for through traffic.

Existing Street Pavement

Statistically presented, of the nearly 69 miles of streets serving the Westwood Community, 50.8% consist of temporary pavement, 20.3% consist of strip pavement, while only 28.9% are of a permanent nature. Analyzed by major streets only, we find some 41.5% consist of permanent pavement while the remaining 58.5% are either temporary or strip construction. It is of interest to note that only 28.8% of West Michigan Avenue consists of permanent pavement construction. The following table indicates a more complete breakdown of street pavement types within the Westwood Community.

STREET PAVEMENT TYPES - WESTWOOD AREA

TOTAL STREET PAVEMENT RESUMÉ		
SURFACE TYPE	MILES	PERCENT OF TOTAL
PERMANENT	20.02	28.9 %
STRIP PAVEMENT	35.16	50.8 %
TEMPORARY PAVEMENT	14.02	20.3 %
TOTAL	69.20	100 %

MAJOR & COLLECTOR STREET RESUMÉ			LOCAL STREET RESUMÉ		
SURFACE TYPE	MILES	PERCENT OF TOTAL	SURFACE TYPE	MILES	PERCENT OF TOTAL
PERMANENT	9.12	41.5 %	PERMANENT	10.90	23.1 %
STRIP PAVEMENT	6.45	29.4 %	STRIP PAVEMENT	7.57	16.0 %
TEMPORARY PAVEMENT	6.38	29.1 %	TEMPORARY PAVEMENT	28.78	60.9 %
TOTAL	21.95	100 %	TOTAL	47.25	100 %

Community Facilities

This section of the report concentrates upon public schools, parks, libraries and fire station facilities in the Westwood Community. The following discussion will concern itself only with the location and physical plant of these facilities. Other aspects, such as educational and recreational programs as well as related financial aspects are equally important but obviously beyond the scope of this report.

Schools

Within the Westwood Community there are located six public elementary schools, one junior high school and one primary school, serving kindergarden through the third grade. (See existing school facility table following this section).

The exceptional education standards of the Westwood Schools have been recognized for sometime. This accomplishment has resulted from the special interest and concern shown by the area's parents as well as the continuous efforts by the Kalamazoo School Board toward school improvement throughout the Kalamazoo Area.

However, some problems do exist which must be faced shortly:

(1) Some schools are approaching capacity and no doubt will surpass it in the near future based upon projected growth trends.

(2) There is a present need for the location of a senior high school facility as well as a forseeable future need for another junior high school to serve the secondary educational needs of the population.

(3) All six elementary schools in the Westwood Community have a portion of their $\frac{1}{2}$ mile service radius divided by a relatively heavily traveled traffic artery. The obvious disadvantage of this condition is apparent when one considers that at least a portion of its elementary grade children must cross these streets in their journey to and from their respective schools. This situation does not present such an important problem in the case of the Grand Prairie, Indian Prairie and Westwood Schools since the areas cut off by the thoroughfares are not presently heavily populated. However, the problem is of immediate concern in the West Main School, Woodward School and Arcadia School areas.

(4) Based upon recognized school service standards (see appendix), two areas of the community appear inadequately served by elementary schools. These are: (1) the eastern portion of the Pinehurst and western portion of the Douglas Neighborhoods and (2) the portion of the Knollwood Neighborhood, located south of West Michigan Avenue.

EXISTING PUBLIC SCHOOL FACILITIES

NAME	DATE OF CONSTRUCTION	SIZE OF SITE	1966 ENROLLMENT	% OF PRESENT CAPACITY
ARCADIA	1964	10 ACRES	279	83 %
GRAND PRAIRIE	1956	7 ACRES	173	66.5 %
HILLSIDE JR. HIGH	1956	22 ACRES	952	103.7 %
INDIAN PRAIRIE	1959	12 ACRES	374	89.0 %
PETER PAN	1956	2.3 ACRES	77	N.R.
WEST MAIN	1918	2.3 ACRES	359	85.5 %
WOODWARD	1921	4.4 ACRES	711	91.2 %

Parks and Playgrounds

Probably nowhere in the City is the need for park facilities as great and the opportunities better as in the Westwood Area. With the exception of the recreation facilities contained within the campuses of Western Michigan University and Kalamazoo College, as well as the facilities provided by public schools essentially serving their own student enrollment, the Westwood Area is nearly devoid of such facilities.

It is readily observed that the Westwood Area containing some 18,000 persons (excluding on-campus college students) contains only one park of any consequence, namely Knollwood Park. Even this park, serves effectively only a relatively small area since much of its potential service area is divided by a railroad right-of-way to the south and heavily traveled West Michigan Avenue to the north. Its service area to the east is extremely limited by the location of the expanding Western Michigan University complex.

Additional facilities within the study area consist of a scattering of extremely small ornamental parks within the Douglas Neighborhood. The two additional parks located on West Main Street at Waldo Avenue and off Grand Prairie Road respectively, are more correctly categoried as Little League baseball diamonds and as such have no picnic or other recreational facilities. The greatest use of these facilities is obviously that of scheduled games rather than serving the neighborhood need for informal recreational use. Crossing of West Main Street adds another obstacle barring its possible use by residents in the Westwood Neighborhood.

The location of the Westwood Senior Little League ball diamond on Grand Prairie Avenue renders it rather ineffective from a park service standpoint since

population within its one-half mile service radius is somewhat sparse. Moreover, as in the case of the West Main facility, its two well cared for diamonds receive their greatest use through scheduled games.

It is obvious that the park area for each neighborhood is well below recommended park standards (see Appendix). While a typical neighborhood of 5,000 to 8,000 residents should have some six to ten acres of park land, Knollwood Park comprising the only sizable park in the community, contains 19.5 acres (much of which is undeveloped) resulting in an average of 5.4 acres per 5,000 people, considering the Westwood Area as a whole. For further details on existing park facilities examine the chart on page 18.

The most serious problem stems from the fact that most of the residential areas in Westwood are well outside the Knollwood Park service area. In summary, less than 10% of the residential area in the Westwood Community is adequately served by parks. The areas where such facilities are most seriously lacking are: the Arcadia, Westwood and Douglas Neighborhoods.

The Park Service Area map, appearing in the Appendix of this report serves to highlight the seriousness of this problem in the Westwood Community.

EXISTING PARK FACILITIES

NAME	LOCATION	SITE SIZE	AVAILABLE FACILITIES	COMMENTS
KNOLLWOOD	WESTBROOK ST.	19.5 ACRES	FEW PICNIC TABLES, GRILLS, 2-SOFTBALL DIAMONDS	BALL DIAMONDS POOR, NEEDS ADDITIONAL FACILITIES
WESTWOOD JR. LITTLE LEAGUE	W. MAIN & WALDO	3.4 ACRES	3-BASEBALL DIAMONDS	GOOD DIAMONDS, NOT INTENDED FOR OTHER FORMS OF RECREATION
WESTWOOD SR. LITTLE LEAGUE	GRAND PRAIRIE	3.0 ACRES	2-BASEBALL DIAMONDS	GOOD DIAMONDS, NOT INTENDED FOR OTHER FORMS OF RECREATION
LOVELL ST. PARK	LOVELL ST. & W. MICHIGAN	1.8 ACRES	NO FACILITIES	PICNIC FACILITIES MIGHT BE IN ORDER
NO NAME	ACADEMY ST. & GRAND	1.4 ACRES	NO FACILITIES	PICNIC FACILITIES MIGHT BE IN ORDER
HENDERSON PARK	W. MAIN & GRAND AVE.	1.3 ACRES	NO FACILITIES	ORNAMENTAL PARK, NOT SUITABLE FOR ACTIVE USE
JONES PARK	HENDERSON DR. & PEAKE RD.	1.1 ACRES	NO FACILITIES	ORNAMENTAL PARK ONLY
NO NAME	HENDERSON DR.	1.0 ACRES	PICNIC TABLE, SLIDE, TEETER TOTERS SWINGS	

Library Facilities

Presently the only library service offered to residents within the Westwood community consists of bookmobile service. The following table indicates the location and schedule of bookmobile stops as well as the average weekly circulation for each location.

Library Bookmobile Service
to Westwood Area

Stopping Place	Length of Stop	Day	Average Circulation per week	
Arcadia	$1\frac{1}{2}$ hrs.	Tues.	96	
Alamo & Nichols Road (7 Day Adventist Church)	1 hr.	Mon.	51	
West Main School	2 hrs.	Thurs.(night)	110	
Westwood School	$2\frac{1}{4}$ hrs.	Mon.	179	
Westwood Shopping Center	2 hrs.	Sat.	152	
Woodward School	$1\frac{1}{2}$ hrs.		43	
		Total	631	(32,812/year)
On Fringe				
Stadium Drive (Minute Market)	$1\frac{1}{4}$ hrs.	Tues.	41	
LaCrone Park (Cobb Street)	3/4 hrs.	Fri.	(36 in summer at park (293 school year at North Christian	
		Total	370	(13,215/year)

Bookmobile carries 2500 volumes - both adult and juvenile reading.

Westwood is the best covered section of City by the bookmobile.

Bookmobile stops once per week at each of the above locations for the designated amount of time.

In consideration of the present circulation within this area, construction of a branch library is probably not justified at the present time; however, such a facility will obviously be necessary within the foreseeable future based upon expected population growth factors.

While bookmobiles fulfill the present gap, they do not offer the desirable services available in a permanent library such as a wide selection of books, reference material, seating space, etc. It is for these reasons that serious consideration should be given the location of a branch library within the Westwood Community. Since many of the branch library's patrons are juveniles, it would seem desirable to keep this community facility as close to as many homes as possible. The increase of income, leisure time, and educational level as well as population will all tend to increase the need for such a facility in Westwood.

Fire Stations

The National Board of Fire Underwriters recommends a set of standards for effective fire protection service dependent upon property values of areas within a specific driving distance from specific types of fire stations measured along existing streets. They are as follows:

Engine Companies -

3/4 mile radius for High Value District (generally industrial and commercial districts, including hospitals and universities)

$1\frac{1}{2}$ mile radius for Residential Districts

Ladder Companies -

1 mile radius for High Value Districts

2 mile radius for Residential Districts

Based upon these standards, the fire protection service area map in the appendix indicates that much of the Westwood Community is lacking in proper fire protection. Two fire stations are presently located within the Westwood Community, one of which is a volunteer township pumper station, which obviously does not provide the full protection that a fully manned, specially trained crew affords.

The remaining station (No. 5) on Douglas Avenue is in effect called upon to protect the entire Westwood Area. Referring to the service area map, it can be seen that this station does provide adequate protection for Kalamazoo College (A) and the commercial strip located along West Main Street as well as the commercial area located on Douglas Avenue; (C) and (B) respectively. How-

ever, the largest amounts of high value property in Westwood are located outside the recommended 3/4 mile radius protection limit. Of particular concern is the fact that all of the Western Michigan University West Campus complex (D) is theoretically unprotected. In addition, the commercial complex on West Michigan Avenue, west of the campue (E); apartment housing on West Main Street, (F&G), the Westwood Shopping Center (H), as well as a commercial area (I), near the Kalamazoo College Athletic Field are also situated outside the service limits of the Douglas Station.

In addition to the aforementioned lack of high value area protection, more than half of the residential area in Westwood is beyond the recommended service area. It is essential that better coverage be extended to these areas thus reducing fire hazards within the Westwood Community to the greatest degree possible.

The Fire Protection Service Area Map in Appendix indicates present and proposed fire stations as well as their respective service areas. It can be readily seen that present facilities are decidedly lacking in regard to adequate protection of high property value complexes as well as the entire western portion of the Westwood Community.

The recommendation regarding the location of a new fire station is based on the following considerations:

1. The type and density of the improvements to be protected. The fire station should be located in close proximity to high value districts in accord with the aforementioned standards discussed in the review of existing conditions.
2. Fire stations should be located close to existing or proposed major thoroughfares.

3. In addition to having readily available access to major thoroughfares, the fire station should be located where no man-made or topographical barriers would hinder the departure of men and equipment.

4. Fire stations should be located on a wide two-way street, however, the stations should not be located on the near side of a traffic light unless the station has access from two directions. In addition, consideration must be given to the size of the site. Good sight distance on the street in both directions is mandatory.

5. If possible, a fire station should be located on a site which can be partially developed as a park for both the surrounding neighborhood and used by the firemen as well.

Based upon the foregoing, it is the recommendation of the Planning Department that serious consideration be directed toward the location of a fire station within an area adjacent to the proposed Howard Street Extension alignment and Kendall Avenue near the present City Limits. A station in this location would be afforded ready access by means of a major crosstown thoroughfare to the University complex, large multi-family developments as well as location adjacent to large residential developments within the Westwood Community.

Considering the high rise construction now taking place on Western's campus, as well as possible future construction of similar design; the need for the service of a ladder company, either within the Westwood Community, or readily accessible to it is emphasized.

Growth of Western Michigan University

Considered in the context of national trends, the formidable growth of Western Michigan University should surprise no one. The tremendous increase in the numbers of college age people in the nation has likewise occurred in the Southwestern Michigan area; (between 1960 and 1965, persons of college age increased some 15% in the City of Kalamazoo alone). Moreover a greater proportion of persons in this age group are attending college than ever before.

Further study suggests that the rate of increase will maintain its accelerated pace for sometime in the future. Advances in technology and the changing character of the urban labor market have created an increasing demand for higher education, thus supporting a steady increase in the college age group attending college. At the turn of the century, less than 5% of this age group was enrolled in college. Indications are that it will increase to 40% by 1975.

Estimated future enrollment for Western Michigan University has been placed somewhere between 20,000 and 25,000 representing 110% and 162% increases respectively over the 1961 enrollment figures of 9,545. The current support being given to the establishment of a new community college is recognition of the problem.

Such action will help to relieve some, but by no means all, enrollment pressure upon Western Michigan University, which will continue to be one of the State's prime centers for many types of undergraduate and graduate education as well as specialized industrial programs.

Growth of the University will have its effect on the Westwood Community in several ways:

1. Increased enrollment, employment and activity at the University will greatly increase demands for housing, community facilities and other physical and cultural services in the area.

2. This same activity will attract other related activities to locate near the University, which in turn will increase the demand for land in the Western Kalamazoo area.
3. Modern universities require large campuses to accommodate their complex and diverse needs for teaching, research and public services.
4. Probably of most current importance, is the fact that both the University and its related activities will result in sizable increases of traffic generation in and out of the area.

University Problems

Probably the subject most perplexing to both University authorities and Westwood residents is that of traffic - both moving and parked. Although this problem will be discussed in greater detail in the material to follow dealing with traffic circulation within the Westwood Area, it is obvious at the outset that the University currently suffers from an inadequate street system, both in capacity and design. Adding to the traffic problem is the fact that the University campus is presently split by a major thoroughfare, namely West Michigan Avenue, rather effectively separating a major dormitory and activity area from the remainder of the campus.

Other problems faced by the University are similar to those confronting most large educational facilities today such as the ever increasing housing need for both students and faculty as well as the constant pressure upon the schools building program.

Associated Problems

The following represent problematic aspects associated with the university complex but generally located outside its confines:

1. The abrupt intrusion of apartments in an area of single family homes. Apartments are needed in the community, but their locations must assure proper residential mixture with their neighborhoods. Unfortunately, past experiences in some sections of Westwood have been to the contrary, i.e., when large apartment structures invade single family home areas, causing a disorganization of the structural scale and composition of the district.
2. Unattractive business and shopping centers. Higher standards of design for other shopping centers have made many of the older Westwood business strips not only economically less competitive but visibly less attractive. Among businesses in these areas, shopper appeal has probably been substantially reduced because of the chaotic congestion at the intersections and driveways, the lack of store front appeal and the clutter of signs.
3. Inadequate and poorly designed parking facilities. Many off-street parking facilities in business and apartment areas are seriously lacking in needed spaces and certainly their appearance is detracting from the surrounding area. Unless properly screened, they disrupt the continuity of the community, particularly when their bounds extend for a long distance, causing a sea of vehicles to obliterate an otherwise unspoiled area.

Outlook for the Future

The needs of the Western Michigan University will either require more land or demand more intensive use of land now in use, or both. The University's decision in developing the North Valley area and the former Gateway Golf Course will relieve some of this demand for space, but the University, despite its continuous

efforts, still faces a major task in meeting its building needs and solving its traffic circulation and parking problems.

The presence of the University assures Westwood of continued dynamic growth. But its presence does not save it from haphazard growth. For example, as a response to the housing demand since 1963, some 955 apartment units have been constructed or are presently under construction within the Westwood Area alone. Too many of them were built with little concern for their affect on their surroundings and the overall affect on the future of the community.

The parking problem is caused largely by campus traffic and by the failure of the University and some business and apartment builders to provide adequate off-street parking facilities. Under the present parking ordinance new business, industry and apartment developments are required to provide adequate off-street parking (the requirement for apartment units was doubled a year ago, but off-street parking for housing facilities serving college students remains inadequate. The overcrowded streets adjacent to and within the University have made traffic movement more difficult, and curb parking has intruded into some of the adjacent residential sections of this community.

It is clear that the University and College growth poses a challenge as well as an opportunity to the Westwood Community. The challenge must be met through careful negotiation of problems involving the physical relationship between the two schools and the community. Especially critical will be decisions on new and improved traffic facilities to serve traffic adjacent to and within the campus, plans for parking and provision of student and faculty housing.

II KEY ISSUES

National, regional and local forces affect the Westwood Community as well as the whole of Kalamazoo in persistent and profound ways. They strongly influence everyday life and work of Westwood residents. For some, it means loss of neighborhood atmosphere and changes in property value. For others, it means the threat of diminution of business, more congested streets, as well as more difficult parking situations. Among all these problems and issues confronting the future Westwood Community, six main areas of concern exist:

••• The influx of student population to the area will continue, even though Western Michigan University is attempting to control its future growth rate. Adequate, decent and safe housing and healthy neighborhoods must be provided for the students. Areas closer to the downtown area will contain, no doubt, a rather large number of transients. The accommodations for a large number of students and the transient population may preclude the possibility of providing for a more permanent population in certain areas. The challenge lies in the achievement of proper balance between the transient and permanent population. Such balance will determine housing types, densities, and the land use pattern. University housing policy for single as well as married students, and for staff as well as faculty will certainly affect this balance.

••• Although balance of population is pertinent to the stability of the community, it alone can't hope to establish this stability. How to arrest the aging and deterioration in the older sections of the community is another question. The answer lies in whether the community is able to continue to renew itself. It depends largely upon proper enforcement of the housing code, zoning ordinance, feasibility of urban renewal and encouragement of private investment.

••• As traffic volume grows, the challenge lies in proper planning for arterials - a collector system of streets to minimize disruption of the community and the campus, and at the same time provide essential traffic services. As parking demands increase, provision for parking spaces for the campus, business centers, apartments and dormitories becomes increasingly critical. The solution will depend largely upon the University's policy regarding use of autos by students, and provision for adequate off-street parking by business and apartment developers.

••• It has become increasingly evident that major thoroughfares cannot and should not represent the sole answer to all complex transportation problems the City faces now and in the future. The challenge will lie in proper planning for public transit systems and in maintaining a proper balance between public and private transportation systems.

••• The changing and growing population has caused changing demands for community facilities. Increase in school enrollments, a result of the growing population, will create new problems, most notable of which is the need for a Senior High School. The challenging question is the location of a new Senior High School in the community which could serve as a focal point of the new residential development in Westwood. As for elementary schools, the challenging issue is the proper adjustment or consolidation of facilities to meet new needs of the changing population and provide modern standards for educational facilities. Similarly, park facilities must be provided in appropriate areas so that they may serve the Westwood population.

••• Older business centers in the area have been unable to maintain their economic positions, particularly those not directly related to the campus. This condition is common in other areas of the City as well. The most compelling

cause in this relative decline is the growth of suburban centers and the competition they furnish. To meet that competition, the challenge is:

... whether these older centers, through joint private efforts or a public program, will be able to acquire needed off-street parking space, to consolidate land to provide more modern facilities, and above all, make them more competitive with suburban centers in goods and services.

... whether the centers, working with public agencies will be able to solve their traffic problems, eliminate some of the bottlenecks and create a system of integrated service roads.

... By no means least important is continuous cooperation among Western Michigan University, Kalamazoo College, the Westwood Community, the City of Kalamazoo and Kalamazoo Township for proper development of the entire area. It is obvious that continuous comprehensive planning for the colleges will be required. Since such a close relationship exists between these complexes and the community, proper planning for one must include the other. Until the University and College begin a program of long range planning for their campuses and make their plans known to the community and the city as they develop planning, efforts on the part of the latter will be in vain. The challenge is to find the proper way for the University, College, the Community and the City to spark present cooperation into an overall drive to build both a lasting and desirable Westwood Community.

These issues and how Westwood residents, businessmen, school officials and civic leaders face up to them will determine to a large extent the future of the area. They will decide if the area is to become one of the most exciting

communities in Kalamazoo, where pleasant neighborhoods surround dynamic campuses and where businesses prosper as the community grows. Conversely, they will also decide if the area is to be overrun by traffic, overcrowded with a transient population leading the community down the route to a substandard area. In effect, it becomes a life and death matter for Westwood.

Above all, the area needs a detailed comprehensive working plan to outline a program of action that will inspire energy and imagination to work together to bring a new life to the Westwood Community. The plan must be based upon the Community's needs and desires. It is a matter of community goals, the subject of the next chapter.

III PLANNING GOALS

Guides to Action

As pointed out in the Land Use Plan, the guideposts to planning are the values and needs of citizens. Any plan orprogram must be based upon these aspirations, but they must first be formulated into goals. Seldom, however, are such goals put into written statements; instead, they remain implied or understood, not clearly stated.

Failure to formulate goals frequently leads to contradiction and conflict in action, either because no thought is given to the community's basic objectives or because secondary objectives are confused with basic objectives and are allowed to override them. On the positive side the process of goal formulation and goals themselves have four specific values.

1. Goals give direction to government officials and agencies enabling them to work in closer accord with community desires.
2. The process of goal formulation clarifies the difference between primary and secondary objectives, thereby providing a clearer understanding of each.
3. Goals provide a framework of understanding so the many diverse decisions affecting the City can be made in the same context.
4. The formulation process provides an opportunity for community and individual discussion of objectives and brings the citizen into direct participation in his City's development.

Four Major Goals for the City

- A balance in the age and economic structure of the City's population should be maintained. This goal has economic and social significance. This

requires protection and enrichment of the residential neighborhoods throughout the City.

- Create and maintain healthy economic conditions by encouraging suitable commercial and industrial development.

- Preserve and enhance the position of the City as an educational and cultural center.

- Maintain a flexible program to take advantage of improved planning techniques, compatible with projected population growth and changing economic and social conditions in the community.

The Ideal Community

There are five residential communities in the City. Each should contain a wide range of activities and land uses; residential, commercial, recreational and cultural. It is not necessary, in some cases not desirable, that each community contain an industrial complex. However, it is desirable that each one should have good access to industrial concentrations for purposes of employment. Each community should also contain several focal points, such as a high school, a community shopping center, and a large recreational center.

The Ideal Neighborhood

There are some nineteen neighborhoods in the City. In each neighborhood the homes and apartments should be linked by quiet streets. An elementary school and adjoining playground should be centrally located, within one-half mile of every residence. A small shopping center is available in which everyday items, such as milk, bread, sundries and drugs can be purchased. Heavy traffic

is restricted from the neighborhood and is carried at its edges by arterial streets (which can also serve as neighborhood boundaries.)

Goals of Westwood

Within the general context of the aforementioned four major City goals, as well as the recommended community profile, the goals for Westwood are defined. The goals touch upon the desired population and housing composition, the improvement of community facilities, business and industry, traffic and circulation, college growth and its coordination with community development.

It is obvious the population cannot be controlled in the direct sense that traffic can. However, the City policies on housing and provision of public facilities will influence the population that it attracts. Neither does the definition of goals discriminate against certain race and age groups of the population. It is rather directed toward the establishment of certain levels of population increase which are physically capable of being accommodated in the Westwood area of Kalamazoo without causing any undesirable overcrowding, congestion, blight or haphazard growth.

Since population determines the housing demands, public facilities needs, traffic generation, and business volume, it must be considered first. The improvement of schools, parks, streets and the provision of better stores and services are all interrelated. Because they jointly determine the "livability" of Westwood, they must be considered together. Since the expansion of Kalamazoo College and particularly Western Michigan University play so great a part in the Community's growth, it becomes essential that both programs be coordinated.

Further study must determine specifically how such coordination should be carried out.

Generally speaking, the majority of problem situations and related goals can be expressed in six major areas, all related to the physical environment, namely:

1. Population and Housing
2. Commercial Development
3. Community Facilities
4. Traffic and Circulation
5. University and College Development

Population and Housing

1. Every effort should be made to promote a stable community -
   a. with residential development logically distributed throughout the Community.
   b. with much the same social and economic structure as now exists.
   c. with encouragement of the child-bearing and stable adult groups, holding the mobile adult group compatible with University growth and at the same time directing the major planning effort toward a more stable population.
2. The Community should contain a variety of housing types and sizes properly related to the economic and social needs of the Community and to the varying needs of families and individuals. Consideration should be given to:
   a. Stable family housing needed for permanent university faculty and for other families employed in or

outside of the Community who may prefer to live near the school complexes.

b. Providing adequate housing for university students and other transient population.

3. Conserve the one and two family dwellings and the sound large homes which add beauty and historical significance to the Community. Encourage new multiple family dwellings varying from garden apartments to limited but tastefully designed high-rise apartments judiciously located near parks, open spaces or on neighborhood fringes.

(College policies, with respect to providing housing in Kalamazoo for single students, married students, faculty and other staff, will have some influence on the realization of these goals).

Commercial Development

1. Efforts should be made to improve existing commercial complexes as well as provide new development where needed to give maximum commercial service to the Community.

2. High priority should be given to providing adequate, properly located, and well designed parking areas adjacent to the commercial and business centers.

3. Attract new industry compatible with the Community, such as research-oriented types of industry in selected areas, following wherever possible, the industrial park concept.

Community Facilities

In order to stablize the Westwood Community, it is essential to maintain and enhance the full range of community facilities including parks, schools, libraries and fire protection stations.

1. Parks

   A. Each neighborhood should have an adequate, well equipped park, preferably adjoining the elementary school.

   B. More green space should be provided in areas of increasing density to serve the recreational needs of the population.

   C. Quiet parks should be developed according to the opportunities offered by various land forms such as on steep or low sites as well as along water courses, integrated with active and passive recreation areas and a larger open space program.

2. Schools

   A. Each neighborhood should contain an elementary school with 1/2 to 3/4 mile walking distance of all children. Such a facility is usually envisioned as the social focal point of the neighborhood. It should be located away from heavily traveled streets or be adequately protected where such location is not possible.

   B. A senior high school should be developed offering a full program.

   C. Gradual replacement or modernization of aged and obsolete schools should be continued.

3. Libraries

   In order to better serve the growing population of the community,

efforts should be made to evaluate present library service regarding the future location of a branch library within the Westwood Community.

4. Fire Protection

   High priority should be given to the relocation of fire protection facilities insuring that they be accessible and adequate for all parts of the Community.

Traffic and Circulation

1. The present traffic situation in certain areas of Westwood is hazardous and will become even more perplexing with continued growth in the future. Heavy east-west through traffic as well as university oriented traffic adversely affects both the universities and the neighborhoods surrounding them. Every effort should be made to implement improvement where needed of all arterial traffic facilities in Westwood as well as develop an adequate by-pass system adjacent to Western Michigan University.

   The resulting increased capacity of major thoroughfares added to the benefits resulting from an adequate by-pass system should effectively channel traffic where needed, draining off through traffic from residential neighborhoods.

2. Development of thoroughfare plans should be carefully studied at all stages to prevent isolation and strangulation of small residential sections.

   A. Adequate intercommunication should be provided between areas separated by major thoroughfares.

B. Access and egress routes should be carefully developed respecting both existing and expected future land use patterns.

3. A safe pedestrian circulation system should be developed relative to the universities, schools and shopping areas.

4. Some proposals for solving serious parking problems in the Community are:

   A. More intensive use of existing University parking space, i.e., parking ramps.

   B. Requirement of additional off-street parking provision by residential units catering to college students.

   C. Cooperation between private and public interests in providing additional off-street parking facilities adjacent to commercial complexes where needed.

5. Improvement of existing public transportation service and integration of express service into the thoroughfare system serving the College and University areas. (College policies with respect to provision of parking facilities and mass transportation of students will aid in determining details of the aforementioned objectives.)

College Growth

Since both Kalamazoo College and Western Michigan University occupy such important positions in the Community, their policies affect every aspect of the Community's life. The basic questions with respect to the colleges at present seem to be:

1. Whether it is possible for the colleges now to individually consolidate and intensify their respective complexes thereby confining themselves generally to present boundaries.
2. Whether the colleges can integrate their planning with Community planning under common goals in the various planning areas subject to periodic joint review.

These goals represent the Planning and Traffic Department's first effort, as the planning program continues and the knowledge of Community problems increase, more specific and detailed objectives may be defined. The comprehensive plan presented in the next chapter represents an interpretation of these objectives. It contains a number of recommendations for the improvement of the Westwood Community.

IV THE COMPREHENSIVE PLAN

- The Concept - An Ideal Community
- The Land Use Plan
- Community Facilities
  - Parks
  - Schools
- Circulation Plan

An Ideal Community

Comprehensive planning for a community begins with a concept. The concept, to be of value, must recognize the basic functions of the community and outline its goals.

There can be little doubt that major portions of the Westwood Community, if not its entirety, are strongly influenced by the presence of Kalamazoo College and particularly Western Michigan University. A comprehensive plan for Westwood, therefore, must begin with the concept of an ideal university community.

First of all, an ideal university community in a metropolitan area must recognize that it cannot be an island. It must be an integrated part of the City and of the metropolitan area. An academic facility must be physically, socially, economically and politically connected with the City and the metropolitan area of which it is a part.

Such a community must provide a proper setting for the two campuses, where academic pursuit, research activities and public services are conducted. It must provide a proper residential environment where community and neighborhood spirit may prosper. A desirable area must be provided where vital industrial and economic activities may be efficiently conducted.

A university community is primarily a place for the exchange of ideas and thoughts. It must provide a setting that will encourage such exchange among students and faculty, both on and off campus, during and after school hours. On the other hand, a university community should not overemphasize its cultural aspect to the extent that it becomes almost separated from the rest of the City and metropolitan area.

A variety of housing to suit different incomes, needs and preferences regardless of races, colors and creeds is essential to this community ideal. Relatively low rent housing for students and attractive, moderately priced homes for faculty members must be provided. If it is to maintain its heterogeneity, it must go beyond accommodations for students and faculty. It must also provide housing for other university personnel who desire to live in the community as well as those who are employed downtown or in other major employment centers and who prefer to live in this community. Above all, it must achieve a balance of permanent and transient, university and non-university population.

High density housing for students within easy walking distance to the campus, particularly important in our climate, is desirable. Low and medium density housing for married students, faculty members and other residents should be further from the campus, but within two miles if possible.

A university community, as any other residential community, must contain convenient shopping facilities. University orientated facilities should be located near the edge of the campus, where they will serve both campus and community.

Churches, schools, parks, libraries and other facilities for religious, educational and social activities should also be a part of this community. Schools, parks and other community facilities should be located as close to their service areas as possible.

Quick and easy access from all parts of the City and metropolitan area, as well as internal circulation within the university neighborhood by both automobile and public transit must likewise be present. Adequate parking facilities are needed to serve both educational complexes as well as commercial and resi-

dential development within the community. Activities on the campus itself should be clustered in compact and identifiable areas on the basis of their compatibility and interrelationship with other functional areas, i.e., a central academic area, recreational and related activity areas and housing facilities.

Within the community, there must be safe, easy and pleasant pedestrian and automobile accesses to the campus, to shopping, and to other essential community facilities.

In summary, any plan for the Westwood Community should be judged in the light of the preceding general concepts.

The Land Use Plan

One of the most important basic elements of a comprehensive plan is the land use aspect, for most of the elements of the plan are designed to serve the urban pattern of land development. Land use determines the land and building values. The property tax, based on these values, is still the main source of City revenue. Land use generates traffic and land use patterns determine the "desire line" of traffic. For these, as well as other reasons, land use is one of the major elements in a comprehensive plan for the Westwood Area.

Changing urban activities have caused a corresponding shift in land use standards and development. For example, industry has changed its production process from a vertical to a horizontal orientation, resulting in an increased demand for land. Modern shopping requires adequate off-street parking and loading facilities as well as attractive store design. These stores often develop as a center rather than a strip, as in the old streetcar days. This results not only in an increased demand for land, but also in a new concept of land development for shopping facilities.

The standards for school, park, and other community facilities have also been raised, most of them calling for more land. Modern institutions such as universities and colleges are highly complex. They require extensive acreage for their diverse activities. New transportation facilities such as expressways and modern crosstown routes require wide right-of-ways; however, increased efficiency in automobile traffic movement should mean some reduction in land demand for other arterials. Most importantly, almost all urban activities today take up more land. On the other hand, in built-up sections of the metropolitan area, where land value is high, more efficient use must be made of precious land.

As noted in the chapter, "Westwood Today - Existing Land Use", there are characteristic problems in the land use pattern of Westwood. Among them are these:

* Rather abrupt changes in the residential density pattern, often with little regard for transitional blending of development or adequate buffering, using artificial or natural features.

* Sizeable portions of land are still available for low density residential development, but are being rapidly reduced with encroaching apartment development.

* Extensive amounts of land in the public and semi-public use category because of the University and College locations, but very little land devoted to public park use. Park facilities in most areas of the community are generally inadequate or nonexistent.

* Older retail concentrations consisting of scatterings of business establishments in a strip pattern suffering from inadequate parking facilities and poorly designed ingress and egress traffic facilities

* Recent enveloping growth of Western Michigan University, rather than blending with surroundings, has formed an "island barrier" between the Westwood Community and the remaining City portion to the east.

Recommendations

Residential

Since the general quality of a community is most often based upon the quality of its residential portions and the adequacy of its supporting service facilities, the following general statements are offered as a "frame of reference" for the more specific land development recommendations within the Land Use Plan section:

Most of the aforementioned land development problems plaguing residential portions of the Westwood Community are duplicated in residential sections throughout the City, lending further proof that we must reconsider the design of residential areas. Residents should collectively demand more from the residential subdivision. It is not just a question of buying a lot and building a home, but rather of buying a share in a neighborhood in which there are facilities for a well-planned life. Schools, parks, playgrounds, shopping centers, and paved streets with curbs and gutters are not luxuries, but necessities, and we must recognize them in the design of residential areas.

As a first step, neighborhood streets should be designed to cope with a traffic load required for a definite number of houses and all other traffic should be eliminated. These residential streets would connect to collector streets which would in turn connect to major thorofares linking the various parts of the metropolitan area. Because these minor streets are the point of transfer from mechanical to pedestrian movement and are the means of servicing the houses, it is logical that all of the service facilities in the home should be oriented to the street.

There has been a tendency in the past to classify residential districts into single-family, two-family and multi-family dwellings. This has often promoted monotonous enclaves of similar units. While there are good arguments for retaining some of the special residential districts, consideration should be given to approaching some residential development on a basis of diversity and performance standards, which will permit the harmonious blending of single family and multifamily units.

While the existing land use pattern cannot be totally ignored in the plan preparation, every effort should be made to implement adopted community goals.

Probably the most dynamic area within the City of Kalamazoo, the Westwood Community, is expected to reach nearly 56,000 persons by 1985. This would mean an increase of some 29,000 persons above the present estimate of 27,300.

In order to accommodate such growth, substantial amounts of land will be developed into low and medium residential density that are now either undeveloped or developed at a very low density.

Following the development trend indicated during the last decade, the western portion will be encouraged to retain its single family nature through the development of over 1200 acres in a low density classification in large undeveloped areas within the Westwood and the Arcadia Neighborhoods, as well as the major areas in Oshtemo Township, just west of Drake Road.

Substantial amounts of medium density residential development are proposed for the following areas:

the Douglas Neighborhood within areas located both north and south of W. Main Street; along W. Michigan Avenue, both within and west of the Knollwood Area; and adjacent to West Main Street between Sage Avenue and Drake Road.

In addition to the medium density development already present in many of these areas stemming from single family homes on relatively small lots, additional development will include scattered garden type and walkup apartments with the possibility of some town house development taking place.

Although much of the Douglas area is presently of a high density nature because of the number of apartment conversions that have taken place, substantial expansion in the high density classification is expected through the next twenty year period to fulfill the anticipated housing needs of students as well as university faculty and personnel. It is strongly recommended that the transitional density concept as described earlier in this report be followed in development adjacent to the University and College complexes as well as in other higher density residential areas.

Parks and Recreation

Although Western Michigan University fulfills some of the recreational land needs of the overall Westwood Community, a need for additional neighborhood facilities is indicated in most areas of the Westwood Community. The land use plan proposes a park area in the northern portion of the community to serve as a buffer between industrial uses and residential development to the south as well as to take advantage of topographic features which are of questionable building value. Neighborhood park facilities are also planned for the Grand Prairie, Arcadia, Douglas and Pinehurst Neighborhoods. The Land Use Plan also indicates an area lying between Stadium Drive and the New York Central Railroad, just east of Drake Road which might be developed into a golf course, thus substituting for the Gateway Course recently built upon by Western Michigan University.

The park aspect is covered in greater detail in the Community Facilities section of this report.

Commercial

While additional development has been proposed for the Rankin Street shopping facility, additional commercial depth is also recommended for the retail complex located on the north side of West Michigan Avenue from Burrows Road to Stone Street. In the case of the latter, a significant proportion of this commercial expansion is needed to provide off-street parking spaces and service areas. Together, these expanded facilities should prove adequate to serve the convenience shopping and service needs of the college complexes.

Additional expansion, particularly in depth, is recommended for the West Main shopping complex located within the Pinehurst Neighborhood. Such expansion in depth facilitates a more unified commercial development in keeping with the shopping center concept. Ease of ingress and egress are provided as well as adequate off-street parking spaces, thus freeing adjacent residential streets from this nuisance as well as removing potential traffic conflicts along the major thoroughfare.

Upon examination of the neighborhood shopping facilities within the Westwood Community and their respective service areas, it is obvious that at least one neighborhood facility should be developed within the western portion of the Pinehurst Neighborhood. The Land Use Plan indicates a possible location for such a complex in the vicinity of Nichols Road and Alamo Avenue.

Another apparent need within the western portion of the community is that of a truly community-serving shopping center. Trends have indicated that the

area adjacent to West Main Street and Drake Road may in the foreseeable future develop into such a complex. The location seems a logical one and is encouraged by the Planning Department.

It is obvious that the expected population growth of the Arcadia Area will require a neighborhood shopping facility in this area within the foreseeable future. A possible location for such a facility would be in the area south of West Michigan Avenue at or near Drake Road.

Industrial

The Land Use Plan proposes an additional 32 acres for industrial development along the northeastern boundary of the Westwood Community adjacent to the western right-of-way of the New York Central Railroad. Through proper development practices, light manufacturing and service facilities would not adversely affect residential areas to the west.

WESTWOOD STUDY AREA

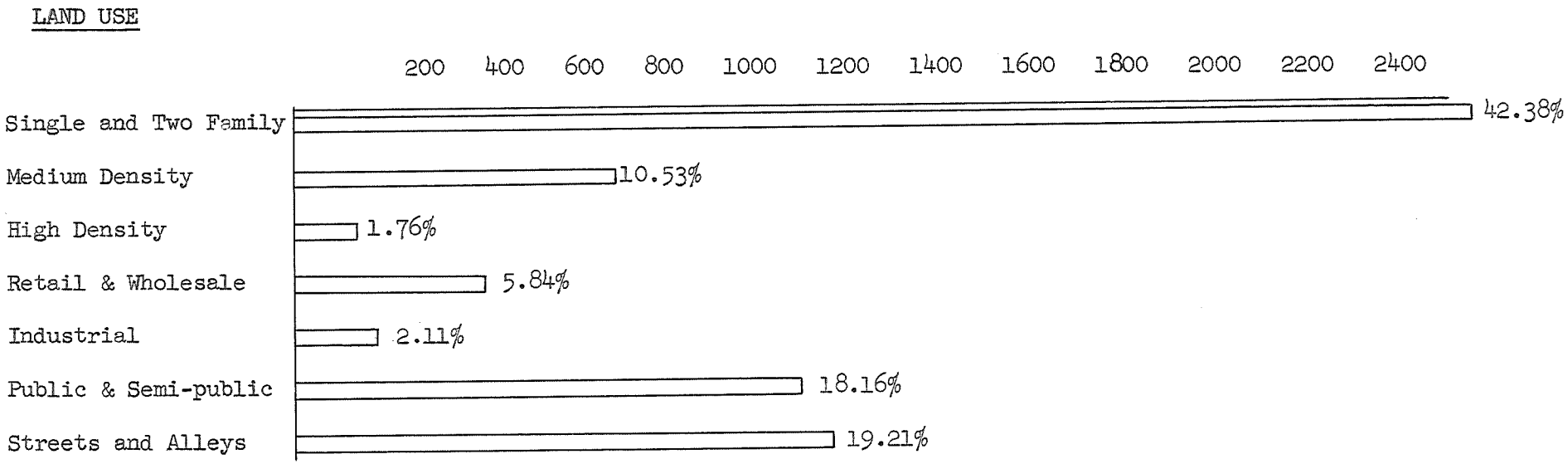
Comparison of Proposed Land Use

Land Use Classification		No. of Acres	Percent of Study Area
Residential		3200.90	54.68
Single family	2481.20*		
Medium density	616.62		
High density	103.08		
Commercial		341.64	5.84
Industrial		123.57	2.11
Public & Semi-public		1063.43	18.16
Streets and Alleys		1124.87	19.21
GRAND TOTAL		5854.41	100.00

*Acres

WESTWOOD STUDY AREA

Proposed Use of Land



Total area 5854.41 acres = 100.00%

Recommendations

Community Facilities

The quality and location of Westwood's recreation areas, schools, and other community facilities are as important to the Community's vitality as its homes, commerce, and transportation system. They contribute to the health and well being of its citizens and exert a great influence upon the quality of living in the City.

For these reasons, the Community's need to expand its park system as well as provide other needed facilities is an urgent one. This Chapter of the Comprehensive Plan sets forth recommendations to serve as guidelines toward accomplishing this goal.

Parks

As pointed out in the aforementioned material dealing with the existing development in the Westwood Area, park facilities were found to be extremely meager throughout the Westwood Community. Although playground facilities were generally available as components of school site developments, these playgrounds do not adequately fulfill the neighborhood need. They generally lack the passive park-like atmosphere (open space) as well as needed park facilities. It should be pointed out that this does not imply a criticism of school playgrounds in this area since these facilities presently are not intended to serve the surrounding resident population. However, there is a close relationship between schools and parks since they both provide needed recreation areas. The logical center for a residential neighborhood is a neighborhood park adjacent to an elementary school which can also render services as the Community building.

Parks have a three-fold value: (1) they provide areas for recreation both active and passive, (2) they preserve and develop natural beauty, and (3) they make land in stream valleys and other locations which is unsuitable to build upon into useful and attractive areas.

Local parks are properly a part of the residential environs in a community and should be designed integrally with each neighborhood. The neighborhood park provides public open spaces devoted primarily to individual recreation and esthetic satisfaction. In the final analysis, the local park is one of the most important elements in restoring to residential neighborhoods the amenities of desirable city living.

In regard to the location and development of neighborhood park facilities, the following objectives should be considered:

1. Distribution of these facilities throughout the community in accordance with the distribution of the population, so that the greatest number of people can take advantage of each one.
2. Placement of recreation space and facilities within each neighborhood where they will be most convenient to the people who will use them, and as close to the centers of the neighborhoods as possible.
3. Location of facilities so that they will be available to the people of newly developed neighborhoods as well as of older ones.
4. Facilitate the most efficient use of both school and recreation facilities.

In order to meet the aforementioned recommendations on parks, it is recommended that the following specific actions be considered: (a map depicting both present and proposed park facilities as well as their potential service areas is shown in the appendix of this report.)

(1) Wherever possible, school and municipal authorities should cooperate in park and playground development, utilizing the economical school-park concept. Such a program would provide needed parks in most of the neighborhoods while avoiding costly duplication of facilities. By combining an elementary school and a neighborhood park in one land area, portions of the school building may serve community needs and indoor recreation requirements, while the park may serve part of the school's recreation programs. Under these conditions, the combined facility truly becomes the neighborhood center.

(2) Several green spots should be preserved and encouraged in the built up areas where adequate park land is difficult to obtain. Each of the street divertors as suggested in the Traffic and Circulation Plan that follows could also provide permanent green spots with the respective neighborhoods.

(3) A relatively new type of park, the "Buffer Park" is recommended to separate industrial areas from residential areas. The Park Facility map in the appendix also indicates the locations in which this type of park can serve a valuable function.

(4) Neighborhood parks are recommended for development in the following areas:

(a) A 7.5 acre site located north of the present Arcadia Plat and adjacent to a proposed Junior High School facility which would serve the Arcadia Neighborhood.

(b) A 7 acre site, presently reserved by the developer, located north of Croyden Avenue adjacent to the plat of Stewart Downs #3, designed to serve the Westwood Neighborhood.

(c) A 6.9 acre site located just south of Westwood Elementary School, east of Nichols Road which would serve the Pinehurst Neighborhood.

(d) Two smaller park facilities, combined totaling some $4\frac{1}{2}$ acres located west of the proposed Howard Street Extension, designed in conjunction with the proposed throughfare to serve as both a buffer and park for the northern portion of the Knollwood Neighborhood.

(e) A 3.4 acre site located east of Berkley Street and north of West North Street designed in conjunction with a possible future elementary school site which would serve the eastern portion of the Pinehurst and western portion of the Douglas Neighborhoods.

(f) A somewhat smaller site located within the Douglas Neighborhood, south of Summit Street, north of West North Street and east of Denner Street.

(5) A larger community park is also suggested for development within the Westwood Area possibly in conjunction with a new Senior High School on a site north of Grand Prairie Avenue and West of Drake Road.

(6) A strip of undeveloped land along Ravine Road is proposed as a northern park ridge. This area containing extremely interesting terrain might be used for picnicking, hiking, children's day camp, etc., as well as serve as a buffer between the industrial areas to the north and the residential neighborhoods to the south.

(7) In addition to the above, two present parks, located near the intersection of West Lovell Street and West Michigan Avenue and between West Grand Avenue and Academy Street, consisting of 1.8 and 1.4 acres respectively, are proposed for improvement which would consist of provision of park benches and picnic facilities. They would then provide additional needed park service for the Douglas Neighborhood.

School Recommendations

The following recommendations concerning the proposed location of future school sites were largely determined by the prevailing and anticipated urbanization trends within the study area. Since it is impractical to recommend specific school locations in an area in which the future development densities can, with present tools, be regulated only to a degree, the proposed locations of school sites are purposely general. Conversely, the timing of the construction of the proposed schools, particularly within the western portion of the Westwood Community will be based entirely upon the urban densities and the time - distance factor which would justify the building of the facility at a given time during the planning period.

1. Although some of the elementary schools, particularly those within the western portion of the community will reach the rated capacity of their present facilities well within the foreseeable future, based upon projected population increases within their service areas - (Indian Prairie has already reached its capacity); most of the schools within this area consist of modern structures situated upon large land sites, thus lending themselves to expansion when necessary.
2. The West Main School is a notable exception to the above characteristics of the Westwood Elementary School. This school is obviously an obsolescent educational facility built in 1919 and situated upon a very limited site. Its present location, on the heavily traveled West Main Street, does not appear to lend itself to a proper

location for an elementary school in which a large proportion of its elementary age enrollment must traverse a major traffic artery. It is therefore our recommendation that replacement of this school be considered in the near future and investigation be undertaken toward its relocation, possibly within an area north of West Main Street adjacent to West North Street and Berkley Street. This general area has also been pointed out for a possible neighborhood park location, thus facilitating the school-park combination.

3. Nearly one-half of the Westwood School service area is located west of Nichols Road, which may duplicate the problem faced by the elementary enrollment of the West Main School when Nichols Road receives increased traffic volume spurred by the proposed Howard Street Extension which will utilize Nichols Road as its northern link.

4. Northern portions of the Arcadia area, although not presently a problem in regard to school service needs will soon realize the need for another elementary school as well as a junior high school facility to serve the projected population growth in this area.

5. This same population growth factor, particularly in consideration of the anticipated closing of Central High School, indicates that a new Senior High School plant should be given priority consideration for development within the western portion of the Westwood Community. One desirable location for this facility would be the site presently controlled by the Board of Education located along the east side of Drake Road, north of Grand Prairie Road.

Needless to say, desirable school facilities constitute one of the main forces for building a stable community. It must be emphasized that maintaining such school facilities at all levels in Westwood is necessary to the future of the community.

Recommendations

Traffic and Circulation Plan

Preliminary estimates indicate that there will be nearly a 100% increase of vehicular traffic on the City's streets in the next two decades. Unless and until other means of urban travel are adopted and measures taken to control traffic growth are employed, the increase is inevitable.

Studies in conjunction with the City Traffic Engineer's office predict that 1985 traffic volume's in Westwood will increase nearly 110%. This projection was made under the assumption that the currently proposed Howard Street Extension from Stadium Drive to Kendall Avenue will be constructed. Although this facility will no doubt improve traffic circulation around the Western Michigan University complex, the traffic volumes on arterials will remain high. In fact, the full benefits of the facility will not be realized unless, development proceeds on the complementary system of arterial thoroughfares and collector streets according to recommended standards. This, of course, calls for the preparation of a comprehensive major street plan; a plan which will designate the proper functions of every street in the area. Such a plan includes a set of design standards and goals which not only conform with City-wide goals, but also recognize the specific needs of the Westwood Community.

General Objectives

It was determined initially, through the studies of existing traffic conditions and future volumes as well as expected future population and land use patterns, that certain obstacles existed which must be overcome if the major street plan for the Westwood community is to be truly successful. In response

to these problems, we believe the following objectives must be adhered to if the major street plan is to be accomplished:

1) The present and impending levels of development of Westwood indicate that this is the time to establish a street network to serve the area. Rapid growth and concentration of people into land, until recently only sparsely populated, requires a realistic approach to providing accessible routes of travel in various directions. For the general benefit it is not sufficient for a group to say that street facilities should be improved and at the same time say, do so without otherwise affecting us or without our participation. Areas of development should provide or be provided with alternate routes of access in two or more directions of travel in order that traffic loads are dispersed rather than concentrated, and direction of travel can be closely related to destination.

2) Maximum efficiency of existing streets must be obtained to meet traffic demands and to minimize the difficulties inherent in the street pattern thus reducing the cost of new construction, reducing accident hazards as well as the travel time required from one area to another.

3) Future major street alignments to serve expected land development patterns must be located in advance of development so that adequate rights-of-way in proper locations may be acquired at least cost.

4) One initial phase of the plan which cannot be illustrated on a drawing relates to obtaining maximum efficiency from existing streets. In essence, this means application of traffic engineering principles to the detailed problems of moving a maximum number of vehicles with maximum safety at least cost on either an existing street or a new

street. Through these methods significant increases in street capacity are available by comparatively simple and inexpensive means.

5) Although the plan as presented is basically an automobile orientated system, it is recommended that all practical means be employed to obtain a convenient and efficient mass transit system which will complement the major street plan thus facilitating a balanced transportation system serving the Westwood Community.

Proposed Street Standards

The recommended standards described on page 68 are presented as general guides for improvement of existing and new streets in Westwood. These standards include the full range of street types applicable to Westwood, from the minor residential street to the four-lane, high-capacity divided highway. Dimensions given are for guidance in design of pavements, lane lining and purchase of rights-of-way but will be subject to numerious modifications as indicated by preliminary engineering in a particular location.

Most of the recommended standards fortunately can be fitted into existing rights-of-way. Widening of an existing street in a developed area, particularly where additional right-of-way is required, is a difficult and expensive project, however, the cost of improving the major thoroughfare network should be measured in terms of all benefits and must not be permitted to cause sacrifice of maximum functional efficiency or furtherance of desirable community or neighborhood development.

Fortunately, traffic engineering studies often reveal dramatic increases of capacity available without purchase of additional right-of-way, or even without widening existing pavements. For example, prohibition of on-street parking may add the capacity equivalent of a one or two lane widening. In many instances, removal of on-street parking plus a short length of permanent widening to give added turning lanes at intersections may be all that is required to provide adequate capacity for present and estimated future traffic.

Several of the standards accommodate on-street parking lanes. These parking lanes are desirable in business areas only if the traffic capacity of the street is adequate. They sometimes appear necessary in older business or residential areas where off-street parking is difficult to provide. The main purpose of the street, however, is to carry traffic and not to provide storage space for cars. Clearing large trees, widening of old pavements or acquisition of more right-of-way is seldom justified for the purpose of providing on-street parking lanes. Expansion of private off-street parking facilities and consistent application of off-street parking regulations in the zoning ordinance will gradually allow streets to be used for their primary traffic purpose.

All needed rights-of-way for major streets should be purchased as far in advance of development as possible so that they may be located in accordance with the plan and without excessive cost. All legal means including subdivision regulations, should be employed to keep these planned rights-of-way free of development until they can be acquired by dedication or purchase.

It is further recommended that additional building setback restrictions be imposed along collector streets, thus reducing future conflicts caused by development encroaching upon the thoroughfares.

Right-of-Way Standards

The standards for rights-of-way for thoroughfares should be considered as guides for future development. There must be, also, consideration of mitigating circumstances which apply to specific design in the engineering of routes due to costs, space factors and topography. Where feasible, however, improvements should be made in accordance with these or, if possible, higher standards which may be warranted by the projected traffic.

Expressways

The term "expressway" implies a limited access highway for uninterrupted movement of traffic, with no cross traffic at grade, and with interchanges for ingress and egress, acceleration and deceleration lanes, and directional traffic separated by a median strip as wide as the location permits.

Expressways can be expected to carry 800 to 1200 vehicles per hour per lane of peak-hour traffic, and up to 12,000 vehicles per day per lane. Although capacity varies according to speeds, lane widths and geometrics of design, a modern four-lane, limited access, divided expressway can be expected to carry 30,000 to 40,000 vehicles per day.

Major Thoroughfares

Major thoroughfares, other than expressways, must provide access to abutting properties as well as accommodate traffic movement. Furthermore, the speed and capacity of a major thoroughfare will be limited by signal lights, parking and the extent of access control.

The primary purpose of the major thoroughfare is to move traffic as rapidly and efficiently as possible. Lights should be synchronized and access limited,

as far as possible, to facilitate movement. Wherever there appears to be a conflict between parking and movement, especially during peak hours, parking should be sacrificed. Each lane can move 350 to 500 cars per hour if there is no parking but only 250 to 300 cars per hour where parking is permitted to interfere with traffic flow.

A major thoroughfare, with lights at major intersections, can be expected to move 350 to 500 cars per hour per lane or a maximum total of 2,000 cars per hour (for four lanes) in peak-hours. This means 20,000 cars per 24 hour day of average daily traffic as projected, since the daily traffic is approximately ten times the peak hour traffic.

Minor Thoroughfares

Minor thoroughfares, including collection or distributor streets and connecting rural roads, collect traffic from local service streets and funnel it into major thoroughfares, or expressways. Though not high in speed nor great in volume, the function of a minor thoroughfare is still primarily movement and secondarily access to abutting properties. Although designed primarily for movement these streets can be expected to permit parking until needed for their full width.

On this basis, each operating lane can be expected to move 200 to 250 vehicles per hour at peak hours. With parking at the curb, capacity is only 4,000 vehicles per day for a minor thoroughfare. Without any parking, 10,000 vehicles per day can be handled, or 1,000 vehicles per hour at peak hours.

Service Streets

All streets not otherwise classified on the Thoroughfare Plan are local service streets. Their primary purpose is to give access to abutting properties.

Where such streets serve residential areas, they should be designed to discourage through traffic (by means of curvilinear design, cul-de-sacs, etc.) and hence, to increase safety and livability for residents. Traffic capacity is not designed for this type of street since it is not intended for moving large volumes of traffic.

Street Classification

Streets can be classified into five categories, according to function:

Freeways - devoted entirely to moving traffic and perform little or no land service functions. They handle large volumes of traffic at high speeds and are intended to serve those on long trips. They are characterized by complete control of access and by multiple lanes and divided roadways.

Expressways - same as freeways, but access control is not absolute.

Arterials - arterial streets connect with freeways and expressways and distribute traffic to and from collector streets. These streets handle the medium - distance trips not using freeways and provide property access functions at concentrated points.

Collectors - collector streets carry the internal traffic of an area (neighborhood) and distribute it between local and arterial streets.

Local - local streets provide access to abutting properties. All through traffic should be discouraged on these streets.

Street Standards

	Freeway-Expressway	Arterial	Collectors	Local
Speed Standards				
Peak Hour	35	30	25	25
Off Peak Hour	35-50	30-40	25-35	25
Minimum Design Standards				
Number Traffic Lanes	4, 6 or 8	4 or 6	2 or 4	2
Width of Traffic Lanes	12 feet	12 feet	12 feet	11 feet
Width of Right-of-Way	120 feet or wider	100-132 feet	66 feet	66 feet
Functional Standards				
Traffic Movement	primary	primary	equal	secondary
Access to Land	none	secondary	equal	primary
Principal Trip Lengths	over 3 miles	over 1 mile	under 1 mile	under $\frac{1}{2}$ mile
Designated Through Streets	always	always	sometimes	never
Spacing	1-3 miles	1 mile	$\frac{1}{2}$ mile	under $\frac{1}{2}$ mile

Major Street Plan

Experience continues to demonstrate the efficiency of designating certain streets designed to meet major traffic demands as "major streets" and improving these streets to accommodate most of the urban traffic. The remaining "minor" streets can then be developed with a narrower, less expensive pavement designed to serve adjoining property only. By their location and improvement, the major streets will attract traffic, while the appropriate design and improvement of minor streets will discourage heavy traffic in residential neighborhoods. Therefore, the following circulation recommendations recognize the different classes of streets and the different functions to be performed by both the existing and proposed streets. Since it is expected that properly designed major streets can accommodate 75-80% of the traffic flow in the Westwood Community, particular emphasis in the following plan will be devoted to this type of facility.

Recommendations:

Major Street Plan

Arterials: The existing arterial streets in Westwood will logically remain as arterials. These are West Main, West Michigan, Stadium Drive, and Douglas Avenue. More specifically, the following improvements should be given priority consideration:

1) W. Main Street - It is recommended that five 12 foot traffic moving lanes be constructed from W. Michigan Avenue westward to the City Limits, with at least four traffic lanes maintained for its remaining length to US 131. A 100 foot right-of-way should be secured wherever practical for future widening and realignment needs.

2) West Michigan Avenue - Various proposals have been made regarding portions of this street. Its future as an arterial is dependent upon happenings in the general vicinity which will materially affect what can be accomplished to relieve traffic problems. For purposes of consideration we have divided the street into three segments which can be evaluated separately.

A. Michigan Avenue from Stadium Drive to Western Avenue: Should be four lanes, possibly five depending upon the eventual disposition of the adjoining section. All remaining parking will ultimately have to be removed. Access to the Western Michigan University field house, Angell Field, etc., requires substantial capacity.

B. West Michigan Avenue from Western Avenue through the "Central Academic Area" of Western Michigan University: Suggestions have been made to close this portion of the street for the convenience of cross campus pedestrian travel. Experience indicates that emphatic objection is often encountered in proposals of this type particularly in lieu of alternate routes acceptable to the public. It is expected that the Howard Street extension would serve to some extent as an alternate, although it is not known that the growing population to the west will regard Howard Street as an equal and totally satisfactory alternate.

Planning Standards call for spacing of collector streets at about one-half mile intervals. The area now developing between

the westerly end of West Michigan Avenue and West Main Street and from Drake Road to Kendall Avenue, is in excess of one mile square. Collector streets which serve residential (minor) streets and provides them access to arterials at concentrated points, are obviously indicated for this area. It seems apparent that future abandonment of a portion of West Michigan Avenue would be dependent upon an adequate network of collector streets both in the north-south and east-west direction between West Main and West Michigan Avenue. Without adequate access as described, it would doubtless be impractical to close West Michigan Avenue but rather reconstruct the street in depressed section through the "Academic Area" so that vehicular traffic would be separate from pedestrian flow and each could proceed without interference. A depressed roadway through this area would be expensive but not impossible and deserves serious consideration in the absence of reasonable and acceptable circulatory patterns for the area.

C. West Michigan Avenue from Academic Area West to City Limits: This portion of the street will require no less than four lanes, with intersection "flares" providing five lanes at Howard Street and 12th Street. The portion of Westwood between Stadium Drive and West Main Street, contains Kalamazoo College, Western Michigan University, commercial, and residential property. Of this development, Western Michigan University occupies the largest single portion, approximately $1\frac{1}{2}$ miles to the north-south direction and 1 mile in the

east-west direction. From the traffic circulation and land use concepts previously outlined, it is seen that this is a large area to exclude from the circulatory system and imposes a questionable burden on circumferential streets, such as West Main Street, etc., as well as residents wishing to pass from west to east, etc. The student body, approaching 20,000, is basically automobile orientated, consistent with residents of all other parts of the City. For mutual convenience, a pattern of circulation streets is proposed which will serve both campus and non-campus in a more direct and comprehensive manner than is now available.

3) Howard Street Extension - Proposed as a major crosstown connector, the much discussed and long overdue, Howard Street Extension will link the present Howard Street facility at Stadium to West Michigan Avenue near Rankin Street, thus linking the southwest and Westwood areas of Kalamazoo while effectively serving large volumes of traffic relative to the Western Michigan University complex.

4) It is further proposed that in the near future, Kendall Avenue and Nichols Road be fused together via construction of a 1,150' segment of roadway extending northwesterly to Nichols Road from the Kendall Avenue intersection with West Main Street. Through such construction a major crosstown route is provided from South Westnedge Avenue to West Main Street, thus freeing other major arterials from unnecessary traffic flow. Needless to say, adequate rights-of-way should be

secured along both Nichols Road and Kendall Avenue to facilitate a possible four lane facility in the foreseeable future.

Collectors

Other significant projects needed for efficient and convenient traffic circulation in the Westwood Area consist of:

1) Construction of an approximate 1000' segment linking Drake Road with Colony Farm Road to the south.
2) Construction of an approximate 1000' segment linking Hillsdale Avenue to North Street.
3) Provision of a major north-south collector facility for the Arcadia Area providing access to West Main Street on the north and Stadium Drive on the south. A proposed 10,400 foot alignment is indicated from Winchell Avenue northbound to Waldo Avenue.
4) An approximate 4,800 foot major service facility is shown paralleling the New York Central Railroad tracks, which is believed necessary to provide adequate circulation to the large apartment complexes developed south of West Michigan Avenue.
5) Extension of Lovell Street westwardly to Kendall Avenue in the near future, and beyond as the area to the west develops. Lovell to serve as an east-west collector street, serving both residential and university traffic, relieving West Main and West Michigan Avenue by dispersing the means of egress-ingress for traffic generated in between.
6) An approximate 1000' extension of Croyden Avenue is shown linking its two portions together, thus providing an east-west collector street serving the Westwood Neighborhood from Drake Road to Nichols Road.

7) The realignment of the eastern portion of Ravine Road is proposed to be extended along the northern right-of-way line of the New York Central Railroad, thus presenting a smooth transition of Ravine Road and Paterson Street. This improvement would involve an approximate 5,500 foot portion of new roadway.

8) Widening and resurfacing of Burrows Road would facilitate traffic access to West Michigan Avenue as well as the commercial area along its eastern right-of-way.

9) Resurfacing of West Lovell Street from Stadium Drive westward, including improvement of its vertical alignment. Also to be considered, is its conversion to a one-way east-bound or possibly a two-way facility.

10) Development of a north-south connection of Western Avenue to Woodside across the west edge of Kalamazoo College athletic field, curving west from the Woodside alignment to Berkely to intersect with West Main Street, and north to West North Street and Hillsdale Avenue. The Woodside connection intersecting with the Lovell Street extension would relieve Monroe Street substantially which due to terrain, has little future as a traffic carrier and desirably should revert to a minor street in terms of traffic use.

Minor Street Considerations

The preceding Major Street Plan emphasizes that each functional portion of the Westwood Community must have adequate access to major thoroughfares. This is particularly true for each of the residential neighborhoods, however, it is extremely important that such access be contained along the peripheries of logical neighborhood boundaries rather than through the neighborhood. In the final analysis, adequate street planning is a major factor in neighborhood conservation.

Designating a street as major or minor does not in itself keep traffic off the street. Many drivers prefer short-cut and by-pass routes which avoid traffic lights and stop signs. One of the major assets of well designed new subdivisions is that through basic layout, all but local traffic to serve the local area is completely discouraged. Since much of the present residential areas has been developed following a rectangular grid-iron street system, and since these neighborhoods are in competition with well designed newer subdivisions, we must face the fact that traffic intrusion will be a major factor in the inevitable decline of all existing areas if nothing is done to prevent or cure the problems which cause such decline.

The drawing on page 76 shows a successful measure which can be taken rather easily to remove the threat of unwarranted traffic intrusion upon residential neighborhoods. This is the "Traffic Divertor", which is essentially a simple redesign of existing streets. Diagonal curb connections with a planted center strip can completely remove all through traffic or by-pass movements from any existing residential neighborhood. It is suggested that the City adopt a policy which encourages any neighborhood to utilize this conservation device.

In neighborhoods where this has been done a marked improvement has occurred. In one Grand Rapids neighborhood where three such divertors were installed, the Institute of Residential Appraisers made a study showing that the mortgage value of 700 homes in the area had increased approximately $500 each, as compared to assessments ranging from $18 to $100. The actual result has been that practically every home in this once - blight - threatened area has been painted and repaired and actual sales are from $1500 to $2500 higher than ever before.

Once -

THE GRIDIRON STREET PATTERN WAS FUNCTIONAL AND ADEQUATE · · · · ·

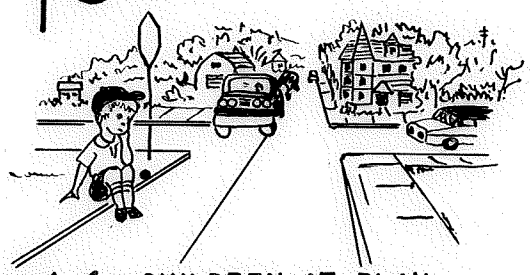
but today ~ THE GRIDIRON PATTERN *creates* PROBLEMS WHICH CAN LEAD *to* DECLINE

IN HOME NEIGHBORHOODS, DAMAGING AUTOMOBILE & TRUCK TRAFFIC

· DECREASES PROPERTY VALUES

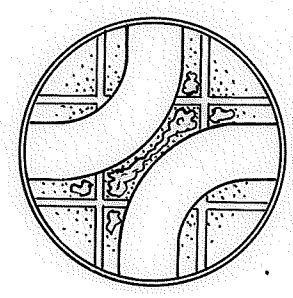
· MAKES THE NEIGHBORHOOD *unsafe for* CHILDREN AT PLAY . . . .

TODAY



THE OLDER NEIGHBORHOOD MUST COMPETE WITH NEW SUBDIVISIONS DESIGNED TO DISCOURAGE TRAFFIC INTRUSION ·

A SIMPLE REARRANGEMENT *of* CURBS *and* THE ADDITION *of* AN ATTRACTIVE PLANTING STRIP *creates*



A TRAFFIC DIVERTOR

· THROUGH TRAFFIC IS PREVENTED

· CHILDREN & PETS ARE SAFER AT PLAY

· HOME VALUES ARE PROTECTED

Traffic Controls

Due to the fluid nature of the traffic pattern, it is almost impossible to provide a fixed plan for a long range program of traffic control devices, such as signals, regulatory signs and pavement markings. One-way streets, reversible lanes, left turn prohibitions and extensive parking prohibitions, are some of the traffic control measures that could become necessary if sufficient vehicular capacity is not provided to handle the greater traffic demands of the future.

V LAND USE AND CIRCULATION FACTORS REGARDING THE CLOSING OF ACADEMY STREET TO THROUGH TRAFFIC

In consideration of the foregoing material comprising all major elements of a comprehensive plan for the Westwood Community, the following considerations are offered specifically concerned with the question of closing Academy Street to through traffic from Catherine Street to Bulkley Street.

Proposed Land Use

For study purposes, the area surrounding the Kalamazoo College complex will be emphasized, generally defined by West Main Street on the north, West Michigan Avenue on the east and south, and the City Limits on the west.

Present land use in this area is, of course, dominated by the Kalamazoo College complex roughly bounded by West Main Street on the north, Catherine Street and West Michigan Avenue on the east, West Lovell Street on the south and Monroe Street on the west.

The proposed campus plan retains the area lying north of Academy Street for campus activities which present the major generators of campus orientated traffic such as the Dalton Theater, tennis courts, library, swimming pool building and faculty guest house. A notable exception to this general plan is the present location of the field house, located south of Academy Street, just west of the New York Central Railroad tracks, on the eastern edge of the campus.

The central academic area generally lies south of Academy Street orientated around the Quandrangle. Faculty residences and student housing facilities are generally located on the southern section of the campus with additional student housing structures proposed in the northeastern portion of the campus adjacent to the recently constructed Severn Hall.

Logical expansion of the college seems directed to the northeast and northwest portions of the college complex. Specifically, the triangle bounded by West Main Street on the north, the New York Central Railroad on the east, Academy Street on the south and Catherine Street on the west. This area presently consists of rather high density campus-orientated housing facilities comprising rooming houses and converted apartment structures. The northwest portion, bounded generally by North Street on the north, Bulkley on the east, Academy Street on the south and Monroe Street on the west contains a scattering of rooming house facilities, but is generally of a single family nature.

When this area changes, proposed land use plans for these areas call for development of attractive townhouse and/or walk-up apartment facilities in the northeast section, while the northwest section is recommended for a lower density garden apartment complex upon demonstrated need for additional college orientated housing facilities. Although the recommended future development of the northwestern area would require a reclassification to Zone 7 from its present single family designation, properly developed moderate-density housing facilities should represent no adverse effect upon the single family area to the west.

It is recommended that this single family area to the west of Monroe Street remain in a low density residential use during the forseeable future. Extremely well maintained at present, an actively pursued code enforcement program should assure the desirable amenities of its present single family character for some time to come.

The area between the New York Central Railroad and Michigan Avenue, presently in a Zone 4 or General Commercial classification, should be retained for commercial activities orientated to West Michigan Avenue - Stadium Drive highway service needs.

The final sector, located in the southern portion of the study area and bounded generally by Lovell Street on the north, Michigan Avenue on the east and south and Burrows Road on the west is suggested for medium density housing development, with related retail service uses in the southern portion fronting upon West Michigan Avenue and Burrows Road.

These commercial uses should be of a neighborhood variety orientated to the college complex and surrounding residential facilities. It is recommended that the present zoning pattern be retained in this area, thus precluding the development of heavy traffic generators from locating east of Stone Street, which would only add to the congested traffic condition at the West Michigan Avenue - Stadium Drive intersection.

It is the studied opinion of the Planning Department Staff that the aforementioned general land use plan should adequately fulfill the growth needs of an expanding college complex while retaining the single family residential character of the area west of Monroe Street.

Kalamazoo College Plan

Turning specifically to the problem at hand, namely the Kalamazoo College Campus Plan and proposed "Academy Street Mall", it should be pointed out initially that although we are not "campus planners", I believe it is fair to say we are in a position to appraise its ability to fulfill recognized general concepts of campus planning as well as its relationship to the surrounding neighborhood. For in the final analysis, planning for the College Campus is not unlike planning for a neighborhood or on a larger scale -- a central business district -- concepts of which are not unfamiliar to planners.

Three general concepts seem to prevail as design requirements in achieving a functional arrangement and proper environment for these aforementioned facilities:

1) Activities should be clustered in compact and identifiable areas on the basis of their compatibility and interrelationship with other functional areas, i.e., a central academic area, recreational and related activity area and housing facilities.

2) An interior circulation pattern designed to complement and service these functional areas rather than separate them, with special attention given to pedestrian traffic. Such a design emphasizes service drives with parking facilities generally located on the periphery of the campus adjacent to major traffic generating facilities as well as near points of entrance to the campus thus facilitating convenient ingress and egress.

3) Elimination of all through traffic from the campus area wherever possible by rerouting traffic around the complex on improved perimeter routes.

Upon review of the Kalamazoo College Plan, with these general concepts in mind, we find it fulfills all requirements more than adequately. Furthermore, considering the general architectural treatment of campus structures as well as its general topographic features, we believe the campus planners have done a commendable job of integrating the campus with the surrounding residential area from both a functional and design standpoint.

In spite of this general endorsement of the planning goals encompassed in the campus plan, we do recognize the closing of Academy Street will no doubt present future hardships if improvements are not forthcoming to perimeter streets through widening and/or parking elimination and traffic signalization techniques. It should be emphasized, however, that the closing of Academy Street, carrying some 1,400 "through" vehicles per day, does not approach the impact on traffic circulation that a closing of West Michigan Avenue West Main Street or Stadium Drive would impose. These facilities, carrying some 14,800 15,700 and 11,000 vehicles per day, of course, represent the three major traffic arteries serving the western portion of the City, for which no reasonable substitutes seem likely in the foreseeable future.

Considering the fact that a significant proportion of the traffic utilizing Academy Street is college orientated with the remainder serving a residential neighborhood, Academy Street has not, and should not be encouraged in the future to serve the function of such an east - west arterial street.

Studies by the Traffic Engineering Department have shown that approximately 56% of the traffic presently utilizing Academy Street has college orientation. Further analysis of the effect of the proposed Academy Street closing reveals that approximately four to five vehicles per minute during peak hour would be added to surrounding alternative streets. These could be expected to distribute themselves on to West Main Street, Lovell Street, Grand Avenue, and Monroe Street.

In the light of the aforementioned neighborhood design objectives as well as the recently discussed traffic studies, we feel the following traffic improvements should be given priority consideration prior to the closing of Academy Street:

1) Widening of West Main Street to a five lane facility from West Michigan Avenue westwardly to the City Limits.

2) Major resurfacing of Lovell Street, as well as its extension westwardly to Kendall Avenue in the near future and beyond as the area to the west develops, be undertaken to facilitate westward flow of traffic into the residential area adjacent to the college as well as service to the residential areas to the west.

3) Widening and resurfacing of Burrows Road would facilitate traffic access to West Michigan Avenue as well as the commercial areas along its eastern right-of-way.

4) Upon examination of traffic flow on interior streets within the area west of Kalamazoo College, it would appear that consideration would be warranted concerning the development of a north - south connection of Western Avenue to Woodside across the west edge of the Kalamazoo College Athletic field, curving west from the Woodside alignment to Berkley Street, intersecting West Main Street, and north to West North Street and Hillsdale Avenue. The Woodside connection, intersecting with the Lovell Street extension would relieve Monroe Street substantially, which due to terrain, has little future as a traffic carrier and desirably would revert to a minor street in terms of traffic use.

Consideration of these factors should adequately relieve the inconvenience of a few, thus making possible the safety and welfare of many, through the Academy Street mall project.

The Community goals expressed throughout this report can be achieved through determined implementation of the Comprehensive Plan. There are various legal tools available to Westwood residents and City Officials for community improvement. Each has its own particular purpose and must be applied to specific circumstances. However, some have general application and are important at all levels of activity. A brief discussion of some of these tools follows.

Zoning Ordinance

The Kalamazoo City Zoning Ordinance was adopted in 1925. It regulates the use of land and buildings, the height of buildings, the proportion of lot that may be covered by them, and the density of population. It is a main tool for the implementation of the Land Use Plan. It also sets forth requirements for off-street parking and is, therefore, a strong weapon to prevent worsening of parking problems. Each change in zoning should be considered in regard to the Proposed Land Use Plan.

Subdivision Regulation

The Subdivision Ordinance sets forth the minimum standards for the design of streets, easements, lot sizes, and policies on the arrangement of public and private spaces to assure best final results. These regulations are applicable where redevelopment or initial development takes place and design of the street pattern is possible.

Subdivision regulations, properly administered, benefit both the community and subdivider but must be realistic so that they do not discourage the legiti-

mate subdivision of land. At the same time, subdivision standards must be restrictive enough to protect the taxpayer against substandard improvements and to prevent excessive government operating costs.

Capital Improvement Program

The Planning Department has the annual responsibility of developing the six-year program for capital improvements in the City. This program includes a number of projects concerning parks, streets, utilities, fire stations and other public buildings. This program is thus one of the major tools for the implementation of the Comprehensive Plan for community facilities. The willingness and ability of the citizens to pay for the improvement is also important in the establishment of project priorities.

Urban Renewal

The Housing Act of 1949 set forth various provisions under which the local government can seek Federal aid for renewing its community, provided that the locality is making every effort to improve its environment.

Urban Renewal programs consist of conservation, rehabilitation or redevelopment. Conservation is the method used to correct relatively minor deficiencies and prevent blight from getting started. Rehabilitation is used where deterioration has begun but where redevelopment is impractical. Blighting influences are corrected through enforcement of building, health and zoning codes, and by providing needed community facilities such as parks, streets and schools. Redevelopment, or clearance and rebuilding, is used in those areas where conditions of blight are too far advanced for conservation or recondi-

tioning to be feasible. This is usually in older areas where the street system is inadequate, most of the buildings are substandard or obsolete, and a deficiency of community facilities exists.

Citizens Participation

The citizens of the community play a vital role in carrying out the objectives of the Comprehensive Plan. Without public support, little can be accomplished. The citizens serve as a weather vane pointing to the standards of public service acceptable to the community. In the past the citizens of Kalamazoo have demanded a high level of service and there is reason to believe that they will choose to continue that quality of service in the future.

Neighborhood Associations can contribute materially to the Comprehensive Plan by bringing to the attention of the Commission needed improvements for their areas and by instilling in their members pride of ownership, which is probably the single most effective means of guarding against deterioration.

It is earnestly hoped that this report will provide the base for a broad program of civic improvement which will eventually lead to the betterment of all segments of the community. Within these guidelines, land use and transportation studies will need to be periodically updated; working drawings should be prepared for approved thoroughfare, park and other public facilities recommended in the Comprehensive Plan.

One of the most important tasks in the days ahead however, will center upon the determination and ability of City officials, college leadership and the residents of Westwood to develop a sense of cooperation in solving common problems which in turn will develop into the accomplishment of a lasting and desirable Westwood Community of which all can be justifiably proud.

VI PLAN IMPLEMENTATION

APPENDIX

A-1 General Development Standards

A-2 Maps (9) under separate cover