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Special acknowledge is due Ms. Nancee A. Nejedlo, SEWRPC Senior Planning Draftsman, for her contribution to the preparation of this report.

# MEMORANDUM REPORT NUMBER 85

# A DEVELOPMENT PLAN FOR THE ENDICOTT NEIGHBORHOOD

# CITY OF BROOKFIELD WAUKESHA COUNTY, WISCONSIN

Prepared by the

Southeastern Wisconsin Regional Planning Commission P. O. Box 1607 Old Courthouse 916 N. East Avenue Waukesha, Wisconsin 53187-1607

September 1993

Inside Region \$2.50 Outside Region \$5.00

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September 3, 1993

The Honorable Kathryn C. Bloomberg Mayor City of Brookfield 2000 N. Calhoun Road Brookfield, Wisconsin 53005

Dear Mayor Bloomberg:

The Southeastern Wisconsin Regional Planning Commission has, since its inception in 1960, recommended and supported the preparation of detailed development plans for neighborhood units in urbanizing communities of the Region such as the City of Brookfield. By letter dated February 13, 1991, the City of Brookfield requested the Regional Planning Commission staff to prepare a neighborhood unit development plan for that area of the City of Brookfield known as the Endicott neighborhood. The requested plan is set forth in this report.

This report presents basic inventory information on the present stage of development of the Endicott neighborhood, including information on population, land use, public utilities, and transportation systems. In addition, information is presented on topography and drainage patterns, and environmentally significant areas within the neighborhood--all of which constitute important considerations in the neighborhood design effort. Based upon these findings and upon the recommended neighborhood development standards presented herein, the report sets forth a recommended neighborhood development plan which is consistent with both regional and local development objectives. The plan is intended to serve as a point of departure for City officials in making day-to-day development decisions.

The Regional Planning Commission is appreciative of the assistance and support given to this project by the Common Council, the City Plan Commission, the City Director of Planning and Zoning, and the other various City departments during the preparation of this plan. The Commission staff stands ready to assist the City in implementing the recommended plan.

Sincerely,

Kurt W. Bauer Executive Director

KWB/ROT/rt

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# Chapter I

## INTRODUCTION

The Southeastern Wisconsin Regional Planning Commission has long recommended that local plan commissions prepare detailed neighborhood unit development plans as an important means of guiding and shaping urban land use development and redevelopment in the public interest. SEWRPC Planning Guide No. 1, <u>Land Development Guide</u>, published in November 1963, discussed the importance of neighborhood unit planning to the attainment of good residential land subdivision. This guide indicated that effective public regulation of the important process of land subdivision--a process through which much of the form and character of a community are determined--requires the preparation of detailed neighborhood unit development plans. The regional land use plan specifically recommends that local plan commissions identify neighborhood units within areas of existing or proposed urban use and prepare detailed plans for the development and redevelopment of these units over time.

On February 13, 1991, the City of Brookfield requested that the Regional Planning Commission staff assist the City in the preparation of a neighborhood unit development plan for the Endicott neighborhood. Work began on the Endicott Neighborhood plan in May 1992, and initial draft plan alternatives were completed by the Commission staff in July 1992. This report describes the planning process and the recommended development plan for the Endicott Neighborhood. The plan recommends future arterial, collector, and land access street alignments and attendant block configurations, and identifies locations within the neighborhood best suited for institutional, recreational, and commercial, as well as for various kinds of residential use. The plan also identifies areas that should be protected from intensive development for environmental reasons.

#### GENERAL SETTING

The City of Brookfield is located in the northeastern portion of Waukesha County in U. S. Public Land Survey Township 7 North, Range 20 East. The City is bordered by the Villages of Menomonee Falls and Butler on the north; by the Cities of Wauwatosa and West Allis and the Village of Elm Grove on the east; by the City of New Berlin on the south; and by the City of Waukesha and the Town of Brookfield on the west. As shown in Table 1, the population of the City increased from 19,812 in 1960, the first census year following incorporation in 1954, to 31,761 persons in 1970, 34,035 persons in 1980, and 35,184 persons in 1990.

Year	Population	Population Change From Previous Period (percent)
1960	19,812	
1970	31,761	60.3
1980	34,035	7.2
1990	35,184	3.4

# HISTORIC POPULATION GROWTH WITHIN THE CITY OF BROOKFIELD

Source: U.S. Bureau of the Census and SEWRPC.

# AREAWIDE AND COMMUNITY PLANNING FRAMEWORK

The Regional Planning Commission has recommended that neighborhood plans be prepared within the framework of regional and community-wide comprehensive plans. The Endicott Neighborhood Plan serves to implement the regional land use plan and extensions of that plan which specifically address development issues in the City of Brookfield. These latter plans include SEWRPC Community Assistance Planning Report No. 108, <u>A Park and Open Space Plan for the City of Brookfield</u>; SEWRPC Community Assistance Planning Report No. 109, <u>Sanitary Sewer Service Area for the City and Town of Brookfield and the Village of Elm Grove</u>; and SEWRPC Community Assistance Planning Report No. 151, <u>A Transportation System Plan for the Bluemound Road (USH 18) Corridor</u>.

The regional land use plan has long recommended that the City of Brookfield be developed as a low- to medium-density urban community. Medium-density as reflected in the regional land use plan refers to residential development at densities ranging from 2.3 to 6.9 dwelling units per net residential acre. Low-density as reflected in the regional land use plan refers to residential development at densities ranging from 0.7 to 2.2 dwelling units per net residential acre. The Bluemound Road corridor plan refined the regional land use plan, delineating all but the southeast one-quarter of the Endicott Neighborhood as a low-density urban area. The Bluemound Road corridor plan also suggested the construction of a new freeway interchange with IH 94 at Calhoun Road. The interchange recommendation was not, however, unanimously supported by the SEWRPC Advisory Committee which prepared the plan. Accordingly, the plan has not to-date been formally adopted.

The City of Brookfield park plan recommended the expansion of Endicott Park as a community-level park serving residents of the City residing south of IH 94. The Park plan also recommends the extension of bikeways in the City and recommends preservation of important natural resources in the area. The sanitary sewer service plan recommends the extent of centralized sanitary sewer services and the preservation of important natural resources. All of the Endicott Neighborhood would be developed with sanitary sewer service.

The findings and recommendations of these adopted local and regional plan elements are all reflected as appropriate in the neighborhood unit development plan presented herein.

#### THE NEIGHBORHOOD CONCEPT

The Regional Planning Commission recommendation concerning the preparation of detailed neighborhood unit development plans by local plan commissions is based upon the concept that an urban area should be formed of, and developed in, a number of spatially organized individual cellular units rather than as a single, large, formless mass. These cellular units may be categorized by their primary or predominant land use and, as such, may be industrial, commercial, institutional, or residential. The Endicott Neighborhood is of the residential type.

Insofar as possible, each residential neighborhood unit should be bounded by arterial streets; major park, parkway, or institutional lands; bodies of water; or other natural or cultural features which serve to clearly and physically separate each unit from the surrounding units. Each residential neighborhood unit should provide housing for that population for which, by prevailing local standards, one public elementary school of reasonable size is typi-The unit should further provide, within established overall cally required. density limitations, a broad range of lot sizes and housing types; a full complement of those public and semipublic facilities needed by the family within the immediate vicinity of its dwelling, such as religious facilities, neighborhood parks, and neighborhood shopping facilities; and ready access to the arterial street system and, thereby, to those urban activities and services which cannot, as a practical matter, be provided in the immediate vicinity of all residential development -- namely, major employment centers, community and regional shopping centers, major recreational facilities, and major cultural and educational centers. The internal street pattern of the residential neighborhood unit should be designed to facilitate vehicular and pedestrian circulation within the unit, but to discourage penetration of the unit by heavy volumes of fast through traffic. An elementary school should be centrally located adjacent to the neighborhood park so that the school and park together may function as a neighborhood center. The school and park should be located within walking distance of all areas of the neighborhood unit.

The residential neighborhood unit is intended to accommodate safe and healthy family home life and the activities associated with it. The neighborhood should be of adequate size and designed to promote stability and the preservation of amenities. The neighborhood concept is intended to promote convenience in living and traveling within an urban area; to promote harmony and beauty in urban development; and to bring the living area of the urban family into a scale which encourages the individual to take an active part in neighborhood and community affairs. The neighborhood unit concept is also intended to facilitate the difficult task of good land subdivision design. The proper relationship of individual subdivisions to areawide features, to existing and proposed land uses, and to other subdivisions can best be achieved through a precise plan for neighborhood unit development.

The neighborhood unit concept also provides a means for involving citizens in local planning programs. A neighborhood is that area most closely associated with the daily activities of family life, such as elementary education or convenience shopping. Residential neighborhoods, however, depend on the larger community for basic employment, comparison shopping, higher education, cultural activities, and certain personal services. A group of neighborhoods which function as a unit, providing the necessary level of external services and facilities required by the neighborhoods in the group, may be described as a community. By identifying neighborhood units and grouping them into communities, residential areas may be planned to provide a physical environment that is healthy, safe, convenient, and attractive; and public sentiment can be constructively focused on the community of interest so created. Because of its emphasis on the day-to-day needs and concerns of the family, neighborhood planning is particularly "people oriented."

Unlike the community comprehensive, or master plan, which is necessarily general, the plan developed for a neighborhood is quite precise. It depicts explicitly alternative development patterns which are practicable to meet such physical needs as traffic circulation, storm water drainage, sanitary sewerage, water supply, a sound arrangement of land uses, and access to solar energy resources. Neighborhood planning, therefore, must involve careful consideration of such factors as soil suitability, land slopes, drainage patterns, flood hazards, woodland and wetland cover, existing and proposed land uses in and surrounding the neighborhood unit, and real property boundaries.

Although the neighborhood unit concept most readily applies to medium- and high-density residential areas, it can be successfully applied in low-density areas with some modifications of the design standards. Historical development within the Endicott Neighborhood is at the low end of the medium-density residential range. The Bluemound Road Corridor plan recommended that the Endicott Neighborhood be considered a part of a larger low-density neighborhood. Table 2 illustrates a typical land use distribution in a low-density planned neighborhood unit, and is intended to provide a basis of comparison for the specific neighborhood unit designs presented herein. Chapter III of this report sets forth, in detail, residential neighborhood objectives, principles, and standards and design criteria upon which the alternative Endicott Neighborhood plans presented herein are based.

The neighborhood unit development plan, while precise, must, nevertheless, also be flexible. The plan is intended to be used as a standard for evaluating development proposals of private and public agencies. It should not be presumed that private developers cannot present development plans harmonious with sound development standards, nor that any development plans that are privately advanced and at variance in some respect with the adopted neighborhood plan are necessarily unacceptable. Local planning officials should remain receptive to proposed plan changes that can be shown to be better than the adopted plan, yet compatible with the overall objectives for the development of the neighborhood and the community as a whole.

# THE NEIGHBORHOOD PLANNING PROCESS

The recommended neighborhood planning process consists of the following steps: 1) preparation of an overall community comprehensive plan; 2) neighborhood delineation; 3) inventory of the factors affecting land use development in the

				Population ensity <sup>a</sup>
Type of Area	Acres <sup>a</sup>	Percent of Area in Land Development Category	Number	Percent of Total
Residential Area	1,958.0	76.5		
Single-Family Area	1,792.0	70.0		
Population			5,330	85.2
Residential Acres per 1,000			.,	
Population			336.2	
Persons per Residential Acre			3.0	
Number of Dwelling Units			1,615	
Dwelling Units per Residential			- • · - ·	
Acre			1.1	
Multi-Family Area	166.0	6.5		
Population			925	14.8
Residential Acres per 1,000				
Population			179.5	
Persons per Residential Acre			5.6	
Number of Dwelling Units			355	
Dwelling Units per Residential				
Acre			2.1	
Public Area	77.0	3.0		
Elementary School (K-6) Area	14.0	0.5		
Number of Classrooms			20	
Total Number of Pupils			500	
Public Park and Playground Area	38.0	1.5		
Other Public and Quasipublic				
Area	25.0	1.0		
Neighborhood Commercial Area	14.0	0.5		
Street Area	511.0	20.0		
Total (population and land area)	2,560.0	100.0	6,255	100.0

# Table 2 LAND USE DISTRIBUTION IN A TYPICAL LOW-DENSITY RESIDENTIAL NEIGHBORHOOD UNIT

NOTE: Low density is defined as 0.7 to 2.2 dwelling units per net residential acre.

<sup>a</sup>Based upon a typical medium-density neighborhood size of 2,560 acres.

Source: SEWRPC

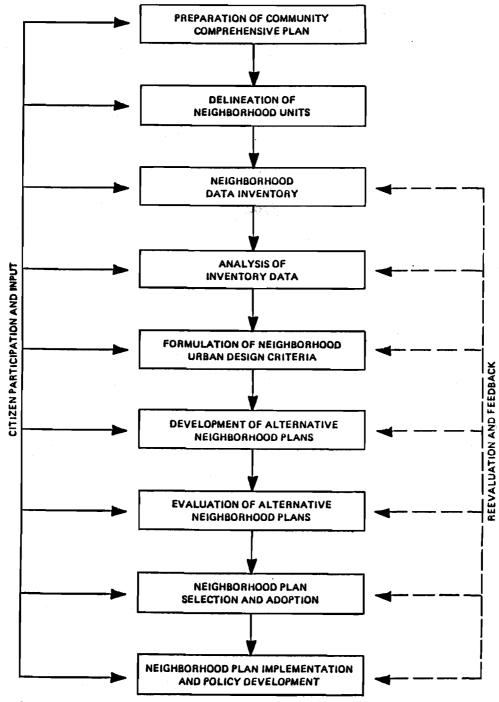
neighborhood area; 4) analysis of inventory data and the identification of neighborhood developmental problems and potentials; 5) formulation of neighborhood objectives and urban design criteria; 6) development of alternative neighborhood plans; 7) evaluation of alternative neighborhood plans; 8) neighborhood plan selection and adoption; and 9) neighborhood plan implementation and policy development. The neighborhood planning process is outlined in graphic form in Figure 1. Imperative within the neighborhood planning process is citizen participation and input. Also imperative to the process is the need to continually reevaluate alternative neighborhood plan schemes based upon the emergence of new data and citizen input.

### ENDICOTT NEIGHBORHOOD LOCATION AND BOUNDARIES

6

The Endicott neighborhood is located in the south central portion of the City of Brookfield. The neighborhood occupies that portion of U.S. Public Land Survey Section 33, Township 7 North, Range 20 East, that is located south of IH 94. The neighborhood is bounded on the north by IH 94; on the east by Calhoun Road; on the south by Greenfield Avenue--which is also the southern City Limits of the City of Brookfield--and on the west by Brookfield Road and its planned extension to Greenfield Avenue. Map 1 shows the location of the Endicott neighborhood within the City of Brookfield. The total area of the Endicott neighborhood is 527 acres. The 1990 population of the neighborhood was 1,070.

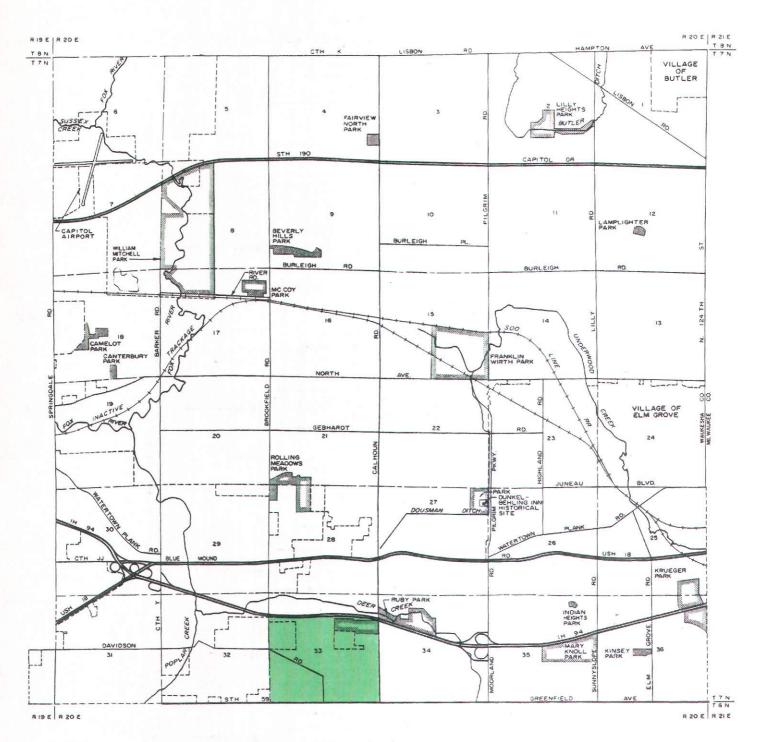




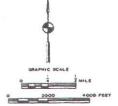
THE NEIGHBORHOOD PLANNING PROCESS

Source: SEWRPC.

MAP 1



LOCATION OF THE ENDICOTT NEIGHBORHOOD STUDY AREA WITHIN THE CITY OF BROOKFIELD



Source: SEWRPC.

# Chapter II

#### INVENTORY FINDINGS AND ANALYSIS

#### INTRODUCTION

The design of a neighborhood plan requires that certain factual data be gathered on the existing characteristics of the neighborhood area, including data on the underlying natural resource base as well as on the man-made features. The underlying natural resource base of the neighborhood includes topography and drainage patterns, soils, wetlands, woodlands, wildlife habitat, and climatic characteristics. Man-made features include community facilities, community utilities, real property ownership boundaries, land use, zoning, and the transportation system.

# THE NATURAL RESOURCE BASE

The natural resources of an area are vital to its economic development and its ability to provide a pleasant and habitable environment for human life. Natural resources not only condition, but are conditioned by, growth and development. Meaningful planning efforts must, therefore, recognize the existence of a limited natural resource base to which urban development must be properly adjusted if serious environmental and developmental problems are to be avoided. A sound evaluation and analysis of the natural resource capabilities is, therefore, important to planning for the development of the neighborhood area.

For the purposes of the Endicott Neighborhood development plan, the principal elements of the natural resource base are defined as 1) the physiography and water-related features which include principal topographic features, watershed and watershed subbasin boundaries, surface water, wetland areas, and isolated floodland areas; 2) soil characteristics; 3) woodland areas; and 4) wildlife habitat areas. Without a proper understanding and recognition of these elements and of the interrelationships which exist between them, human use and alteration of the natural environment proceeds at the risk of excessive costs in terms of both monetary expenditures and environmental degradation. The natural resource base is highly subject to grave misuse through improper land use and transportation facility development. Such misuse may lead to severe environmental problems which are difficult and costly to correct, and to the deterioration and destruction of the natural resource base itself. Intelligent selection of the most desirable land use plan from among the alternatives available must, therefore, be based in part upon a careful assessment of the

effects of each plan upon the supporting natural resource base. Protection of the natural resource base is embodied in the Regional Planning Commission's delineation of primary and secondary environmental corridors, and isolated natural areas.

# Environmental Corridor Delineation

Environmental corridors are defined by the Regional Planning Commission as linear areas in the landscape which contain concentrations of high-value elements of the natural resource base. Preservation of the natural resource base and related elements, especially where these elements are concentrated in identifiable geographic areas, is essential to the maintenance of the overall environmental quality of an area, to the continued provision of certain amenities that provide a high quality of life for the resident population, and to the avoidance of excessive costs associated with the development, operation, and maintenance of urban land uses in some of these areas.

Seven elements of the natural resource base are considered by the Regional Planning Commission to be essential to the maintenance of the ecological balance and overall quality of life in an area. These elements include: 1) lakes, rivers, and streams, and their associated undeveloped shorelands and floodlands; 2) wetlands; 3) areas covered by wet, poorly drained, and organic soils; 4) woodlands; 5) prairies; 6) wildlife habitat areas; and 7) rugged terrain and high-relief topography having slopes exceeding 12 percent.

There are certain other elements which, although not a part of the natural resource base per se, are closely related to or centered on that base. These elements include: 1) existing parks and outdoor recreation sites; 2) potential park, outdoor recreation, and related open space sites; 3) historic sites and structures; 4) areas having scientific value; and 5) scenic areas and vistas or viewpoints.

No primary or secondary environmental corridors occur in the Endicott neighborhood. The major natural features which are evident in the neighborhood are woodlands and wetlands. These features are shown on the existing land use map (Map II-1) and occur in the northern one-half of the neighborhood. In addition, the wetlands in the northwestern portion of the neighborhood are designated as "shoreland" wetlands. State law requires the protection of "shoreland" wetlands located within 1,000 feet of a lake, pond, or flowage; within 300 feet of a navigable river or stream; or within the l00-year recurrence interval floodplain, whichever distance is greater. The wetland and woodland features in the Endicott neighborhood account for about 79 acres or about 15 percent of the neighborhood.

#### MAN-MADE FEATURES

#### Existing Land Use

The existing land uses within the Endicott Neighborhood in 1992 are quantified in Table 3, and shown graphically on Map 2. In 1992, residential lands--all of which were single-family detached in terms of type--accounted for about 182 acres, or about 35 percent of the total neighborhood area, and represented the

# EXISTING LAND USE IN THE ENDICOTT NEIGHBORHOOD CITY OF BROOKFIELD, WISCONSIN: 1992

F******	<u> </u>	
Land Use Category	Acres	Percent of Neighborhood
	neres	Merginoerilood
Residential		
Single-Family	182	35.0
Two-Family	0	0.0
Multi-Family	0	0.0
Subtotal	182	35.0
Commercial	1	0.2
Subtotal	1	0.2
Government and		
Institutional	13	2.5
Subtotal	1.2	0 E
	13	2.5
Park and Recreational		
Public	11	2.1
Private	0	0.0
>		а. 
Subtotal	11	2.1
Transportation and Utilities		
Interstate Highway	20	3.9
Arterial Streets	8	1.5
Collector and Minor Land		
Access Streets	39	7.5
Utilities	1	0.2
Subtotal	68	13.1
Natural Areas		
Wetlands	40	7.6
Woodlands	39	7.5
Subtotal	79	15.1
Agricultural, Open, and		
Other Undeveloped Lands	165	32.0
Subtotal	165	20.0
Subcotat	165	32.0
<b>m</b>		
Total	527	100.0

Source: SEWRPC

largest land use category. Agricultural and open and unused lands accounted for about 165 acres, or about 32 percent of the total neighborhood area. Natural areas--woodlands and wetlands--accounted for about 79 acres, or 15 percent; and streets, highways, and utilities accounted for about 68 acres or 13 percent of the

neighborhood. No other land use accounted for more than 2.5 percent of the total neighborhood area.

# Major Undeveloped Land Holdings

In 1992, approximately 62 percent of the lands in the Endicott Neighborhood were developed for urban use or under development for such use. Map 3 shows the major undeveloped land holdings in the Endicott Neighborhood. These land holdings will be referred to in the description of the recommended land use plan.

#### Land Use Control

Land use development within the neighborhood is regulated by the City of Brookfield Zoning Code (Chapter 17 of the Municipal Code). Eight of the 23 zoning districts provided in the city zoning ordinance have been applied within the neighborhood. The boundaries of these zoning districts are shown on Map 4. Pertinent information concerning the regulations governing each of these zoning districts is set forth in Table 4. Approximately 91 percent of the Endicott Neighborhood is currently zoned for single-family residential use and 7 percent for multiple-family residential use. About 10 percent of the neighborhood has been placed in environmental overlay districts including the Shoreland Wetland Overlay Subdistrict, the Non-shoreland Wetland Overlay Subdistrict, and the Shoreland Protection Overlay Subdistrict. The recommended neighborhood unit plan presented later herein is intended to provide a basis for the redistricting of the neighborhood area into zoning districts which are more suitable to achieving the development objectives, as expressed in the plan and presented in Chapter III of this report.

#### Public Utilities

Public utility systems are one of the most important elements influencing community growth and development. Moreover, certain utility facilities are closely linked to the surface water and groundwater resources of the area, and may, therefore, affect the overall quality of the natural resource base. This is particularly true of sanitary sewerage, water supply, and storm water drainage facilities, which are in a sense modifications of, or extensions to, the natural lake, stream, and watercourse system of the area and of the underlying groundwater reservoir. Knowledge of the location and capacities of these utilities is, therefore, essential to intelligent land use planning for the neighborhood area.

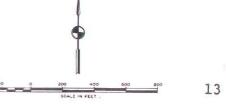
In 1992, 233 acres of the Endicott Neighborhood, representing about 74 percent of the existing urban development and about 44 percent of the total area of the neighborhood, were served by public sanitary sewer facilities. The entire neighborhood is within the planned City of Brookfield sanitary sewer service area as set forth in SEWRPC Community Assistance Planning Report No. 109, <u>Sanitary Sewer Service Area for the City and Town of Brookfield and the Vil-</u> lage of Elm Grove. Approximately 223 acres of the neighborhood, or about







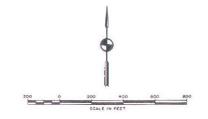
SOURCE: SEWRPC.

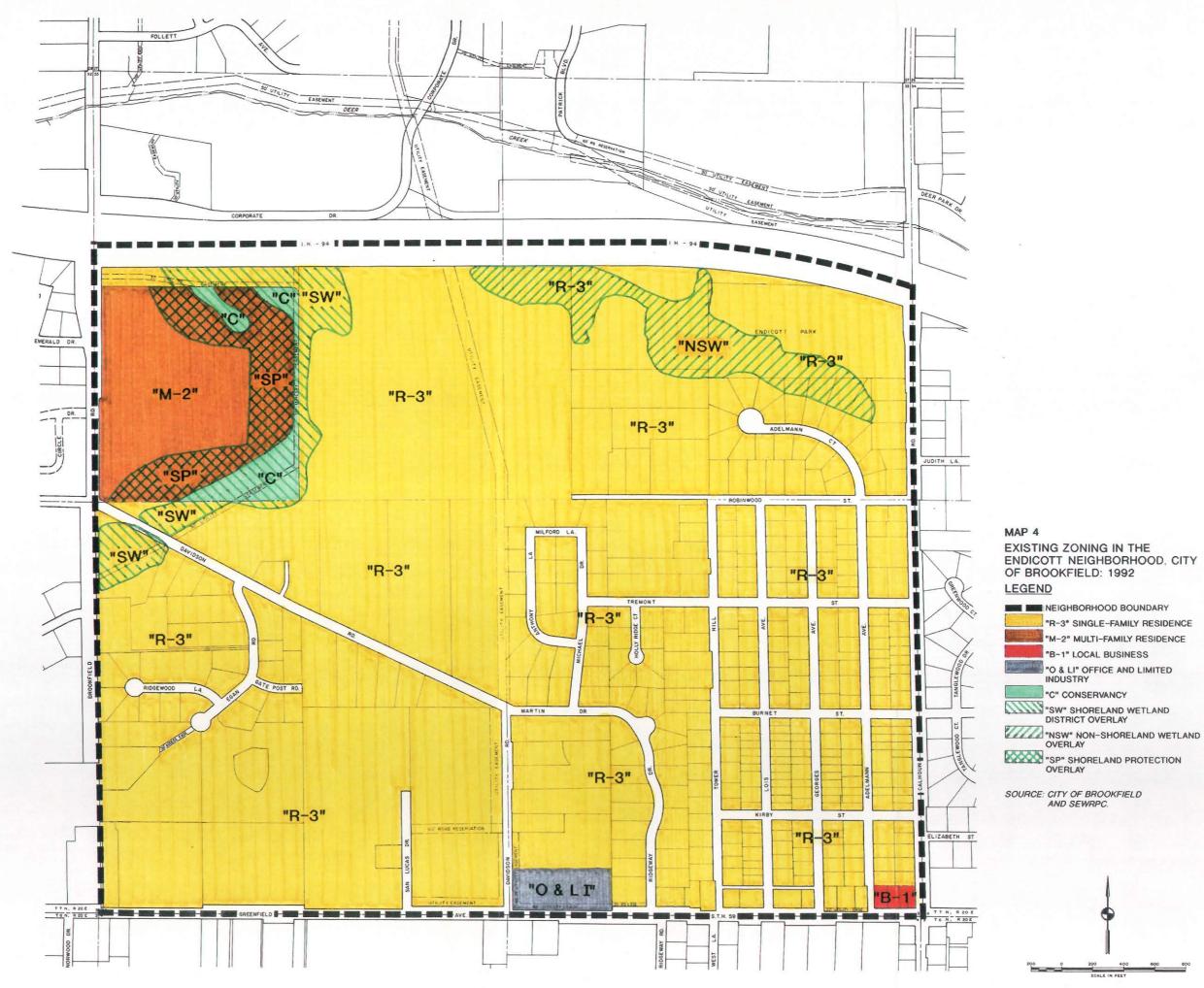






SOURCE: CITY OF BROOKFIELD AND SEWRPC.





LEGEND
NEIGHBORHOOD BOUNDARY
"R-3" SINGLE-FAMILY RESIDENCE
"M-2" MULTI-FAMILY RESIDENCE
"B-1" LOCAL BUSINESS
"O & LI" OFFICE AND LIMITED INDUSTRY
C" CONSERVANCY
"SW" SHORELAND WETLAND DISTRICT OVERLAY
WILL "NSW" NON-SHORELAND WETLAND
"SP" SHORELAND PROTECTION OVERLAY
SOURCE: CITY OF BROOKFIELD AND SEWRPC.

CALE IN FEE

#### SUMMARY OF EXISTING ZONING DISTRICTS IN THE CITY OF BROOKFIELD: 1992

	· · ·					· · ·	· · · ·	Existing 1992 Zoning	
Zoning District	Permitted Uses	Minimum Lot Area (sq. ft.)	Maximum Density	Minimum Lot Width (feet)	Maximum Lot Coverage (percent)	Minimum Setback (feet)	Minimum Offset (feet)	Acres	Percent of Total
"C" Conservancy District	Open space uses, non- residential build-ings, dams							6.0	1.1
"UC" Upland Conservancy District	Open space uses; Single-family dwellings on estate sized lots	217,800 (5 acres)	0.2 dwelling units per net acre	300	Principal: 20 Accessory: 5	50	50		
"R-1" Single-Family Residential District	Single-family dwellings, agri- cultural uses, home occupations	30,000	1.5 dwelling units per net acre	150	Principal: 20 Accessory: 5	50	25		
"R-2" Single-Family Residential District	Uses permitted in the "R-1" district	25,000	1.7 dwelling units per net acre	130 120 if lots were platted before 8/15/89	Principal: 20 Accessory: 5	50	25		
"R-3" Single-Family Residential District	Uses permitted in the "R-1" district	22,500 20,000 if lots were platted before 8/15/89	1.9 dwelling units per net acre	130 120 if lots were platted before 8/15/89	Principal: 20 Accessory: 5	50	25	478.7	90.8
"M-1" Multiple-Family Residential District	Uses permitted in the "R-2" district, two- family and multiple- family dwellings	20,000	2.9 dwelling units per net acre	130 for Single-family 180 for Two-family & Multiple-family	35 all build- ings and surfaced areas	50	20		
"M-2" Multiple-Family Residential District	Uses permitted in the "M-1" district, except home occupations	20,000	5.8 dwelling units per net acre	120	35 all build- ings and surfaced areas	50	20	36.1	6.9

#### SUMMARY OF EXISTING ZONING DISTRICTS IN THE CITY OF BROOKFIELD: 1992 (continued)

Zoning District	Permitted Uses	Minimum Lot Area (sq. ft.)	Maximum Density	Minimum Lot Width (feet)	Maximum Lot Coverage (percent)	Minimum Setback (feet)	Minimum Offset (feet)	Existing 1992 Zoning	
								Acres	Percent of Total
"B-1" Local Business District	Local retail and customer service establishments, accessory dwellings not exceeding the number of businesses	30,000		150	70	100 for buildings 25 for parking	10 from other businesses 25 from a residen- tial district	1.6	0.3
"B-2" General Business District	Uses permitted in the "B-1" district, except residences; larger uses such as theaters, auto sales, dry cleaners and laundries, restaurants, locker plants	30,000		150	70	100 for buildings 25 for parking	10 from other businesses 25 from a residen- tial district		
"B-3" Regional Business District	Uses permitted in the "B-2" district, motels, shopping centers, gas- oline service stations, wholesaling, incidental manufacturing and processing	120,000		300	70	100 for buildings 25 for parking	25		
"O" Office District	Business offices, pro- fessional offices, real estate offices, financial institutions	30,000		150	70	100 when abutting a more restric- tive district 50 when abutting a less restric- tive district or an arterial street	25 from other businesses 50 from a residen- tial district	 	
"O&LB" Office and Limited Business District	Business offices, pro- fessional offices, real estate offices, financial institutions	60,000	<b></b> ,	180	70	100 for buildings 25 for parking	25 from other businesses 50 from a residen- tial district		

#### SUMMARY OF EXISTING ZONING DISTRICTS IN THE CITY OF BROOKFIELD: 1992 (continued)

					:			Existing 1992 Zoning	
Zoning District	Permitted Uses	Minimum Lot Area (sq. ft.)	Maximum Density	Minimum Lot Width (feet)	Maximum Lot Coverage (percent)	Minimum Setback (feet)	Minimum Offset (feet)	Acres	Percent of Total
"O&LI" Office and Limited Industry District	Uses permitted in the "O&LB" district, light industry, wholesaling, dry cleaning, printing, restaurants, motels	80,000		200	70 for offices 75 for other uses	100 when abutting a more restric- tive district 50 when abutting a less restric- tive distict or an arterial street	25 from other industries 100 from a residen- tial district	4.6	0.9
"I" Industrial District	Uses permitted in the "O&LI" district and any other use not listed as a prohibited industry	30,000		150	85	100 when abutting a more restric- tive district 50 when abutting a less restric- tive district or an arterial street	10 from other industries 200 from a residen- tial district		
"REC" Recreational District	Parks, playgrounds, ice skating, sledding, swimming, nature trails, golf, tennis								
Planned Residential Development District	Flexible development projects in the "R-1" and "R-2" districts on not less than 40 acres of land								
Floodway Overlay Subdistrict	Non-structural open space uses, culti- vation, storage of floodwater	· · · ·				· · · ·			

-continued-

# SUMMARY OF EXISTING ZONING DISTRICTS IN THE CITY OF BROOKFIELD: 1992

(continued)

Permitted Uses	Minimum Lot Area (sq. ft.)	Maximum Density	Minimum Lot Width (feet)	Maximum Lot Coverage (percent)	Minimum Setback (feet)	Minimum Offset (feet)	Existing 1992 Zoning	
							Acres	Percent of Total
Structures permitted in the underlying district when elevated or floodproofed					_			
Non-structural open space uses, culti- vation, storage of floodwater (until the floodway/flood fringe have been delineated)								
Non-structural open space uses							15.3ª	2.9 <sup>a</sup>
Non-structural open space uses						·	16.4 <sup>a</sup>	3.1 <sup>a</sup>
Development of land annexed to the City after May 7, 1982, in a manner consistent with the Waukesha County Shoreland Protection Zoning Ordinance							19.8 <sup>a</sup>	3.8 <sup>a</sup>
Preservation of open space features on lands committed to urban development								
	Structures permitted in the underlying district when elevated or floodproofed Non-structural open space uses, culti- vation, storage of floodwater (until the floodwater (until the floodway/flood fringe have been delineated) Non-structural open space uses Non-structural open space uses Development of land annexed to the City after May 7, 1982, in a manner consistent with the Waukesha County Shoreland Protection Zoning Ordinance Preservation of open space features on lands committed to urban	Permitted UsesLot Area (sq. ft.)Structures permitted in the underlying district when elevated or floodproofedNon-structural open space uses, culti- vation, storage of floodwater (until the floodwater (until the floodway/flood fringe have been delineated)Non-structural open space usesNon-structural open space usesNon-structural open space usesDevelopment of land annexed to the City after May 7, 1982, in a manner consistent with the Waukesha County Shoreland Protection Zoning OrdinancePreservation of 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<sup>a</sup> Zoning acreages and corresponding percentages for overlay districts are not included in the total.

Source: SEWRPC

70 percent of the existing urban development within the neighborhood and about 42 percent of the total neighborhood area, were served by public water supply facilities. Also, based upon information provided by the City Engineer, about one-third of the existing urban development within the neighborhood is served by an engineered storm sewer system.

## Community Facilities

There are no schools located within the boundaries of the Endicott Neighborhood. Endicott Park is owned by the School District of Elmbrook as a potential school site. In discussions with School District staff, it was indicated that the District no longer plans to build a school in the Endicott neighborhood. The District is currently negotiating with the City for the sale of the Endicott park site to the City.

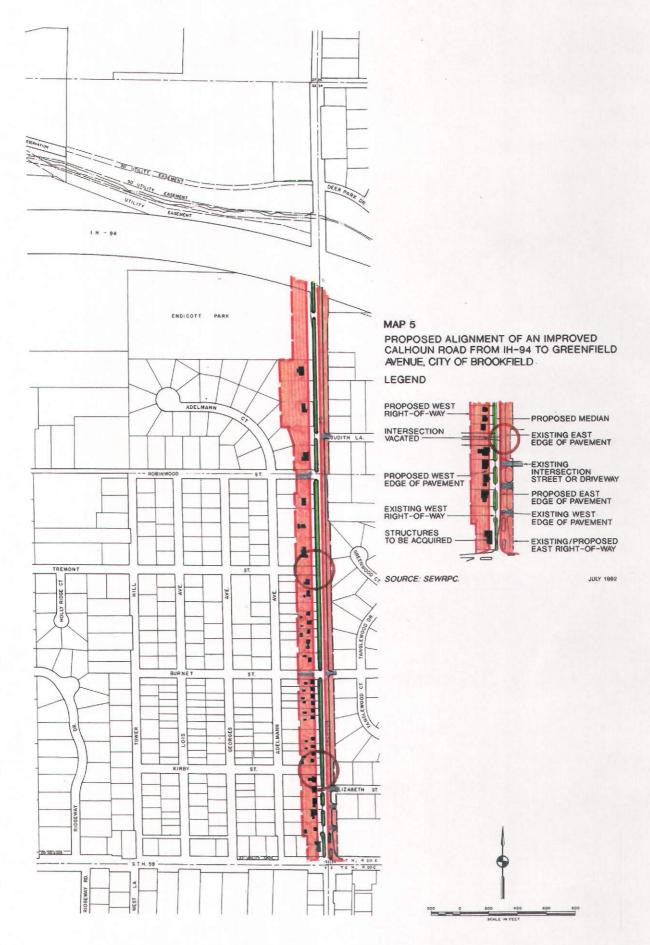
The Endicott Neighborhood is served by the 28 acre Endicott Park located in the northeast corner of the neighborhood on Calhoun Road adjacent to IH 94. Existing facilities at the park include an ice-skating rink, a soccer field, a playfield, a children's play area, a league softball diamond, and a parking lot. The park also encompasses wetlands within an isolated natural area. The City park plan recommends that an additional 15 acres be acquired adjacent to the Endicott Park. The planned facilities for this park include a lighted softball diamond, lighted tennis courts, an additional playfield area, an area for picnicking and other passive uses, trails, and appropriate support facilities.

## Street and Highway Facilities

The existing streets and highways within and adjacent to the Endicott Neighborhood area are shown on Map 2. Approximately 4 percent of the total neighborhood area is occupied by IH 94. Arterial, collector, and minor land access streets presently account for approximately 9 percent of the total area of the neighborhood.

In December 1987, a transportation study of the Bluemound Road corridor was completed by the Regional Planning Commission. The findings and recommendations of this study are set forth in SEWRPC Community Planning Report No. 108, <u>A Transportation System Plan for the Bluemound Road (USH 18) Corridor</u>. The purpose of the study was to examine traffic generation and congestion problems in the vicinity of Bluemound Road--an east-west arterial highway located approximately 3/4 mile north of the Endicott neighborhood. The study examined the need for an additional freeway interchange on IH 94. Alternatives considered were an interchange at Brookfield Road, an interchange at Calhoun Road, and a split interchange divided between Brookfield and Calhoun Roads.

The recommended plan proposed a new interchange at Calhoun Road. The Calhoun Road location was selected because of lower construction costs, greater ease of use by motorists, better connection provided to the centroid of development between Moorland Road and Goerke's Corners, and its consistency with planned urban development. The plan further recommended the widening of Calhoun Road to provide for the development of an attractive four-lane divided roadway. It was recommended that the east Calhoun Road right-of-way line be maintained and that the additional minimum 30 feet of right-of-way required for the improvement be taken from lands on the west side of the existing facility. This would require the taking of about 30 structures on the west side of Calhoun Road. The proposed Calhoun Road alignment is illustrated on Map 5. Because the foregoing Calhoun Road interchange recommendation was not unanimously supported by the SEWRPC Advisory Committee which prepared the Bluemound Road corridor plan, that plan has never been formally adopted by any of the key parties concerned--the Southeastern Wisconsin Regional Planning Commission; the Cities of Brookfield and New Berlin; and the Wisconsin Department of Transportation.



## Chapter III

## RESIDENTIAL NEIGHBORHOOD URBAN DESIGN CRITERIA

#### INTRODUCTION

Urban design criteria consist of a body of information which can be applied in the development of a solution or solutions to specific urban design problems. Urban development decisions should be based in part upon urban design criteria. Urban design criteria must be of a relatively high level of specificity in order to assist in the development of detailed solutions to urban development problems. Accordingly, urban design criteria are herein proposed with respect to environmental preservation; neighborhood recreation facilities; service radii of neighborhood facilities; street, block, and lot layouts and arrangements; general landscaping; utility easements; and storm water drainage and erosion/sedimentation control. The alternative neighborhood plans described in Chapter IV are based, in part, upon these various urban design criteria.

## ENVIRONMENTAL PRESERVATION

<u>Primary Environmental Corridors</u>: Since primary environmental corridors are a composite of the best individual elements of the natural resource base, through the preservation of these corridors flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, and wildlife populations enhanced, and continued opportunities can be provided for scientific, educational, and recreational pursuits. Therefore, all remaining undeveloped lands within a designated primary environmental corridors should be preserved in essentially natural, open uses.

Lakes and Streams: Since inland lakes and streams contribute to the atmospheric water supply through evaporation; provide a suitable environment for desirable forms of plant and animal life; provide the resident population with opportunities for wholesome recreational areas; provide a desirable aesthetic setting for certain types of land use development; serve to receive, store, and convey flood waters; and provide certain water supply needs, these areas should not be infringed upon by urban development.

<u>Wetlands</u>: All wetland areas adjacent to streams or lakes, all wetlands within areas having special wildlife and other natural values, and all wetlands hav-

ing an area in excess of five acres should not be allocated to any urban development except limited recreation uses and should not be drained or filled.

<u>Woodlands and Vegetation</u>: Every effort should be made to protect and retain existing natural vegetative cover, particularly trees. Trees should be protected and preserved during construction in accordance with sound conservation practices, including the use of wells or islands or retaining walls whenever surrounding grades are altered.

<u>Wildlife Habitat</u>: The most suitable habitat for wildlife--that is, the area wherein wildlife can best be fed, sheltered, and reproduce--is a natural habitat. Since good habitat for wildlife can best be achieved by preserving or maintaining in a wholesome state other resources such as soil, air, water, wetlands, and woodlands, the standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and wildlife populations.

<u>Soils</u>: Since the proper relation of urban land use development to soil type and distribution can serve to avoid the creation of costly environmental problems and promote the wise use of an irreplaceable resource, sewered urban development should not be located in areas covered by soils identified in the regional detailed operational soil survey as having severe or very severe limitations for such development.

### NEIGHBORHOOD RECREATIONAL/EDUCATIONAL FACILITIES

Recreational lands at the neighborhood level should provide a focal point for neighborhood activities and should be located and developed in conjunction with a neighborhood elementary school. The elementary school and recreational facilities should be provided on a common site available to serve the recreation demands of both the school student and the resident neighborhood population. Using a neighborhood park site standard of 1.7 acres per 1,000 residents, and an elementary school site standard of 1.6 acres per 1,000 residents, a total site area of 3.3 acres per 1,000 residents should be provided, with the joint site having a minimum area of 10 acres in size, however. The individual recreational facility requirements should be based upon the values listed in Table 5.

## WALKING DISTANCES TO NEIGHBORHOOD FACILITIES

Residents of the neighborhood should be afforded convenient access to existing and proposed commercial facilities, educational facilities, transportation facilities, recreational facilities, and community facilities; and in highand medium-density residential neighborhoods, such facilities should be located within walking distance of each neighborhood residence.

#### STREETS

Limitation of Access to Arterial Streets: Whenever proposed residential land uses abut an arterial street or highway, the character of the residential uses and the capacity and safety of the arterial facility should be protected by

### Table 5

	OUTDOOR RECREATION FACILITY REQUIREMENTS				
IN A	TYPICAL	LOW-DENSITY	RESIDENTIAL	NEIGHBORHOOD	UNIT

Facility	Minimum Standard Public Facility Requirement (per 1,000 population)	Number of Facilities Required	Total Acreage Required
Active Recreation Baseball Diamond Basketball Goal Ice Skating Rink Playfield Playground	0.09 per 1,000 0.91 per 1,000 0.15 per 1,000 0.39 per 1,000 0.35 per 1,000	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	4.5 0.42 0.35 minimum 4.95 minimum 1.24 minimum 5.36
Softball Diamond Tennis Court Subtotal	0.53 per 1,000 0.50 per 1,000	3.4 = 2 3.3 = 3	0.96 17.78 minimum
Passive Recreational Area	Add 10 percent of recreation area to		1.8
Other Recreational Area <sup>a</sup>	Add 10 percent of recreation area to		1.8
Total			21.38 minimum

NOTE: Low density development is defined as 0.7 to 2.2 dwelling units per net residential acre, with a total population of 6,500 within an area of four square miles (2,560 acres).

<sup>a</sup>Picnicking facilities should be provided in a neighborhood park.

Source: SEWRPC

limiting access from the abutting land uses, and by separating through and local traffic, where possible, by reversed frontage. In addition, a planting screen should be provided in a nonaccess reservation along the rear property line.

<u>Street Cross-Sections</u>: Table 6 summarizes cross-sectional design criteria for desirable four-lane arterial streets, minimum four-lane arterial streets, desirable collector streets, minimum collector streets, minor streets, cul-de-sacs, and pedestrian ways. The respective cross-sections are shown graphically in Figure 2.

<u>Street Grades</u>: Unless necessitated by exceptional topography, the maximum grade of any street should not exceed the following: arterial streets, 6 percent; collector streets, 8 percent; minor streets, alleys, and frontage streets, 12 percent; and pedestrian ways, 12 percent unless steps of acceptable design are provided. In addition, the grade of any street should not exceed 12 percent or be less than 0.5 percent. Street grades should be estab-

lished so as to avoid excessive grading, the promiscuous removal of ground cover and tree growth, and unnecessary leveling of the topography.

<u>Street Intersections</u>: Streets should intersect each other at as near to right angles as topography and other limiting factors of design permit. In addition, the number of streets converging at one intersection should be held to a minimum, preferably to not more than two streets at one intersection; the number of intersections along arterial streets and highways should be held to a minimum, and the distance between such intersections should generally not be less than 1,200 feet; and property lines at street intersections should be rounded with a minimum radius of 15 feet or should be cut off by a straight line through the joints of tangency of an arc having a radius of 15 feet.

## Table 6

Type of Street	Minimum Right-of-Way to be Dedicated	Minimum Dimensions
Recommended Four-lane Divided Arterial Street (Greenfield Road)	120 feet	<ul> <li>+ Dual 28-foot pavement (face of curb to face of curb)</li> <li>+ 24-foot median</li> <li>+ 14-foot tree banks</li> <li>+ 5-foot bike paths (on each side)</li> <li>+ 1-foot outside bike path</li> </ul>
Recommended Four-lane Arterial Street (Calhoun Road)	100 feet	<pre>+ 52-foot pavement (face of curb     to face of curb) + 18-foot tree banks + 5-foot bike paths (on each     side) + 1-foot outside bike path</pre>
Recommended Two-lane Arterial Street (Brookfield Road)	100 feet	<pre>+ 48-foot pavement (face of curb to face of curb) + 20-foot tree banks + 5-foot bike paths (on each side) + 1-foot outside bike path</pre>
Recommended Collector Street	66 feet	<ul> <li>+ 48-foot pavement (face of curb to face of curb)</li> <li>+ 9-foot tree banks</li> </ul>
Recommended Minor Land Access Street	60 feet	<ul> <li>+ 27-foot pavement (face of curb to face of curb)</li> <li>+ 16.5-foot tree banks</li> </ul>

#### STREET DESIGN CRITERIA FOR THE ENDICOTT NEIGHBORHOOD

Source: SEWRPC

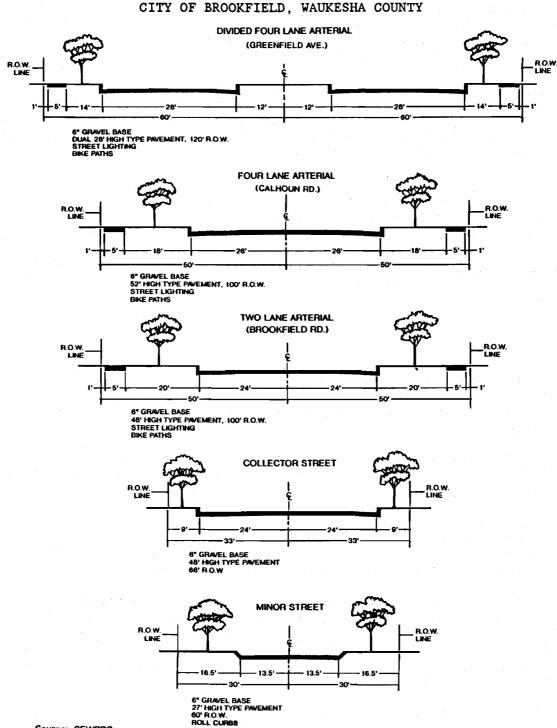


Figure 2

TYPICAL STREET CROSS-SECTIONS FOR THE ENDICOTT NEIGHBORHOOD, CITY OF BROOKFIELD, WAUKESHA COUNTY

Source: SEWRPC.

<u>Street Alignment</u>: When a continuous street centerline deflects at any point by more than 10 degrees, a circular curve should be introduced having a radius of curvature on the centerline of not less than the following: arterial streets, 300 feet; collector streets, 200 feet; and minor streets, 120 feet. A tangent at least 100 feet in length should be provided between reverse curves on arterial and collector streets. In addition, minor and collector streets should not necessarily continue across arterial streets. If the distance between the centerline intersections of any street and any intersecting street is less than 125 feet measured along the centerline of the intersecting streets, then the street location should be adjusted so that the distance is increased or the adjoinment across the intersecting street is continuous, thus avoiding a jog in the flow of traffic.

<u>Half Streets</u>: The platting of half streets should be avoided. Half streets put an unrealistic reliance on the chance that adjacent property owners will develop their adjacent properties at the same time. If half streets are allowed and then improved, their narrow width may result in street maintenance as well as traffic circulation problems.

<u>Cul-de-Sac Streets</u>: Cul-de-sacs which are designed to have one end permanently closed should generally not exceed 600 feet in length. Such cul-de-sac streets should terminate in a circular turnaround having a minimum right-ofway diameter of 120 feet and a turnaround with a minimum diameter of 90 feet.

<u>Handicap and Bicycle Access</u>: Wheelchair and bicycle curb ramps should be installed at street intersection crosswalks pursuant to Section 66.616 of the Wisconsin Statutes.

#### BLOCKS

The widths, lengths, and shapes of blocks should be suited to the planned use of the land; zoning requirements; the need for convenient access, control, and safety of street traffic; and the limitations of and opportunities provided by topography.

<u>Length</u>: Blocks in residential areas should not be less than 600 feet nor more than 1,200 feet in length unless otherwise dictated by exceptional topography or other limiting factors of good design.

<u>Pedestrian Ways</u>: Pedestrian ways of not less than 16 feet in width may be required near the center and entirely across any block of more than 900 feet in length to provide adequate pedestrian circulation or access to schools, parks, shopping centers, churches, or transportation facilities.

<u>Width</u>: Blocks should be wide enough to provide for two tiers of lots of appropriate depth except where required to separate residential development from through traffic. Width of lots or parcels reserved or designated for commercial or industrial use shall be adequate to provide for the off-street service and parking areas required by the use contemplated and to meet the area zoning restrictions for such use.

<u>Utilities</u>: Telephone and electric power lines should, where practical, be placed on midblock easements of not less than 20 feet in width centered on the

property line and, where possible, along rear lot lines for underground construction.

#### LOTS

The size, shape, and orientation of lots shall be appropriate for the location of the subdivision and for the type of development and use contemplated. The lots should be designed to provide an aesthetically pleasing building site and a proper architectural setting for the building contemplated.

<u>Side Lots</u>: Side lot lines should be at right angles to straight street lines or radial to curved street lines on which the lots face. Lot lines should follow municipal boundary lines rather than cross them.

<u>Double Frontage</u>: Double frontage or "through" lots should be prohibited except where necessary to provide separation of residential development from arterial traffic or to overcome specific disadvantages of topography and orientation.

<u>Access</u>: Every lot should front or abut a public street for a distance of at least 60 feet.

Lot Size: Area and dimensions of all lots should conform to the requirements of the City of Brookfield Zoning Code for subdivisions within the neighborhood.

Lot Depth: Excessive depth of lots in relation to width should be avoided, and a proportion of two and one-half to one should be considered a maximum depth-to-width ratio. Depth of lots or parcels designated for commercial or industrial use should be adequate to provide for the off-street service and parking areas required by the use contemplated.

Lot Width: Lots within the interior of a block should have the minimum average width required in the City of Brookfield Zoning Code.

<u>Corner Lots</u>: Corner lots should have an additional width of 15 feet to permit adequate building setbacks from side streets.

### CODE CONFORMANCE

Single-family and two-family dwelling structures should be constructed in such a manner as to meet the minimum energy conservation standards as defined in the Wisconsin Administrative Code, Section Ind. 22, entitled "Energy Conservation" of the Uniform Dwelling Code.

### GENERAL LANDSCAPING

Every effort should be made to protect and retain all existing trees, shrubbery, vines, and grasses not actually lying in public roadways, drainageways, paths, and trails. Trees should be protected and preserved during construction in accordance with sound conservation practices, including the use of wells or islands or retaining walls whenever abutting grades are altered.

<u>Cutting and Clearing</u>: Tree cutting and shrubbery clearing should not exceed 30 percent of the lot or tract and should be conducted so as to prevent erosion and sedimentation and preserve and improve scenic qualities.

<u>Paths</u>: Paths and trails in wooded and wetland areas should not exceed 10 feet in width unless otherwise approved by the City of Brookfield, and should be designed and constructed so as to result in the least removal and disruption of trees and shrubs and the minimum impairment of natural beauty.

<u>Street Trees</u>: At least one street tree of an approved species and of at least 2 inches in diameter at breast height (dbh) should be planted for each 50 feet of frontage on proposed dedicated streets.

<u>Wind and Landscape Planting</u>: With respect to wind, landscaping should be done in such a way so as to minimize winter wind and promote summer wind effects on structures; winter wind protection is afforded by planting landscaping of an adequate height on the west of structures. An optimum distance between a winter windbreak and a structure is approximately twice the tree height. A coniferous windbreak that is two rows wide is nearly optimum for efficiency, and additional rows would not significantly increase its effectiveness as a windbreak.

Noise and Landscape Planting: Groups of trees, shrubs, and other landscape masses, such as earth berms, can serve as noise barriers and should be utilized where noise could create problems for neighboring land uses. Such landscaped noise barriers are most effective when the barrier is near the noise source or receiver. Under daytime conditions, dense landscape plantings can provide noise reductions of 5 to 8 dBA of traffic noise. Also, earth berms 12 feet high, when combined with dense landscape plantings, can reduce truck noise by 10 to 15 dBA. However, landscaped sound barriers can be expected to be less effective at night than during the day since, when surface air is cool (inversions), the noise will be refracted over any noise barrier. Landscape planting noise barriers should be used whenever possible.

### EASEMENTS

Utility easements of widths adequate for the intended purpose but not less than 10 feet on each side of all rear lot lines and on side lot lines or across lots may be required by the City of Brookfield where necessary or advisable for electric power and communication wires and conduits; storm and sanitary sewers; and gas, water, and other utility lines. Where a subdivision is traversed by a watercourse, an adequate drainageway or easement should be provided as may be required by the City Engineer.

# STORM WATER DRAINAGE AND EROSION/SEDIMENTATION CONTROL

Storm water drainage facilities should be adequate to serve the subdivision, and may include curbs and gutters, catch basins and inlets, storm sewers, road ditches, culverts, open channels, water retention structures, and settling basins. The facilities should be of adequate size and grade to hydraulically accommodate the maximum potential values of flow through and from the subdivision, and shall be so designed as to prevent and control soil erosion and sedimentation and to present no hazards to life or property. Where feasible, storm water drainage should consist of landscaped open channels of adequate size and grade to hydraulically accommodate maximum potential volumes of flow. These design details are subject to review by the City Engineer.

Earthmoving activities such as grading, topsoil removal, mineral extraction, road cutting, waterway construction or enlargement, excavation, channel clearing, ditching, drain tile laying, dredging, and lagooning should be so conducted as to prevent erosion and sedimentation and to least disturb the natural fauna, flora, watercourse, water regimen, and topography. Cut and filled lands outside of street rights-of-way should be graded to a maximum slope of 25 percent or to the angle of repose of the soil.

The subdivider should plant those grasses, trees, and vines--the species and size of which are to be determined by the City--to prevent soil erosion and sedimentation. The City of Brookfield may require the subdivider to provide or install certain protection and rehabilitation measures, such as fencing, slopes, seeding, trees, shrubs, riprap, wells, revetments, jetties, clearing, dredging, snagging, drop structures, brush mats, willow poles, and grade stabilization structures. (This page intentionally left blank)

#### Chapter IV

## ALTERNATIVE AND RECOMMENDED PLANS FOR THE ENDICOTT NEIGHBORHOOD

## INTRODUCTION

In accordance with the neighborhood development objective and the neighborhood unit design principles previously outlined herein, the Regional Planning Commission staff initially presented two alternative neighborhood development plans for the Endicott Neighborhood to the City of Brookfield Plan Commission. The plans were prepared at a scale of 1 inch equals 200 feet, using topographic maps having a vertical contour interval of two feet, to which cadastral--property boundary--data compiled by the City were added. All of the basic data pertinent to land subdivision design--including such topographic features as wetlands, floodlands, drainage patterns, and slopes; soil characteristics; woodlands; wildlife habitat; areas having scenic, scientific, historic, and recreational value; environmental corridors; existing land use; real property boundaries; and utilities--were carefully considered in the preparation of the alternative neighborhood plan designs. The preparation of these designs was also guided by the various urban design criteria outlined and discussed in Chapter III.

The preparation of the initial alternative plans focused on two central issues. The first issue related to freeway access. One alternative plan proposed the development of the neighborhood assuming the provision of a new freeway interchange between IH 94 and Calhoun Road. The second alternative proposed development of the neighborhood without the Calhoun Road interchange.

The second issue was the presence of freeway noise adjacent to IH 94 and the selection of land uses compatible with such noise. The Wisconsin Noise Barrier Study prepared for the Wisconsin Department of Transportation by Howard, Needles, Tammen and Bergendoff (HNTB) in 1990 recommended that residential development within the 67 decibel (dBA) noise contour, and non-residential development within the 72 dBA noise contour, be prohibited or -- in the alternative--provided with noise attenuation measures such as landscaped berms or engineered noise barriers. Along IH 94 through the Endicott Neighborhood, the 67 dBA noise contour is located approximately 475 feet south of and parallel to the IH 94 eastbound travel lane. An alternative plan was prepared that proposed the public acquisition of all lands within 475 feet of the eastbound freeway travel lane for park and open space uses. A second alternative proposed a combination of public ownership--in the vicinity of the existing Endicott Park--and the development of private open space--possibly as an integral part of planned unit development projects -- in the western portion of the neighborhood adjacent to the freeway.

Upon initial review of the alternative neighborhood plans, the City of Brookfield Plan Commission reaffirmed the City's opposition to the development of a Calhoun Road interchange and directed the staff to eliminate the interchange from further consideration in the neighborhood unit planning effort. Regarding the freeway noise issue, the Plan Commission directed the staff to present the alternatives to citizens of the neighborhood in a series of public information meetings. The Plan Commission further sought public reaction to converting the existing commercial uses in the northwest quadrant of the intersection of Greenfield Road (STH 59) and Calhoun Road to two-family residential use, and reaction to closing the intersections of Kirby Street and Tremont Street with Calhoun Road.

### PUBLIC REACTION TO PLAN ALTERNATIVES

The neighborhood plan alternatives were presented to the public at a series of public informational meetings. Meetings were held on September 10, 1992, September 16, 1992, and September 29, 1992. All three meetings were well attended.

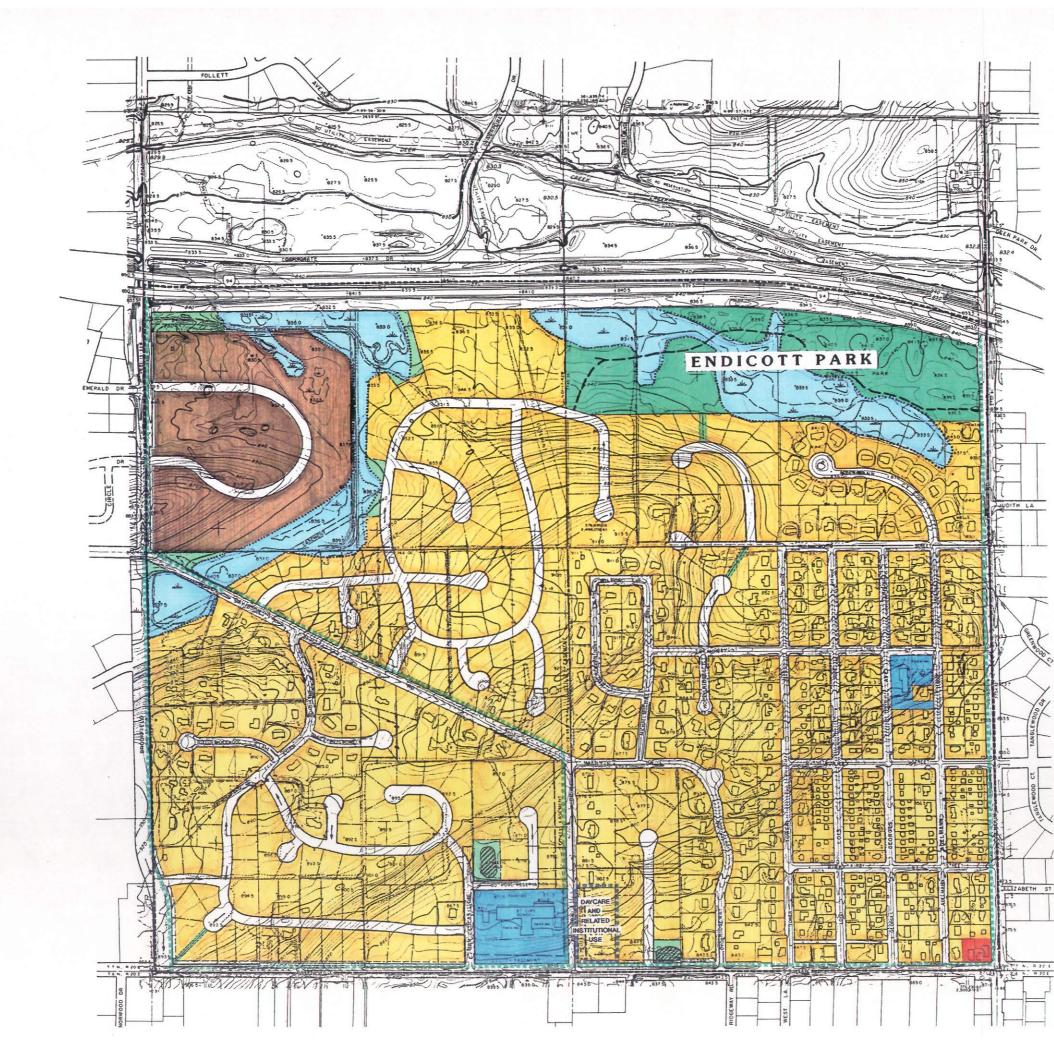
There was mixed reaction to the provision of park and open space lands along the IH 94 freeway. Some citizens objected to the added cost of park lands and others questioned the practical use of the land for recreational purposes given the amount of wetlands in the area. Others objected to the development of private parks that would not be accessible to the public. There was strong support for expanding Endicott Park in the northeast corner of the neighborhood. There was also much concern that existing trees in the neighborhood be preserved.

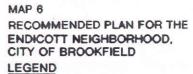
Most of the comments made at the meetings concerned traffic circulation. Residents suggested that the streets be designed in a manner that would not encourage through traffic in the neighborhood. This was particularly reflective of property owners in the northern one-half of the neighborhood. Many residents expressed concern that further development of the neighborhood would raise traffic volumes to unacceptable levels. The City Engineering Department subsequently made a finding that the proposed streets would not produce traffic volumes beyond those expected on local land access streets.

#### THE RECOMMENDED NEIGHBORHOOD UNIT PLAN

After consideration of the comments presented at the public informational meetings, a recommended plan was presented to the City Plan Commission. That plan is shown in graphic summary form on Map 6. The plan is quantitatively summarized on Table 7. The following briefly describes the plan.

<u>Residential Land Uses</u>: The predominant proposed land use in the Endicott Neighborhood is single-family residential use. Single-family residential uses would account for about 308 acres of land, or about 58 percent of the total area of the neighborhood, and would accommodate about 589 single-family dwelling structures. Proposed single-family residential lots adjacent to IH 94 were provided with extra depth so that building envelopes and other outdoor activity areas can be set back a minimum of 475 feet from freeway travel lanes to recognize freeway noise levels. Alternative development designs could be





## EGEND

	NEIGHBORHOOD BOUNDARY
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	SINGLE-FAMILY RESIDENCE
	TWO-FAMILY RESIDENCE (2.9 DWELLING UNITS PER NET ACRE)
	MULTI-FAMILY RESIDENCE (5.8 DWELLING UNITS PER NET ACRE)
NONE	COMMERCIAL
6 I	GOVERNMENTAL AND INSTITUTIONAL
1.1.1	RECREATIONAL
	DRAINAGEWAYS AND OTHER OPEN SPACE
	SURFACE DRAINAGE DIRECTION
	DETENTION/RETENTION POND
	WETLANDS
	LANDSCAPE BUFFER AND NO ACCESS EASEMENT
	BIKE PATH
	PEDESTRIAN TRAIL
<b>E</b>	NOISE ATTENUATIONLANDSCAPED

SOURCE: SEWRPC.

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# Table 7

# SUMMARY OF PROPOSED LAND USES AND DWELLING UNITS FOR THE ENDICOTT NEIGHBORHOOD, CITY OF BROOKFIELD, WISCONSIN

	Ultimate Land Use		Dwelling Units	
Land Use Category	Acres	Percent of Neighborhood Area	Number	Percent of Dwelling Units
Residential				
Single-Family	308	58.4	589	76.5
Two-Family	1	0.2	2	0.3
Multi-Family	33	6.3	180	23.2
Subtotal	342	64.9	774	100.0
Commercial	0	0.0		
Subtotal	0	0.0		
Park and Open Space				
Park	23	4.4		
Drainageways and Other Open Space	2	0.4	'	
Wetlands	35	6.6		
Subtotal	60	11.4		
Institutional	9	1.7		
Subtotal	9	1.7		
Transportation				
Arterial Streets	46	8.9		
Collector and Minor Land Access Streets	69	13.1		
Subtotal	116	22.0		
Total	527	100.0	774	100.0

Source: SEWRPC

accommodated if berms or other engineered noise attenuation measures are provided. It would be up to private developers to take the initiative for any such accommodation.

Two-family residential development is proposed for the northwest quadrant of the intersection of Greenfield Avenue and Calhoun Road. The two-family residential use would be the result of redevelopment of the existing commercial area at that intersection. Two-family residential uses would account for about one acre of land, or less than one percent of the total area of the neighborhood, and accommodate two dwelling units.

Multifamily residential uses are proposed for the northwest corner of the neighborhood adjacent to Brookfield Road. This represents a commitment made by the City at the time this land was annexed. The multifamily residential land uses would account for about 33 acres of land, or about 6 percent of the total area of the neighborhood, and accommodate about 180 total dwelling units.

<u>Commercial Land Uses</u>: No commercial land uses are proposed in the Endicott neighborhood. Existing commercial land uses would be converted to two-family residential use under the recommended plan.

<u>Park, Recreation, and Open Space Land Uses</u>: Under the recommended neighborhood plan, approximately 22 acres of land would be added to the existing Endicott Park. The addition consists of about 12 acres of land for active park use and 10 acres of wetland. The addition would bring the total Endicott Park area to 36 acres. This will serve to implement the recommendations of the City adopted park plan. Park and open space land uses under the recommended plan would account for a total of about 60 acres, or about 11 percent of the total area of the neighborhood.

A system of bicycle paths is also proposed for the neighborhood within the existing and proposed rights-of-way of Greenfield Avenue, Brookfield Road, Calhoun Road, and Davidson Road. The bicycle paths will serve to implement the recommendations of the City's adopted master bikeway plan.

<u>Governmental and Institutional Land Use</u>: Governmental and institutional land uses would account for a total of about 9 acres of land, or about 2 percent of the total area of the neighborhood. Under the recommended neighborhood plan, the existing institutional land uses in the neighborhood would continue. These include a church at the intersection of Georges Avenue and Tremont Street and St. Luke's School at the intersection of Greenfield Avenue and Davidson Road. In addition to these existing uses, the plan proposes a new day care facility on lands located east of St. Luke's School on Greenfield Avenue. It should be noted that the City of Brookfield has no zoning district that would ensure that the land would be reserved for the planned use.

As indicated in Chapter II of this report, the Brookfield School District has no plans to provide an elementary school within the Endicott Neighborhood.

<u>Streets and Circulation</u>: The proposed street system for the neighborhood is organized on a functional basis and consists of arterial, collector, and land access, or minor streets. Arterial streets are arranged so as to facilitate ready access from the neighborhood to centers of employment, governmental activity, shopping and services, and recreation both within and beyond the boundaries of the community. They are properly integrated with and related to the existing and proposed regional system of major streets and highways and are continuous in alignment with existing or planned arterial streets and highways with which they are to connect. Four arterial streets or highways are shown under the recommended plan-the existing IH 94, existing STH 59 (Greenfield Avenue), existing Calhoun Road, and existing and proposed Brookfield Road. Under the plan, Brookfield Road, which currently extends to about 700 south of Davidson Road, would be extended to Greenfield Avenue. Greenfield Avenue is planned to be developed as a four-lane divided roadway; Calhoun Road is planned to be developed as a two-lane undivided roadway, and Brookfield Road is planned to be developed as a two-lane roadway.

In order to promote traffic safety and protect the capacity of the arterial street system, the plan proposes to limit direct access of building sites to arterial streets by backing lots against the arterials. The depth of the lots backed against the arterials has been increased over the generally prevailing lot depth within the neighborhood unit in order to provide room for a planting strip to buffer the residential uses from the arterial streets, as provided for by the urban design criteria outlined earlier. Generally, the planting screen strip should be a minimum of 20 feet wide and provide a mixture of coniferous and deciduous planting materials, providing a sight-proof landscape screen. The arterial streets and highways would total 2.62 miles in length.

Under the recommended plan, one block of Tremont Street--a local street between Adelmann Avenue and Calhoun Road--would be vacated. There are currently no homes that access this street segment and no new homes are proposed in this block.

Collector and local streets in the Endicott neighborhood would result upon ultimate development in a total of 8.65 miles, an increase of 4.14 miles over the existing 1992 mileage of collector and minor streets in the neighborhood. The only collector street in the Neighborhood is Davidson Road which should be improved in accordance with the standards set forth in Table 7 and Figure 2. The proposed minor land access street network is designed to achieve an efficient use of land; to discourage use by through traffic; to minimize street area; to provide an attractive setting for residential development; to facilitate the provision of efficient storm water drainage, sewerage, and public water supply facilities; and to fit the natural terrain, thereby minimizing the need for earthwork during the development process. The street locations are based upon careful consideration of a number of factors, including soil characteristics, topography, property boundaries, a hierarchy of functions within the total street system, existing and proposed land uses, the principles of good neighborhood planning, and the urban design criteria presented herein.

<u>Development of Major Undeveloped Land Holdings</u>: Map 3 identifies 15 major undeveloped land holdings in the Endicott Neighborhood. Table 8 sets forth the proposed land uses for each of these major properties.

## CONCLUSIONS

The recommended Endicott Neighborhood unit plan, as presented herein, offers a sound guide to the physical development of the neighborhood. Proper utilization of the plan by City officials can provide the following benefits:

## Table 8

## PLANNED USE OF MAJOR UNDEVELOPED LAND HOLDINGS IN THE ENDICOTT NEIGHBORHOOD

Land Holding	Proposed Land Uses
Dugan	Multi-family residential, wetlands
Weston Partners No. 2 (west)	Single-family residential, wetlands
Weston Partners No. 2 (east)	Single-family residential, park, wetlands
Ruby	Park, wetlands
Elmbrook School District	Park, wetlands
Valentine	Single-family residential
Zolor (north)	Single-family residential
Zolor (central)	Single-family residential
Zolor (south)	Single-family residential
Safer	Single-family residential
Donaldson	Single-family residential
Whaling and Crowley	Single-family residential
Port Washington Savings and Loan	Single-family residential
Bonness (west)	Single-family residential
Bonness (east)	Single-family residential
Breyer and Kollmansberger	Single-family residential
St. Luke	Single-family residential, retention
East Davidson Road Properties	Single-family residential, retention

Source: SEWRPC

- 1. The plan provides a framework within which proposed land uses can be properly related to existing and other probable future land uses in the area, and to supporting transportation, utility, and storm water drainage facilities. The plan provides for the development of a basic street network able to efficiently and safely move traffic into and out of, as well as within, the neighborhood. The proposed street pattern also provides the basic public rights-of-way needed to efficiently accommodate utilities and storm water drainage.
- 2. The plan can accommodate a diversity of housing types and styles, as well as a wide range of land subdivision proposals.
- 3. The plan identifies areas containing significant natural resources which should be permanently preserved in essentially open, natural

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uses to protect the overall quality of the environment, and to enhance other land uses in the area.

4. Finally, the plan addresses transportation needs of both the neighborhood, the greater Brookfield community, and the region of which Brookfield is an integral part.

As already noted, the plan should be applied in a thoughtful manner, and the City Plan Commission must assume the final responsibility of determining when, where, and how future development is to take place in the neighborhood. The plan can, however, provides the Plan Commission with a broad view of how individual development proposals may be fit into the neighborhood as a whole without creating problems. (This page intentionally left blank)

#### Chapter V

### PLAN IMPLEMENTATION

#### INTRODUCTION

The recommended neighborhood unit development plan described in Chapter IV provides a design for the attainment of the neighborhood development objectives set forth in this report for the Endicott Neighborhood. In a practical sense, however, the plan is not complete until the steps necessary to implement that plan are specified. After formal adoption of the neighborhood development plan, realization of the plan will require faithful, long-term dedication to the objectives on which the plan is based by the city officials concerned with its implementation. Thus, the adoption of the neighborhood plan is only the beginning of a series of actions necessary to achieve the objectives expressed in this report. The neighborhood plan is intended to be used as a guide in the making of land development decisions affecting the Endicott Neighborhood. Adjustments to the neighborhood plan should be made as required by changing conditions. Consequently, one of the important plan implementation tasks is the periodic reevaluation and reexamination of the neighborhood plan to ensure that it is properly reflective of current conditions.

Development requiring the draining and filling of wetlands or the grading of hilly, wooded sections should be avoided. This policy is central to a sound development strategy for the Endicott Neighborhood. In fact, the effectiveness of many of this report's more specific recommendations will be lost if this policy is ignored or greatly compromised. Development policies and practices which respect the limitations of the natural environment will do much in the long term to protect and preserve the overall quality of the environment in the Brookfield area.

The design of a neighborhood unit development plan is only the first in a series of public and private actions required for the ultimate development of the neighborhood in accordance with the neighborhood plan. Attainment of the recommended Endicott Neighborhood plan for Brookfield will require the application and modification of certain plan implement instruments. These include the careful review of all subdivisions for conformance with the neighborhood plan and plan objectives, the proper application of zoning districts and zoning district regulations in the neighborhood to assist in implementing the land use pattern envisioned in the neighborhood plan with respect to the location of streets, highways, parkways, parks, and playgrounds.

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## PUBLIC INFORMATIONAL MEETINGS AND HEARING

Although the Wisconsin city planning enabling legislation does not require local plan commissions to hold public hearings on proposed plan elements prior to adoption of those elements, it is nevertheless recommended that, in order to provide for and promote active citizen participation in the planning process, the city plan commission hold one or more public informational meetings and a formal public hearing to acquaint neighborhood residents and landowners with all details of the proposed plan and to solicit public reaction to the plan proposals. The plan should be modified to incorporate any desirable new ideas which may be advanced at the informational meetings and hearing.

Neighborhood meetings on initial draft proposals were held on September 10, 1992, September 16, 1992, and September 29, 1992. After the City Plan Commission reviewed public comment and made modifications to the plan, the recommended plan was presented at a neighborhood meeting held in the Brookfield City Hall on July 27, 1993.

## NEIGHBORHOOD PLAN ADOPTION

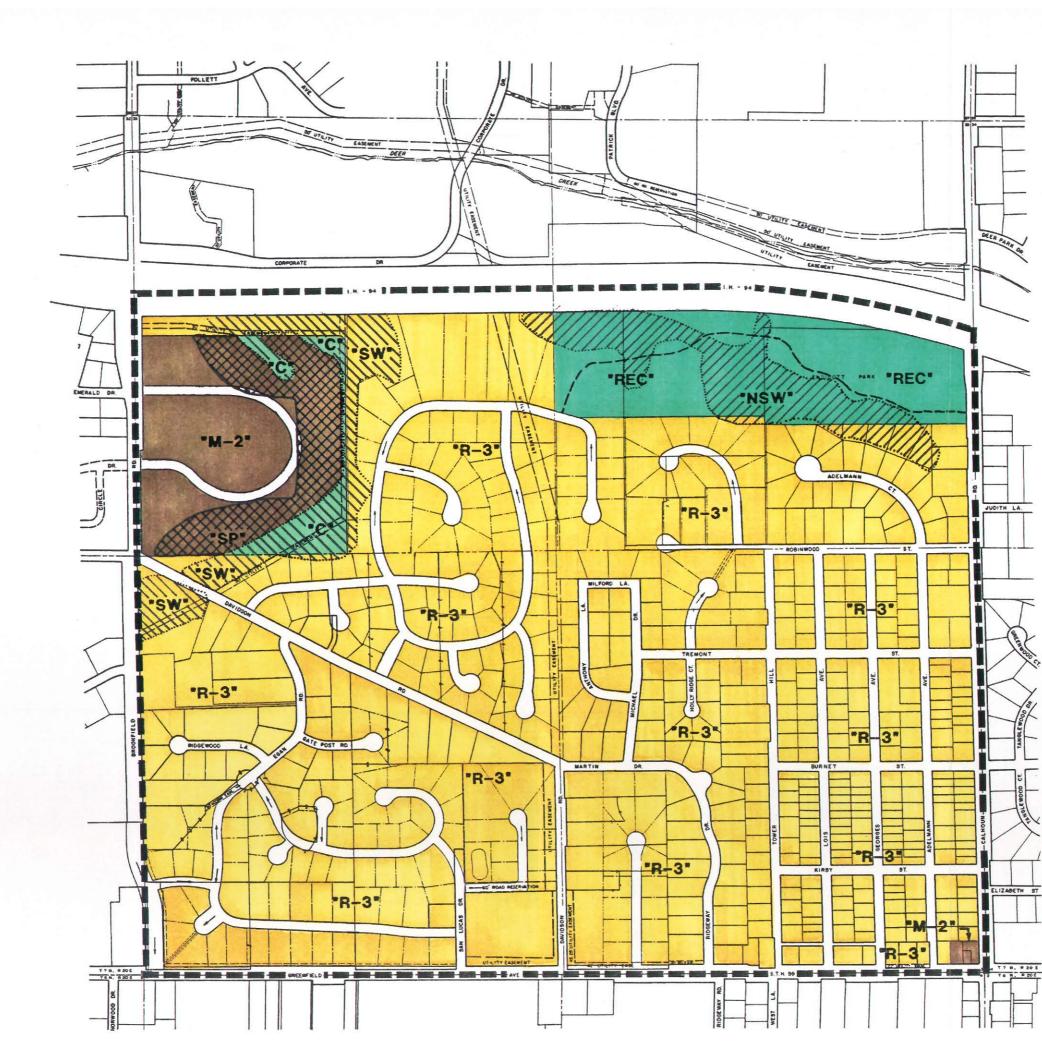
An important step in plan implementation is the formal adoption of the neighborhood plan by the City Plan Commission, and certification of the adopted neighborhood plan, as documented herein, to the Common Council pursuant to state enabling legislation. Upon such adoption, the neighborhood plan becomes the official guide to the making of decisions concerning the development and redevelopment of the neighborhood by city officials. Sample resolutions of plan adoption and transmission are set forth in Appendices A and B.

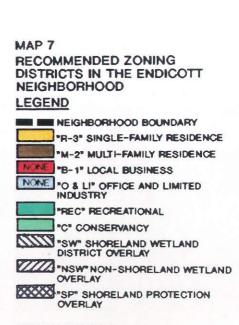
#### ZONING

Following adoption of the plan by the City Plan Commission and certification to the Common Council, the City Plan Commission should initiate amendments to the city zoning district map to bring that map into conformance with the land use proposals advanced in the adopted neighborhood plan as presented herein. Map 7 shows the zoning district boundaries required to implement the neighborhood plan. It is further recommended that the City proceed to create an exclusive institutional zoning district intended to permit schools, churches, public buildings, and other quasi-public uses. Such a district will enable the City to set lands aside for public and quasi-public uses without fear that the land will first be developed in a use other than the planned use. In the Endicott Neighborhood, the district would be used to reserve the proposed day care center site. Pursuant to state enabling legislation, the zoning changes recommended by the Plan Commission must be enacted by the Common Council after a formal public hearing.

An important issue considered during the preparation of the Endicott Neighborhood Unit Plan relationship of land use to freeway noise. It is suggested that the City consider the adoption of a performance standard that would require that new development be set back from freeways to avoid excessive exposure to freeway noise. In the alternative, private developers could be required to provide for freeway noise deflection by means of landscaped berms or engineered noise barriers. Appendix C sets forth a draft zoning ordinance

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SOURCE: CITY OF BROOKFIELD AND SEWRPC

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amendment, for Plan Commission review, that would serve to require the consideration of noise in land development.

## OFFICIAL MAPPING

Following adoption of the Endicott Neighborhood development plan for the City of Brookfield, existing and proposed streets, highways, parks, parkways, and playgrounds shown on the plan should be incorporated into an Official Map for the City and surrounding area. Section 62.23(6) of the Wisconsin Statutes provides that the Common Council of any city may establish an Official Map for the precise designation of right-of-way lines and site boundaries of streets, highways, parkways, parks, and playgrounds. Such a map has all the force of law and is deemed to be final and conclusive with respect to the location and width of both existing and proposed streets, highways, and parkways, and the location and extent of existing and proposed parks and playgrounds. The Statutes further provide that the Official Map may be extended to include areas beyond the corporate limits lines but within the extraterritorial plat approval jurisdiction of the municipality.

The Official Map is intended to be used as a precise planning tool to implement the neighborhood plan for streets, highways, parkways, parks, and playgrounds. One of the basic purposes of the Official Map is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use. Furthermore, the Official Map is the only arterial street and highway system plan implementation device that operates on an areawide basis in advance of land development, and can thereby effectively assure the integrated development of the street and highway system. And, unlike subdivision control which operates on a plat-by-plat basis, the neighborhood plan, with the Official Map as one of its implementation instruments, can operate over a wide planning area well in The Official Map is a useful device to advance of development proposals. achieve public acceptance of long-range plans in that it serves legal notice of the government's intention to all parties concerned well in advance of any actual improvements. It thereby avoids the altogether too common situation of development being undertaken without knowledge or regard for the long-range plan, and thereby does much to avoid local resistance when plan implementation becomes imminent.

The City Plan Commission and Common Council should act to adopt a new Official Map after a public hearing. It should be noted that the Wisconsin Statutes specifically provide that the approval of a subdivision plat by the Common Council constitutes an amendment to the Official Map, thus providing flexibility in its administration.

#### SUBDIVISION PLAT REVIEW

Following adoption of the neighborhood unit plan, the plan should serve as a basis for the preparation of preliminary and final land subdivision plats within the neighborhood. In this respect, the neighborhood plan should be regarded as a point of departure against which to evaluate proposed subdivision plats. Developers should be required to fully justify any proposed departures from the plan, demonstrating that such departures are an improvement to, or a proper refinement of, the adopted neighborhood plan.

#### CONCLUSION

The recommended neighborhood plan, together with supporting zoning, official mapping, and subdivision control ordinances, and a capital improvements program, provides the basic means for accomplishing orderly growth and development of the Endicott Neighborhood area. However, if the plan is not properly and consistently utilized over time in the evaluation of proposed zoning changes, the review of proposed land subdivisions, and the consideration of other physical development proposals, such orderly growth and development may be negated, and the City may face difficult and costly future problems in the area and thus never achieve its full development potential. Consistent application of the neighborhood plan will assure that individual physical development proposals will be channeled toward the sound development of the neighborhood. The staff of the Regional Planning Commission is available on a continuing basis to provide the City with assistance in administering and implementing the Endicott Neighborhood plan. APPENDICES

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## Appendix A

## SUGGESTED CITY OF BROOKFIELD PLAN COMMISSION RESOLUTION ADOPTING THE ENDICOTT NEIGHBORHOOD PLAN

WHEREAS, the City of Brookfield Plan Commission, pursuant to the provisions of Section 62.23 of the Wisconsin Statutes, has the function and duty of making and adopting a master plan for the physical development of the City; and

WHEREAS, the City of Brookfield Plan Commission has:

- 1. Adopted the regional land use and transportation plans for southeastern Wisconsin, as prepared by the Southeastern Wisconsin Regional Planning Commission;
- Prepared and adopted a zoning district map for the City of Brookfield; and
- 3. Prepared and adopted an official map ordinance for the City of Brookfield; and

WHEREAS, the City of Brookfield Plan Commission, with the assistance of the staff of the Southeastern Wisconsin Regional Planning Commission, has prepared a precise neighborhood unit development plan to guide future development for the Endicott Neighborhood, a neighborhood generally bounded by IH 94, Calhoun Road, Greenfield Avenue, and Brookfield Road; and

WHEREAS, the City of Brookfield Plan Commission has held a public informational meeting to acquaint residents and owners of land within the Endicott Neighborhood with the recommendations contained in the plan as described in SEWRPC Memorandum Report No. 85; and

WHEREAS, The City of Brookfield Plan Commission has considered the plan, together with statements and requests of individual landowners within the neighborhood, and has proceeded to incorporate, where deemed advisable, their requests in the plan;

NOW, THEREFORE, BE IT RESOLVED that pursuant to Section 62.23 of the Wisconsin Statutes, the City Plan Commission on this \_\_\_\_\_ day of \_\_\_\_\_, 1993, hereby adopts the precise neighborhood unit development plan described in SEWRPC Memorandum Report No. 85 as a guide for future development of the Endicott Neighborhood; and this plan shall further be a part of the master plan of the City of Brookfield.

BE IT FURTHER RESOLVED that the Secretary of the Plan Commission transmit a certified copy of this Resolution to the Common Council of the City of Brookfield and the Southeastern Wisconsin Regional Planning Commission.

> Chairman City of Brookfield Plan Commission

ATTESTATION:

Secretary City of Brookfield Plan Commission (This page intentionally left blank)

#### Appendix B

## CITY OF BROOKFIELD COMMON COUNCIL RESOLUTION ADOPTING THE ENDICOTT NEIGHBORHOOD PLAN

#### RESOLUTION NO. BY THE PLAN COMMISSION ADOPTING THE ENDICOTT NEIGHBORHOOD PLAN INCLUDING PLAN IMPLEMENTATION MEASURES APPLICABLE

WHEREAS, the City of Brookfield Plan Commission has determined that a comprehensive land use plan is necessary to properly protect and maintain the predominant single-family residential character of the Endicott Neighborhood.

WHEREAS, the Endicott Neighborhood in the City of Brookfield consists of that area bounded by Interstate 94 on the north, Brookfield Road on the west, Greenfield Avenue on the south, and Calhoun Road on the east; and

WHEREAS, the City commissioned the Southeastern Wisconsin Regional Planning Commission (SEWRPC) to prepare a comprehensive land use study titled <u>A Development Plan for the Endicott Neighborhood</u>, dated September 1993; and

WHEREAS, under Section 62.23 (2) of the Wisconsin Statutes it is the role of the City Plan Commission, "to make and adopt a master plan for the physical development of the municipality;" and

WHEREAS, The City Plan Commission recommended approval of the <u>Development Plan for the Endicott Neighborhood</u> on June 22, 1993; and

WHEREAS, informational meetings with affected property owners were held on September 10, 1992, September 16, 1993, and September 29, 1992, to collect public comments on the preliminary draft of the aforementioned plan and a fourth informational meeting was held on July 27, 1993, to collect comments on the final plan as approved by the Plan Commission; and

WHEREAS, Resolution No. 5023, approved on July 20, 1993, by the Common Council of the City of Brookfield, established a moratorium on City approval of Plans and Methods of Operation (MPO), Building Permits, and Land Divisions within the "noise impacted" area of the Endicott Neighborhood, described in the resolution as an area measured 475 feet due south of the southern edge of the pavement of the east-bound lanes of IH 94 between Calhoun Road and Brookfield Road, until December 31, 1993; and

WHEREAS, by the date of this Resolution the planning work contemplated by Resolution No 5023 will not have been completed but the results of which will not change the general land use recommendations of the plan; and

NOW BE IT HEREBY RESOLVED by the Common Council of the City of Brookfield that the City hereby adopts the Endicott Development Plan and Implementation Program as recommended by the City Plan Commission on June 22, 1993, and such plan becomes an additional element of the City's Master Plan.

BE IT FURTHER RESOLVED by the Common Council of the City of Brookfield that the City initiate the recommended steps to implement said plan including: the recommended changes in zoning districts under the authority of Wisconsin Statute 62.23 (7) necessary to bring zoning into conformance with the land use plan and the official mapping of streets recommended in such plan. The Plan Commission is directed to arrange for a duly noticed public hearing before the Common Council required by State law and to bring these implementation measures and Plan Commission recommendations thereon back to the Common Council for action. The totality of these implementing measures shall be handled on a repeal and reenactment basis under Wisconsin law.

BE IT FURTHER RESOLVED that the Common Council of the City of Brookfield use the aforementioned Endicott Development Plan in reviewing development proposals and making land use decisions in the Endicott Neighborhood Area.

BE IT FURTHER RESOLVED that Resolution 5023 shall continue to be in force as stated until December 31, 1993.

ADOPTED \_\_\_\_\_

Gary L. Rasmussen, City Clerk

APPROVED

Kathryn C. Bloomberg, Mayor

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### Appendix C

### SUGGESTED NOISE ATTENUATION PERFORMANCE STANDARDS

# 1. Add the following definitions to Section 17.02 of the City of Brookfield Zoning Ordinance in their appropriate alphabetical order:

(14a) EQUIVALENT A-WEIGHTED SOUND LEVEL. The equivalent steady-state sound level, which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same period. The A-scale is the measurement of sound approximating the auditory sensitivity of the human ear and used to measure the relative noisiness or annoyance of common sounds. For the purpose of measuring or predicting noise levels, a recepter is assumed to be at ear level, located five feet above the ground surface. Sound level is expressed as  $L_{eq}$ .  $L_{eq}$  [h] is the hourly value of sound level.

Spaces that are associated (42a) OUTDOOR LIVING AREA. with residential land uses typically used for passive recreational activities or other noise sensitive uses. Such spaces include patio areas, barbecue areas, residential play areas; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas not so affected are front yard areas, driveways, greenbelts, maintenance areas, and storage areas associated with residential areas; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and outdoor areas with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

(51a) SOUND LEVEL. The weighted sound pressure level obtained by use of a sound level meter and frequency weighting network, such as A, B, or C as specified in American National Standards Institute specifications for sound level meters (ANSI S1.4-197, or the latest approved revision thereof). If the frequency weighting is not indicated, the A-weighting scale shall apply.

(51b) SOUND LEVEL METER. An instrument which includes a microphone, amplifier, RMS detector, integrator or time averager, output meter, and weighting networks used to measure sound pressure levels.

2. <u>Greate Section 17.215 of the City of Brookfield Zoning Ordinance to read</u> <u>as follows</u>:

17.215 <u>TRAFFIC NOISE LIMITATIONS</u>. (1) COMPLIANCE. This Ordinance permits specific uses in specific districts; and these uses may

be affected by traffic sound levels that adversely affect the health, safety, and comfort of persons located in the proximity of arterial streets and highways. These noise level performance standards are designed to limit, restrict, and prohibit the effects of traffic sound levels on adjacent uses. All structures, land, air, and waters shall hereafter, in addition to their use and site regulations, comply with the following performance standards.

(2) BASIS OF APPROVAL. No owner of land adjacent to an existing freeway or adjacent to a planned transportation corridor shall commence or cause to be commenced construction of any structure that will be subject to traffic noise levels that exceed the following sound levels measured by a sound level meter:

(a) <u>Construction Restrictions for Habitable and</u> <u>Institutional Structures</u>.

1) No new single-family residential structure shall be approved for construction (excluding substantial repair or alteration) if any exterior hourly traffic sound level  $(L_{eq}[h])$  anywhere within the proposed outdoor living area is projected to be equal to or in excess of 67 dB(A) upon completion of the structure or anytime thereafter.

2) No new multi-family residence, dormitory, mobile home park, transient lodging, school, hospital, nursing home or similar structure, or substantial modification of such existing structure, shall be approved if any exterior hourly traffic sound level  $(L_{eq}[h])$  anywhere within the proposed outdoor living area on the site is projected to be equal to or in excess of 67 dB(A) upon completion of the structure or anytime thereafter.

3) Designation or approval of outdoor living areas otherwise prohibited under Section 17.215(2)(a)(1) or 17.215(2)(a)(2) of this Ordinance shall be permitted if the noise level specified in that subsection can be achieved by appropriate means of sound attenuation, such as berms, barriers, or buildings, at the perimeter of or elsewhere on the site.

4) Construction of structures otherwise prohibited shall be permitted if there are no outdoor use areas on the site of the proposed structure projected to be exposed to an hourly traffic sound level  $(L_{eq}[h])$  equal to or in excess of 67 dB(A) provided that there is incorporated into the design and construction of the structure such sound attenuation measures as are necessary to reduce the maximum interior hourly traffic induced sound level  $(L_{eq}[h])$  in a habitable room to 52 dB(A) upon completion of the structure or anytime there-after.

(b) <u>Construction Restrictions for Recreational Struc-</u> <u>tures</u>.

1) No land shall be designated or approved for construction or use as a public or private exterior recreational area, including, but not limited to, playgrounds, outdoor theaters and amphitheaters, picnic grounds, tennis courts and swimming pools, if any exterior hourly traffic sound level  $(L_{eq}[h])$  anywhere on the site the proposed recreational area is projected to be equal to or in excess of 67 dB(A) upon completion of the structure or anytime thereafter.

2) This section shall not apply to the designation or approval of any green belt or open space in any area in which the noise level exceeds 67 dB(A) regardless of whether such green belt or open space is open to public use, provided that no recreational improvement or facility is constructed thereon.

3) Designation or approval of exterior recreational areas otherwise prohibited under Section 17.215(2)(b)(1) of this Ordinance shall be permitted if the noise level specified in that subsection can be achieved by appropriate means of sound attenuation, such as berms, barriers, or buildings, at the perimeter of or elsewhere on the site.

4) No new interior recreational facility, including, but not limited to, gymnasiums, ice or roller skating rinks, indoor swimming pools, and tennis courts, shall be approved for construction if the hourly traffic sound level  $(L_{eq}[h])$  anywhere on the site is projected to be equal to or in excess of 67 dB(A) upon completion of the structure or anytime thereafter, unless there is incorporated into the design and construction of the structure such sound attenuation measures as are necessary to reduce the maximum hourly traffic induced sound level  $(L_{eq}[h])$  to 52 dB(A).

(c) <u>Construction Restrictions for Commercial and</u> <u>Industrial Structures</u>.

1) No new commercial or industrial structure, or substantial modification of such existing structure, shall be approved if any exterior hourly traffic sound level  $(L_{eq}[h])$  anywhere on the site is projected to be equal to or in excess of 72 dB(A) upon completion of the structure or anytime thereafter.

2) Construction otherwise prohibited shall be permitted if there are no outdoor use areas on the site of the proposed structure (except parking lots and storage areas) projected to be exposed to an hourly traffic sound level  $(L_{eq}[h])$  equal to or in excess of 72 dB(A) provided that there is incorporated into the design and construction of the structure such sound attenuation measures as are necessary to reduce the maximum interior hourly traffic induced sound level  $(L_{eq}[h])$ in an interior work or public area to 59 dB(A) upon completion of the structure or anytime there-after.

(3) NOISE ATTENUATION PLANS. If the City of Brookfield Plan Commission has reason to believe that a report is necessary to determine whether a project will be exposed to excessive traffic induced sound levels, such report shall be made by the permit applicant prior to the approval of any subdivision, zoning, or building permit approval. The report shall be prepared by a registered professional engineer or other qualified noise control consultant, and shall contain the following information and any other information the Plan Commission may reasonably require:

(a) the existing maximum hourly traffic sound level  $(L_{eq}[h])$  for a representative sample of locations, measured in accordance with guidelines set forth in "Sound Procedures for Measuring Highway Noise: Final Report," dated August 1981, published by the U.S. Department of Transportation, Federal Highway Administration (FHWA), Arlington, VA, or modeled according to a methodology consistent with the methodology set forth in the FHWA Highway Traffic Noise Prediction Model (Report No. FHWA-RD-77-108); and

(b) the projected future  $(L_{eq}[h])$  at the site resulting from future traffic increases; and

(c) where applicable, plans for sound attenuation measures on the site and/or within the structure proposed to be constructed or altered, and the amount of sound attenuation anticipated as a result of these measures. Sound attenuation may be achieved by separation from noise sources, berms, barriers, landscaping, building construction materials, insulation, and other building measures, or any combination thereof.

In determining whether an applicant should be required to submit a noise attenuation plan pursuant to Section 17.215(3) of this Ordinance, the Plan Commission shall consider the Wisconsin Department of Transportation's Administrative Code TRANS 405 and the Federal Highway Administration's Procedures for Abatement of Highway Traffic Noise and Construction Noise, Title 23, CFR, Chapter I, Subchapter J, Part 772.

(4) <u>Appeals</u>. Any person aggrieved by a decision of the City of Brookfield Plan Commission to prohibit a use or structure by reason of its excessive hourly traffic sound level  $(L_{eq}[h])$ ; or by a decision of the Plan Commission to require a Noise Attenuation Plan may appeal such decision to the Board of Zoning Appeal in accordance with the procedures set forth in Section 17.41 of this Ordinance. Such appeal shall be made within 30 days following the Plan Commission decision.