An appraisal of Brookfield Hills apartments. September 21, 1981

Landmark Research, Inc.
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AN APPRAISAL OF

BROOKFIELD HILLS APARTMENTS

PREPARED FOR

SPRING & BOE ASSOCIATES, INC.

Landmark Research Inc.

AN APPRAISAL OF
BROOKFIELD HILLS APARTMENTS
AS OF
SEPTEMBER 21, 1981

PREPARED FOR

SPRING & BOE ASSOCIATES, INC.
16655 WEST BLUEMOUND ROAD
BROOKFIELD, WISCONSIN 53005

PREPARED BY

LANDMARK RESEARCH, INC.
TIM WARNER, MS, MAI, SREA

1501 Monroe Street, Madison, Wisconsin 53711, 608-256-1090

Landmark Research Inc.

James A. Graaskamp, Ph.D., SREA, CRE
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Jean B. Davis, MS

September 21, 1981

Mr. William Spring
Spring and Boe Associates, Inc.
16655 West Bluemound Road
Brookfield, WI 53005

Dear Mr. Spring:

We are transmitting the appraisal report that you requested on the property known as Brookfield Hills Apartments located in the general vicinity of South Moorland Road and South of the intersection of Moorland Road and Interstate 94, City of Brookfield, County of Waukesha, Wisconsin.

The study and analysis of the project includes investigation of its physical attributes, income and expenses of both the subject property and similar competing projects, and an in-depth analysis of comparable properties that have recently sold in southeastern Wisconsin.

We have valued the subject property given its investment value for continued apartment residency but also have indicated an estimate of the aggregate gross sellout of the project if it were converted to condominium ownership. The enclosed report has concluded that the most probable selling price or market value of the property as of September 21, 1981, as an apartment project to be:

SIX MILLION ONE HUNDRED THOUSAND DOLLARS

($6,100,000)

or in the alternative for condominium conversion, the gross aggregate sellout price is estimated to be:

NINE MILLION TWO HUNDRED SEVENTY SIX THOUSAND
FIVE HUNDRED DOLLARS

($9,276,500)

Valuation as an apartment project assumes typical financing prevailing for this project as reflected in the 28 transactions utilized to formulate a predictive equation to predict selling

price of the subject property. A most probable seller in this context would provide financing below market interest rates with down payments ranging from 10 to 20 percent of selling price. These value conclusions are sensitive to money market conditions which have been adverse to the real estate market during this high money market period which commenced as of October 6, 1979. Valuation would assume continued seller financing for continued apartment resale or financing typically involved in the sales of similar projects and units used for comparison purposes to estimate value.

Of this total value, it is our opinion that the value of $600,000 could be allocated to the land and $150,000 to the personal property consisting of ranges, refrigerators, garbage disposals, and air-conditioning units.

Your attention is called to the assumptions, limiting conditions, and controls on use that are included in the addenda of this report.

FOR LANDMARK RESEARCH, INC.

Tim Warner, MS, MAI, SREA
Vice President

Enclosures

TW/mgh

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I. APPRAISAL PROBLEM ASSIGNMENT

A. The Appraisal Issue

The valuation problem is the determination of the market value of the subject property, given the definition of value, as of September 9, 1981.

The property is being purchased by a general partner sponsor to be marketed as a security offering to limited partners, subject to a registered intra-state offering.

The valuation assignment denotes a pricing of the subject property at its market value given the terms and conditions that predominate for properties sold that constitute the subject property's market tier or context.

We have researched a variety of multifamily residential sales throughout the southeastern Wisconsin area extending from Milwaukee through the Madison area. It is interesting to note that out of 30 sales researched, all were to general partner sponsor, or joint or common tenancy arrangements. Thus, there is a decided shifting of the context of the value from recent memory. Previously, apartment properties were conventionally financed with cash down payments of between 10 and 30 percent and married with first mortgage conventional financing provided by various financial institutions. In the current market, apartment properties are purchased with the eye towards the security offering and given the assumption that financing is

and will be provided by the seller. This complicates the valuation problem in that sellers are providing financing. Thus a transaction price includes both the value of the real estate and a value of financing. The price and terms and conditions of financing are an integral unit in the sense that they are almost always unique, having been custom tailored to fit the instant transaction. The appraisal issue is to provide a most probable selling price that encompasses both. This in effect is a nominal selling price as opposed to a cash equivalent price. The financing terms provide the context for the value estimate.

It must be noted that many apartment projects are sold with the upside consideration for condominium potential conversion if their mix of units is appropriate to such a conversion. Because of this phenomenon, sales prices per apartment often rival or exceed the hard costs of constructing a unit. Of course, the high interest rates make the soft cost portion of the total unit cost economically unfeasible.

B. Definition of Value Methodology and Content of the Report

The content of the appraisal report is determined by the decision for which it will serve as a benchmark, the limiting assumptions inherent in the property, the data base, or other factors in the decision context. The appraisal is made to assist the owner or purchaser in determining the most probable

selling price or market value given the context of the current terms and conditions of seller financings available as of the date of valuation.

For the purposes of this appraisal, the most appropriate definition of value is that of "market value," defined in the Revised Edition of Real Estate Appraisal Terminology, 1981, as:

Market Value

> The most probable price in terms of money which a property should bring in competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.
>
> Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> 1. buyer and seller are typically motivated.
> 2. both parties are well informed or well advised, and each acting in what they consider their own best interest.
> 3. a reasonable time is allowed for exposure in the open market.
> 4. payment is made in cash or its equivalent.
> 5. financing, if any, is on terms generally available in the community at the specified date and typical for the property type in its locale.
> 6. the price represents a normal consideration for the property sold unaffected by special financing amounts and/or terms, services, fees, costs, or credits incurred in the transaction.

The legal interest to be appraised is the fee simple interest of the subject property.

C. Identification of the Subject Property

The properties comprise Phases I and II of an apartment project known as Brookfield Hills. It is located in Brookfield, Wisconsin, as can be seen from Exhibit A, a map of the general area. The subject property lies south of Interstate 94 and west of South Moorland Road in Waukesha County. It is adjacent to the Brookfield Hills Golf Course, which lies generally to the north and west of the subject property, and west of Deer Creek, which flows through the subject site.

The subject possesses a singular locational setting given its adjacency to a private golf course and a large site with rolling grounds and wooded vegetation in the well regarded western suburbs of Milwaukee.

The property was built in 1969 and encompasses nine buildings with 135 units and 136 concrete carports.

The properties can legally be described as: A metes and bounds description consisting of 14.23 acres out of the Southeast Quarter of Section 34, Range 20 East, Township 6 North, Waukesha County, State of Wisconsin.

II. PROPERTY ANALYSIS

A. Site Analysis

1. Locational Setting

The subject property is located in the southern quadrant of the City of Brookfield, approximately 15 miles west of the Central City of Milwaukee, and approximately 3-1/2 miles south of the City Hall of Brookfield, in Waukesha County, Wisconsin.

The grouping of land use patterns in the general area of the subject is residential in character. However, there is a strong core of commercial development along North Moorland Road, which includes the Brookfield Square Shopping Center, a major regional shopping center with three national anchor tenants, located North of I-94. There is also strong commercial development along Moorland and east and west along West Bluemound Road, an east-west thoroughfare approximately a mile and three-quarters north of the subject property. Westmoor Country Club lies to the north and east of Moorland Road and I-94. The first major commercial incursion south of I-94 is rising from the ground as the Midway Motor Lodge. This project, when complete, will partner with the Marriott, lying immediately north of the subject, to provide a strong draw of motels,

conventions, and meeting facilities for the western suburban area.

The area south of I-94 is generally zoned residential with the land to the east of Moorland Road generally vacant with some scattered residential and commercial development. The subject is the only major apartment project in the Brookfield area. There is no other land zoned multifamily in the City of Brookfield. This portion of Brookfield has developed rapidly during the 1960s and 70s. It forms an area with Elm Grove, portions of New Berlin, Waukesha, and portions of unincorporated Waukesha County, with the highest per capita income in the Milwaukee Metropolitan Area.

North Moorland connects with the Interstate system and north and south into the suburbs of Elm Grove, the subject's Brookfield area, and New Berlin. I-94 connects to the east with Milwaukee and to the west with Madison, as well as interlying communities.

Although Brookfield is generally a residential suburb, Brookfield Hills is the only major residential apartment complex in the area. New Berlin, to the south, houses two other competing projects, Coachlight Village and Brittany Trace. Since many apartment complexes do not provide an acceptable investment return unless they have below market

financing or because of depreciation shelter, many investors are buying on an after-tax basis. Therefore, a number of owners or purchasers are seeking to acquire apartment complexes for their condominium conversion potential. To be considered for this possibility a project must have good room layouts, sound building structure, a good mix of two and three bedroom units, and must be a generally attractive project. The subject property is ideally suited for this conversion potential due to its ideal location with the surrounding golf complex and open space and its large and generally well executed and appointed units. On a per square foot basis, the subject property would maximize its conversion potential on a price basis whereas in an apartment unit, its rental rates are penalized due to larger sizes relative to its competition.

2. Physical Site Attributes

This section of the report is oriented to a careful identification of the attributes inherent in the subject site. Those pertinent characteristics include the static attributes, legal constraints, linkage attributes, and dynamic attributes.

The <u>static attributes</u> are those characteristics which describe the physical resources of land. They are:

Size and Shape: The subject is comprised of two tracts totaling 14.32 acres, lying south of I-94 and west of South Moorland Road. Both sites are irregular in shape. See Exhibit B. The subject is set south of the Brookfield Hills Country Club and west of Moorland Road. Some commercial development is taking place now along South Moorland. Given its unique location in the affluent Brookfield community, the subject property has singular siting relative to its competition.

Topography and Soil: The terrain of the subject property is generally rolling both in the east and west parcels. Surface drainage appears to be adequate. As referenced from the Waukesha County Soil Survey of the U.S. Department of Agriculture, Table 8, entitled, "Engineering Interpretations for Specified Uses." Exhibit I, the general soil types are indicated to have moderate to severe limitations for various uses including the existing use. Its potential problems of high water table and high shrink-swell potential and lower bearing capacity caused the land planning firm of Nelson and Associates to be consulted in the original development of the project to engineer around potential problems. As can be seen from the map in Exhibit I, these characteristics are generally

common to soils in the general area of the subject property to the south and west of I-94 and Moorland Road.

Flood Hazard: The subject property is not situated in a designated flood hazard area as indicated by the survey provided by the U.S. Department of Housing and Urban Development.

Access: The subject site has good accessibility via South Moorland Road which connects with the east-west I-94 and connects to the south to West Greenfield Avenue and the neighboring New Berlin, to include the New Berlin Industrial Park, which lies to the West of Moorland Road between Moorland and Calhoun Roads. This industrial complex, started in the early 1960s, comprises a number of major manufacturing and distribution centers and is the largest industrial park in the Milwaukee Metropolitan Area. I-94 connects to the west to Madison and intervening communities and to the east with the Milwaukee Metropolitan Area. North Moorland Road provides convenient access to the major regional center of Brookfield Square and north into the premier residential communities of Elm Grove, Brookfield, and then farther north to Menonomee Falls.

3. Legal Constraints

These include specific controls such as zoning and identified external public or private controls on use or

potential legislative or administrative attitudes and procedures which would impact on the owner alternatives for use or reuse of the subject property.

Zoning and Site Restrictions: The subject property is an existing use of M-1 multifamily residential in the Brookfield community. The necessary building permits, reviews and approvals, including an ordinance change and further reviews by state agencies, took place before construction. It should be noted that the current size requirements for M-1 in terms of floor area ratios, setbacks, side yard and dedication requirements would necessitate a parcel of 67.5 acres to allow construction of the subject's 135 units. This would make construction of competition almost impossible in terms of land cost alone. There are no known restrictive deed covenants affecting the property, based on our research.

Easements and Encroachments: There are no apparent easements or encroachments which would adversely affect the marketability of the subject.

Utility Services: The following services are available and connect to the site:

Service	Provided By
Sanitary sewer. A 12-inch intercepter sewer connecting to a 30-inch drain in North Moorland Road to the east.	The Milwaukee Metropolitan Sewage Commission

Storm sewer and concrete box.	The Milwaukee Metropolitan Sewage Commission
Water Service. A 16-inch main located on East Moorland Road with on-site distribution.	The City of Brookfield
Electricity, underground.	Wisconsin Electric Power Company (WEPCO)
Natural gas.	Wisconsin Gas Company
Telephone.	Wisconsin Telephone

4. Dynamic Attributes

Dynamic attributes have to do with the mental or emotional responses which the subject project stimulates and how they affect decision-making behavior. The subject has very good accessibility and configuration, extremely good visibility, and generally good location within a stable residential area. The project is one of the best situated in the Milwaukee Metropolitan Area. All of these attributes are considered to be positive attributes affecting the subject property. Negative attributes affecting the subject property generally refer to its rolling terrain, which drops some 20 feet from the northwest corner of the site to the South Moorland Road frontage, requiring a number of retaining walls and embankments and the neaby townhouses which do detract from

overall site optimization. On balance, the subject is one of the most desirable projects in the Milwaukee Metropolitan Area. Its setting, given the open space and golf course to the north, provides a unique attribute for the property, which, combined with its location in the affluent Brookfield area, provides a singular asset for investment potential upside probabilities.

5. Improvement Description

The two phases are improved with 135 units and 136 parking garages or carports which were completed in late 1969 with the original planning and site clearing for the first portion of the development started in the summer of 1969. The average age of all units is therefore approximately 12 years.

Building construction consists of concrete block and poured concrete floors and footings, some on grade, with basement walls, wood framing, textured siding, and decorative wood and stucco board exterior walls, and composition shingle roofing. All drives and parking areas are asphalt paved and striped. The 136 carports are reinforced concrete structures built into hillsides with 12- to 15-car capacity. Other improvements include a recreation building of approximately 2,200 square feet on two levels, an in-ground, olympic sized pool with filter

and water treatment and cleaning facilities, laundry facilities in the basement of each structure, and two fenced tennis courts.

Partitioning and soundproofing for each unit consists of a nominal 8-inch wall with 2 x 4 staggered studs, 1/2 inch to 3/4 inch sound-board on both sides, and 1-1/2 inch batt insulation. Each unit has a private patio or balcony, depending on its location at grade or higher levels. All interior walls are painted, and floors are generally carpeted in all rooms except the bath, which has a ceramic tile floor, and the kitchen, which is finished with a vinyl flooring. Storage and laundry rooms are located on the lower level according to building plans. There is a range, refrigerator, dishwasher, garbage disposal, vent fans, individual air conditioning unit, and electric panel heating and ceiling fan located in each unit.

The project is, in general, quite above average in overall condition given its age. There is some minor exterior and general touchup that would serve to improve the overall condition to above average condition.

The floor plans for the subject property are located in Exhibit C.

III. THE USE PREMISES

Given the strong investor demand for multi-family apartments, and indeed almost any real estate investment, the most probable use of the property, given its physical and economic characteristics, is continued operation as a residential complex for many years to come. This could take the form of either a rental apartment complex or conversion to condominiums.

Given the analysis of almost two and a half dozen sales which were included in the valuation of the subject property, it is concluded that the most probable buyer for residential properties, such as the subject, in the southeastern Wisconsin area market is a general partner sponsor, a syndication, or an entity holding title in a joint or common tenant vehicle.

Interviews with those involved in the recent apartment transactions have provided the basis to analyze not only the terms and conditions of the sale but to gain an insight into the "investor calculus" of the perceptions and attitudes of the buyers making their buy-hold-sell decision. Additionally, principals of the four largest syndication entities in the midwest were interviewed. Based on these interviews, we have found that the investor calculus generally involves a general partner sponsor

acquiring property that can be in turn marketed as units to limited partner individuals or other monied interests, including pension funds.

The general partner provides skill, know-how, and management abilities while the limited partners provide the equity contribution and in turn obtain tax shelter and buy the right for appreciation potential. Apartment properties are in great demand because the generally less than sophisticated real estate limited partner can identify most easily with this type of property. Additionally, depreciation write-offs or shelters are highest for this type of investment vehicle. This was before the enactment of the Economic Recovery Act of 1981.

Of the monies raised for investment, a certain percentage will go directly to the general partner interest as fees for finding and putting together the partnership. The remainder goes to the equity position to acquire the property. Transactions are almost always entered into with the assumption that the seller will provide below market mortgage financing. Each deal is individual and there is no typical financing available except to say that standard mortgage rate money financing is not utilized. The main yardstick for the purchase is that the general partners will acquire a property based on zero, breakeven, or no

cash flow after provision for operating expenses and debt service, with perhaps even some negative cash flow possible in the early months or years. Returns to the limited partners on either a before or after-tax basis must exceed the yields on money market certificates, currently ranging in the vicinity of 17 to 18 percent, before tax. Yields currently would have to exceed 18 percent as projected from the combination of cash dividends, tax savings, and appreciation potential.

It should then be seen that the viewpoint of the purchase is not from the pre-tax or other normal real estate provisos, given the standard financing conditions of a cash down payment and standard mortgage financing, but purchases are made based on potential yields to the limited partner investor after satisfying all other costs.

In summary then, the most probable use of the subject property will remain as residential multifamily, with the most probable purchaser being a consortium of partners, either general or general and limited, or by a group of investors purchasing as joint or tenants in common.

IV. DESCRIPTION OF APPRAISAL METHODOLOGY FOR THE ESTIMATATION OF VALUE

The preferred method of valuing the subject property is to estimate or predict its most probable selling price given the best information furnished from past and current transactions as based on the relevant differences and factors, including terms and conditions of financing. This is to predict the nominal selling price of the property within the context of existing or assumable financing.

There follows a recitation and description of a dozen and a half comparable sales which were abstracted from a study of an original 38 sales. Of these, a number represent mid-rise or high-rise buildings as well as others which may not be directly comparable to the subject. These sales took place throughout the southeastern Wisconsin regional area. Sales beyond the Milwaukee area were used for two reasons: 1) there has been a lack of transactions in the Milwaukee Metropolitan Area during the last two years and 2) generally Wisconsin investors will go throughout the southeastern portion of the state with no discernable difference being shown to properties in Madison or other areas relative to the Milwaukee area.

Each of the transactions is reported in summary fashion. Real estate is not a fungible commodity and thus differences from property to property are generally significant. Adding to

these vagaries are the problems of changing financial market conditions which are further compounded by the volatility of the market and the noted lack of real estate market efficiency.

The most pertinent question at hand is the method to determine the best predictors of the sale price of the subject property given the terms and conditions of the recent market transactions.

V. VALUATION METHODOLOGY

Secular changes in the money markets have disjointed many of the conventional valuation methods. This has led, out of necessity, to a use of methods which can be shown to predict value based on replication of recent market transactions. The methodology used in this report has been recommended and available but previously was not widely practiced in most valuation contexts.

The methodology utilized in this report will differ slightly from the conventional three approach valuation methodology. However it will be used because the three approaches of cost, income, and market usually do not replicate the actions of actual buyers and sellers making their buy-hold-sell decision.

Undercurrent in market conditions and in this market tier which involves the resale of large investment grade properties, the cost approach is of little relevance. What matters most to the investors is the current economics of the project in terms of rental income and expenses. This is then placed in the context of current market transactions with various indicators such as price per unit or gross rent multiplier, or capitalization rate providing parameters within which the relative goodness of the deal is compared. To recreate or replicate this methodology, we have utilized three methods, or two pricing

methods, to check upon the final estimated selling price. The first is an estimate of value by the income approach or valuation based upon the investment economics of the project. An analysis of income receipts and operational expenses will be conducted. The resulting net income will be processed into an indication of value. What makes the latter step difficult is the various methods of financing available in the market. Most apartment properties are purchased by the most probable buyer type described previously, the syndication, or joint ownership vehicle. They will purchase the property at zero cash or break-even point based upon projected first year revenues and expenses. The cash break-even point will depend on the type of financing available. Currently, all transactions we are aware of had financing provided by the seller at below market rate interest. The terms and conditions of the financing can take many forms, for example, a property could have the seller taking back a land contract at 8 percent interest, or 12 percent interest, or at the prime rate plus a certain number of percentage points. Each one of these would have a different debt service dollar amount and therefore change the amount of debt that the property could carry, thereby affecting the actual price paid. A current example is an apartment project offered for sale in a southern Milwaukee suburb. The seller is willing to take back a land contract with a five year balloon

at the following terms and conditions of interest. In year one, the seller would require a 10 percent down payment with a first year interest of 8 percent only on the remaining balance, in year two an additional 5 percent down with the balance carrying an interest rate of 9 percent interest only, in year three an additional 5 percent down would be required with a 10 percent interest only debt service on the remaining balance for years 3 through 5.

The valuation approach that is used will only bracket a probable sales price for the subject property. A benchmark price cannot be estimated because standard loan terms and conditions are not stabilized or generally available, and indeed, each deal is so dependent upon its specific loan terms and conditions.

The next approach that was used was to analyze sales and the current asking price in the southeastern and central Wisconsin area to derive a method to predict a value which can be shown to be a good predictor of value because a high correlation or association between price and the predictor variables can be demonstrated. This methodology will predict a value based on the variables of income and down payment. Our on-going analysis of apartment sales in the Wisconsin area shows that there is a good correlation between some of the major variables of income and other factors. The method

utilized to predict a value is a refinement of multiple regression analysis. This refinement allows the selection based on best fit of variables such as income or down payment that would best predict the selling price of the subject property from all possible subsets and combinations. This method allows the entry of various items that relate to the income, expenses, other physical factors, such as the selling price per unit and the condominium conversion potential of the sale properties, and then searches for those variables which best predict the selling price. When the equation and variables have been selected, it is then possible to enter pertinent input items for the property being valued and calculate a predicted sales price based on the central tendency of the mass of the other sales utilized.

VI. INCOME AND EXPENSE PROJECTIONS

As stated previously, in valuing the subject property, we have derived an estimate of gross revenues, operating expenses, and net income.

The first step in our analysis is to project gross potential revenue.

Table 1 is an apartment rentals survey of competing projects and the subject as of the valuation date. Table 2 is a rental comparison chart which shows the subject and the competing properties and their current rent schedule. It should be noted that the subject property is situated in Brookfield and is the only one of the comparable properties that is as well located. The prestige of the Brookfield address should be reflected in the rental rate comparison as a premium. The Coachlight Village is a somewhat similar, although less desirable, project located on the south side of Greenfield Avenue, approximately 2 blocks to the south and west of the subject property. The Brittany, a former Kassuba project, is located on the west side of Calhoun Road. The other projects are nearby competing projects, the Springdale Apartment Complex is located in Waukesha while Parkland Green is located closer in on West Cleveland Avenue. Mayfair Manor is an older complex located in the western suburb of Wauwatosa.

TABLE 1

APARTMENT RENTAL SURVEY

PROJECT: Coachlight Village
159th and Greenfield
New Berlin, Wisconsin 53151

TYPE OF PROJECT:

208 - Unit Complex
Built:
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

September 9, 1981
Rental Agent

	NUMBER & TYPE OF UNITS	$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
92	1 Br., 1 -bath 1 Br., 1.5-bath	350	700	.50
56	2 Br., 1 -bath	390	950	.41
32	2 Br., 1.5-bath 3 Br., 1 -bath 3 Br., 1.5-bath	405	1,050	.39
23	2 Br., 1 -bath	400	1,025	.40

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	x
Refrigerator	x	Electric	
Dishwasher		Pool	2
Disposal	x	Clubhouse	
Carpeting	x	Tennis Courts:	
A.C. - Central		Parking: 2 each Outdoor,	Indoor
A.C. - Sleeve	x	Extra Parking Charges:	
Heat	x	Other:	

COMMENTS: The apartment complex is adjoining the Coachlight Village Condominium Complex. The project is in a good state of repair. There were no vacancies at the time of this investigation. There are 6-month and 1-year leases. See Exhibit "H" for unit floor plans.

TABLE 1, Continued

APARTMENT RENTAL SURVEY

PROJECT: Brittany Apartments
Calhoun & Brittany Lane (North of Cleveland)
New Berlin, Wisconsin

TYPE OF PROJECT:

186 - Unit Complex
Built:
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

September 9, 1981
Property Manager

NUMBER & TYPE OF UNITS		$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
20	1 Br., 1 -bath 1 Br., 1.5-bath 2 Br., 1 -bath 2 Br., 1.5-bath 3 Br., 1 -bath 3 Br., 1.5-bath	325	715	.45
166	2 Br., 2 -bath			
	(center)	380	975	.39
	(corner)	395	975	.41

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	x
Refrigerator	x	Electric	
Dishwasher	x	Pool (outdoor)	x
Disposal	x	Clubhouse	
Carpeting	x	Tennis Courts:	
A.C. - Central		Parking: x Outdoor,	Indoor
A.C. - Sleeve	x	Extra Parking Charges:	
Heat	x	Other:	

COMMENTS: One vacancy as of date of inquiry. Project is appealing and well maintained. 1 year leases required.

TABLE 1, Continued

APARTMENT RENTAL SURVEY

PROJECT: Parkland Green
15000 West Cleveland
New Berlin, Wisconsin

TYPE OF PROJECT:

124 - Unit Complex
Built: 1971
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

August 8, 1981
Resident Manager

	NUMBER & TYPE OF UNITS	$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
68	1 Br., 1 -bath 1 Br., 1.5-bath 2 Br., 1 -bath	375	720	.52
56	2 Br., 1.5-bath 3 Br., 1 -bath 3 Br., 1.5-bath	435	980-1000	.44

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	x
Refrigerator	x	Electric	
Dishwasher	x	Pool	x
Disposal	x	Clubhouse	
Carpeting	x	Tennis Courts:	
A.C. - Central		Parking: x Outdoor, x Indoor	
A.C. - Sleeve	x	Extra Parking Charges: Indoor $20/ month	
Heat	x		
		Other:	

COMMENTS: 100 % rented. Property in good state of repair and is attractive. All tenants on 1-year lease.

TABLE 1, Continued

APARTMENT RENTAL SURVEY

PROJECT: Springdale Apartments
2415 Springdale Road
Waukesha, Wisconsin

TYPE OF PROJECT:

199 - Unit Complex
Built: 1972-73
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

September 8, 1981
Manager

	NUMBER & TYPE OF UNITS	$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
79	1 Br., 1 -bath	335 & 340	677 & 733	.49 & .46
	1 Br., 1.5-bath			
	2 Br., 1 -bath			
100	2 Br., 2 -bath	385 & 395	936 & 965	.41
	3 Br., 1 -bath			
	3 Br., 1.5-bath			
20	3 Br., 2 -bath	410 & 415	1150 & 1200	.36 & .35

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	x
Refrigerator	x	Electric	
Dishwasher	x	Pool	x
Disposal	x	Clubhouse	x
Carpeting	x	Tennis Courts: 1 Paddle Court	
A.C. - Central		Parking: 2 Outdoor, Indoor	
A.C. - Sleeve		Extra Parking Charges:	
Heat	x	Other:	

COMMENTS: The subject project is in good overall condition and currently has one vacancy. Project amenities include 1 outdoor heated pool, 1 outdoor paddle court, and a clubhouse.

Heat and hot water are included in the rent, tenants pay their own electric. No indoor parking facilities are available.

TABLE 1, Continued

APARTMENT RENTAL SURVEY

PROJECT: Mayfair Manor Apartments
11040 West Meinecke Avenue
Wauwatosa, Wisconsin

TYPE OF PROJECT:

192 - Unit Complex (Garden)
Built: Approximately 1960
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

August, 1981
Assistant Manager

NUMBER & TYPE OF UNITS		$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
	1 Br., 1 -bath			
	1 Br., 1.5-bath			
168	2 Br., 1 -bath	275	810	.33
	2 Br., 1.5-bath			
	3 Br., 1 -bath			
24	3 Br., 1.5-bath	295	1,024	.29

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	By tenant
Refrigerator	+ $5/mo.	Electric	By tenant
Dishwasher	x	Pool	
Disposal	x	Clubhouse	
Carpeting	+ $10/mo.	Tennis Courts:	
A.C. - Central	x	Parking: 1 Outdoor,	Indoor
A.C. - Sleeve		Extra Parking Charges:	
Heat	By tenant	Other:	

COMMENTS: Laundry facilities and storage lockers
No locked lobbies
Fair soundproofing
Fair maintenance policy
Occupancy at 95%

TABLE 1, Continued

APARTMENT RENTAL SURVEY

PROJECT: Brookfield Hills Apartments
15855 Pinehurst
Brookfield, Wisconsin

TYPE OF PROJECT:

135 - Unit Complex
Built: 1969
Site Area:

DATE OF INSPECTION AND PERSON INTERVIEWED:

February, 1981
Manager

	NUMBER & TYPE OF UNITS	$ RENT/MO.	SQ. FT. AREA	$ RENT/SQ. FT.
32	1 Br., 1 -bath 1 Br., 1.5-bath	340	885	.38
8	2 Br., 1 -bath	375	966	.39
76	2 Br., 1.5-bath 3 Br., 1 -bath 3 Br., 1.5-bath	405	1,200	.34
15	2 Br., 2 -bath, Den	470	1,440	.33
4	3 Br., 2 -bath	495	1,440	.34

FEATURES INCLUDED: (Check if included)

Range	x	Hot Water	x
Refrigerator	x	Electric	
Dishwasher	x	Pool	x
Disposal	x	Clubhouse	x
Carpeting	x	Tennis Courts:	
A.C. - Central		Parking: x Outdoor, x Carport (1/ apt.)	
A.C. - Sleeve			
Heat		Extra Parking Charges:	
		Other:	

COMMENTS: Five vacancies as of this report.
Tenants pay their own heat and electric.
Amenities include an 18 hole Brookfield Hills golf course adjacent to the project.

The rental comparison chart, Table 2, shows the subject property is greatly under the market when comparing size and amenity features and premium location relative to the other properties. It should be noted that the subject property, with its larger sized apartments, will be near the bottom of any range but given its other attributes, it is definitely under-rented as of the valuation date.

Table 3 is an estimation of the current market level rentals based on the foregoing tabular presentations.

Towards the end of projecting operating expenses for the current year, an actual expense statement for the subject property is displayed in Exhibit D. This can be compared to Exhibit E, which is the Milwaukee garden apartment income and expense analysis, prepared annually by the Institute of Real Estate Management of the National Association of Realtors.

Using these, a pro forma operating statement was prepared. This follows as Table 4. The expense estimates were computed primarily from previous years' actual operating results with increases factored or based on our analysis and experience of local trends and national studies.

The subject property has the heating and cooling electrical utility bills paid for by the tenants. This of course has shifted the burden of a substantial portion of the expense estimates. The utilities that the project would assume

BROOKFIELD HILLS RENTAL COMPARISON CHART

Size/Rent per Square Foot

	1 Bedroom 1 Bath	2 Bedroom 1 Bath	2 Bedroom 1½ Bath	2 Bedroom 2 Bath	2 Bedroom Den, 2 Bath	3 Bedroom 1½ Bath	3 Bedroom 2 Bath
Coachlight Village (208 units)	700/.50	950/.41 1,025/.40	1,050/.39				
Brittany (186 units)	7,151/.45			975/.39 .41			
Parkland Green (124 units)	720/.52		980 1,000/.44				
Springdale (199 units)	677/.49 733/.46			936/.41 965			1,150/.36 1,200/.35
Mayfair Manor (192 units)		810/.33				1,024/.29	
BROOKFIELD HILLS	885/.38	966/.39	1,200/.34		1,440/.33		1,440/.34

TABLE 2

TABLE 3

BROOKFIELD HILLS
ESTIMATION OF MARKET LEVEL RENTALS

Monthly Rental	Size in Square Feet	Monthly Rent per Square Foot
$345	$ 885	.39
390	966	.40
415	1,200	.35
475	1,440	.33
495	1,440	.34

$345 x 32	=	$11,040
390 x 8	=	3,120
415 x 76	=	31,540
475 x 15	=	7,125
495 x 4	=	1,980
$54,805 x 12	=	$657,660 Gross Annual Rental Income

TABLE 4

BROOKFIELD HILLS
PRO FORMA OPERATING STATEMENT

Gross Potential Rental Revenue	$657,660
Other Miscellaneous Revenue	9,455
Total Potential Revenue	$667,115
Less Vacancy and Collection Loss (3%)	20,013
Effective Gross Revenue	$647,102
Estimated Operating Expenses	
Management (1)	$32,335
Maintenance (2)	14,273
Payroll and Payroll Taxes (3)	6,510
General Repairs (4)	15,765
Supplies and Materials (5)	13,200
Trash Collection (6)	2,070
Snow Removal (7)	2,140
Insurance (8)	6,912
Utilities (Common Areas) (9)	8,905
Capital Expenditures or Reserves (10)	7,890
Real Estate Taxes (11)	132,794
Other Contract and Recreational Amenity Maintenance (12)	6,120
Total Estimated Expenses	$249,914
Net Income Before Debt Service	$398,188

(1) Management calculated a 5 percent contracted of effective gross revenue.
(2) Previous year's actual increase by 13 percent.
(3) Adjusted for new management salary but based on previous year.
(4) Previous year increased by 10 percent.
(5) Estimated based on similar western Milwaukee projects.
(6) Current vendor's estimate of cost.
(7) Previous year increased by 7 percent.
(8) Previous year increased by 12 percent.
(9) Based on projections by local utilities, increased at 9 percent. This is for water, common area and vacant unit heating.
(10) Based on national studies and similar projects in southeastern Wisconsin.
(11) Actual for 1981.
(12) Based on national studies and histories of similar projects in southeastern Wisconsin.

OPERATING EXPENSES CALCULATE AS 37.3 PERCENT OF GROSS REVENUES AND 38.5 PERCENT OF EFFECTIVE GROSS REVENUE

liability for include that of water, common area utility expenses, and the heating of vacant units. Expense projection estimates for these were based on discussions with the Wisconsin Electric Power Company officials who have projected increases in electrical power rates to range from 5 to 11 percent exclusive of the cost of fuel adjustment. Other expenses estimated are footnoted as to source. Total expenses calculate to 37.3 percent of gross revenues and 38.5 percent of effective gross revenue.

Table 5 is an attempt to provide certain benchmark indicators of value, given alternative financing possibilities. The combinations and permutations of financing packages, assuming seller financing, are indeed too varied to calculate exhaustively. Underlying interest rates on the market would range generally from 8 to 11 percent but these could be with a variety of amortization terms, balloon terms, interest or interest only, and with various step-up or step-down provisions. Other alternatives would call for wrap-around financing or master leases to guarantee occupancies at virtually 100 percent rental levels which would also reflect to either offset gross or net income. A sampling of the ranges of value indications gives a sense of the pricing of the subject property given buyer and seller perceptions of current income, future price appreciation and possible financing terms.

TABLE 5

POSSIBLE SALES PRICES
GIVEN ALTERNATIVE FINANCING

8 to 11 percent
30 year financing term
Given zero cash break-even

8 Percent			
0	x .25	= 0	$398,188 Net Income
.75	x .0880	= .0660	.0660
Capitalization Rate		.0660	= $6,033,000

9 Percent			
0	x .25	= 0	$398,188 Net Income
.75	x .09655	= .0724	.0724
Capitalization Rate		.0724	= $5,500,000

10 Percent			
0	x .25	= 0	$398,188 Net Income
.75	x .1053	= .078975	.078975
Capitalization Rate		.078975	= $5,040,000

11 Percent			
0	x .25	= 0	$398,188 Net Income
.75	x .114279	= .085709	.08571
Capitalization Rate		.085709	= $4,646,000

TABLE 5, Continued

POSSIBLE SALES PRICES
GIVEN ALTERNATIVE FINANCING

8 to 11 percent
Interest only financing
Given zero cash break-even

8 Percent

.75 x .080 = .060
Capitalization Rate = .060

$398,188 Net Income
.060

= $6,648,000

11 Percent

.75 x .11 = .0825
Capitalization Rate = .0825

$398,188 Net Income
.0825

= $4,827,000

ALTERNATIVE FINANCING POSSIBILITIES INDICATE A RANGE OF VALUE FROM $4,600,000 TO $6,600,000.

VII. ESTIMATION OF MOST PROBABLE SELLING PRICE FROM RECENT TRANSACTIONS

In this section we have completed two items: the first is an analysis of recent sales of apartment projects occurring throughout the southeast and south central portions of the state of Wisconsin and the second is a prediction of selling price for the subject property given the analysis of these sales.

The analysis of sales prices and variables was handled by a statistical pachage program that analyzes relationships between variables and indicates those variables most closely correlated to value. The printout for this analysis is shown in Exhibit F. The variables analyzed include date of sale (DATE), projected gross income (PGI), actual gross income at the time of sale (AGI), number of units (UNITS), condominium potential (CP), down payment in dollars (DP), projected net income (PNI), actual net income at the time of sale (ANI), and the selling price per net leaseable area (NLA).

The correlations with sales price are 85 percent or better for down payment, projected income, actual gross income and actual net income. The program sorts through the various combinations of the variables and comes up with the best subset of variables. For the subject property this proved to be a combination of down payment and actual gross income. It did

this by reviewing other subsets with one, two, three, four, or five variables with the criteria being the highest adjusted R squared and the lowest Mallows Cp, which are statistical measures of association.

Given this analysis, we can determine most probable selling price using actual gross income and down payment as the best predictors. Most probable selling price can be calculated for the subject property based on these variables as shown in Table 6.

Table 7 represents the regression equation for predicting the most probable selling price or market value of the subject property. Here the sales price of the subject property is the function of both the down payment and actual gross income of the subject property. The actual gross income of the property is taken from Tables 3 and 4. The down payment factor here entered as $600,000 was found iteratively by substituting various numbers to find out what sales price was the central tendancy of a variety of down payment inputs. It should be pointed out that this sales price is merely the central tendancy of an ordinary least squares methodology to infer selling price based on down payment and actual gross income. This is not the lowest or highest number of the range, but is the central tendancy based on the analysis performed. The calculation of the predicting formula has been based on the

Landmark Research, Inc.

WISCONSIN APARTMENT TRANSACTIONS

		Sales Price (SP)	Sales Date (DATE)	Down Payment (DP)	Actual Gross Income (AGI)	Actual Net Income (ANI)	Number of Units (UNITS)	Net Leaseable Area (NLA)	Condominium Potential (CP)
1.	Tuckaway Heights	$4,082,000	5/11/78	$692,000	$572,184	$273,856	240	$195,804	1
2.	Alpine Courts	2,000,000	8/31/78	670,000	230,577	151,571	81	83,082	1
3.	Alpine Apartments	1,350,000	8/15/81	350,000	176,158	91,602	56	64,272	1
4.	Dutchman's Creek	6,500,000	7/22/80	1,250,000	788,580	392,674	405	234,480	1
5.	Prospect Heights	2,300,000	5/14/80	500,000	264,911	129,089	132	56,880	1
6.	Stonefield Village	2,550,000	10/31/78	850,000	368,060	237,584	128	76,024	1
7.	Willowick Pool Apts.	4,712,000	10/7/77	900,000	663,142	404,516	248	238,012	1
8.	Lakeshore Towers	6,500,000	12/1/79	750,000	698,388	363,999	210	204,932	1
9.	Prospect Towers	7,500,000	12/15/78	1,000,000	808,620	368,942	207	216,978	1
10.	Quarles House	3,904,000	12/6/78	500,000	469,150	255,160	126	110,966	1
11.	Bay View Terrace	2,500,000	10/28/77	300,000	304,575	585,720	148	175,790	1
12.	Alhambra Apartments	2,247,212	12/28/78	300,000	368,640	202,752	96	88,600	1
13.	Lamplighter	1,630,061	9/1/80	484,000	182,881	113,386	48	44,400	1
14.	Nakoma Heights	3,203,883	11/1/79	500,000	513,240	246,458	168	141,800	1
15.	Newbury Bay Sale #1	999,465	5/78	200,000	136,286	81,771	44	39,500	1
16.	Newbury Bay Sale #2	1,189,972	10/31/80	150,000	161,905	89,048	44	39,500	1
17.	Rimrock Hills	2,484,387	11/5/79	600,000	430,800	253,310	140	131,000	1
18.	The Villa Phase I	1,888,787	3/31/80	150,000	526,560	255,381	176	132,100	1
19.	The Villa Phases II - VII	5,169,988	7/12/79	775,000	797,376	478,426	288	207,800	1
20.	Westridge	4,522,277	5/29/80	1,000,000	623,750	374,250	176	156,000	1
21.	King's Cross	1,172,906	3/31/81	354,475	215,491	88,780	58	56,700	0
22.	22 Langdon	1,083,862	10/20/80	220,000	148,571	89,143	74	29,600	0
23.	Midvale Heights	1,087,650	10/27/77	100,000	226,920	159,888	60	53,400	0
24.	Park Tower	2,242,328	7/25/79	365,809	365,610	161,526	139	96,000	1
25.	Shorewood House	1,284,019	7/1/80	250,000	174,000[a]	92,220	56	32,500[b]	0
26.	303 Princeton	343,976	3/6/81	25,000	55,140	31,875	14	14,700	0
27.	Three Fountains	12,090,120[c]	11/30/79	1,164,120	1,514,292	1,060,057	584	206,990	1
28.	Holiday Gardens	6,036,000	12/18/79	740,750	858,636	615,272	301	256,450	1

a Includes commercial rental of $30,000 gross
b Apartment NLA only
c Land lease included at capitalized value

TABLE 7

A REGRESSION EQUATION
TO INFER VALUE

Sales Price = Intercept + X(Downpayment)
+ Y(Actual Gross Income)

Sales Price = Intercept + X($600,000)
+ Y($667,102)

Sales Price = $101,642 + 3.14123($600,000)
+ 6.16118($667,102)

Sales Price = $101,642 + $1,884,738
+ $4,110,603

Sales Price = $6,096,983

Most Probable Estimated Sales Price (Rounded)

$6,100,000

This equation was derived from a statistical analysis shown in Exhibit F of 28 apartment sales in the Wisconsin marketplace.

analysis of the sales recently occurring in the south and south central Wisconsin area. This formula has a significantly strong correlation coefficient, the degree to which the expected values fit the observed values, and therefore, this method has strong credibility as a reliable value predictor.

VIII. VALUATION AS CONDOMINIUM

This section formulates an estimate of the growth retail sellout price of the subject property, should it be offered for sale as a condominium as of the date of valuation. It should be noted that gross retail selling price is not the same as the net realizable potential for development. The gross sellout potential is the aggregate sales price of each unit. The retail sales potential would be the discounted present worth after such costs as developers profit marketing and selling costs and the like have been calculated.

The latter is in effect the value to a hypothecated individual purchaser.

Review of comparables sales in the Brookfield, Elm Grove, and New Berlin area disclosed the following sales.

Wexford Downs consists of 14 two-story frame and brick structures. Each building contains five residential units. There is a recreation building, pool, and tennis courts. The subject contains 70 units on 30 acres.

	PENTHOUSE	TOWNHOUSE	GARDEN HOUSE
TYPE:	14-1458 sq. ft.	28-1432 sq. ft.	28-1214 sq.ft.
ROOM COUNT:	6RM-3BR-2BT Garage & Utility Rm.	6RM-3BR-2.5BT Garage, Full Basement	5RM-2BR-2BT Garage, Full Basement

In 1980 there were six resales of the project with an average selling price of $77,500, approximately $58.64 per square foot. In 1981 there were two transactions with an average sales price of $61.08 per square foot.

Woodridge is on the east side of Barker Road south of Gebhardt Road in Brookfield. Woodridge is a project consisting of 24 units in 3 two-story and eight-unit brick veneer buildings. Each unit has 1,300 or 1,320 square feet with 2 bedrooms and 2 baths. Each unit has an individual garage structure. Amenities on the 8.2 acre site include two tennis courts. In 1980 there were six original sales with an average selling price of $70,000 or $53.44 per square foot. There have been no recorded transactions for 1981 to date.

Squire's Grove Condominiums located in the Village of Elm Grove along North Moorland Road or Pilgram Road in the Village has 76 units which were constructed in 9 buildings on a 16.6 acre site of which 7.7 is open area. There is a large lagoon, open parking area, and two tennis courts.

STANTON	CAMBRIDGE	WINDSOR	SHEFFIELD
Town(A) 5 Units 1,840 SF Cent HW Heat A/C w/Humid. 5R-3BR-2B FP 2 c Gar in Low Level w/ Auto Dr	Town(B) 3 Units 1,780 SF Cent HW Heat A/C w/Humid. 5R-3BR-2B FP 2 c att Gar	Town(C) 28 Units 1,580 SF Ind Gas HA Heat A/C w/Humid. 5R-3BR-2.5B FP 2c Det Gar	Apt(D) 10 Units 1,490 SF 2nd Fl only Cent HW Heat A/C w/Humid. 4F-3BR-2B 1 car lower Level w/auto Dr

Resales of the Windsor project in 1980 showed selling

prices to be $90,000 and $96,000 or sales price per square foot of $56.90 and $60.76 respectively. The resale of a Windsor model in 1981 reflected a selling price of $97,500 or $61.71 per square foot. A Sheffield model sold in May of 1981 for $95,780 or $64.26 per square foot.

Coachlight Village Condominiums located nearby to the subject property in the City of New Berlin have six different projects with a variety of unit mix and types. The Coachlight Village Townhouses were built in 1965. Other phases known by somewhat similar names were constructed in 1973 and 1977. The Carriage Land Condominiums and Townhomes were built in 1979. Sale prices on the smaller units run from $68 per square foot in two transactions recorded in late 1980 and 1981. While in Coachlight Village Condominium Homes, one-bedroom transactions ran from $58.58 per square foot to $65.48 per square foot. The larger townhouses sold for prices ranging in the $58 to $59 per square foot range. Most recent transactions in the Coachlight Condominium Townhomes were reflective of five transactions occurring in 1980 through 1981. Sales prices ranged from $57.46 per square foot to $63.08 per square foot for the 1,408 square foot unit with 2-1/2 bath and attached one-car garage.

Based on the previously related sales, it is our estimate that the subject property could be expected to retail units at the $60 per square foot range as an average across the spectrum of the living units. But the principal unit in the mix for the

subject property are 76, 1,200 square foot, 2-bedroom units. These are easily converted to condominium. The good size of the subject property with units ranging from 885 square feet to 1,440 would allow easy conversion and good marketability depending upon good financing. For the subject's 154,608 square foot of net leaseable area, it would be estimated that a "gross sellout price" which is the total aggregate market value of all the individual units as of the effective date of the appraisal at an overall average sales price of $60 per square foot is:

NINE MILLION TWO HUNDRED SEVENTY SIX THOUSAND

FIVE HUNDRED DOLLARS

($9,276,500)

IX. SUMMARY

The subject property has been valued after solving for an equation that would value it based on its investment potential characteristics based on an analysis of recent sales in the southeastern Wisconsin area, the market area under consideration by the prototypical purchaser. An analysis of both income and expenses for the subject property was conducted based on current competing rental units in the subject's market and current management experiences. A prediction of value was then rendered. The final step in the process is to confirm the estimation of most probable selling price for the subject property that was derived based on inference from other similar properties that have recently sold. This was done via an analysis shown in Exhibit G. Current income and projections of the appraised selling price were input. This analysis shows that the rate of return for the subject property of 22 percent before income taxes and 21.5 percent after income taxes would attract purchasers given the floor yields available currently in money market certificates of 17 to 18 percent. This is a sufficient yield to attract purchasers of limited partnership units as previously discussed.

Thus, the value estimate of the subject property has been demonstrated and confirmed as a check to the underlying assumptions inherent in the valuation methodology. It is then

our opinion that the most probable selling price or market value of the subject property, given a continuation of use as an apartment project, as of September 21, 1981, is:

SIX MILLION ONE HUNDRED THOUSAND DOLLARS

($6,100,000)

CERTIFICATE OF APPRAISAL

The undersigned do hereby certify that except as otherwise noted in this report:

We have no present or contemplated future interest in the real estate that is the subject of this report.

We have no personal interest or bias with respect to the subject matter of this report or the parties involved.

Neither our employment to make this report nor our compensation for it is contingent upon the value or findings reported.

To the best of our knowledge and belief the statements of fact contained in this report, upon which the analyses, opinions, and conclusions expressed herein are based, are true and correct.

This report sets forth all of the limiting conditions, imposed by the terms of our assignment or by the undersigned, affecting the analyses, opinions and conclusions contained in this report.

This report has been made in conformity with and is subject to the requirements of the Codes of Professional Ethics and Standards of Professional Practice of the American Institute of Real Estate Appraisers and of the Society of Real Estate Appraisers.

No one other than the undersigned prepared the analyses, opinions, and conclusions concerning real estate that are set forth in this report.

The American Institute of Real Estate Appraisers conducts a voluntary program of continuing education for its designated members. MAIs and RMs who meet the minimum standards of this program are awarded periodic educational certification. I am certified under this program through December 31, 1983.

Brookfield Hills' most probable selling prices under alternate use scenarios, as of September 21, 1981, are:

CONTINUATION AS MULTIFAMILY RESIDENTIAL

SIX MILLION ONE HUNDRED THOUSAND DOLLARS

($6,100,000)

AGGREGATE GROSS SELLOUT AS A CONDOMINUM PROJECT

NINE MILLION TWO HUNDRED SEVENTY SIX THOUSAND FIVE HUNDRED DOLLARS

($9,276,500)

Of these prices $600,000 could be allocated to land value and $150,000 to personal property.

Tim Warner, MS, MAI, SREA

LIMITING CONDITIONS

The certification of the appraiser and/or author appearing in this report is subject to the following conditions as set forth in the report.

1. The legal description furnished is assumed to be correct. No responsibility for matters legal in character is assumed nor is any opinion of title rendered. Title is assumed merchantable. The property is appraised as though under responsible ownership.

2. The author will not be required to give testimony or to appear in court by reason of this report, with reference to the property in question, unless timely arrangements have been previously made therefore, at prevailing per diem rates.

3. The distribution of the total valuation of this report, between land and improvements, applies only under the existing program of utilization. A separate valuation for land and buildings must not be used in conjunction with any other analysis and is invalid if so used.

4. The author assumes that there are no hidden or unapparent conditions of the property, subsoil, or structures which would render it more or less valuable. The author assumes no responsibility for such conditions or for the engineering which might be required to discover such factors.

5. Information, estimates and opinions furnished to us and contained in this report were obtained from sources considered reliable and believed to be true and correct. However, no responsibility for accuracy of such items is assumed.

6. Protection of the client's interest regarding the report and its contents is governed by the by-laws and regulations of the professional appraisal organization with which we are affiliated.

T I M W A R N E R

PROFESSIONAL DESIGNATIONS

MAI, Member, American Institute of Real Estate Appraisers, Certificate Number 5645

SREA, Senior Real Estate Analyst, Society of Real Estate Appraisers

EDUCATION

Master of Science - Real Estate Appraisal and Investment Analysis - University of Wisconsin

Bachelor of Arts - Marquette University - Milwaukee, Wisconsin

PROFESSIONAL EDUCATION

Society of Real Estate Appraisers

Appraising Real Property	Course 101
Appraising Income Producing Property	Course 201
Special Applications of Appraisal Analysis	Course 301
Instructor's Clinic	1975

American Institute of Real Estate Appraisers

Real Estate Appraisal I	Principles
Real Estate Appraisal II	Urban Properties
Real Estate Appraisal VI	Investment Analysis
Real Estate Appraisal VII	Industrial Properties
Real Estate Appraisal VIII	Residential Properties

Contemporary Real Estate Appraisal, University of Wisconsin, 1977

PROFESSIONAL EXPERIENCE

Mr. Warner is currently associated with Landmark Research, Inc. Previously, he was associated with The Appraisal Company of Houston, Texas, and was the Manager of Appraisal Operations for Mortgage Guaranty Insurance Corporation. His experience includes appraisal, consulting, and market and financial analysis of proposed and existing projects; reuse and conversion studies; lease analysis and structuring; analysis of equity positions for financial institutions; analysis of proposed multiple land use developments for developers, investors, and financial institutions.

J A M E S A. G R A A S K A M P

PROFESSIONAL DESIGNATIONS

SREA, Senior Real Estate Analyst, Society of Real Estate Appraisers

CRE, Counselor of Real Estate, American Society of Real Estate Counselors

CPCU, Certified Property Casualty Underwriter, College of Property Underwriters

EDUCATION

Ph.D., Urban Land Economics and Risk Management - University of Wisconsin
Master of Business Administration Security Analysis - Marquette University
Bachelor of Arts - Rollins College

ACADEMIC HONORS

Chairman, Department of Real Estate and Urban Land Economics, School of Business, University of Wisconsin
Urban Land Institute Research Fellow
University of Wisconsin Fellow, Omicron Delta Kappa
Lambda Alpha - Ely Chapter
Beta Gamma Sigma, William Kiekhofer Teaching Award (1966)

PROFESSIONAL EXPERIENCE

Dr. Graaskamp is the President and founder of Landmark Research, Inc., which was established in 1968. He is also co-founder of a general contracting firm, a land development company and a farm investment corporation. He is formerly a member of the Board of Directors and treasurer of the Wisconsin Housing Finance Agency. He is currently a member of the Board and Executive Committee of First Asset Realty Advisors, a subsidiary of First Bank Minneapolis. He is the co-designer and instructor of the EDUCARE teaching program for computer applications in the real estate industry. His work includes substantial and varied consulting and valuation assignments to include investment counseling to insurance companies and banks, court testimony as expert witness and the market/financial analysis of various projects, both nationally and locally, and for private and corporate investors and municipalities.

J E A N B. D A V I S

EDUCATION

Master of Science - Real Estate Appraisal and Investment Analysis, University of Wisconsin

Master of Arts - Elementary Education, Stanford University

Bachelor of Arts - Stanford University (with distinctions)

Additional graduate and undergraduate work at Columbia Teachers College and the University of Wisconsin

PROFESSIONAL EDUCATION

Society of Real Estate Appraisers

Appraising Real Property	Course 101
Principles of Income Property Appraising	Course 201

American Institute of Real Estate Appraisers

Residential Valuation (formerly Course VIII)

Certified as Assessor I, Department of Revenue, State of Wisconsin

PROFESSIONAL EXPERIENCE

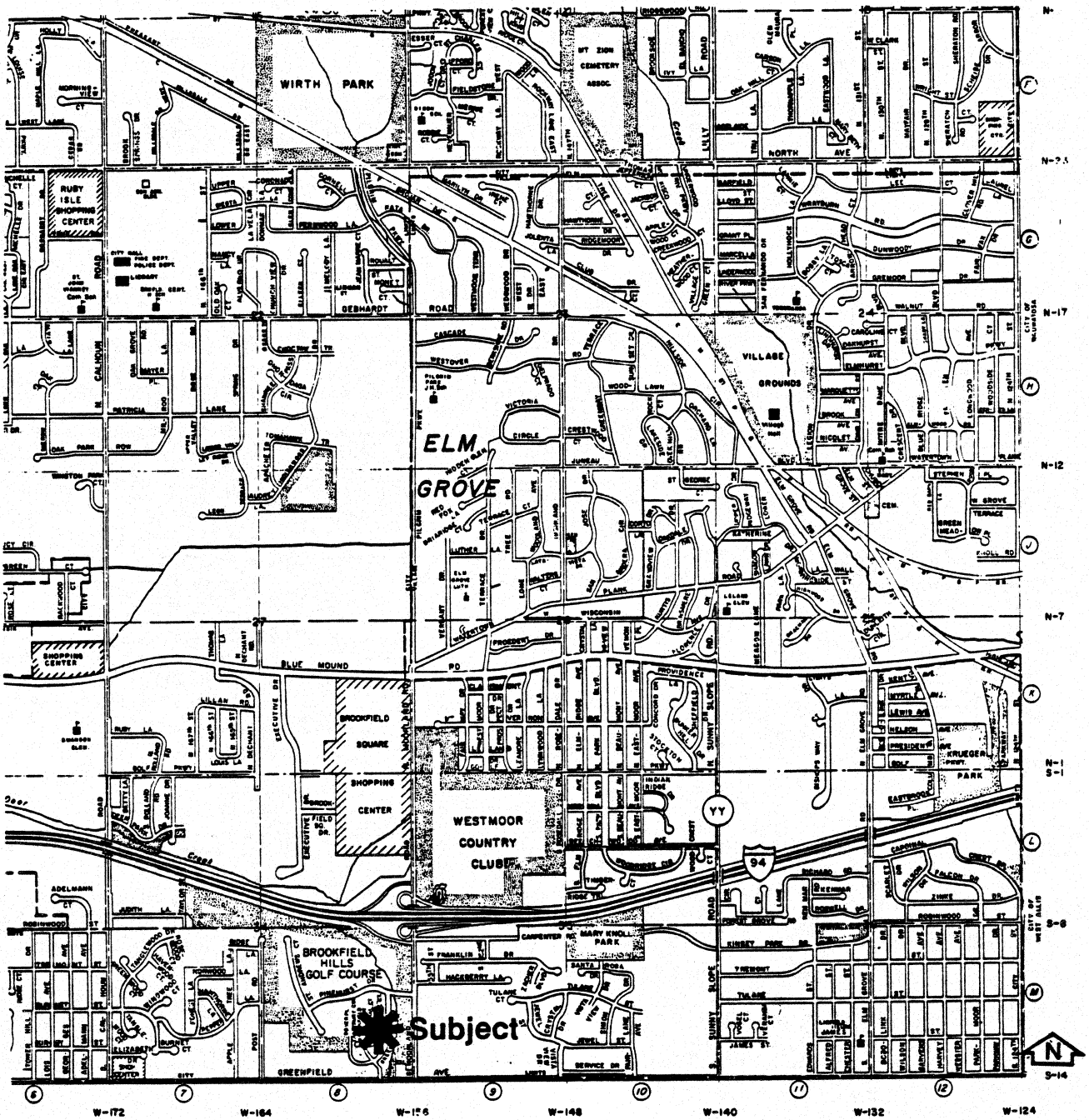
With a significant background in education, practiced in California, Hawaii and Wisconsin, Ms. Davis is currently associated with Landmark Research, Inc. Her experience includes the appraisal and analysis of commercial and residential properties, significant involvement in municipal assessment practices, and market and survey research to determine demand potentials.

EXHIBITS

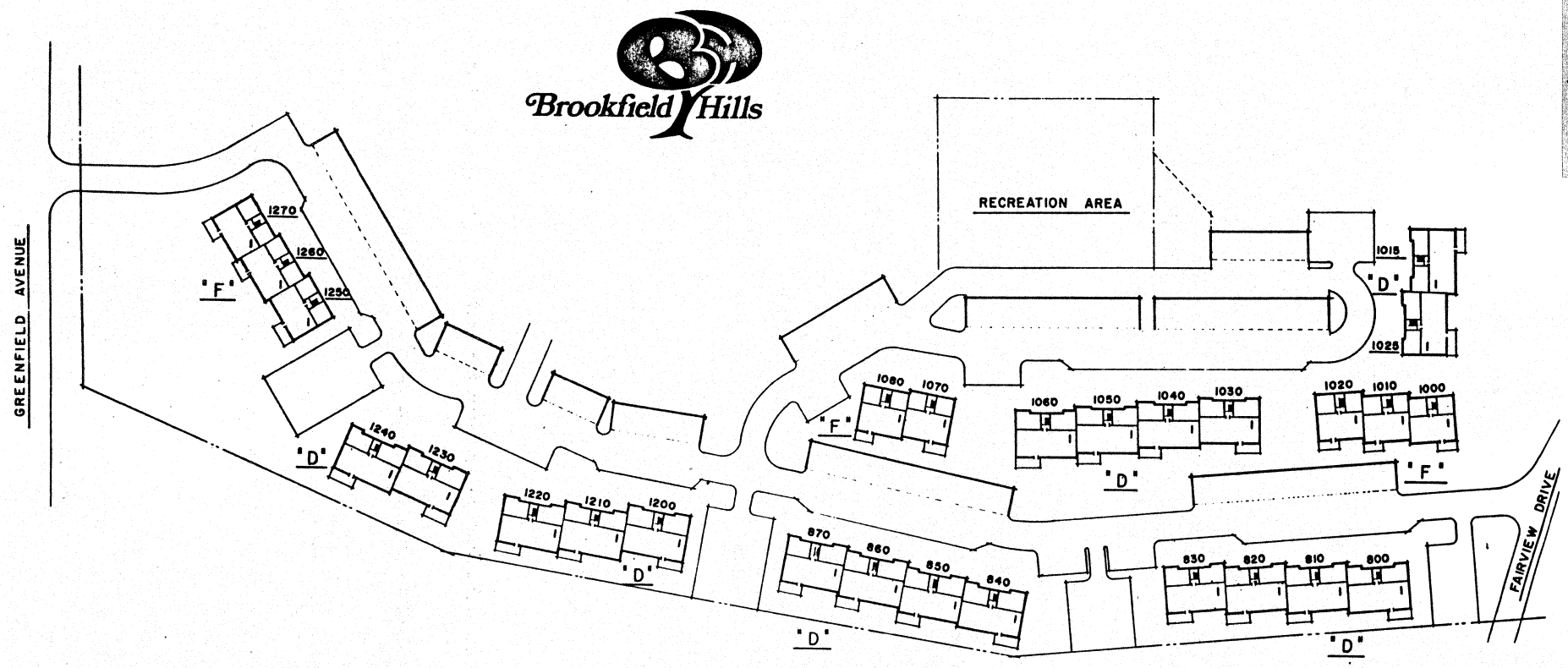
EXHIBIT A

LOCATION MAP OF SUBJECT PROPERTY

BROOKFIELD—BUTLER—ELM GROVE
(SOUTHEAST SECTION)



PLOT PLAN FOR BROOKFIELD HILLS



GROUND FLOOR

APARTMENT No. 1

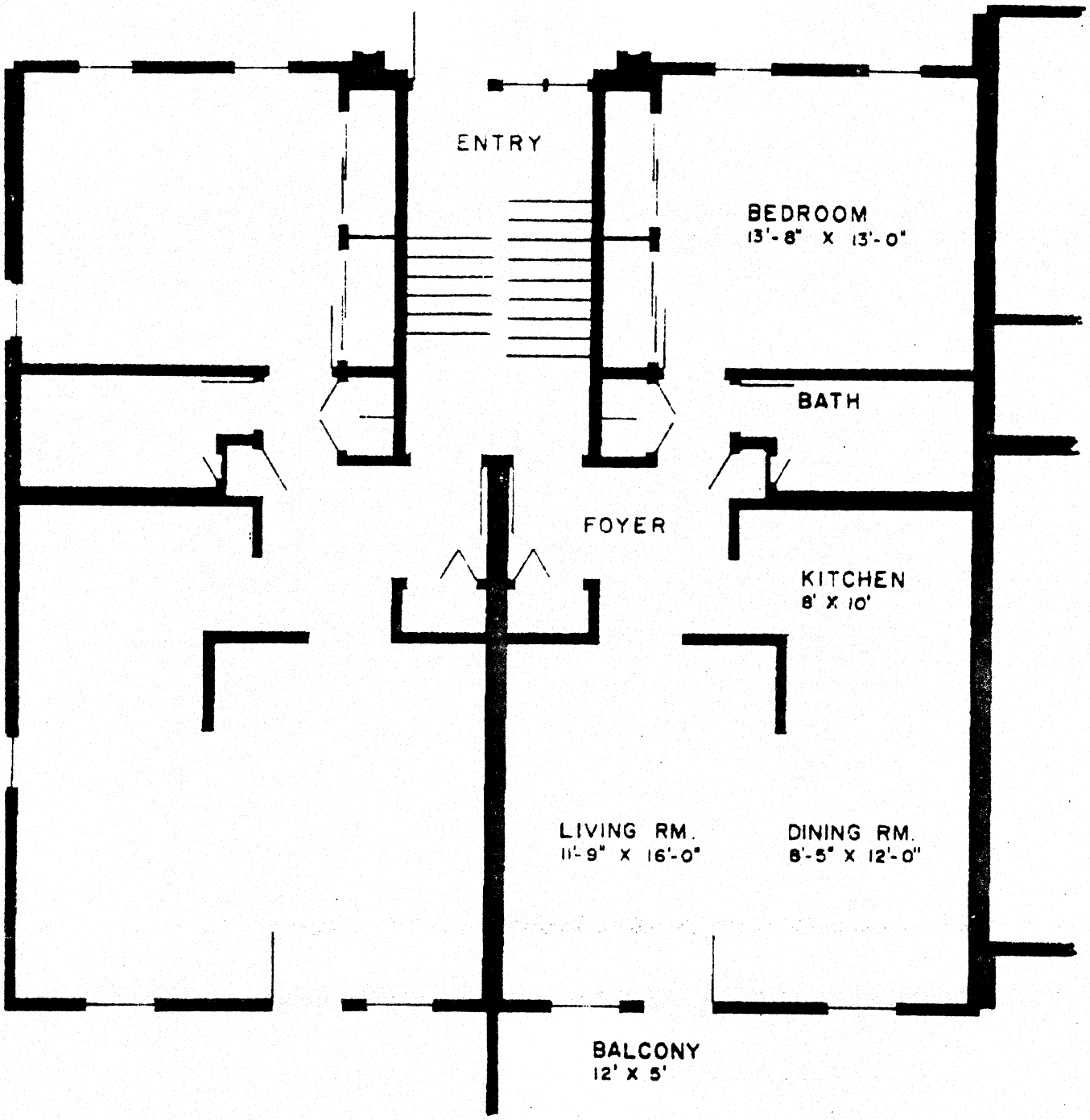
0' 20' 40' 60' 80' 100' 150' 200

SCALE IN FEET

Diagram showing apartment locations.
See inserts for floor plans.

EXHIBIT C

BROOKFIELD HILLS UNIT FLOOR PLANS



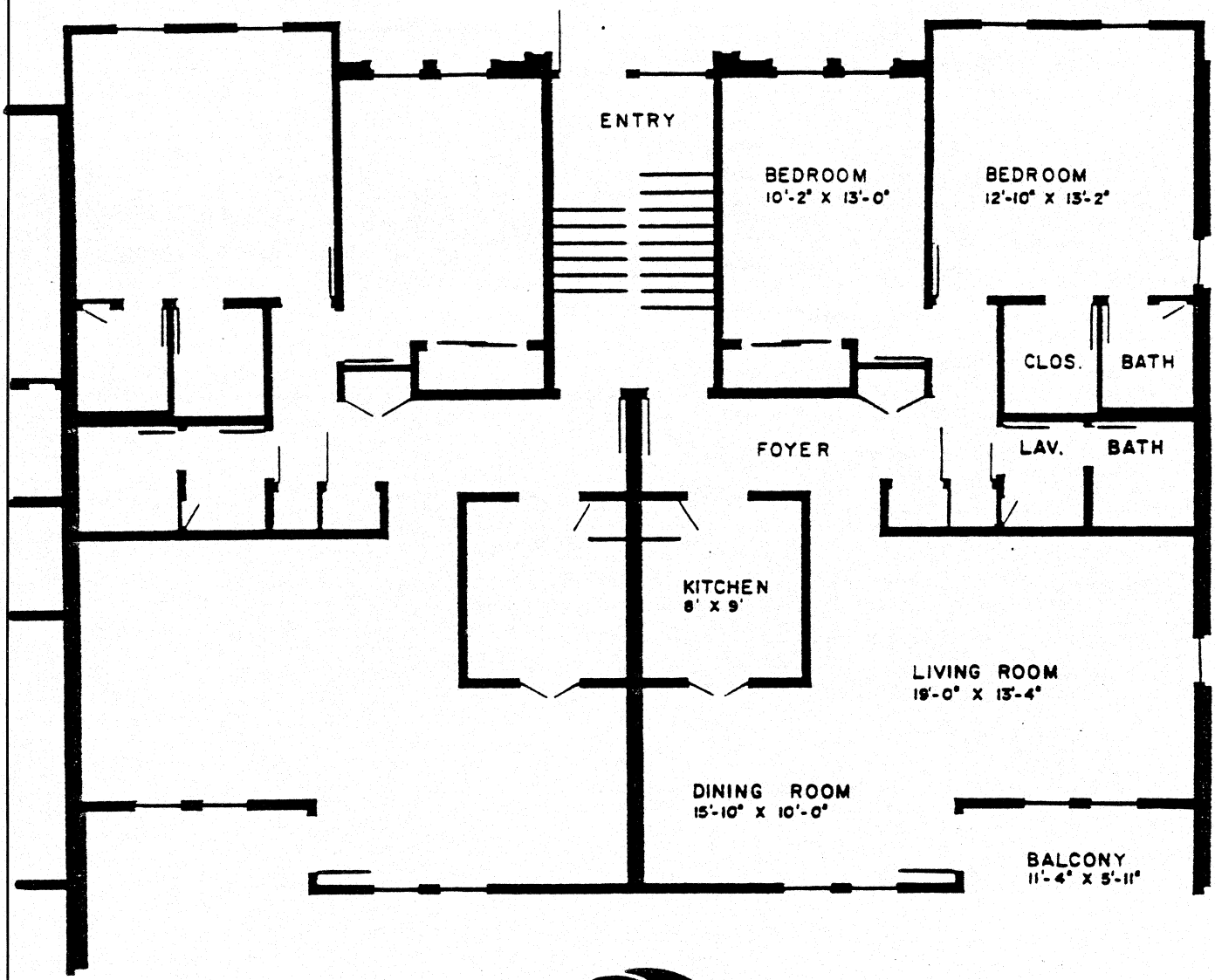
Brookfield Hills

See diagrams of apartment locations for this apartment.

ONE BEDROOM — APARTMENT TYPE 'A'

885 SQ. FT.

EXHIBIT C (Continued)

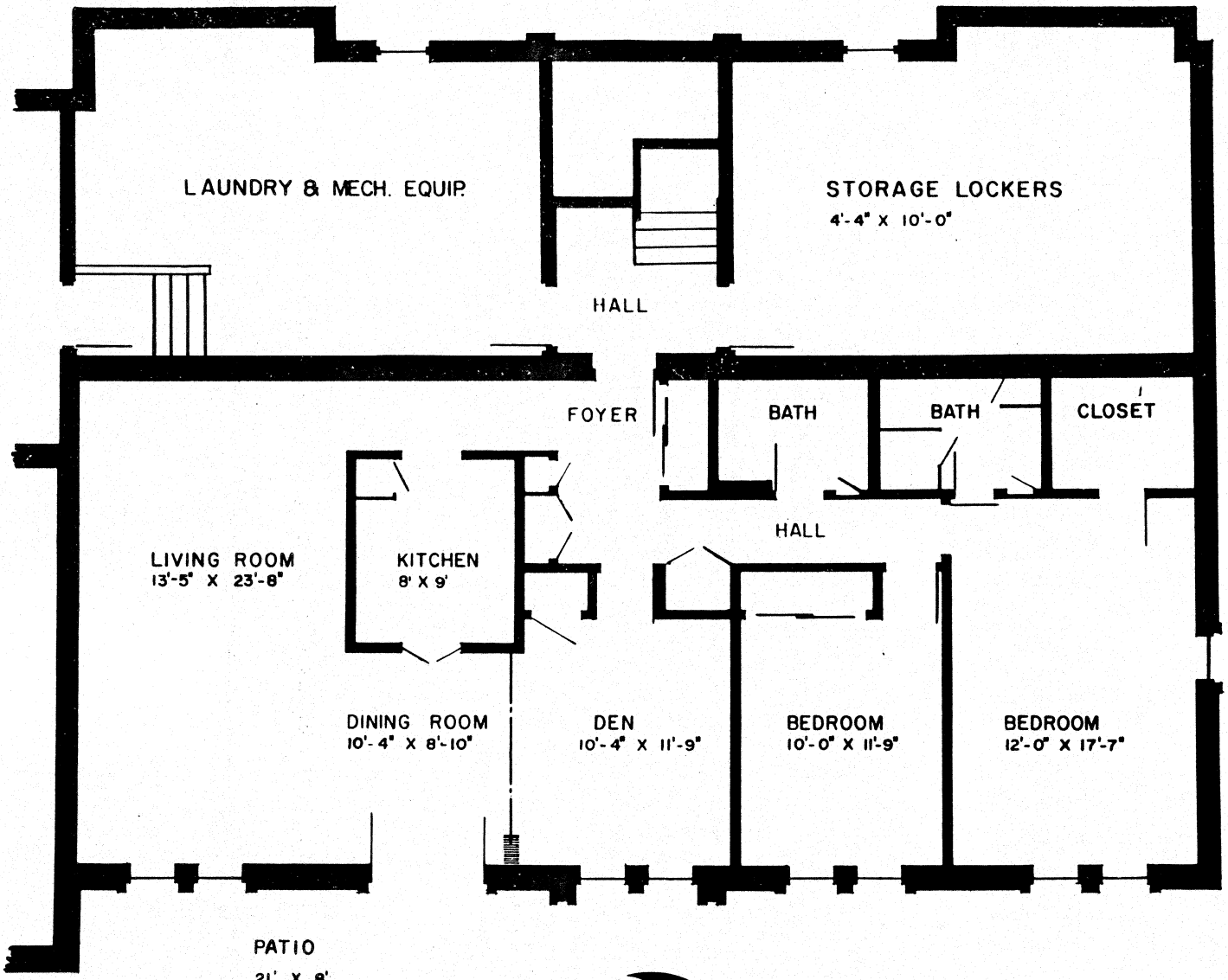


Brookfield Hills

See diagrams of apartment locations for this apartment.

TWO BEDROOM — APARTMENT TYPE 'C'

1200 SQ. FT.

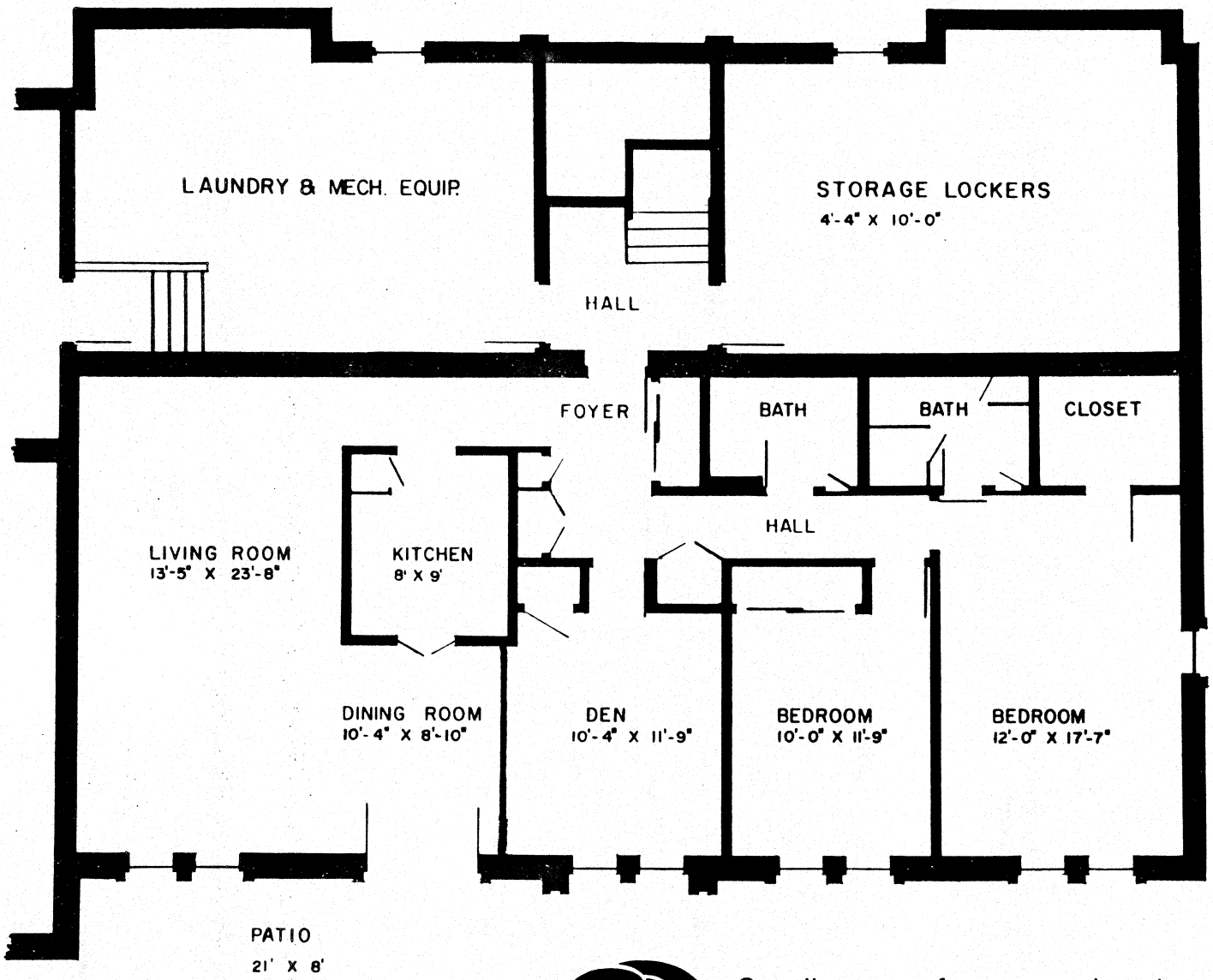


Brookfield Hills

See diagrams of apartment locations for this apartment.

TWO BEDROOM & DEN — APARTMENT TYPE 'D'

1440 SQ. FT.



Brookfield Hills

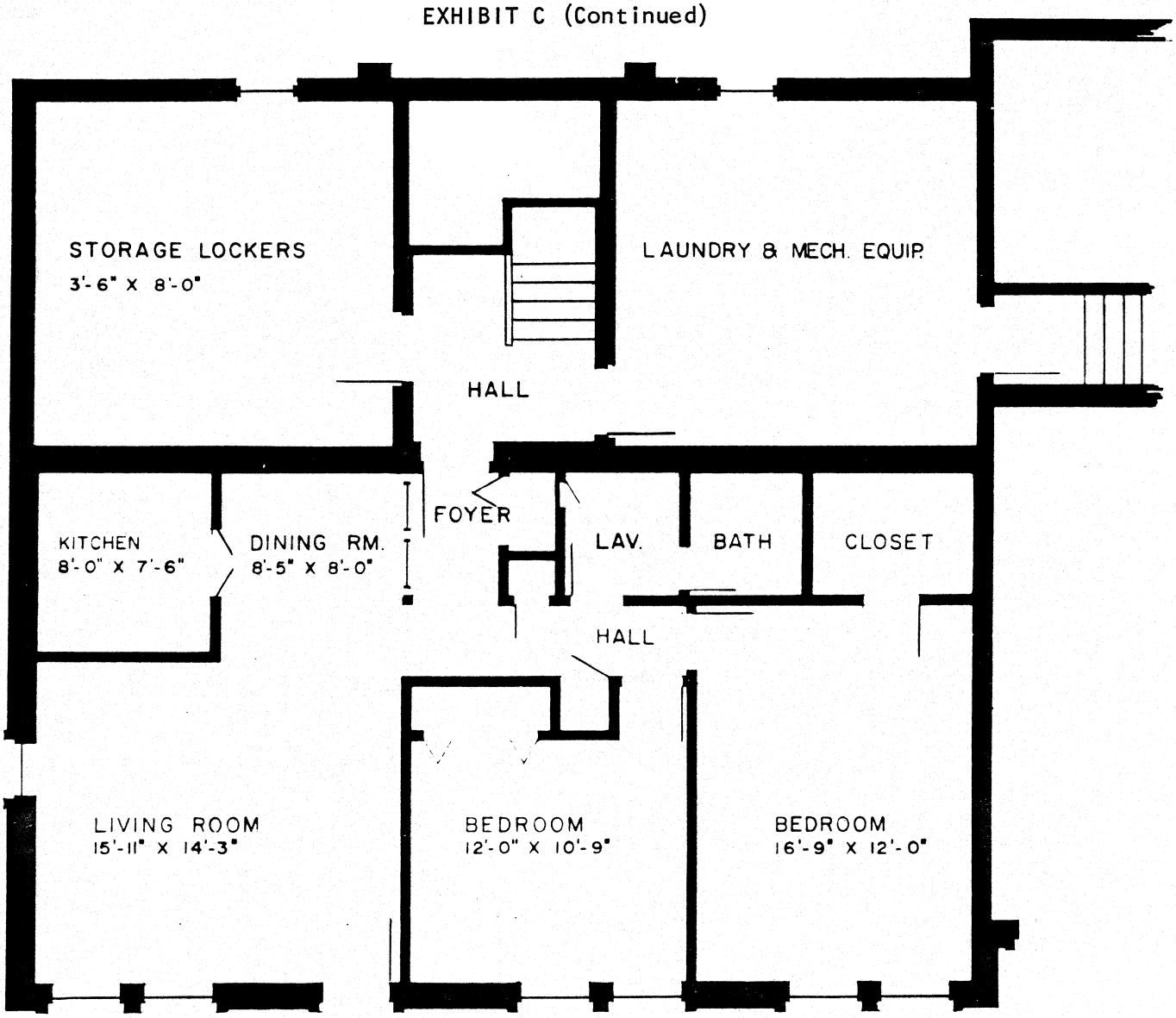
See diagrams of apartment locations for this apartment.

THREE BEDROOM

APARTMENT TYPE 'D'

1440 SQ. FT.

EXHIBIT C (Continued)



Brookfield Hills

See diagrams of apartment locations for this apartment.

TWO BEDROOM — APARTMENT TYPE 'F'

966 SQ. FT.

ACTUAL EXPENSE STATEMENT THROUGH JULY 1981

BROOKFIELD HILLS APARTMENTS
1195 LINKS COURT
BROOKFIELD, WISCONSIN 53005

INCOME STATEMENT
JULY 31, 1981

7 MONTHS

		CURRENT PERIOD AMOUNT	CURRENT PERIOD RATIO	YEAR-TO-DATE AMOUNT	YEAR-TO-DATE RATIO
3100	SALES				
3500	RENTS	$ 48,452.96	93.44	$ 330,067.21	98.4
3502	WASHER & DRYER	766.08	1.56	4,793.32	1.4
3504	MISCELLANEOUS INCOME			300.00	.0
3999	TOTAL SALES	$ 49,219.04	100.00	$ 335,160.53	100.0
5000	OPERATING EXPENSES				
5322				$ 1.00	
5600	TELEPHONE-BUSINESS	56.05	.11	457.14	.14
5601	TELEPHONE-PAY PHONE	15.85	.03	112.44	.03
5610	ELECTRIC-APARTMENTS	42.50	.09	1,031.47	.31
5611	ELECTRIC-HALLWAYS	1,432.21	2.91	11,942.44	3.56
5612	ELECTRIC-CLUB HOUSE	405.09	.82	1,204.52	.3
5613	ELECTRIC-PUMP HOUSE	411.69	.84	1,538.49	.49
5620	WATER SOFTENER-RENTAL			1,769.04	.5
5621	WATER SOFTENER-SALT			2,340.00	.70
5630	EQUIPMENT MAINT & REPAIRS			125.22	.04
5633	GASOLINE	91.75	.19	579.07	.17
5640	PLUMBING REPAIR	31.33	.06	390.24	.12
5642	APPLIANCE REPAIR			476.89	.14
5643	AIR COND. REPAIR			64.27	.02
5644	CARPET MAINTENANCE			193.76	.06
5645	CARPET CLEANING	64.40	.13	2,681.01	.86
5646	PAINTING-INTERIOR	591.81	1.20	1,048.06	.31
5647	PAINTING-EXTERIOR			76.29	.02
5648	GLASS REPAIRS	66.81	.14	74.43	.02
5649	ELECTRICAL REPAIRS	6.25	.01	26.63	.01
5650	LANDSCAPING	175.33	.36	1,286.65	.38
5651	SNOW REMOVAL			2,669.64	.80
5652	DRY WALL REPAIRS			72.51	.02
5660	POOL MAINTENANCE	420.38	.85	2,307.83	.69
5670	SUPPLIES-MAINTENANCE	105.90	.22	1,522.30	.45
5671	SUPPLIES-OFFICE	1.52		250.66	.07
5672	CLEANING SUPPLIES	21.18	.04	176.17	.05
5673	TV CABLE REPAIR			419.87	.13
5681	PROF FEES-ACCTG	116.50	.24	1,177.25	.35
5690	MANAGERS SALARIES	1,000.00	2.03	7,000.00	2.09
5691	CLEANING SALARIES	499.00	1.01	2,012.00	.60
5692	MAINTENANCE SALARIES	900.00	1.83	6,300.00	1.88
5693	ADDITIONAL HELP	1,648.16	3.35	7,090.46	2.12
5700	PAYROLL TAXES	671.35	1.36	3,359.58	1.00
5701	REAL ESTATE TAXES	6,489.55	13.19	45,426.85	13.55
5702	PERS PROPERTY TAXES			563.49	.17
5703	SEWER TAXES	1,792.00	3.64	5,376.00	1.60
5709	WORKMANS COMPENSATION			249.00	.07
5710	INSURANCE-GENERAL	970.75	1.97	6,870.22	2.05
5711	HEALTH INSURANCE	923.43	1.88	1,376.83	.41
5720	DEBT SERVICE	$ 12,079.93	24.54	$ 85,325.32	25.4
5731	GARBAGE REMOVAL	602.00	1.22	3,916.00	1.1
5740	BUILDING MAINTENANCE	218.40	.44	1,734.68	.52
5741	APPLIANCE REPLACEMENT	265.41	.54	1,294.05	.3
5742	WATER HEATER REPLACEMENT	446.60	.91	2,357.07	.7
5743	CARPET REPLACEMENT	2,496.50	5.07	2,986.50	.8
5744	FLOOR REPLACEMENT	199.00	.40	398.00	.1
5750	MISCELLANEOUS	104.61	.21	1,085.27	.3
5770	FURNITURE RENTAL			(59.44)	.0
5780	ADVERTISING	193.25	.39	1,559.97	.4
5790	PUMP HOUSE-L P GAS			(20.90)	.0
5791	PUMP HOUSE MAINT	265.20	.54	533.85	.1
5792	MAINT SHOP-PROPANE GAS			575.19	.1
5793	PROPANE-CLUB HOUSE	242.18	.49	1,336.46	.4
5794	DEPRECIATION	8,042.45	16.34	56,297.15	16.8
5799	TOTAL OPERATING EXPENSE	$ 44,106.72	89.61	$ 281,048.89	83.8
5999	OPERATING PROFIT OR (LOSS)	$ 5,112.32	10.39	$ 54,111.64	16.1
6000	OTHER EXPENSE				
6682	PROFESSIONAL FEES-OTHER	$ 2,000.00	4.06	$ 4,239.66	1.2
6694	MANAGERS BONUS			12,612.00	3.7
6704	PHASE III RE TAX	2,939.93	5.97	6,986.44	2.0
6706	CLUB HOUSE SITE R/E TAX	1,125.96	2.29	1,125.96	.3
6721	OTHER INTEREST	1,979.00	4.02	12,747.78	3.8
6890	TOTAL OTHER EXPENSE	$ 8,043.89	16.34	$ 37,711.84	11.2
	NET INCOME OR (LOSS)	$ (2,931.57)	5.96	$ 16,399.80	4.8

SEE ACCOUNTANT'S COMPILATION REPORT

SEE ACCOUNTANT'S COMPILATION REPORT

EXHIBIT D

GARDEN TYPE BUILDINGS

GARDEN TYPE BUILDINGS
UNFURNISHED

MEDIAN INCOME AND OPERATING COSTS

SELECTED METROPOLITAN AREAS
U.S.A.

	MEMPHIS, TN 27 BUILDINGS 4,207 APARTMENTS 3,661,619 RENTABLE SQUARE FEET						MILWAUKEE, WI 12 BUILDINGS 618 APARTMENTS 305,264 RENTABLE SQUARE FEET					
	BLDGS.	-----% OF GPTI-----			----$/SQ.FT.----			BLDGS.	-----% OF GPTI-----			----$/SQ.FT.----		
INCOME		MED	LOW	HIGH	MED	LOW	HIGH		MED	LOW	HIGH	MED	LOW	HIGH
RENTS-APARTMENTS	(27)	100.0%	98.2%	100.0%	2.65	2.55	2.87	(12)	99.3%	99.1%	100.0%	4.36		
RENTS-GARAGE/PARKING	( )							(3)	3.3			.15		
RENTS-STORES/OFFICES	(1)	3.9			.09			(1)	12.0			.55		
GROSS POSSIBLE RENTS	(27)	100.0%	98.2%	100.0%	2.65	2.55	2.87	(12)	99.5%	99.1%	100.0%	4.36		
VACANCIES/RENT LOSS	(27)	4.8	2.9	5.7	.14	.09	.15	(9)	1.1			.12		
TOTAL RENTS COLLECTED	(27)	94.6	92.1	95.5	2.50	2.41	2.78	(12)	99.0	97.2	99.1	4.24		
OTHER INCOME	(13)	1.8	1.0	3.9	.05	.04	.10	(7)	.9			.04		
GROSS POSSIBLE INCOME	(27)	100.0%	100.0%	100.0%	2.73	2.56	2.95	(12)	100.0%	100.0%	100.0%	4.44		
TOTAL COLLECTIONS	(27)	95.2	93.7	96.0	2.53	2.45	2.85	(12)	99.5	98.7	99.9	4.33		
EXPENSES														
MANAGEMENT COSTS**	(27)	7.1	6.6	8.0	.19	.18	.21	(12)	5.0	4.2	5.9	.22		
OTHER ADMINISTRATIVE	(27)	2.4	1.6	3.5	.07	.05	.10	(7)	.3			.01		
SUBTOTAL ADMINIST.	(27)	9.6%	7.8%	11.8%	.26	.23	.31	(12)	5.3%	4.5%	6.2%	.23		
SUPPLIES	(26)	.4	.2	.7	.01	.01	.02	(11)	.7	.6	1.4	.03		
HEATING FUEL-CA ONLY*	(15)	1.0	.6	1.1	.03	.02	.03	( )						
CA & APTS.*	(2)	.9			.03			(9)	5.3			.20		
ELECTRICITY--CA ONLY*	(23)	2.3	1.5	2.5	.06	.05	.07	(12)	1.5	1.3	1.9	.06		
CA & APTS.*	(4)	1.9			.05			( )						
WATER/SEWER--CA ONLY*	(5)	.6			.01			( )						
CA & APTS.*	(22)	1.6	1.3	2.3	.05	.04	.06	(12)	1.9	1.3	2.4	.09		
GAS----------CA ONLY*	(6)	.5			.01			(3)	1.5			.07		
CA & APTS.*	(1)	.5			.01			(5)	1.2			.03		
BUILDING SERVICES	(23)	.6	.4	1.2	.02	.01	.03	(8)	1.3			.02		
OTHER OPERATING	(15)	.9	.2	1.1	.02	.01	.07	(7)	1.1			.07		
SUBTOTAL OPERATING	(27)	5.4%	4.7%	7.7%	.16	.13	.20	(12)	11.8%	9.5%	13.7%	.45		
SECURITY**	(8)	3.0			.07			(1)	1.4			.07		
GROUNDS MAINTENANCE**	(27)	2.8	1.3	3.8	.09	.03	.10	(9)	1.1			.04		
MAINTENANCE-REPAIRS	(27)	7.5	5.0	11.1	.19	.14	.29	(12)	4.3	2.8	4.7	.17		
PAINTING/DECORATING**	(27)	3.0	1.5	4.5	.09	.05	.12	(10)	1.5			.04		
SUBTOTAL MAINTENANCE	(27)	14.3%	11.3%	18.2%	.37	.27	.51	(12)	6.3%	5.3%	8.8%	.25		
REAL ESTATE TAXES	(27)	13.2	11.2	14.3	.33	.29	.37	(12)	17.3	15.7	18.6	.73		
OTHER TAX/FEE/PERMIT	(12)	.6	.2	1.0	.02	.00	.02	(8)	.2			.01		
INSURANCE	(27)	2.9	2.0	4.4	.09	.06	.13	(12)	2.2	1.4	2.2	.06		
SUBTOTAL TAX-INSURNCE	(27)	16.1%	14.7%	17.8%	.44	.38	.49	(12)	19.3%	18.4%	21.1%	.79		
RECREATNL/AMENITIES**	(20)	1.0	.7	1.2	.02	.02	.03	(2)	3.0			.04		
OTHER PAYROLL**	(21)	4.4	3.2	4.9	.10	.09	.14	(5)	5.9			.21		
TOTAL ALL EXPENSES	(27)	48.0%	45.9%	59.6%	1.30	1.19	1.46	(12)	41.0%	38.5%	51.0%	1.82		
NET OPERATING INCOME	(27)	46.7%	34.2%	49.9%	1.27	.91	1.33	(12)	56.6%	49.0%	59.1%	2.51		
PAYROLL RECAP**	(27)	8.7	6.4	11.4	.25	.19	.29	(9)	5.9			.25		

Source: Income/Expense Analysis for Apartments, Institute of Real Estate Management, 1980 Edition.

FOOTNOTE: For a description of Utility Expense (*) and Payroll Cost (**) reporting, and an explanation of the report layouts and method of data analysis, refer to the sections entitled "Guidelines for Use of this Data", and "Interpretation of a Page of Data". For definitions of the income and expense categories, refer to the Appendix, pages 210-213.

EXHIBIT F

ANALYSIS OF APARTMENT SALES

```
RSTS V7.0-07 MACC*WITS*A  Job 14  KB72  05-Sep-81  15:46
#150,10
Password:
You last used this account on 05-Sep-81  af^C

Ready

DIR

READY


DIS P2R.CTL

/PROBLEM          TITLE IS/COMPARABLE  SALES ANALYSIS/.
/INPUT             FILE IS/WIS APT SALES/
                     VARIABLES ARE  8.
                   FORMAT IS /(f8,6X)/.
/VARIABLE           NAMES ARE/SP,DATE,DP,AGI,ANI,UNITS,NLA,CP/.
/REGRESS            DEPENDENT IS SP
/PRINT              EQUATION
/END

PROBLEM TITLE


COMPARABLE SALES ANALYSIS

NUMBER OF VARIABLES TO READ  IN . . . . .   8
CASE LABELING VARIABLES . . . . . .ID
PRINT CORRELATION MATRIX . . . . . .     NO
PRINT COVARIANCE MATRIX . . . . . .      NO


          ADJUSTED
R-SQUARED R-SQUARED       CP


0.863704 0.860121      -1.031     VARIABLE         COEFFICIENT  T-STATISTIC
                                  3 DP              3.14123       4.08
                                  4 AGI             6.16188       7.438
                                  INTERCEPT101642.20341
```

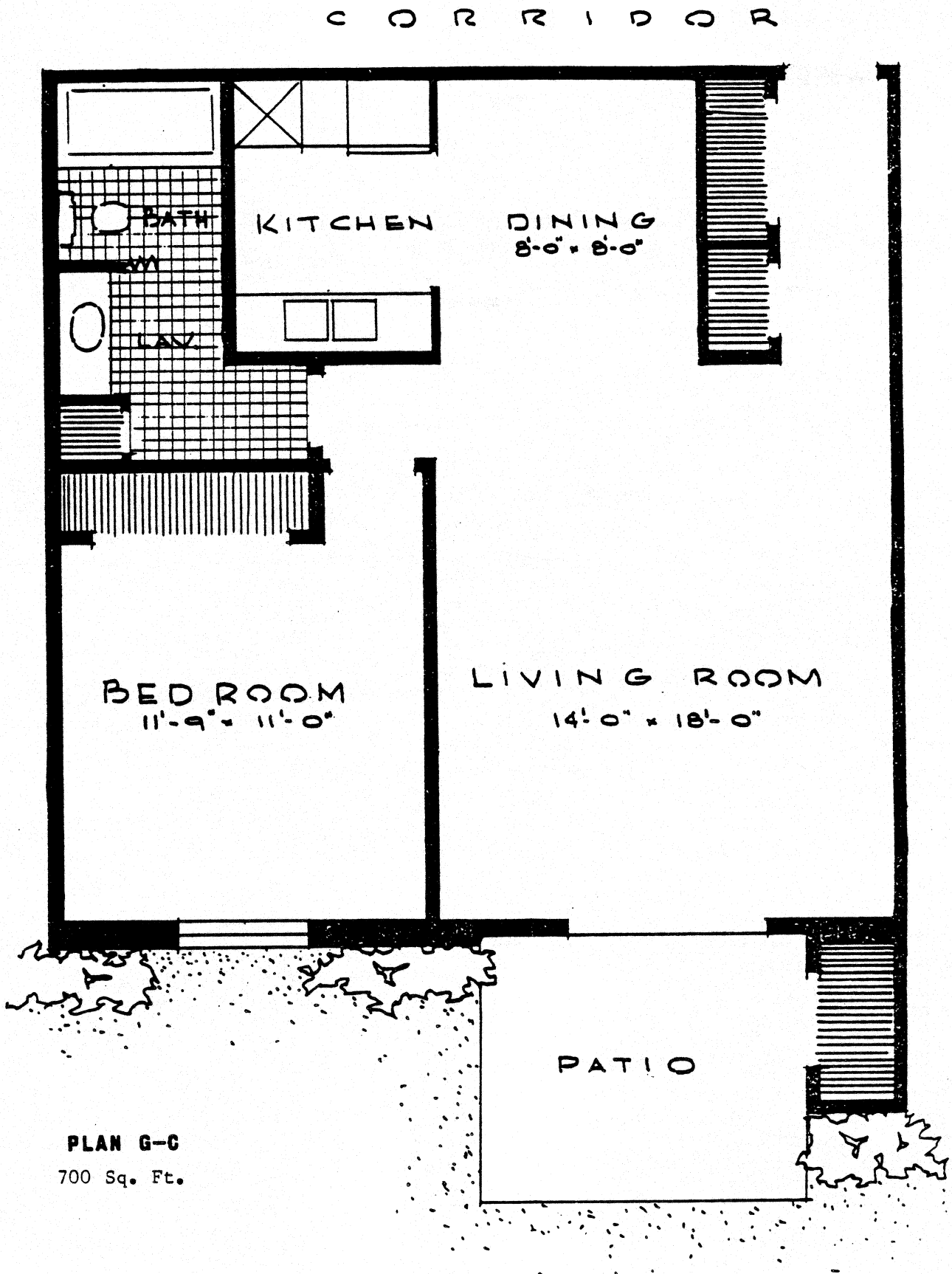
EXHIBIT G

AN ANALYSIS AND TEST OF MOST
PROBABLE SELLING PRICE

```
EDUCARE COMPUTER NETWORK 09/21/81 09:48CDT

USED     1.22 UNITS

BFCF          09:49CDT    09/21/81

 1. ENTER PROJECT NAME? BROOKFIELD HILLS
 2. PROJECTION PERIOD:? 5
    TO REPEAT PREV YRS NOI FOR BAL OF PROJ ENTER 0
 3. ENTER N.O.I.:
 ? 398188,438000,481807,529988,582987
 4. VALUE:? 6100000
 5. MTG. RATIO, INT., TERM & NO. PAY/YR:
 ?  .67,.0929,50,12
 6. IMP./TOTAL VALUE RATIO & IMP. LIFE:? .88,15
 7. DEPRECIATION METHOD? 4
    IS PROPERTY LOW INCOME HOUSING? Y OR N? N
    IS OWNER A TAXABLE CORPORATION, Y OR N? N
 8. ORDINARY INCOME TAX BRACKET & BRACKET IN YR OF SALE:? .50,.50
 9. RESALE PRICE:? 6900000


    I.R.R. BEFORE TAXES IS  22.1717 %

    AFTER TAX I.R.R. IS 21.522 %
```

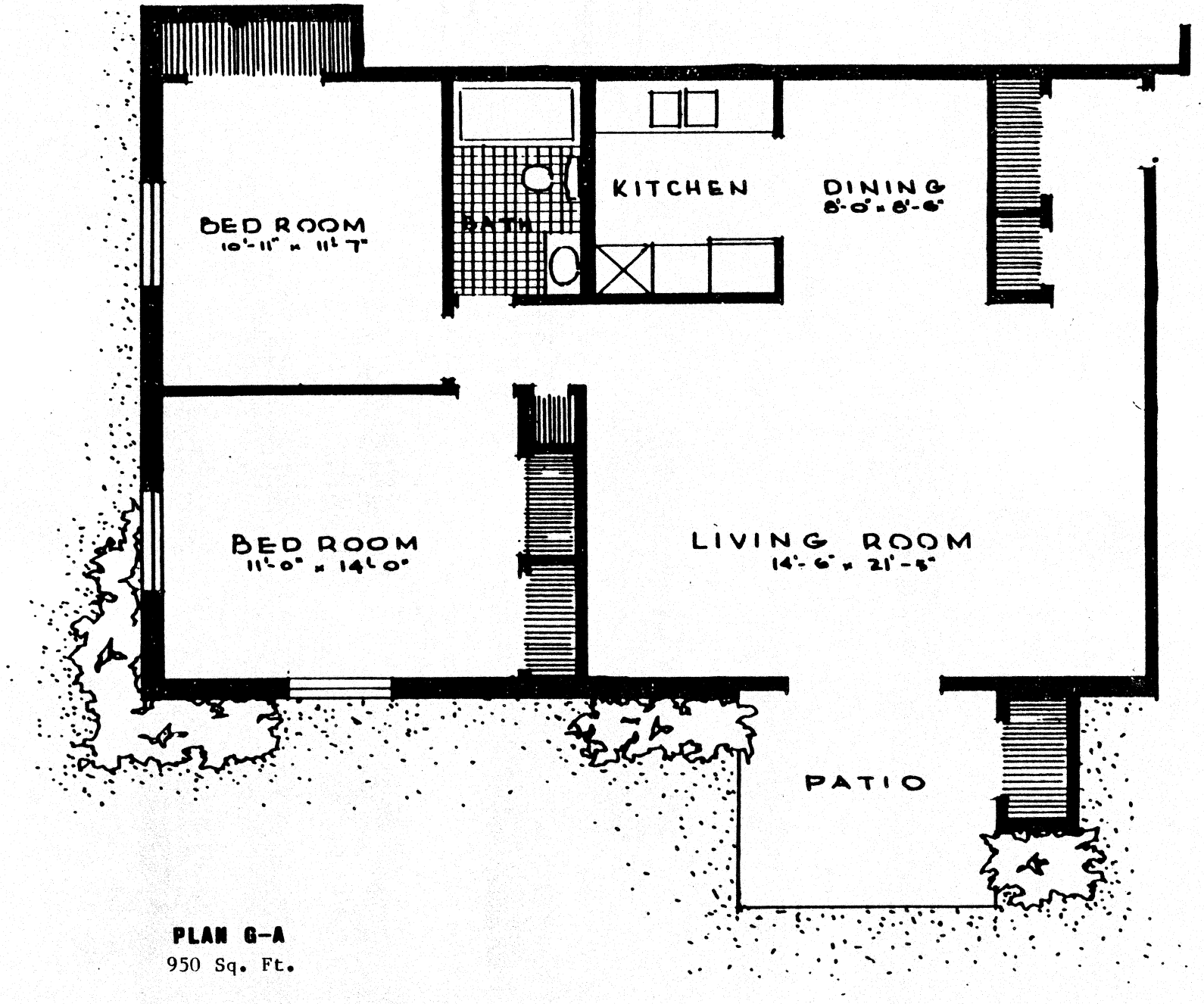
EXHIBIT H

FLOOR PLAN OF COACHLIGHT VILLAGE



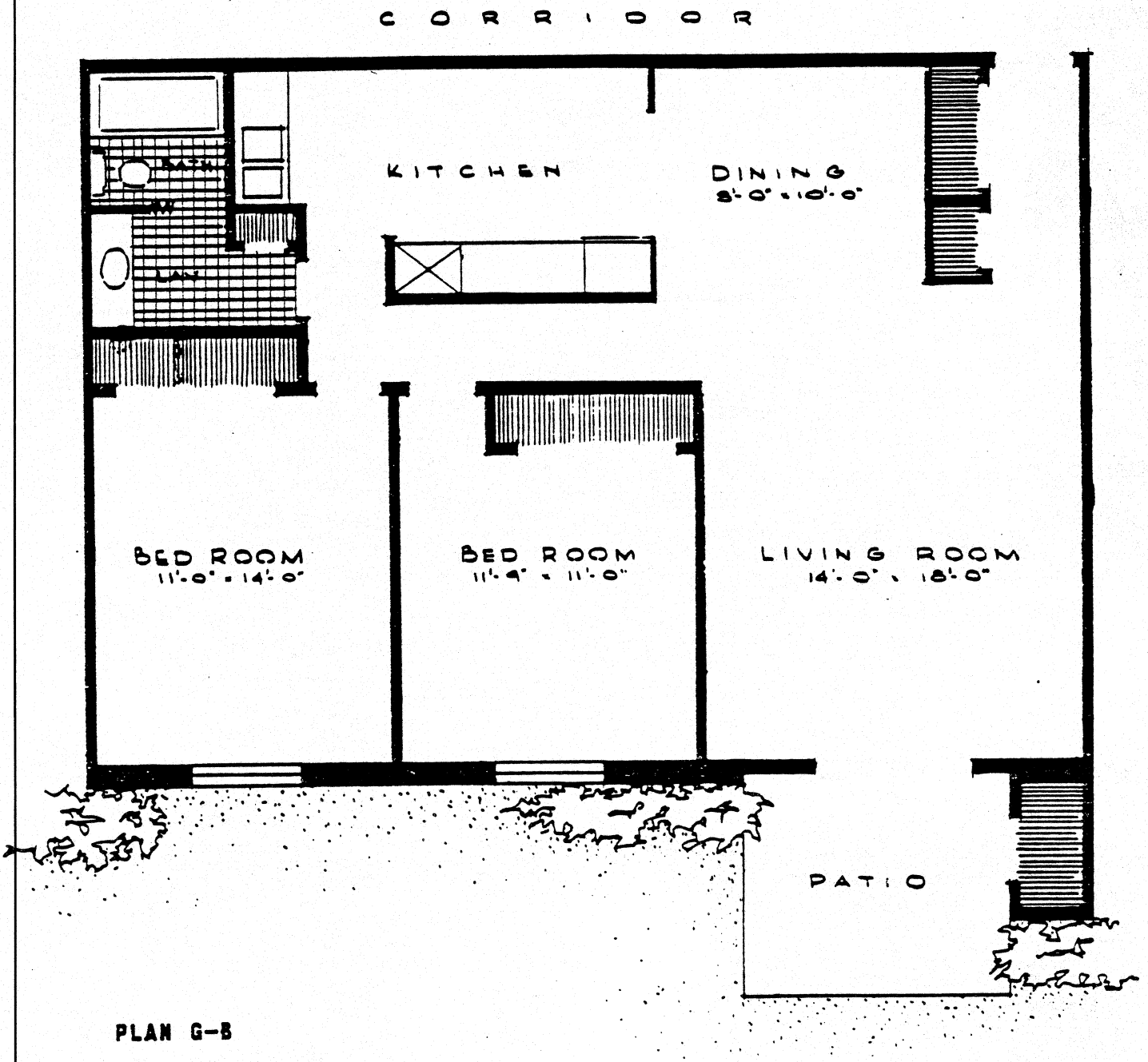
PLAN G-C

700 Sq. Ft.



PLAN G-A
950 Sq. Ft.

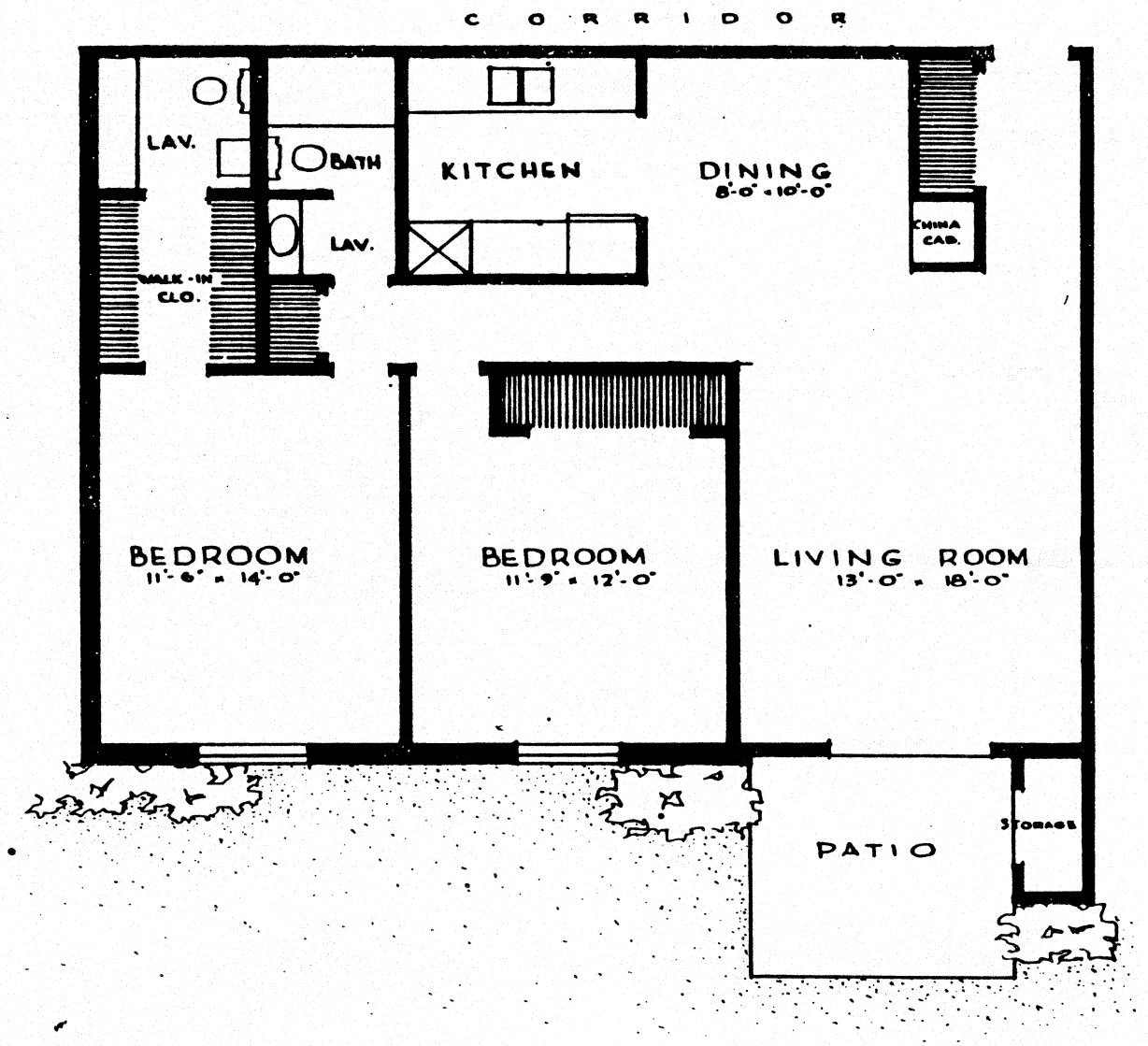
EXHIBIT H (Continued)



PLAN G-B

1,025 Sq. Ft.

EXHIBIT H (Continued)

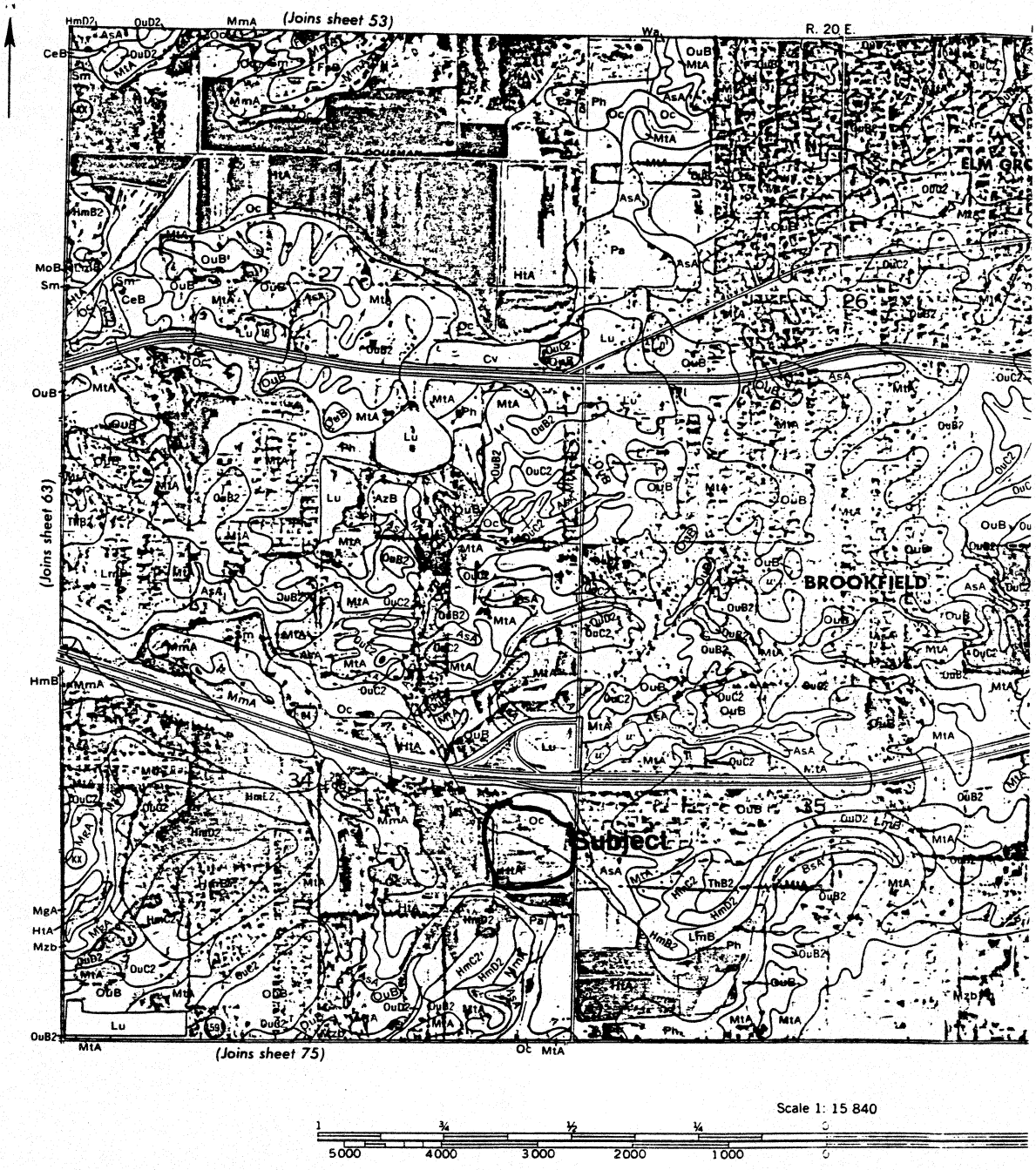


PLAN G-B1½

1,050 Sq. Ft.

EXHIBIT I

EXCERPTS FROM SOIL SURVEY OF WAUKESHA COUNTY



SOIL LEGEND

The first capital letter is the initial one of the soil name. A second capital letter, A, B, C, D, E, or F, shows the slope. Most symbols without a slope letter are those of nearly level soils or land types, but some are for soils or land types that have a considerable range in slope. The final number, 2 or 3, in a symbol indicates that the soil is eroded or severely eroded.

SYMBOL	NAME
Ac	Adrain muck
Am	Alluvial land
AsA	Ashkum silty clay loam, 0 to 3 percent slopes
AzA	Astolan loam, 0 to 2 percent slopes
AzB	Astolan loam, 2 to 6 percent slopes
BlA	Blount silt loam, 1 to 3 percent slopes
BmB	Boyer loamy sand, 1 to 6 percent slopes
BmC2	Boyer loamy sand, 6 to 12 percent slopes, eroded
BnB	Boyer sandy loam, 1 to 6 percent slopes
BsA	Brookston silt loam, 0 to 3 percent slopes
CcB	Casco sandy loam, 2 to 6 percent slopes
CcC2	Casco sandy loam, 6 to 12 percent slopes, eroded
CcD2	Casco sandy loam, 12 to 20 percent slopes, eroded
CeB	Casco loam, 2 to 6 percent slopes
CeC2	Casco loam, 6 to 12 percent slopes, eroded
CeD2	Casco loam, 12 to 20 percent slopes, eroded
CfC3	Casco soils, 6 to 12 percent slopes, severely eroded
CrC2	Casco-Rodman complex, 6 to 12 percent slopes, eroded
CrD	Casco-Rodman complex, 12 to 20 percent slopes
CrE	Casco-Rodman complex, 20 to 30 percent slopes
CrF	Casco-Rodman complex, 30 to 45 percent slopes
CtB	Chelsea fine sand, 1 to 6 percent slopes
CtD	Chelsea fine sand, 6 to 20 percent slopes
Cv	Clayey land
Cw	Colwood silt loam
DdA	Dodge silt loam, 0 to 2 percent slopes
DdB	Dodge silt loam, 2 to 6 percent slopes
Dt	Drummer silt loam, gravelly substratum
EsA	Elliott silt loam, 1 to 3 percent slopes
FaA	Fabius loam, 1 to 3 percent slopes
FmA	Fox sandy loam, 0 to 2 percent slopes
FmB	Fox sandy loam, 2 to 6 percent slopes
FmC2	Fox sandy loam, 6 to 12 percent slopes, eroded
FnB	Fox sandy loam, loamy substratum, 2 to 6 percent slopes
FoA	Fox loam, 0 to 2 percent slopes
FoB	Fox loam, 2 to 6 percent slopes
FoC2	Fox loam, 6 to 12 percent slopes, eroded
FsA	Fox silt loam, 0 to 2 percent slopes
FsB	Fox silt loam, 2 to 6 percent slopes
FsC2	Fox silt loam, 6 to 12 percent slopes, eroded
FtB	Fox silt loam, loamy substratum, 2 to 6 percent slopes
Gd	Gilford loam
Gl	Granby fine sandy loam
GrA	Grays silt loam, 0 to 2 percent slopes
GrB	Grays silt loam, 2 to 6 percent slopes
GtB	Griswold silt loam, 2 to 6 percent slopes
GtC2	Griswold silt loam, 6 to 12 percent slopes, eroded
GwB	Griswold silt loam, mottled subsoil variant, 2 to 6 percent slopes
HeA	Hebron loam, 0 to 2 percent slopes
HeB	Hebron loam, 2 to 6 percent slopes
HeC2	Hebron loam, 6 to 12 percent slopes, eroded
HmB	Hochheim loam, 2 to 6 percent slopes
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded
HmD2	Hochheim loam, 12 to 20 percent slopes, eroded
HmE2	Hochheim loam, 20 to 30 percent slopes, eroded
HoC3	Hochheim soils, 6 to 12 percent slopes, severely eroded
HoD3	Hochheim soils, 12 to 20 percent slopes, severely eroded
HoE3	Hochheim soils, 20 to 30 percent slopes, severely eroded
HtA	Houghton muck, 0 to 2 percent slopes
HtB	Houghton muck, 2 to 6 percent slopes
JuA	Juneau silt loam, 1 to 3 percent slopes
KaA	Kane silt loam, 1 to 3 percent slopes
KlA	Kendall silt loam, 1 to 3 percent slopes
KnB	Kewaunee silt loam, 2 to 6 percent slopes
KnC2	Kewaunee silt loam, 6 to 12 percent slopes, eroded
KwA	Knowles silt loam, 0 to 2 percent slopes
KwB	Knowles silt loam, 2 to 6 percent slopes
LmB	Lamartine silt loam, 1 to 4 percent slopes
Lo	Lawson silt loam
Lu	Loamy land
LyB2	Lorenzo loam, 2 to 6 percent slopes, eroded
LyC2	Lorenzo loam, 6 to 12 percent slopes, eroded
LyD2	Lorenzo loam, 12 to 20 percent slopes, eroded
MeA	Manawa silt loam, 1 to 3 percent slopes
MeB	Markham silt loam, 2 to 6 percent slopes
Mf	Marsh
MgA	Martinton silt loam, 1 to 3 percent slopes
MhA	Matherton sandy loam, 1 to 3 percent slopes
MmA	Matherton silt loam, 1 to 3 percent slopes
MoA	Mayville silt loam, 0 to 2 percent slopes
MoB	Mayville silt loam, 2 to 6 percent slopes
MrA	Mequon silt loam, 1 to 3 percent slopes
MvB	Miami sandy loam, sandy loam substratum, 2 to 6 percent slopes
MvC2	Miami sandy loam, sandy loam substratum, 6 to 12 percent slopes, eroded
MxB	Miami loam, sandy loam substratum, 2 to 6 percent slopes
MxC2	Miami loam, sandy loam substratum, 6 to 12 percent slopes, eroded
MxD2	Miami loam, sandy loam substratum, 12 to 20 percent slopes, eroded
MxE	Miami loam, sandy loam substratum, 20 to 30 percent slopes
Mxb	Montgomery silty clay loam
MzdB	Morley silt loam, 2 to 6 percent slopes
MzdB2	Morley silt loam, 2 to 6 percent slopes, eroded
MzdC2	Morley silt loam, 6 to 12 percent slopes, eroded
MzdD2	Morley silt loam, 12 to 20 percent slopes, eroded
MzfA	Mundelein silt loam, 1 to 3 percent slopes
Mzg	Muskego muck
Mzk	Mussey loam
Na	Navan silt loam
Oc	Ogden muck
OnB	Oshtemo loamy sand, 1 to 6 percent slopes
OnB	Oshtemo sandy loam, 1 to 6 percent slopes
OuB	Ozaukee silt loam, 2 to 6 percent slopes
OuB2	Ozaukee silt loam, 2 to 6 percent slopes, eroded
OuC2	Ozaukee silt loam, 6 to 12 percent slopes, eroded
OuD2	Ozaukee silt loam, 12 to 20 percent slopes, eroded
Pa	Palms muck
Ph	Pella silt loam
Pm	Pella silt loam, moderately shallow variant
PrA	Pistakee silt loam, 1 to 3 percent slopes
RhB	Ritchey silt loam, 1 to 6 percent slopes
RhC2	Ritchey silt loam, 6 to 12 percent slopes, eroded
RhE	Ritchey silt loam, 12 to 30 percent slopes
RlA	Ritchey silt loam, mottled subsoil variant, 1 to 3 percent slopes
Ru	Rollin muck, deep
Rv	Rollin muck, shallow
Ry	Rough broken land
SaA	St. Charles sandy loam, gravelly substratum, 1 to 3 percent slopes
ScA	St. Charles silt loam, 0 to 2 percent slopes
ScB	St. Charles silt loam, 2 to 6 percent slopes
SnA	St. Charles silt loam, gravelly substratum, 0 to 2 percent slopes
SnB	St. Charles silt loam, gravelly substratum, 2 to 6 percent slopes
Sf	Sandy and gravelly land
Sfb	Sandy lake beaches
Sg	Sawmill silt loam, calcareous variant
ShA	Saylesville silt loam, 0 to 2 percent slopes
ShB	Saylesville silt loam, 2 to 6 percent slopes
ShB2	Saylesville silt loam, 2 to 6 percent slopes, eroded
ShC2	Saylesville silt loam, 6 to 12 percent slopes, eroded
Sm	Sebewa silt loam
ThA	Theresa silt loam, 0 to 2 percent slopes
ThB	Theresa silt loam, 2 to 6 percent slopes
ThB2	Theresa silt loam, 2 to 6 percent slopes, eroded
ThC2	Theresa silt loam, 6 to 12 percent slopes, eroded
VsA	Virgil silt loam, gravelly substratum, 0 to 3 percent slopes
Wa	Wallkill silt loam
WdB	Warsaw sandy loam, 2 to 6 percent slopes
WeA	Warsaw loam, 0 to 2 percent slopes
WeB	Warsaw loam, 2 to 6 percent slopes
WeC2	Warsaw loam, 6 to 12 percent slopes, eroded
WhA	Warsaw silt loam, 0 to 2 percent slopes
WmA	Wasepi sandy loam, 1 to 3 percent slopes
Wu	Wet alluvial land

Soil map constructed 1969 by Cartographic Division, Soil Conservation Service, USDA, from 1963 aerial photographs. Controlled mosaic based on Wisconsin plane coordinate system, south zone, Lambert conformal conic projection, 1927 North American datum.

EXHIBIT I (Continued)

EXHIBIT I (Continued)

TABLE 8.--ENGINEERING

[Clayey land (Cv), Loamy land (Lu), and Sandy and gravelly land (Sf) are omitted from this

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for lo buildings
Adrian: Ac----------	Poor; soil is erodible and oxidizes rapidly.	Fair; underlying sand is variable; high water table hinders excavation.	Very severe; organic material is unsuitable for subgrade.	Very severe; organ ic material is unsuitable for foundations.
Alluvial land: Am--------	Fair; variable------	Unsuitable; soil material is variable.	Severe; soil material is variable; stability and bearing capacity are variable; occasional flooding.	Moderate to severe occasional flooding; soil material is vari able and is unstable in places
Ashkum: AsA----------	Surface layer good; subsoil poor, clayey; water table within 1 foot of surface most of the time.	Unsuitable---------	Very severe in subsoil; high shrink-swell potential; severe in substratum, low bearing capacity, elastic.	Severe; fair shear strength; high compressibility high shrink-swe potential; low bearing capacit high water tabl
Aztalan: AzA, AzB--------	Surface layer good; subsoil poor, lower part is silty clay loam and is unstable in sloping areas.	Unsuitable---------	Moderate in subsoil, low bearing capacity when wet, low stability in lower part of subsoil; severe in substratum, unstable when wet.	Severe; moderate shrink-swell po tential; high compressibility poor shear strength; seepage, a high wat table at times, or both.
Blount: BlA----------	Surface layer good, thin in some places; subsoil and substratum poor, clayey.	Unsuitable---------	Very severe in subsoil, high to moderate shrink-swell potential; severe in substratum, moderate shrink-swell potential; low bearing capacity; elastic.	Severe; fair shea strength; high compressibility high to moderat shrink-swell po tential; low bearing capacit high water tabl seepage, or bot

See footnote at end of table.

EXHIBIT I (Continued)

INTERPRETATIONS FOR SPECIFIED USES

...able because their properties are too variable for rating. Onsite investigation is required.

Degree and kinds of limitations affecting--Continued				Corrosion potential for conduits	
Residential development with public sewer	Onsite sewage disposal systems	Commercial and light industrial developments	Roads and airports	Metal	Concrete
Severe; high water table.	Very severe; high water table.	Very severe; high water table; high compressibility and instability; erodible.	Very severe; high water table; high compressibility; erodible.	High; medium in underlying sand.	Low.
Very severe on flood plains and subject to overflow.	Very severe on flood plains and subject to overflow.	Severe; soil material liquefies when saturated; subject to frost heave; low bearing strength when wet; subject to flooding.	Severe; material below the surface layer has low stability and low bearing capacity when wet; subject to flooding.	Medium----	Low.
Severe; low bearing capacity when wet; high shrink-swell potential; fluctuating water table; water management needed.	Very severe; fluctuating high water table.	Severe; low bearing capacity when wet; high shrink-swell potential; fluctuating water table.	Severe; high shrink-swell potential; low bearing capacity when wet; high water table.	High------	Low.
Moderate; moderate shrink-swell potential; seasonal high water table.	Very severe; seasonal high water table; slow permeability.	Severe; moderate shrink-swell potential; high compressibility; low shear strength; seasonal high water table.	Severe; subsoil has low stability and low bearing capacity when wet; subject to slippage and frost heave; seasonal high water table.	High------	Low.
Moderate; low bearing capacity when wet; high to moderate shrink-swell potential; seasonal high water table.	Very severe; seasonal high water table; moderately slow permeability.	Severe; seasonal high water table; high to moderate shrink-swell potential; low bearing capacity when wet; subject to frost heave.	Severe; seasonal high water table; high to moderate shrink-swell potential; low bearing capacity when wet; subject to frost heave.	High------	Low.

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EXHIBIT I (Continued)

TABLE 8.--ENGINEERING INTERPRETATIONS

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for low buildings
Griswold, mottled subsoil variant: GwB.	Surface layer good, dark, thick; subsoil poor, clay loam, many pebbles in lower part in some places; seasonal high water table.	Poor; substratum contains pockets of well-graded sand and gravel; seasonal high water table.	Severe in subsoil, moderate shrink-swell potential, loss of bearing capacity when wet; slight in substratum, low shrink-swell potential, good stability.	Slight; low compressibility; fair shear strength; moderate to good bearing capacity.
Hebron: HeA, HeB, HeC2--	Surface layer good; subsoil poor, lower part unstable.	Unsuitable; thin layers of sand and gravel occur only in a few places.	Moderate in subsoil, low stability, low bearing capacity; severe in substratum, unstable when wet.	Severe; moderate shrink-swell potential; high compressibility; poor shear strength.
Hochheim: HmB, HmB2, HmC2, HmD2, HmE2.	Surface layer good but thin; subsoil poor, clay loam, many pebbles in places.	Poor; substratum contains pockets of well-graded sand and gravel in places. 1/	Very severe in subsoil, moderate shrink-swell potential, low bearing capacity; slight in substratum, low shrink-swell potential, fair stability.	Slight; low compressibility; easy to compact; fair shear strength.
HoC3, HoD3, HoE3-------	Poor; gravelly, severely eroded, little or no subsoil.	Poor; substratum contains pockets of well-graded sand and gravel in places. 1/	Slight; low shrink-swell potential; fair stability; little or no subsoil above substratum.	Slight; low compressibility; easy to compact; fair shear strength.
Houghton: HtA, HtB------	Poor; oxidizes easily; erodible.	Unsuitable--------	Very severe; organic soil material.	Very severe; organic soil material.

See footnote at end of table.

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EXHIBIT I (Continued)

FOR SPECIFIED USES--Continued

Degree and kinds of limitations affecting--Continued				Corrosion potential for conduits	
Residential development with public sewer	Onsite sewage disposal systems	Commercial and light industrial developments	Roads and airports	Metal	Concrete
Moderate; seasonal high water table; basements likely to be wet.	Very severe; seasonal high water table.	Moderate; seasonal high water table; subject to frost heave.	Moderate; seasonal high water table; subject to frost heave; low bearing capacity when wet.	High----	Low.
Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; substratum has moderate shrink-swell potential and low bearing capacity.	Severe; slow permeability.	Moderate; moderate shrink-swell potential; low shear strength; high compressibility.	Moderate; substratum has low bearing capacity when wet; moderate shrink-swell potential.	Medium--	Low.
Very slight on slopes of 0 to 6 percent; slight on slopes of 6 to 12 percent; moderate on slopes of 12 to 20 percent; severe on slopes stronger than 20 percent; erodible in sloping areas.	Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; severe on slopes stronger than 12 percent.	Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; severe on slopes stronger than 12 percent; erodible in sloping areas.	Slight on slopes of 0 to 12 percent; moderate on slopes stronger than 12 percent; subsoil has moderate shrink-swell potential; erodible in sloping areas.	Medium--	Low.
Slight on slopes of 0 to 12 percent; moderate on slopes of 12 to 20 percent; severe on slopes stronger than 20 percent; droughty; gravelly; vegetation difficult to maintain.	Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; severe on slopes stronger than 12 percent.	Moderate on slopes of 0 to 12 percent; severe on slopes stronger than 12 percent; vegetation difficult to establish.	Moderate; vegetation difficult to establish.	Medium--	Low.
Very severe; subject to shrinkage; low bearing capacity; high water table.	Very severe; subject to shrinkage; high water table.	Very severe; high compressibility; unstable; high water table.	Very severe; high water table; high compressibility; unstable; very low bearing capacity.	High----	Low.

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EXHIBIT I (Continued)

TABLE 8.--ENGINEERING INTERPRETATIONS

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for low buildings
Montgomery: Mzb--------	Surface layer good, dark; subsoil poor, clayey; high water table.	Unsuitable---------	Very severe in subsoil, high shrink-swell potential, low bearing capacity, not suitable for flexible pavement; severe in substratum, low bearing capacity; moderate shrink-swell potential.	Severe; high shrink-swell potential; high to very high compressibility; high water table.
Morley: MzdB, MzdB2, MzdC2, MzdD2.	Surface layer good; subsoil poor, clayey.	Unsuitable---------	Very severe in subsoil, high shrink-swell potential; severe in substratum, moderate shrink-swell potential, low bearing capacity when wet.	Severe; fair shear strength; moderate compressibility; poor bearing capacity.
Mundelein: MzfA--------	Surface layer good; subsoil poor, unstable in sloping areas; seasonal high water table.	Poor; poorly graded; fine sand and silt in places; seasonal high water table.	Severe in subsoil, low bearing capacity; severe in substratum, relatively unstable.	Severe; fairly low compressibility; high susceptibility to frost heave; seasonal high water table, seepage, or both.
Muskego: Mzg----------	Poor; soil is erodible and oxidizes rapidly.	Unsuitable---------	Very severe; organic material; not suitable for subgrade.	Very severe; organic material; not suitable for foundations.
Mussey: Mzk----------	Surface layer good, dark; subsoil poor; high water table.	Good; substratum poorly graded sand and gravel; high water table.	Moderate in subsoil, low shrink-swell potential, low stability; very slight in substratum where properly drained, very stable.	Slight; very low compressibility; low shrink-swell potential; good shear strength; high water table.
Navan: Na----------	Surface layer good, thick, dark; subsoil poor, clayey in lower part; high water table.	Unsuitable---------	Moderate in subsoil, low stability and bearing capacity in lower part; severe in substratum, unstable.	Severe; moderate shrink-swell potential; high compressibility; poor shear strength; high water table.
Ogden: Oc----------	Poor; erodible; oxidizes rapidly.	Unsuitable---------	Very severe; organic material.	Very severe; organic material.

See footnote at end of table.

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EXHIBIT I (Continued)

FOR SPECIFIED USES--Continued

Degree and kinds of limitations affecting--Continued				Corrosion potential	
Residential development with public sewer	Onsite sewage disposal systems	Commercial and light industrial developments	Roads and airports	Metal	Concrete
Severe; high water table; basements likely to be wet; high shrink-swell potential.	Very severe; high water table; slow permeability.	Severe; high water table; high shrink-swell potential; low bearing capacity when wet.	Very severe; high water table; high shrink-swell potential; low bearing capacity when wet; low shear strength.	High----	Low.
Moderate on slopes of 0 to 12 percent; severe on slopes stronger than 12 percent; low bearing capacity when wet.	Severe; moderately slow permeability.	Moderate on slopes of 0 to 6 percent; severe on slopes stronger than 6 percent; low bearing capacity when wet; moderate to high shrink-swell potential.	Moderate on slopes of 0 to 12 percent; severe on slopes stronger than 12 percent; low bearing capacity when wet; subject to frost heave.	Medium--	Low.
Moderate; liquefies easily; seasonal high water table.	Very severe; seasonal high water table.	Severe; seasonal high water table; low bearing capacity when wet; subject to liquefaction, piping, and frost heave.	Severe; seasonal high water table; low bearing capacity when wet; subject to liquefaction, piping, and frost heave.	High----	Low.
Very severe; high water table; shrinks and settles where drained; compressible.	Very severe; high water table.	Very severe; high water table; subject to shrinkage; unstable.	Very severe; high water table; subject to shrinkage; very low bearing capacity.	High----	Low.
Severe; high water table; basements likely to be wet; flotation of pipes.	Very severe; high water table.	Severe; high water table.	Severe; high water table.	High----	Low.
Severe; substratum has low bearing capacity; high water table; basements likely to be wet.	Very severe; high water table; slow permeability.	Severe; high water table; low bearing capacity when wet; moderate shrink-swell potential.	Severe; high water table; low bearing capacity when wet; subject to liquefaction, piping, and frost heave.	High----	Low.
Severe; subject to shrinkage; high water table.	Very severe; high water table.	Very severe; high water table; clay substratum has high shrink-swell potential.	Very severe; high water table; high compressibility and very low bearing capacity.	High----	Low.

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