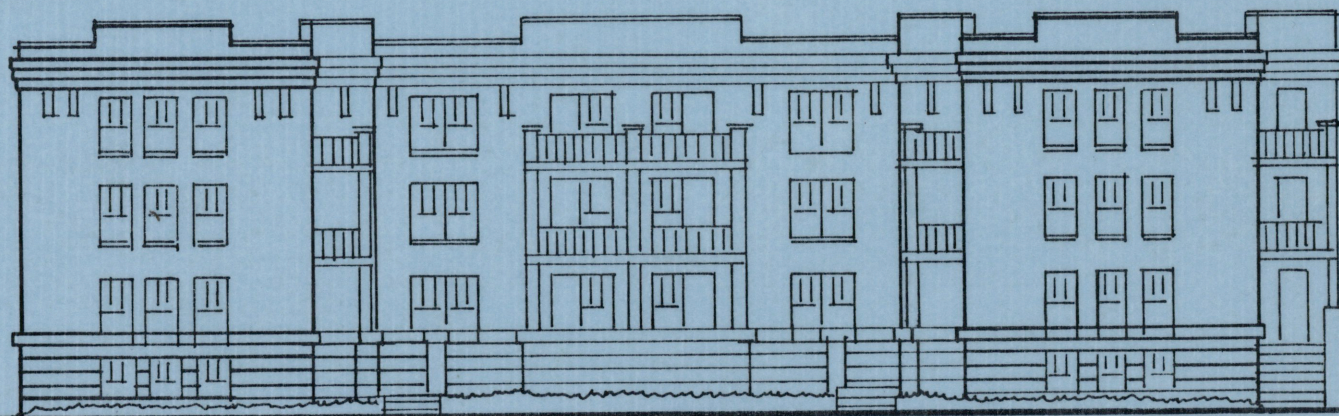
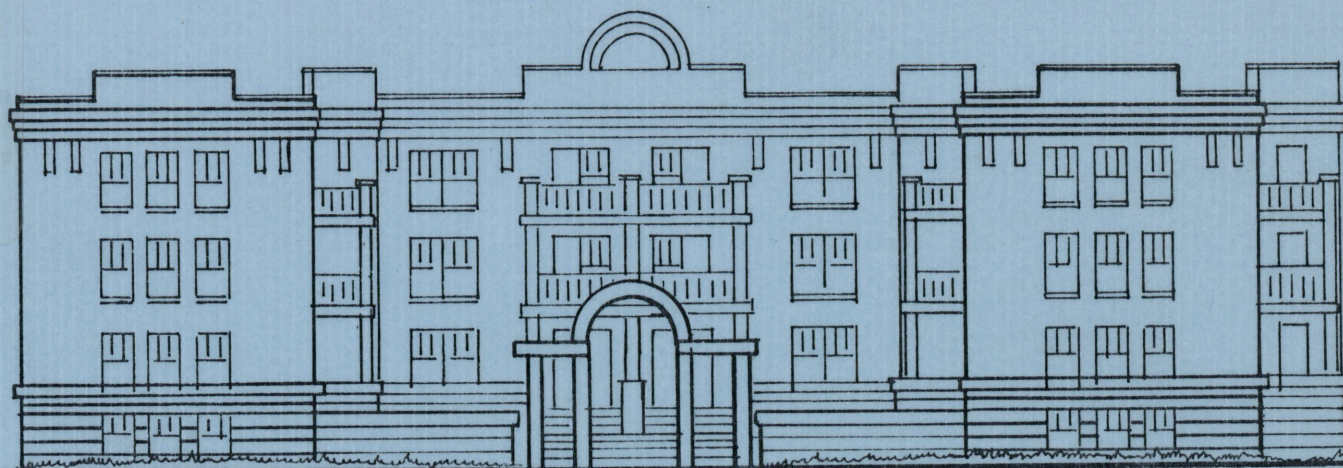


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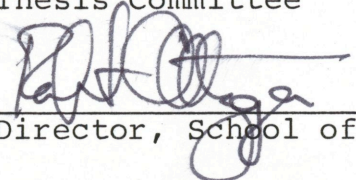
Donna M. Hartmans

A professional paper submitted in partial fulfillment
of the requirements for the degree
of Bachelor of Architecture

Approved:

Advisor

Thesis Committee



Director, School of Architecture

Montana State University
Bozeman, Montana

June 1984

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Date Oct. 11, 1984

This book is dedicated to my mother,
Marie A. Hartmans,
and to
Frank A. Culbertson,
mio principio comprimo,
for their support and encouragement in the past five years,
and in memory of my father,
William R. Hartmans

TABLE OF CONTENTS

	Page
Thesis Statement	1
Chapter I. Preservation - Changing Attitudes and Laws	2
II. Preservation as a Business	11
III. Energy and Other Advantages	14
IV. Early History of Housing in Bozeman	19
V. The Blackmore Apartments	26
VI. Establishing a Need: Low Income Housing in Bozeman	43
VII. Case Study: Miles Building Apartments, Livingston, Montana	50
VIII. Elderly Housing	58
IX. Elderly Housing in the Blackmore Apartments	61
X. Program	63
XI. Design Criteria and Concepts	105
XII. The Design	121

	Page
Appendices	
A. Site Analysis and Climatological Data	133
B. National Register of Historic Places	135
1. Nomination forms	
2. Historic Preservation Certification Application	
C. Building Codes for Historic Structures	141
Footnotes	147
Selected Bibliography	154

THESIS STATEMENT

The purpose of this thesis is to combine my interest in historic preservation with the community need for low-income housing in Bozeman, Montana. The challenge is to adaptively reuse an historic structure -- The Blackmore Apartments -- to fulfill the needs of subsidized housing for financially disadvantaged senior citizens.

The areas I have researched in this book will provide an understanding of preservation practice, philosophy, and techniques as well as the social issue of low-income housing in Bozeman. It is not my intent, however, to strictly follow the requirements of the Secretary of Interior and the Department of Housing and Urban Development, but to use the policies of these governing bodies as guides in the design process. This thesis will attempt to maintain the integrity of the historic structure while promoting the project's economic feasibility.

CHAPTER I

Preservation - Changing Attitudes and Laws

The art of preserving provides us with a physical reminder of our past -- whether it be our thoughts in a diary, a special moment in a photograph, or an artifact in a museum. Preserving our built environment provides us with a visual link to our cultural past and a history of the evolution of our society.

Preservation fulfills a psychological need within human beings. It is through preservation that we are able to inform one generation of another. Architectural preservation gives us the ability to learn about our roots -- places in our past. As with our human lives, our built environment reflects patterns of growth, changes in our society, and the process of aging and character development. A city is a unique place in that it cannot be duplicated. A city has a distinctive quality developed over time and special to its inhabitants. Pierre Schneider states that a "city without history is as flat and inconsistent as a stage set."¹ A city is special not only because of its landmarks and street names, but its scale, public spaces, and inherent character.

The role of preservation in our built environment is to establish these psychological links with our past. The preservation movement was organized to preserve and restore well-known and popular historic sites and buildings, such as Williamsburg and Independence Hall, as historic landmarks for the education and enjoyment of the visiting public. But beyond this, we must recognize the historic value of other aspects of the built environment -- neighborhoods, districts, and private residences that are irreplaceable. The following acts of past legislation reflect the changing attitudes affecting preservation of our built environment.

1906

Antiquities Act

The significance of this act is for federal properties only. The President of the United States was given power to establish monuments on government land and to protect those values recognized.

1916

Creation of the National Park Service by Congress.

1935

Historic Sites Act

This act entrusted the National Park Service with the policy to preserve for public use historic sites, buildings, and objects of national significance. It initiated the program of identifying and recording sites of national significance and the ability to preserve them in cooperation with other public and private entities.

1949

The Act of 1949

National Trust for Historic Preservation was chartered by Congress.

1961-1965

Housing Acts

Enabled the U.S. Department of Housing and Urban Development to spend federal monies for preservation purposes in urban renewal projects.

1966

National Historic Preservation Act

Federal participation in preservation was increased by:

1. Making federal monies available to states for surveys, acquisition, protection, and preservation of significant sites.
2. Establishing the National Register of Historic Places (see Appendix A) for state and local sites of historic or architectural significance in addition to national sites.
3. Creating the Advisory Council on Historic Preservation.

Demonstration Cities and Metropolitan Development Act of 1966

This act authorizes HUD to:

1. Make matching grants to public agencies of up to one-half the cost of preserving sites and structures in urban areas.
2. Make urban planning grants for surveys.
3. Demonstration grants for demonstrating historical preservation projects.

1966

Transportation Act of 1966

Provides protection for historic sites threatened by highway construction.

1969

National Environmental Policy Act of 1969

Impact statements must be filed by all federal agencies on all proposed actions and projects affecting the natural and cultural environments.

1971

Executive Order 11593, 1971 - "Protection and Enhancement of the Cultural Environment"

All federal agencies are required to:

1. Participate in some aspect of historic preservation.
2. Survey all property holdings to determine historic and architectural significance and eligibility for the National Register.²

1976

Tax Reform Act of 1976

Traditionally, new construction was given special tax treatment. The tax incentives in this act encouraged historic preservation projects by:

1. Allowing a rapid amortization of rehabilitation costs over a sixty month period.
2. Allowing accelerated depreciation of substantially rehabilitated structures.

This law also contains disincentives to discourage builders from tearing down historic structures by:

1. Denying accelerated depreciation for new construction on the site of a demolished or altered certified historic structure.
2. Requiring demolition costs to be capitalized as part of the cost of the land rather than deducted.

1978

Revenue Act of 1978

Congress approved a 10% investment tax credit (ITC) for "qualified rehabilitated buildings" that were twenty years old or older. The buildings must be used for commercial or industrial purposes following rehabilitation. The buildings must also retain 75% of the exterior walls. Only certified historic structures qualified under this act.

1981

The Economic Recovery Tax Act of 1981

This law features a three-tier investment tax credit (ITC) for qualified rehabilitations.

1. 15% for buildings at least thirty years old.
2. 20% for buildings at least forty years old.
3. 25% for certified rehabilitations of historic structures, regardless of the building's age.

The owner must meet a "substantial rehabilitation" test to qualify for tax credit. The test requires rehabilitation expenditures to exceed \$5000 or the adjusted basis of the property -- the cost of the building plus capital improvements, minus depreciation. The rehabilitation must also retain 75% of the existing external walls as exposed exterior walls.

Other major provisions:

1. A 15-year audit-proof recovery period to both new and existing buildings.
2. Allows certified rehabilitations of residential rental projects, as well as commercial and industrial projects, to use the 25% ITC.
3. The ITC is available for lessees of charities and governmental units.

Up through the 1960s, little concern was given to preservation laws besides the protection of national landmarks, historic battlefields, and 8

house museums. The American way of life based on a penchant for disposability is characterized in our tax laws until the mid-1970s. Our tax structure reflects our economic values. In this article "Big In The 70's: Recycling and Restoration", Stanley Abercrombie states, "the destruction of our architectural heritage was simply sound business practice."⁴ The tax laws of the 1970s reflect changing attitudes towards architectural preservation and adaptive reuse of old buildings. These laws coincided with an economic recession which limited new construction.

In 1976 the American Institute of Architects created an "Extended Use" category of design awards, thus recognizing the validity of preservation in the architectural profession. The attitude of function as formgiver is modified in this statement about new uses for old buildings.

Long after a building's original function had moved away or become obsolete, we learned that we were likely to find its shell still rich with intrinsic architectural assets, assets we could adjust to accommodate any number of new functions never imagined by the original architect. We often found, indeed, that the greater the disparity between a building's original use and its new use, the greater might be the complexities, contradictions, surprises, and delights of the adaptation.⁵

END

Our attitudes towards preservation coincide with our current trends in architectural design. The renewed interest in our architectural past, pre-International style, incorporates historicism as a theme today. In our search for a valid post-modern style "we have outgrown our fear and loathing of pre-modern."⁶

CHAPTER II

Preservation as a Business

Once considered a harmless hobby of bleeding hearts and dreamers, it has become an integral part of the country's economy.

Since the restructuring of the tax laws in the late 70s and early 80s, our economy has encouraged preservation of old buildings. This trend should continue due to high interest rates, high energy costs, high inflation rates, and increasing material and land costs. In 1980 the Bureau of Building Marketing Research estimated the total U.S. non-residential rehabilitation at:

\$35.6 billion in 1980
\$29.7 billion in 1979⁸
\$19.2 billion in 1974⁸

Also in 1980, the Department of the Interior reported a 100% increase in the number of architectural firms doing restoration, rehabilitation, and adaptive reuse projects over the previous ten years.⁹

Adaptive reuse and restoration of old structures has become a profitable business venture in many ways. A report on "The Contribution of

Historic Preservation to Urban Revitalization" by the Advisory Council on
Historic Preservation states that:

historic preservation of districts in cities creates
new jobs and services and business profit from
increased trade and tourism, resulting in a decrease in
crime and better housing.¹⁰

Many recyclable old buildings are located in our urban centers which
strengthens the revitalization of our downtown areas. Until the 1970s,
developers and the real estate market believed that "anything new was
better by the sole virtue of its novelty, that time brings progress and
that all change is for the better."¹¹ With the decreasing availability
of large-scale buildable sites in urban markets, that attitude has changed.
Preservation has become an important force in the development industry.

Lending institutions and the real estate industry are two of the
largest sources of financial activity in the United States, but both are
geared to new construction and development. Promoting the values for the
use of old buildings involves sound economics. Lending institutions are
reluctant to lend on older properties, they rely on seeing architectural
renderings of the finished product. Bankers "recognize only existing
conditions -- grime, blight, decay -- and cannot visualize a physical

transformation."¹² The area the building is located in must be proved financially stable.

A new financing business, equity syndication, evolved rapidly since the Economic Recovery Tax Act of 1981. Syndicators help finance innovative new uses for old and historic buildings. They help real estate developers raise money by selling shares in their projects to investors.¹³

Recycling old buildings is a new business, few facts and figures are known about it by lending institutions and the real estate industry. With the present economic advantages, preservation of our built environment should continue as a popular trend through the 1980s.

CHAPTER III

Energy

Studies done by the Energy Research & Development Administration conclude that the most energy consumptive period of architectural history occurred between 1940 and 1975. This period reflects the era of the "glass box" when energy was used most inefficiently.¹⁴ Reyner Banham refers to this period as "the architecture of the well-tempered environment. It depends entirely on mechanical forces to provide heating and cooling for comfort. It is an architecture that uses technology in the most inefficient way to overcome energy deficiencies of glazing and overillumination."¹⁵

A federal report "Assessing the Energy Conservation Benefits of Historic Preservation" proves that historic preservation is energy efficient. The study's findings report that:

One-third of America's total energy consumption involves buildings, their use and operation.

Five percent of the country's annual energy consumption is invested in the processing, transporting, and putting into place of construction materials.¹⁶

The report also outlines three energy considerations for preserving historic buildings:

1. Demolition costs energy - the gasoline used for wreckers to raze the structure and haul away debris.
2. Embodied energy - the energy already invested in the structure; non-recoverable energy - the energy originally used to make the bricks and other buildings materials, plus the energy used to construct the building. The energy in eight bricks equals one gallon of gasoline.
3. Operational energy - energy required to operate the structure on an annual basis.

The report includes feasibility studies for three historic buildings that proved economically beneficial to preserve from an energy standpoint. Grand Central Arcade located in Seattle's Pioneer Square required less than one-fifth the energy to rehabilitate than was needed to construct a building of similar size. This provided a savings of 92 million BTUs even though energy to operate the building would be greater than the new building. These savings would run the structure for more than 200 years.¹⁸

Many old buildings provide hidden assets for rehabilitation when considering the original design of the structure. High ceilings provide

built-in climate control; heat is lost with air rising through natural convection and there is less need for a mechanical air exchange system.

This characteristic combined with the fact that many old buildings are constructed of thick masonry walls helps to maintain constant temperatures. Many old buildings also contain large windows for maximum daylight in high-ceilinged spaces. Large windows can be energy retrofitted to retain their historic character and provide natural light when considering the monotony of artificially lit spaces. Scale and rhythm of outside fenestration can be maintained by placing storm windows on the inside of buildings for energy conservation.

In addition to the energy benefits of preservation of old buildings, the following considerations are also valuable aspects both culturally and economically.

"... life is made up of both old and new."¹⁹ Old buildings are an important part of our urban fabric; they reflect past growth and create variety and potential for the future built environment.

Most old buildings are located in urban areas where public services -- water, sewer, gas, etc. -- already exist.²⁰ This reduces the need for new utility systems.

Modern technology and constructional methods allow the remodeling of old buildings. "Mechanical facilities can inject air and light into the interior and floors, and structural members can be removed or added, walls opened or closed and volumes supplemented or reduced."²¹

Generally, older buildings are of sound construction; nineteenth century structures are of masonry wall-bearing construction, stone or brick, and twentieth century buildings are of skeleton steel construction.²²

Visual characteristics of old buildings make them easily remembered; they are self-advertising as in the transformation of the abandoned chocolate factory in San Francisco into the Ghirardelli Square shopping complex.²³

Rehabilitation of older buildings is labor-intensive and requires local resources rather than out of town or out of state construction companies' involvement.²⁴ It provides jobs for the unemployed in the community.

Older buildings represent an era of fine craftsmanship that cannot be duplicated. Thus, rehabilitation is a craft-intensive process. Attractive elements such as moldings, cornices, ceiling coffers, carved panels, and wainscoting require skilled craftsmen to restore.²⁵

"Generally, the cost for renovation is running a quarter to ²⁶a third less than the cost for new construction." This is because:

1. Recycling requires shorter construction time and shorter construction loans,
2. fewer work days are lost to adverse weather conditions, and
3. renovation uses less materials than new construction.

One exception to this rule is that unexpected difficulties may arise once the renovation work starts. Unforeseen structural problems may occur which makes cost estimating less reliable.

Preservation of older buildings creates a shorter, smoother development process than new construction and poses less fear of alienating the community.²⁷

Recycling old buildings bypasses lengthy development review processes: local neighborhood opposition and zoning delays.²⁸

Rehabilitated space is more readily marketable than new construction. The renter or lessee will have a good idea of the spatial characteristics of the building soon after renovation is underway.²⁹

Cities and towns gain by putting tax-delinquent properties back on the tax rolls, and revitalizing the economic fiber of the urban areas.³⁰

There are many aspects to preserving an old building that must be justified on utilitarian terms -- energy, jobs, economics -- to make the project feasible and profitable.

CHAPTER IV

Early History of Housing in Bozeman

The discovery of gold in Alder Gulch in May of 1863 prompted the settlement of the Gallatin Valley in 1864. As a prime agricultural valley which supplied food for the isolated mountain mining towns, Bozeman became its leading agricultural center. Bozeman also became a major stopping point for travelers on the Bozeman Trail: the direct overland route from the Midwest to the gold fields of Montana and further west.

The first official hotel was the Safford and Rice building on the northwest corner of Main Street and Bozeman Avenue in 1864. The story and a half log structure seemed too pretentious for the little town and was soon converted into a store.³¹ In the spring of 1866, the G.W.A. Frazier family came to Bozeman from Virginia City, Montana. The Fraziers felt that a hotel would be a profitable venture, so a one and a half story frame building was constructed on Main Street and called the City Hotel.

The first twenty years of Bozeman's history produced various important economic changes which created the need for rental housing. Its major economic base was agriculture and was followed in the 1870s by coal 19

mining.³² Fort Ellis, established seven miles east of Bozeman in 1867, provided a market for agricultural produce and coal. The creation of Yellowstone Park in 1872 launched the tourist industry. Bozeman became the principal outfitting point for tourists.³⁴ In 1883 Bozeman's early years as a frontier town came to a close with the arrival of the Northern Pacific Railroad. This event was of great economic importance to Bozeman as well as the state of Montana. The NPRR provided a market for the valley's coal, reduced the freight rates of agricultural products, and ended nearly twenty years of relative isolation.

Many other hotels opened after the City Hotel in Bozeman. In 1867 John C. Guy built a hotel on the northwest corner of Main Street and Black known as the Guy House. It later became the Northern Pacific Hotel. The Metropolitan Hotel, later the Laclede Hotel, c.1872, was located on the northeast corner of Main Street and Bozeman. It was the first brick building in Bozeman and was said to be the finest hotel in the area prior to the Bozeman Hotel. There was also a boarding house run by Mrs. Frazier of the old City Hotel. It was located on the southeast corner of Mendenhall and Bozeman Streets.³⁴

There was an increasing need for more rental housing in Bozeman following the arrival of the NPRR. In 1883 Matt W. Alderson wrote in his book, Bozeman, a Guide to Its Places of Recreation:

Opportunities for the profitable investment of capital were never³⁵ better. The City needs a large first class hotel ...

This need was fulfilled in 1889 with the opening of the Bozeman Hotel on the northeast corner of Main Street and Rouse. It became the city's finest and most popular hotel and operated until the mid-1970s. In the first city directory of 1892, the Bozeman Hotel was listed along with six other establishments as rental accommodations in Bozeman.

In 1893 the locating of the Agricultural College of the State of Montana in Bozeman initiated a strong and lasting economic base for the community. It also established the need for student housing on a seasonal basis. Prior to the construction of Montana Hall on the site chosen for the campus, the first session of school was conducted in a building owned by Nelson Story on the southeast corner of Main Street and Third Avenue, called the Old Academy. Dr. Merrill Burlingame states that many local families housed the students in their homes.

... student and faculty organizations began to form immediately and many were more easily managed downtown, within easier reach of student living quarters in Bozeman's homes, than after the move to the new campus which³⁶ was almost a mile away from the major residence area.

In 1898 there were nine curriculums offered at Montana State College taught by seventeen faculty members to two hundred students. W. E. Ellsworth states that the student population created a large influx of people needing rental quarters, but that the Bozeman community was short on housing.³⁸

Its [the College's] growth has been a healthy and permanent one built to meet the growing demand of the country around it. At this writing³⁸ there is not a desirable residence for rent in the city.

In the 1900 Bozeman Directory, listings for rental quarters included four hotels and three boarding houses. In the 1904 directory there were still four hotels plus five boarding houses. The 1912 Bozeman Directory shows a substantial increase in the number of rental quarters available: four hotels and nine boarding houses.

The Bozeman community expanded in the early 1900s not only because of the growing student population but due to an influx of well-to-do professional people establishing themselves here.³⁹ A new form of

housing which entered the market -- the apartment building -- appealed to these people who were not yet ready for a single family dwelling. The first apartment building in Bozeman was the Blackmore Apartments at 120 South Black built in 1913. The developer of the building was the Bozeman Investment Company, a group of prominent local citizens committed to the long-term growth of Bozeman. One businessman commented on the viability of the structure in the local newspaper on June 10, 1914:

One of the features about the opening of the apartment house in Bozeman which may be overlooked, but which is decidedly important is that it provides a home for the class of people Bozeman wants, but who have not always been finding the homes they desire here. Last year I remember how several commercial travelers were forced to leave Bozeman, unable to get the homes they wanted. An apartment house would have kept them here.⁴⁰

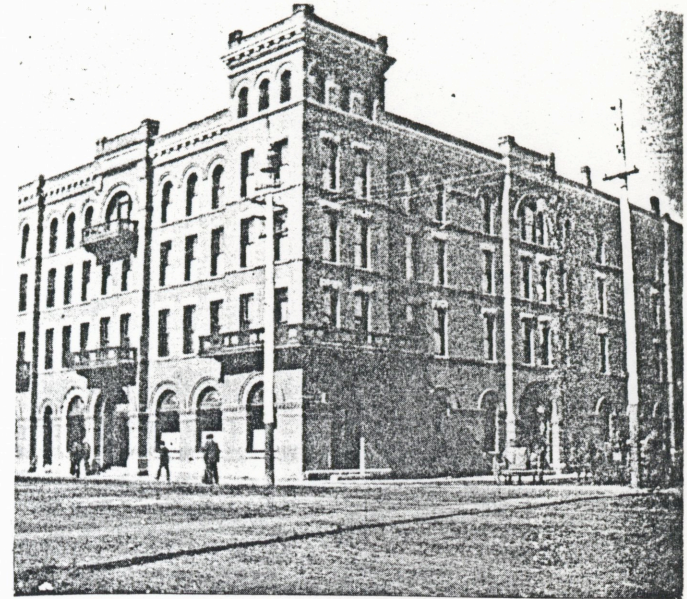
The popularity of apartment houses in Bozeman is evident in the 1927 directory. In just thirteen years following the opening of the Blackmore, fourteen additional apartment houses were listed. This growth reflects the need for rental housing in the community which has continued to the present.



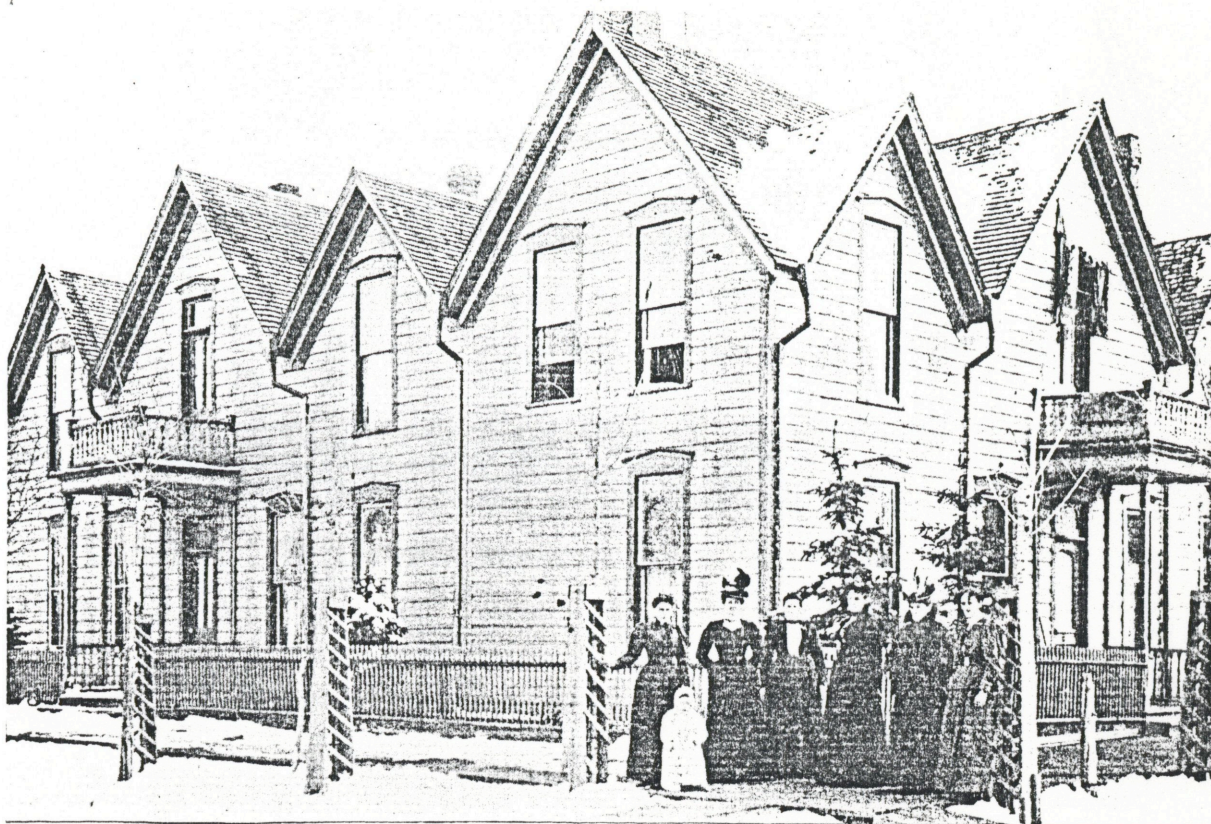
The Metropolitan Hotel, later the Laclede Hotel, c. 1872, was located on the northeast corner of Main and Bozeman Streets.



The Guy House, built in 1867, served as a hotel and was located on the northwest corner of Main and Black Streets. It later became the Northern Pacific Hotel.



The Bozeman Hotel, built in 1889, is located on the northeast corner of Main and Rouse Streets. It operated as a hotel until the mid-1970s.



The Frazier House, built in 1881, was operated by Elizabeth Frazier of the earlier City Hotel (1866). The Frazier House served as a boarding house and was located on the southeast corner of Mendenhall and Bozeman Streets.

Photo Courtesy of the Museum of the Rockies.

CHAPTER V

The Blackmore Apartments

The Blackmore Apartments, built in 1913-14, were listed in the National Register of Historic Places in 1983. The building is a significant example of the work of a prominent early architect in Bozeman, Fred Willson. As a local architect, Willson designed many major buildings in Bozeman, as well as nearby Three Forks and Belgrade. His career spanned over 50 years, which is evident in the many styles he designed in: castellated gothic, classical, neo-classical, art deco, and other popular trends.

A Bozeman native, born in 1877, Willson's education began at Montana State College in engineering and continued at Columbia University where he graduated with a degree in architecture in 1902. He then studied at the Ecole des Beaux Arts in Paris. Upon returning to the states, Willson worked with the New York firm of Vissher and Burley and then for Link and Haire in Butte. Willson then opened his own office in Bozeman and began his career as one of the major contributors to the area's architecture.

The Blackmore Apartments were named for Lord and Lady Blackmore, an English couple traveling through Bozeman in 1872 on their way to Yellowstone Park. While staying at the home of General and Mrs. Lester Willson, Lady Blackmore became ill and died. The Blackmores had agreed that should either of them die on a trip, they would be buried in that place. Lord Blackmore bought seven and a half acres east of Bozeman and donated it to the city to be used as a cemetery. Lady Blackmore is buried there.

The Blackmore Apartments have served Bozeman as a private apartment complex. The completion of the building represented a new era in housing in Bozeman. It was described in the January 14, 1914 Weekly Courier as having the latest modern conveniences:

... all the kitchenettes will be provided with electric stoves, iceboxes, and a chute to convey garbage to the basement, where it is burned in a heating apparatus that heats the water for the building.⁴²

The Blackmore Apartments were designed to serve a variety of tenants. It is a three-story building with a daylight basement and contained twenty-nine apartments at the time it was built: seven five-room units, twelve four-room units, and ten two-room units. Each apartment had

hardwood maple floors and mission style trim made of fir. Brick walls between units prevent the spread of noise as well as the spread of fire.⁴²

The design of the Blackmore Apartments reflects the Ecole des Beaux Arts influence on Fred Willson. The Classical Revival of the late 19th and early 20th centuries was based on a clear sense of order and unity. The classical styles used traditional vocabularies, whether it be Greek, Roman, or Renaissance, to create balance, symmetry, and restraint; absent qualities in architecture since the 1850s.

The focus of the U-shaped Blackmore Apartment building is the central courtyard on South Black. The west ends and the three courtyard facades are symmetrically organized. The window arrangement and entries to the building are balanced, whereas on the north, south, and east elevations interior function dominates the fenestration.

Italian Renaissance characteristics are evident in the rusticated base and the exaggerated Palladian window featured in the north and south courtyard entries. The basement level is given a rusticated appearance through the brick coursing -- every fifth row is recessed which creates a contrast with the planar walls of the upper three stories and stresses

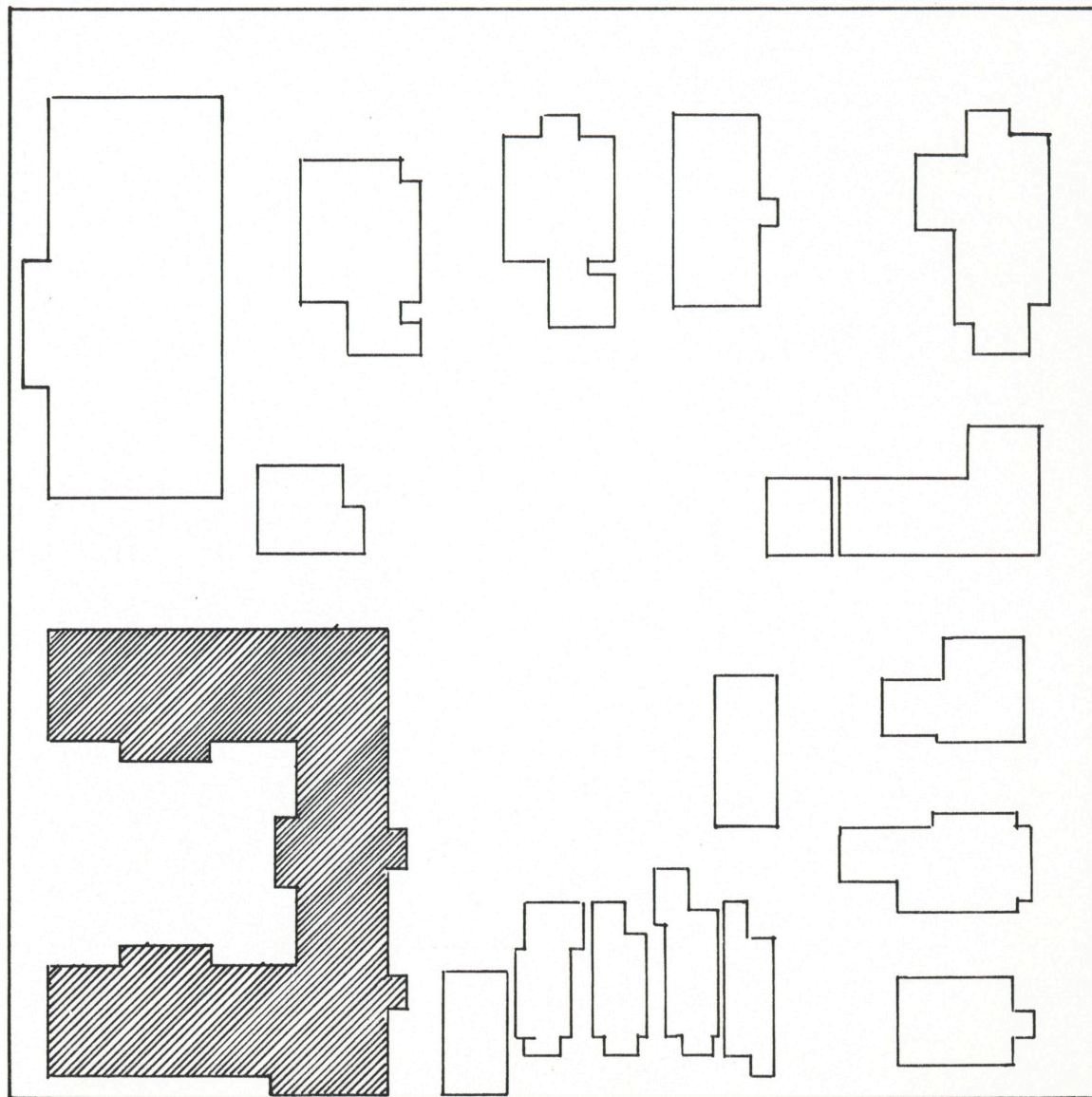
horizontality. The north and south courtyard entries are defined by a three story projecting Palladian window which is functionally expressed as a central staircase with balconies to both sides; the balconies of the first and second stories have been enclosed with glass to create sunrooms which changes the original appearance of the building. (See plans and elevations)⁴³

The treatment of the parapet is of corbelled brick courses which horizontally unify the top of the building as the rusticated base does at the bottom. The parapet is terminated by a continuous concrete coping which visually crowns the building.

BABCOCK

BLACK

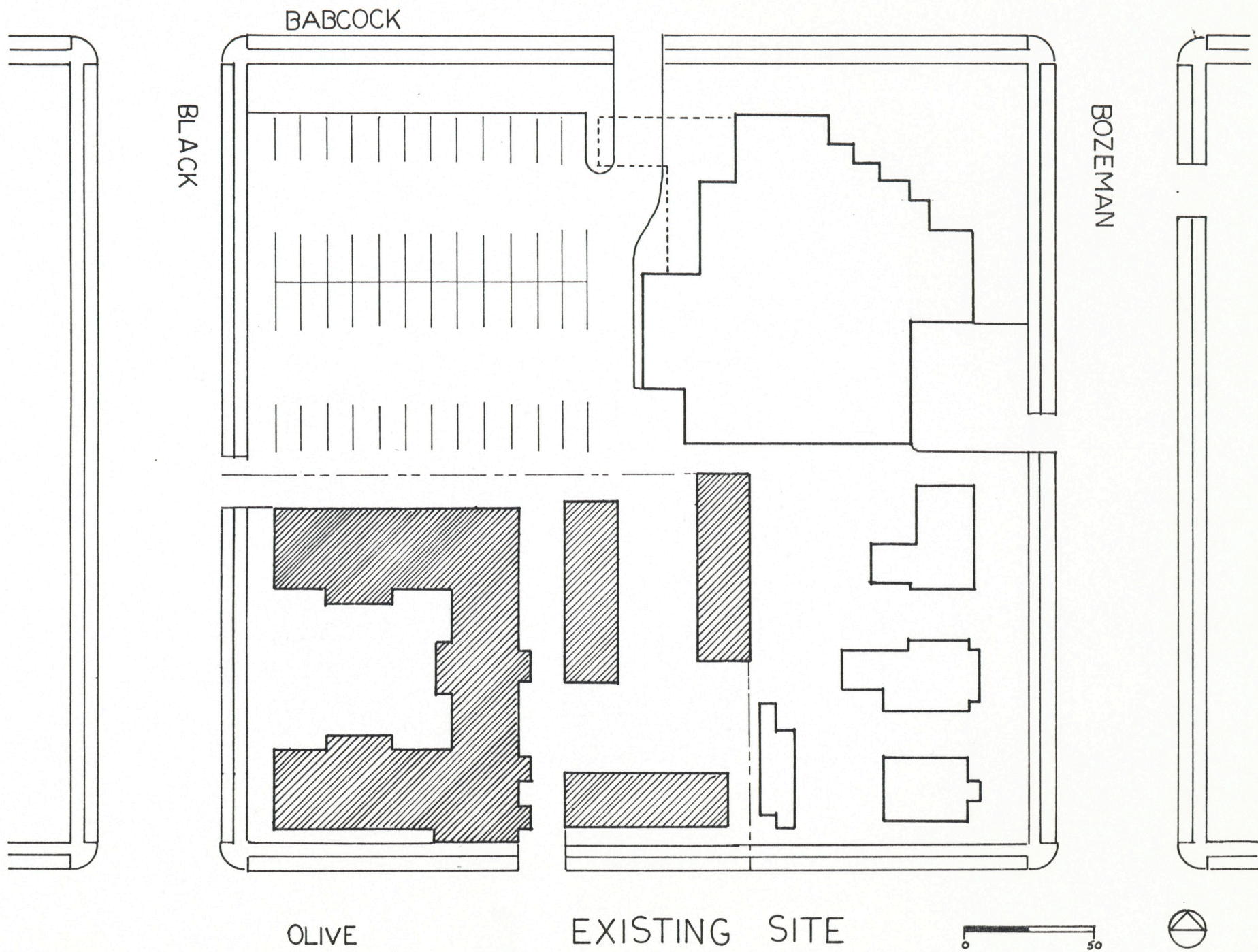
BOZEMAN

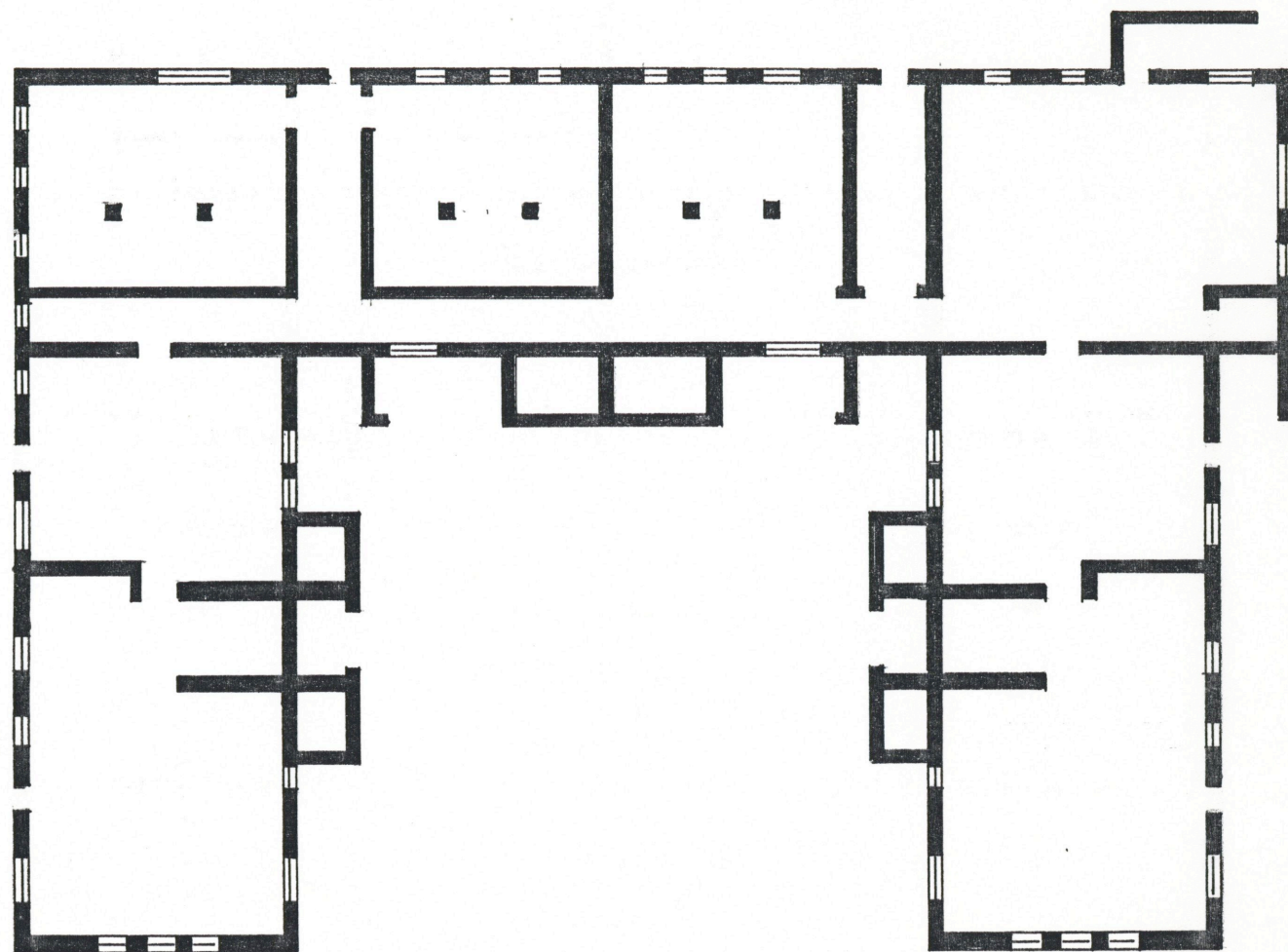


OLIVE

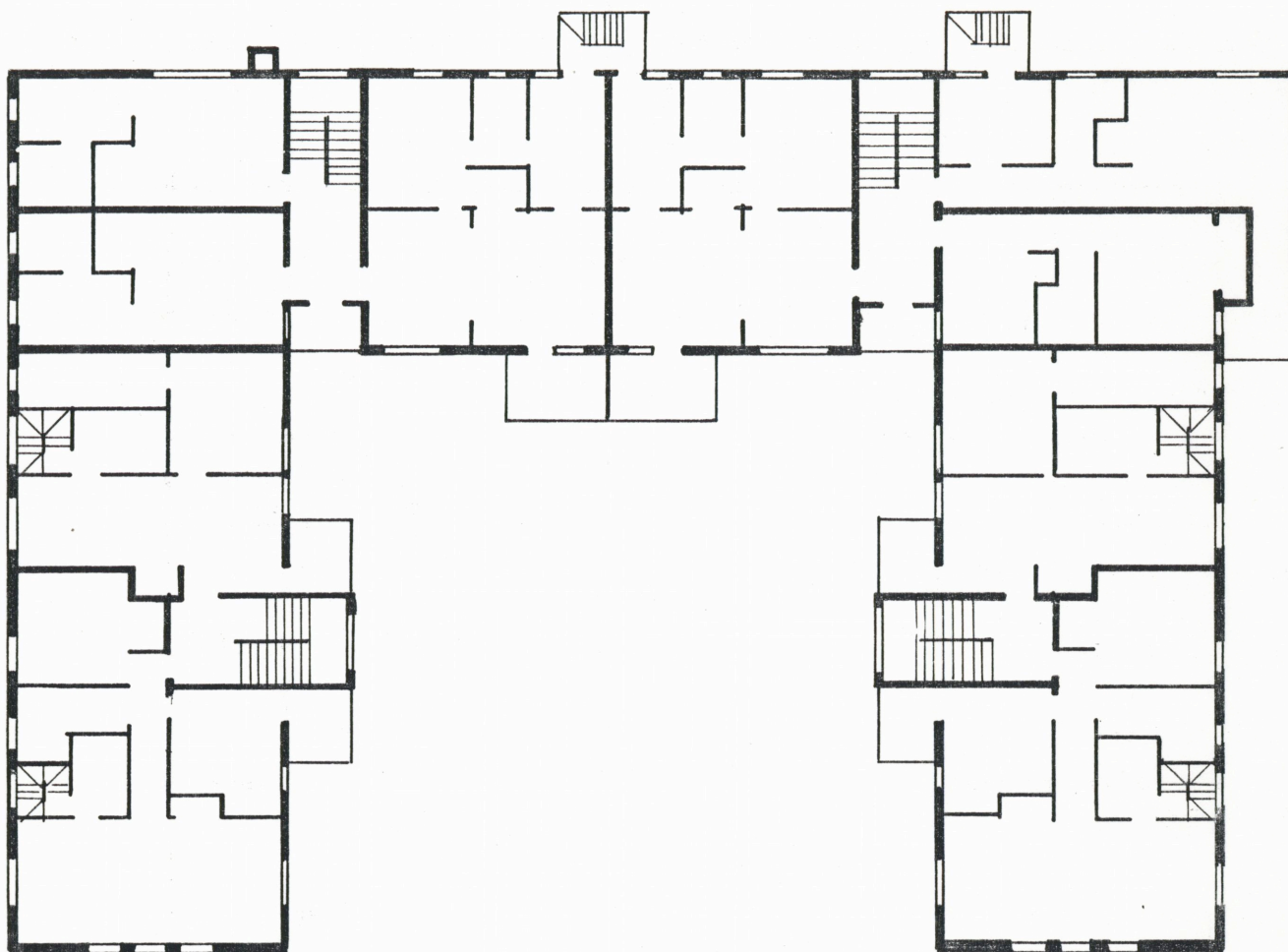
SANBORN MAP 1927







STRUCTURE



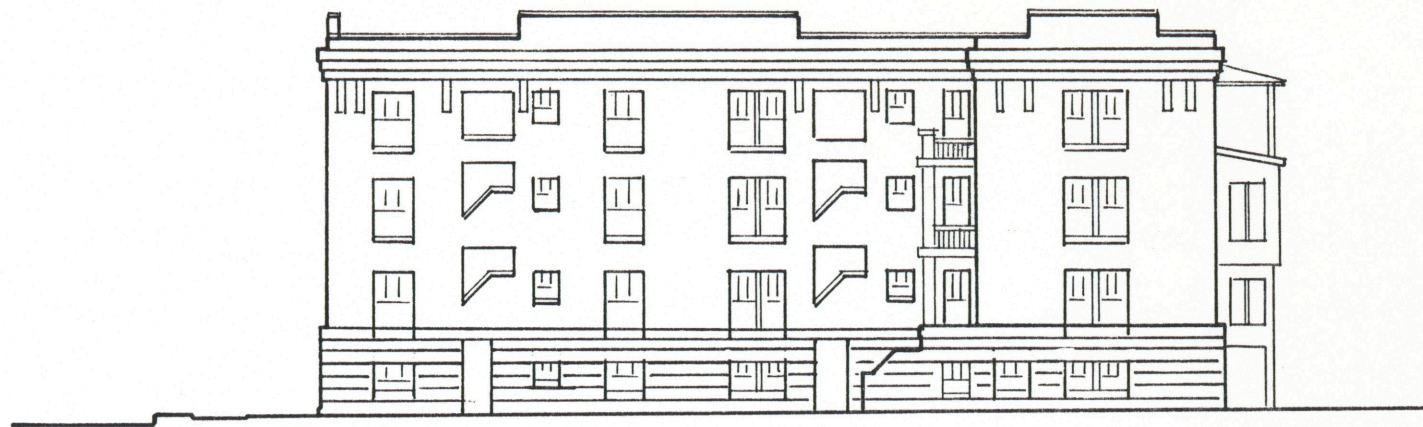
TYPICAL FLOOR PLAN



EAST ELEVATION



WEST ELEVATION



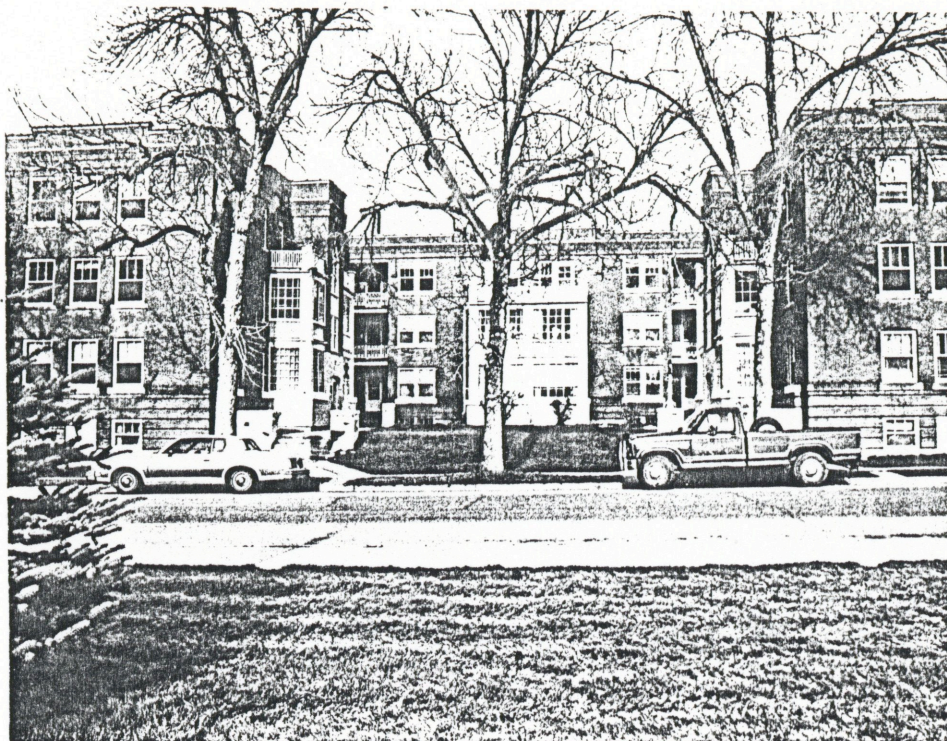
SOUTH ELEVATION



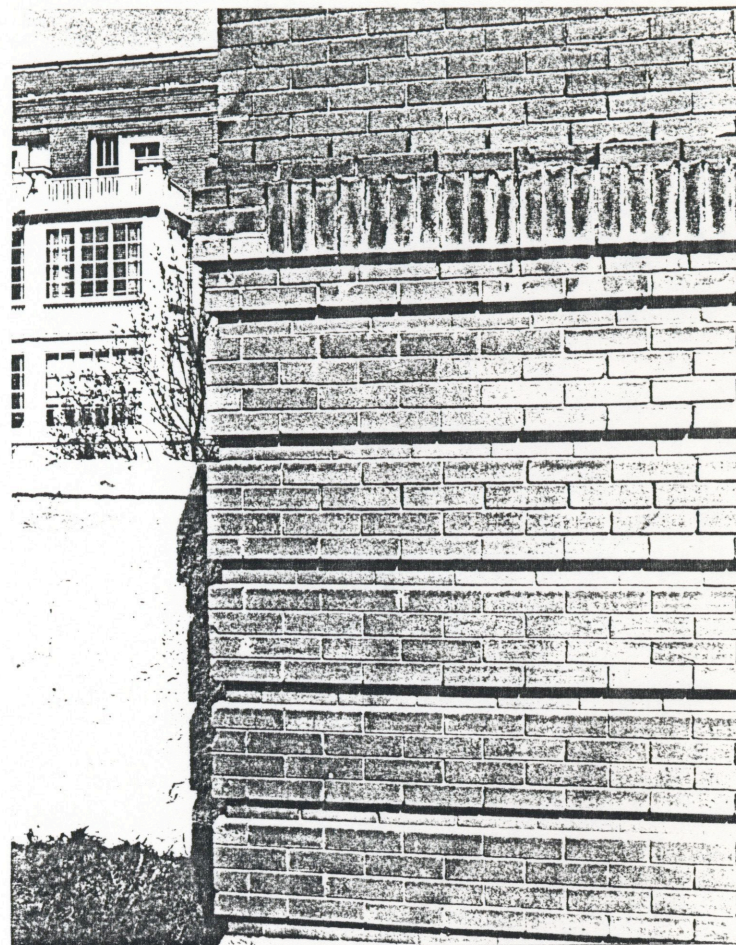
NORTH ELEVATION



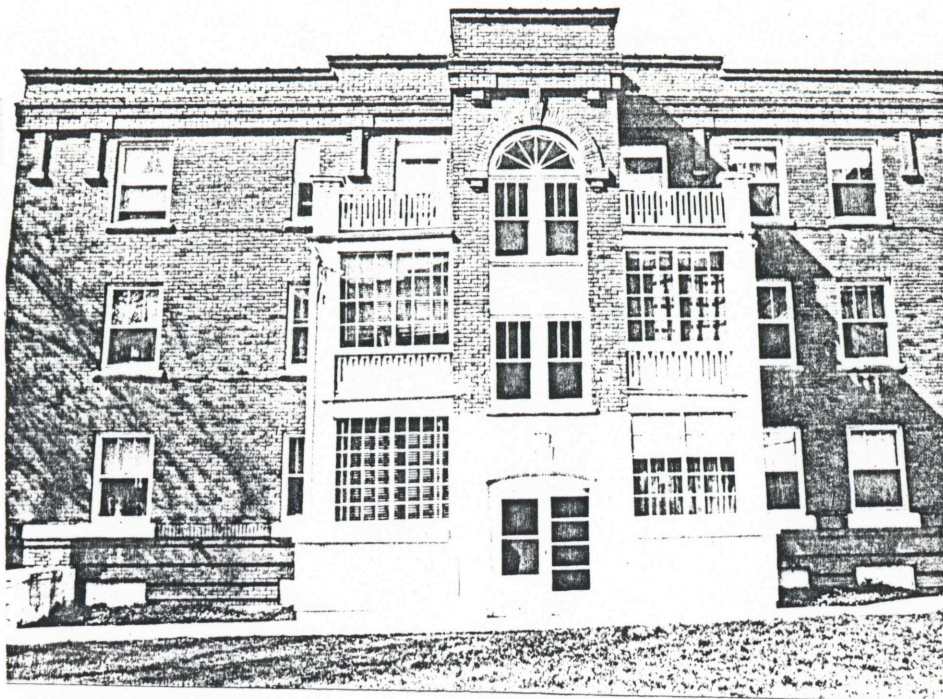
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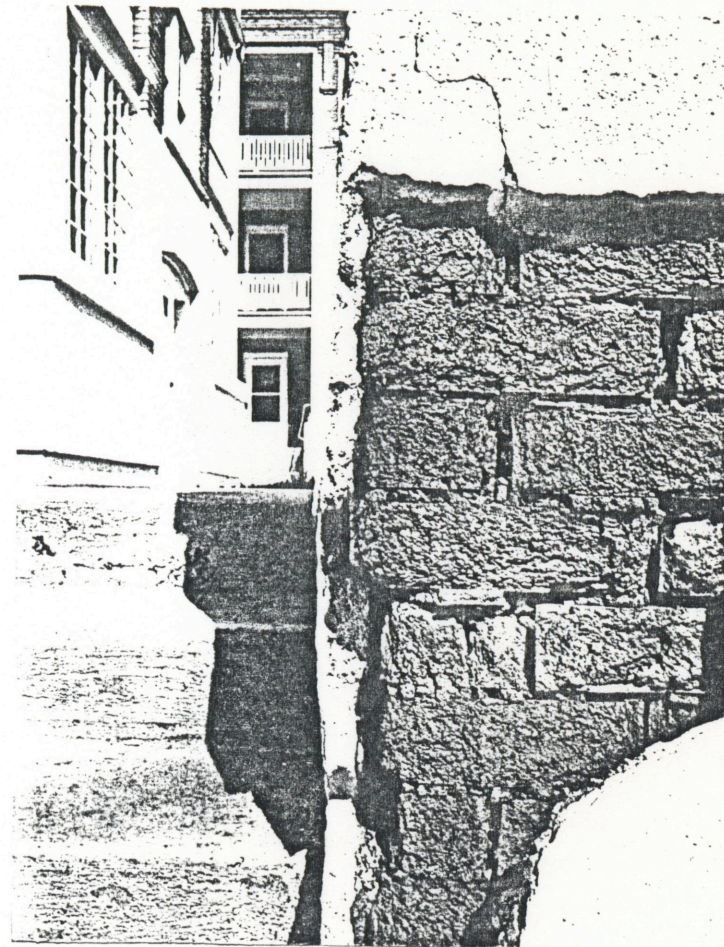
West elevation and courtyard, S. Black Avenue.



Detail of rusticated base at the daylight basement level. Red brick running bond courses with every fifth course recessed. This pattern terminates at the level of the first floor concrete window sills where a projecting soldier course encircles the building.



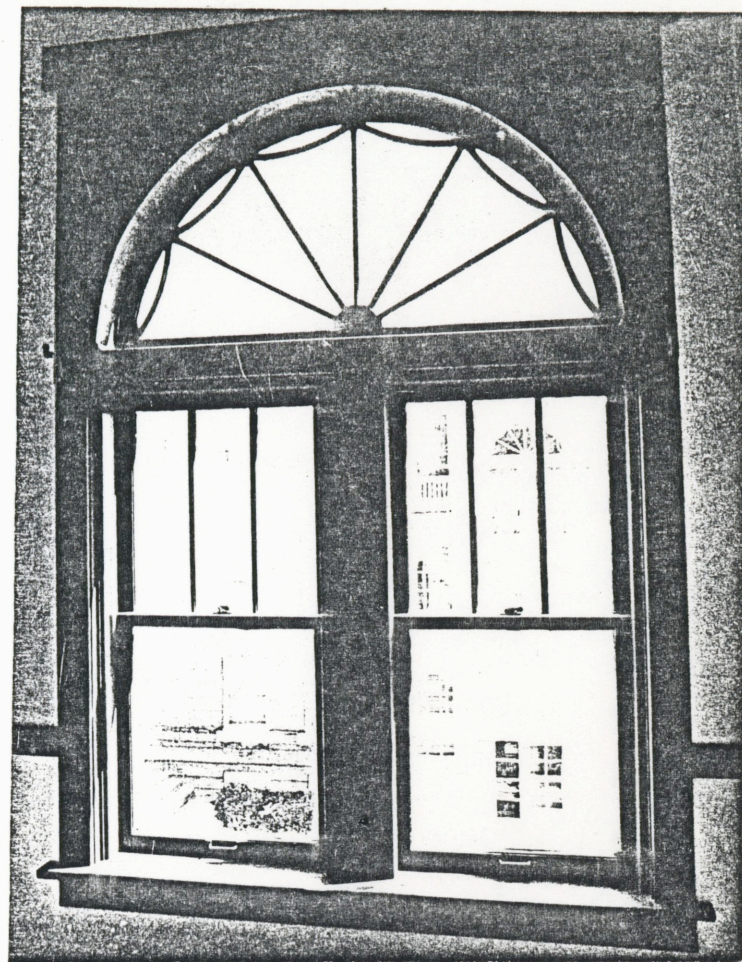
The exaggerated "Palladian" window of the north and south courtyard entries. First floor level has been stuccoed.



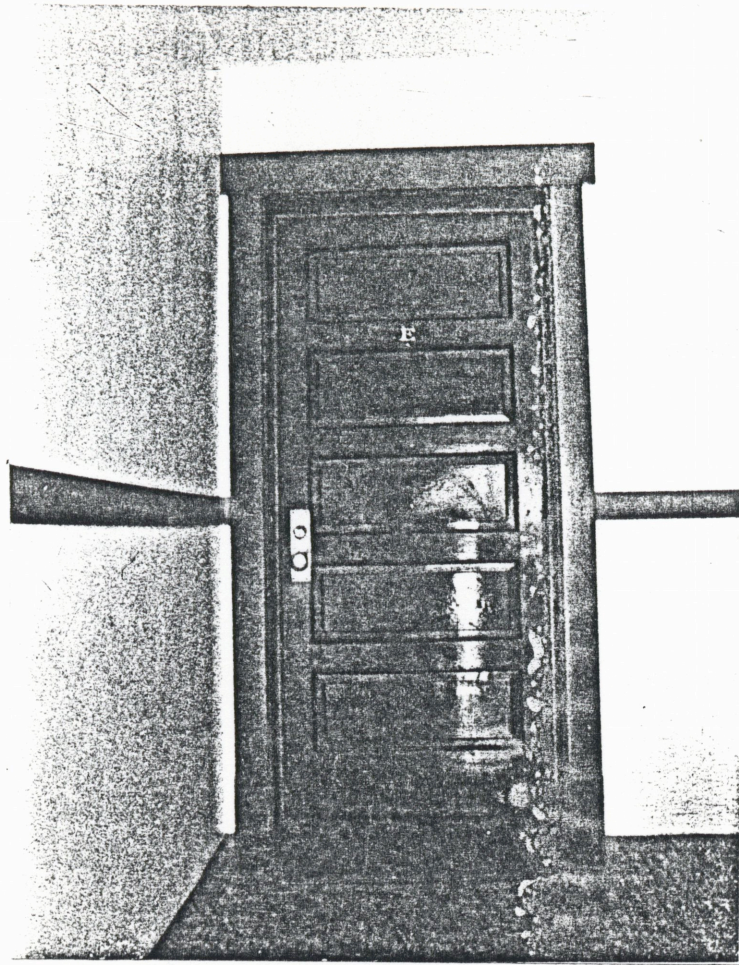
Detail of lamp base at the courtyard entry
Cracking stucco reveals deteriorated soft
brick.



Detail of balconies and stairwell window.



Interior detailing of stairwell window.



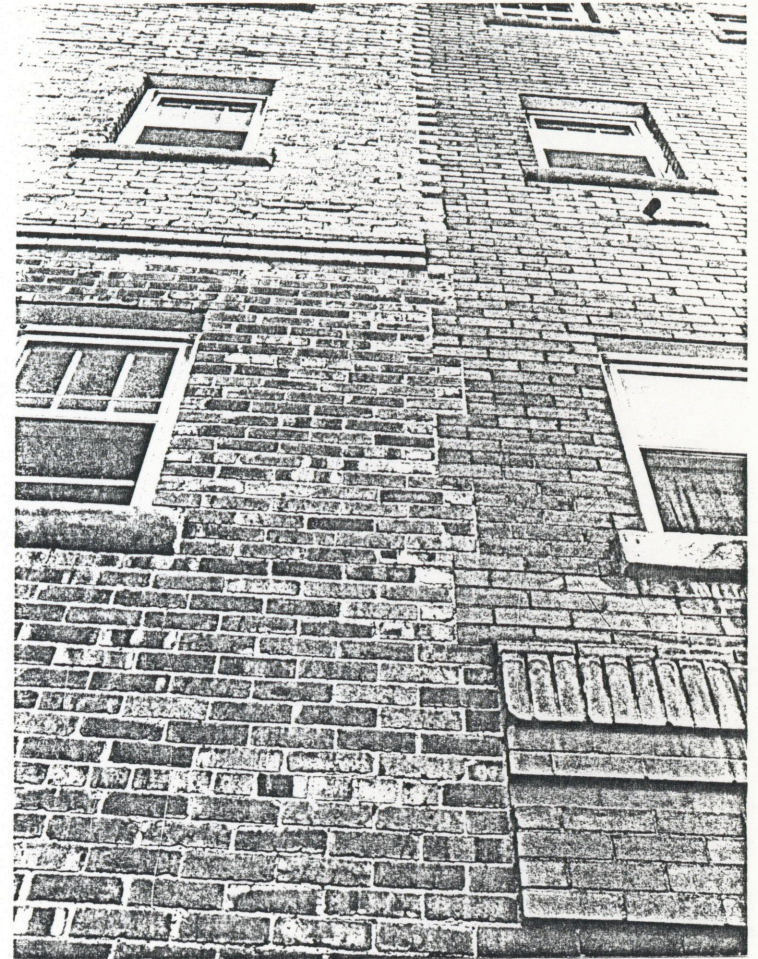
Interior hallways and apartment entrances showing Mission style trim of fir on plaster walls.



East elevation of unfinished brick.



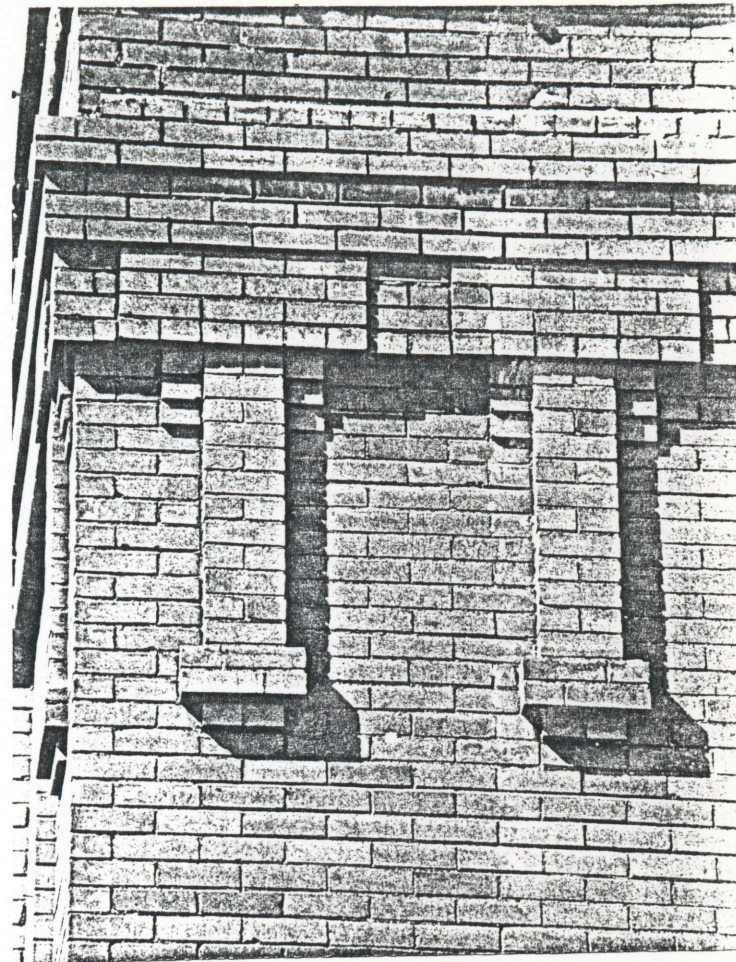
North elevation showing rear stairways.



Detail of the change of materials on the north elevation.



South elevation showing rear stairways.



Detail of corbelled brick courses on parapet.

CHAPTER VI

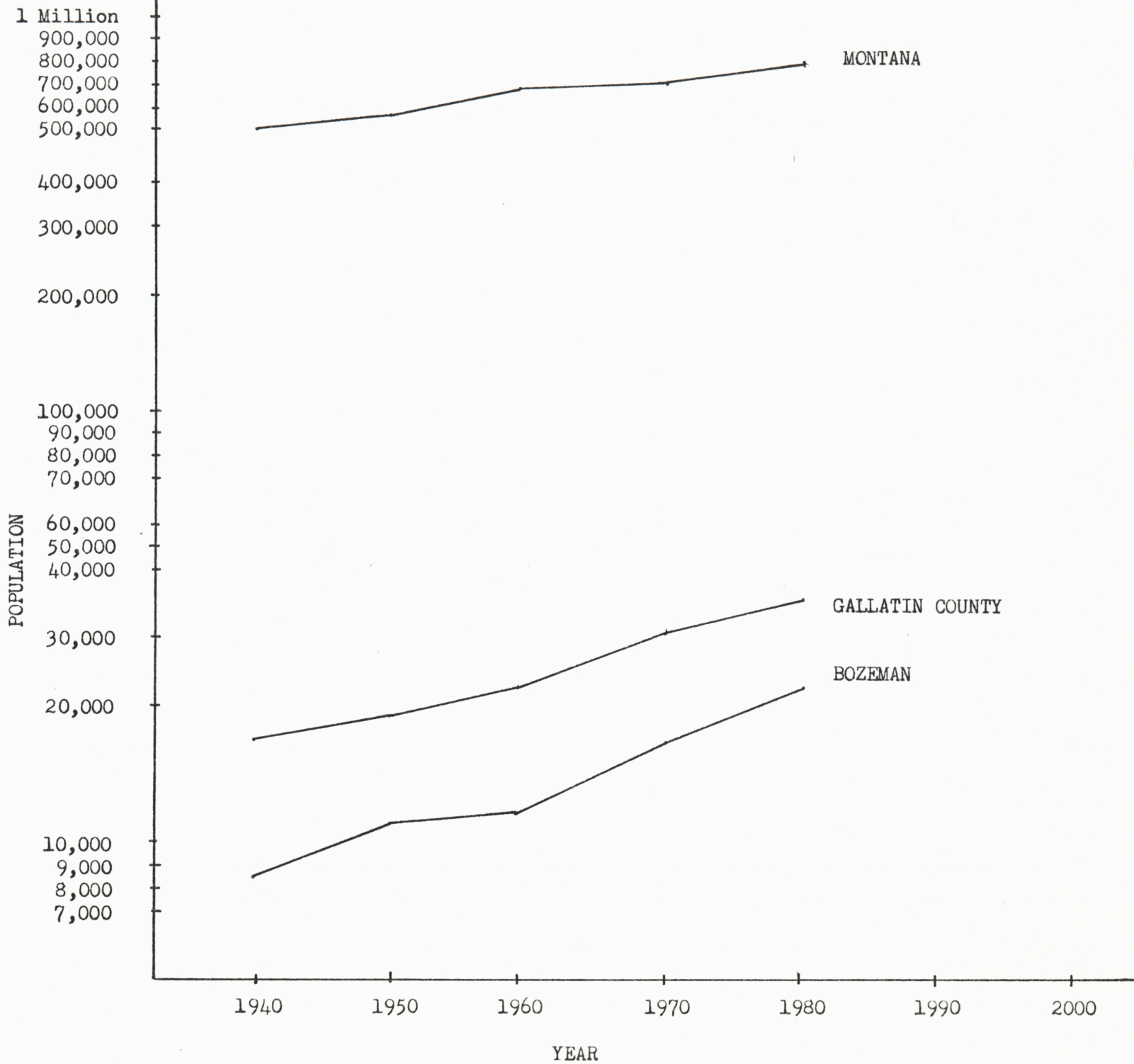
Establishing a Need: Low-Income Housing in Bozeman

The need for low-income housing in Bozeman has become a significant issue which has evolved over the past four years. The Bozeman City Commission and the Bozeman City-County Planning Board have recognized the issue and begun to implement policies and plans to ease the problem.

The economy of Bozeman is largely based on minimum wage labor. The ever-present university student population provides a cheap labor force for retail, motel, and food service jobs. This creates competition for other members of the community seeking this type of employment. With the state minimum wage being \$2.75/hour, a person working full time would earn \$5,720/year. Based on federal guidelines that limit the rent payment to 30% of the gross income, this person should pay no more than \$143/month for rent.⁴⁴

The population of the Bozeman area has grown steadily since 1960. (See Table 6.1). The reasons for this growth are attributed to:

1. an increase in the student population of Montana State University



2. an excellent quality of life which causes a large in-migration of people to the Bozeman area, and
3. a strong recreational industry that operates on a year-round basis.

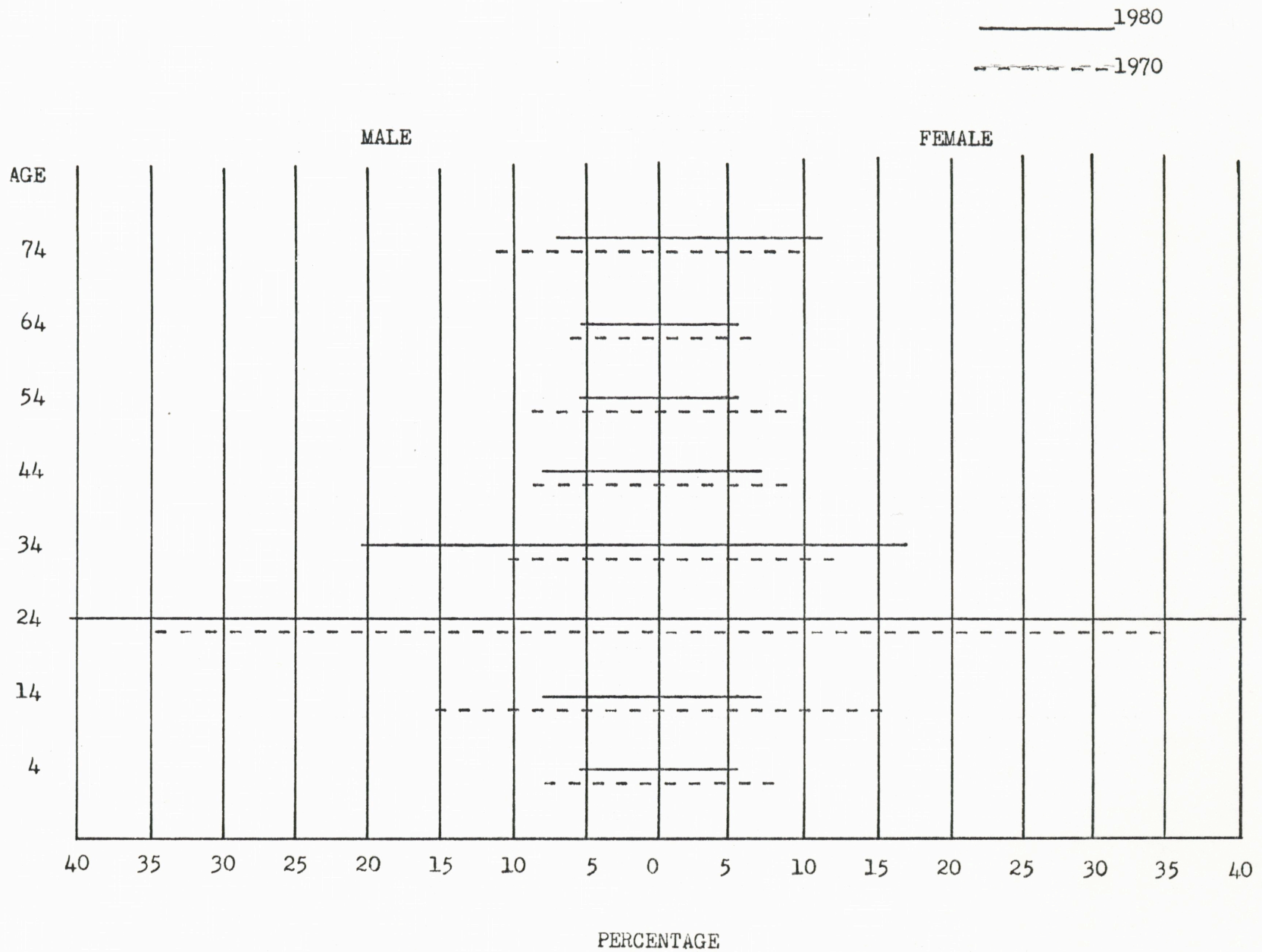
The population has also tended to grow in the age bracket of 14 years of age to 24 years of age. (See Table 6.2). This young population base, mostly comprised of single person households, is a highly mobile group. Consequently, this group is involved in the rental market. The 1980 U.S. Census of Housing shows that 58.3% of the occupied housing stock in Bozeman is renter occupied.⁴⁶

The Census also shows that as of 1980 there were 4,377 rental units in Bozeman. Of this number 866 units were available for \$160 per month or less. 222 of these units were located at MSU for married students and faculty. This left a total of 644 low rent units available in the Bozeman community. In the fall of 1982 100 of these units were eliminated for a park and office development.⁴⁷

The City of Bozeman has no Local Housing Authority with in which to implement public housing for the community. The City-County Planning offices recognized the need for low-income housing in Bozeman and address the problem via federally funded housing programs and enforcement of local zoning regulations. One federal program available to landlords in the

45

TABLE 6.2 BOZEMAN AGE DISTRIBUTION



community is The Section 8 Moderate Rehabilitation Program. The program is designed to:

1. Rehabilitate rental units which are now sub-standard or have major building components which will soon need repair or replacement;
2. provide a rental income to an owner that will repay rehabilitation costs, meet monthly operating expenses, and allow a reasonable profit on the owner's investment in the property; and
3. provide rental subsidies to lower income families and elderly, handicapped, or disabled persons living in the rehabilitated units.

The incentive for landlords to participate is evident in the number of benefits offered by the program:

1. Property is upgraded -- the owner's property is upgraded and its value increased.
2. Adequate rents -- rents cover all normal operating expenses, repay the rehabilitation loan, and allow a reasonable return on equity.
3. Rent adjustment provisions -- after the HAP Contract is executed rents are adjusted annually to keep pace with general cost increases; special rent adjustments cover increases in property tax and utility rates.

4. Reduced vacancy rates and rental delinquencies.

The Section 8 Program makes rental assistance available to lower income tenants, who will occupy the units. This assistance virtually assures the market for the rehabilitated property, reducing vacancy rates and rental delinquencies.

5. Rent paid on time

Guaranteed prompt payment of the agency's part of the rent each month.

6. Current tenant may be assisted

Assistance can be provided to current eligible lower income tenants.

7. Potential tax benefits

Potential opportunity for five-year depreciation of improvements.⁴⁹

In 1983, the state Department of Commerce allocated funds for 30 units in the City of Bozeman for the Section 8 Moderate Rehabilitation Program. As of January 1, 1984 landlords in the community had shown no interest. Due to the tight housing market and an increasing student population every year, landlords are insured of filling their rental units, sub-standard or not. Though partial rent is guaranteed through the program, City-County Planner John Moss stated that "landlords are already making too much money

and are in too secure a position in renting them just the way they
are."50

CHAPTER VII

Case Study: Miles Building Apartments, Livingston, Montana

Arthur Wellington Miles was a Livingston entrepreneur responsible for much of the construction in downtown Livingston from 1881 through the teens. In 1904 Miles began work on a building next to the Park Hotel on Second Street called the A. W. Miles Co. This building housed Miles' hardware business. In 1909 Miles began the crown jewel of his building career, 'The Miles Block'⁵¹, directly south of his A. W. Miles Co. building. The Miles Block was a three-story 140 by 200 foot building. The main floor was used for Miles' retail business, the second floor contained 36 offices and community meeting rooms, and the third floor contained 21 offices. The building was completed in 1910 at a cost of \$150,000.

The exterior of the Miles Block and the A. W. Miles Co. building are virutally the same. The interior of the two buildings, however, were altered and made into additional hotel rooms and apartments for the Park Hotel. This was due to the increasing popularity of Yellowstone National Park and the need for more overnight tourist accommodations. With the closing of the Park Hotel in the 1960s, the upper stories of the Miles 50

Block and the A. W. Miles Co. building were closed off and fell into disrepair.

In 1979 an historic survey of Livingston's older buildings was conducted to establish an Historic District for the city. The Miles Block and the A. W. Miles Co. building were listed in the National Register of Historic Places along with 436 other structures.

In 1980 the City of Livingston applied for an allocation of subsidized housing through the Montana Department of Commerce and the U.S. Department of Housing and Urban Development. Livingston was granted a 40-unit allocation for subsidized housing through the Section 8 Moderate Rehabilitation Program sponsored by HUD.

The government-subsidized housing project was developed by Heritage Associates of Livingston, a privately funded organization. The main goal of the project was to fulfill the "city's need for low-income housing and the desire to maintain the integrity of its historic downtown buildings."⁵² The idea of Heritage Associates became a unique project, "not only unique to Livingston but to the country as well."⁵³ The coupling of a HUD subsidized housing project and the renovation of an historic structure created bureaucratic headaches that lasted for two years 51

before the actual work on the building began. Federal officials in Denver were excited about the project, but it caused them to rethink the entire issue -- nothing had been done like this before. In the two years of paperwork, six separate government bodies were involved in the legalities of the project.

Federal requirements set by HUD for subsidized housing changed the original intention of the project. Initially, the function of the project was to serve the need for low-income family housing in Livingston. Because of the location of the structures, the tenant group was limited to elderly residents. The downtown location limited the space required for off-street parking for family tenants. The limited driving habits of elderly better suited the restricted parking situation that the site offered. A variance on the parking requirements was passed by the City Planning office to solve this problem. The location of the site also restricted the HUD requirement for recreational facilities for children in a family housing project. The needed space for a playground could not be provided and thus, once again restricted the user group to elderly residents. Another limiting factor was the need for an elevator for elderly and handicapped residents. HUD

requirements prohibit the installation of a passenger elevator in a low-rise family housing project.

In financing the project, Heritage Associates encountered additional problems. Purchasing the buildings and renovation materials was made extremely difficult due to the 18% interest rate at the time (1979). The construction phase of the project was financed by the Montana Board of Housing. The permanent financing was provided by the Government National Mortgage Association. The original cost estimate was figured at half a million dollars and eventually totalled one and a half million dollars.

Renovation of the structures was also based on the U.S. Department of the Interior's regulations for historic buildings. In order for Heritage Associates to qualify for the 25% Investment Tax Credit, the renovation of the buildings had to retain 75% of the existing external walls as exposed exterior walls. A Certified Rehabilitation application of the proposed rehabilitation work had to be approved by the State Preservation Office and then the National Park Service (Department of the Interior). This approval certifies that the rehabilitation plans are consistent with the historic character of the building. Renovation of the Miles buildings "endeavored to ensure that the new usage of the building fit in with its historic 53

nature."⁵⁴ Important features of the building were identified and enhanced to retain its historic quality and role in the community.

The original wood double-hung sash windows on the Second Street elevations of the buildings were restored. New double glazed glass replaced the old panes to make the windows energy efficient. The original prism glass was restored above the windows on the first floor commercial level. The high ceilings of the old office/hotel spaces were retained. Handcrafted woodwork -- doors, doorframes, baseboards, and chair rails -- plasterwork, and some tin ceilings were removed, refurbished, and reinstalled, all in keeping with the historic integrity of the buildings.

In updating the old building with modern conveniences to meet building code requirements, extra fire exits, an elevator, new plumbing fixtures, and some new windows were added. Security entries were added to the building whereby each unit was wired with a bell for visitors to ring. An emergency alarm system was also installed in each apartment with the main light panel located outside the manager's door.

One structural problem that occurred and added an unforeseen expense to the project was the need to make the building earthquake proof. Seismic codes required the addition of shear walls to strengthen the structure in

54

case of an earthquake. Fireproofing also had to be added to the structures to insure safety codes. Two layers of sheetrock were applied to the ceiling of the first floor commercial level. A spring-loaded automatic fire door was installed in the corridor in the brick party wall to separate the two buildings.

The forty-unit allocation for subsidized housing was fulfilled with the reorganizing of the old office/hotel spaces into 35 one-bedroom units -- four with handicapped features -- one two-bedroom unit, and four efficiency units. Each unit is a little different: some are larger than others, some have better views, some have more windows. Rent for each apartment is the same amount as set by HUD. Payments are adjusted depending on each tenant's income. "Thirty percent of a tenant's annual adjusted income goes to pay rent, whether that income is \$100 a year or \$1,000. The difference is paid by HUD."⁵⁵

The unusual aspect about this project was the amount of creativity that was required on all levels to meet the program demands. Though much paperwork and time was involved during the planning process, a unique challenge was undertaken and achieved. Bringing the building up to present day code standards was the biggest problem. Today's building codes plus

55

the HUD regulations are designed for new construction. Compromises had to be made to adapt the codes to an old building without destroying the historic character of the structure.



A.W. Miles Building and the Miles Block. (c. 1920)

CHAPTER VIII

Elderly Housing

In America today, 10% of our population or 22 million Americans are age 65 or older. Life expectancy of the average American is increased regularly with advancing medical technology. Consequently, this population group of 65 years and older will increase in size and create a special need for their housing in our society. 90% of older Americans are capable of independent living, but only three million housing units for the elderly have been built. This has created a condition in which one-third of all older Americans are living in sub-standard housing situations.⁵⁶

Housing the elderly requires a keen sense of social awareness. The elderly are as diverse a population group as any other on economic, cultural, and personal preference levels. There are various options for housing the elderly, each with its advantages and disadvantages.

1. The Homeowner

This option enables the older person to remain independent and part of the neighborhood. But the responsibilities for the homeowner become increasingly difficult with age. "The older homeowner becomes less physically able to meet the responsibilities of ownership -- shoveling snow, mowing the lawn, painting, and other maintenance chores."⁵⁷

2. Living with relatives

This living situation insures the older person of family ties, but it often strains family relationships, too. The older person is uprooted and loses his/her sense of independence and need for privacy.

3. Public housing

While providing the elderly with an independent living situation, public housing required the older person to leave familiar neighborhoods and friends. Sociologists discovered that the majority of the elderly consider age integration and high-rises to be undesirable and to create a sense of loss of place.

4. Nursing Homes

This option is good for extended medical care, but too often elderly enter nursing homes prematurely; they simply have no other place to go.

As a person advances to the age of retirement, there is a definite change in his/her role in our society. The elderly experience a loss of identity, they feel they are no longer a productive part of our society. They feel a loss of incentive -- what's next after retirement? They feel a loss of economic status; they are now dependent upon pensions and social security funds. The elderly also experience a loss of friends through mobility and death. The elderly's sense of place and sense of independence become the two most important personal freedoms that are left.

The major reasons why elderly people move into age-segregated communities is for security and physical aid if needed. From a security standpoint, the elderly want to be safe from crime, plus they want the certainty of having someone nearby to call in case of an emergency. The elderly also want to live independently, but with modern conveniences to help them in a period of declining strength. Community elderly housing reinforces this sense of independence and sense of place, but does not create an atmosphere of "institutionalization".

CHAPTER IX

Elderly Housing in the Blackmore Apartments

Based on my study of the need for low-income housing in Bozeman, the user groups involved would be young single people, families, and elderly. In comparison to the case study of the Miles Apartment Building in Livingston, Montana, I feel a similar situation exists in using the Blackmore Apartments for subsidized housing. Given the downtown location of the Blackmore Apartments, a parking problem would arise in fulfilling the required off-street spaces for a family or young single group. A variance or cash-in-lieu payments to the City of Bozeman based on elderly parking needs could be more easily met. The HUD requirement of a recreational space for family housing would be a restriction on the Blackmore Apartment site. The elderly's need for an elevator is also a restriction of HUD's for mixed use housing.

In addition to considering the above restrictions for subsidized housing, we must also keep in mind the needs and concerns of elderly people when considering adaptive reuse of the Blackmore Apartments. The location of the Blackmore Apartments will retain a sense of familiarity for elderly 61

people. The Blackmore Apartments is in an older, well-established section of Bozeman that elderly citizens of this community can relate to. A problem that the elderly face when they leave their homes and move to an elderly housing project is that they lose their sense of identity and sense of place. By using the Blackmore Apartments for elderly, this sense of uprootedness and displacement will be reduced.

The location of the Blackmore Apartments also offers a link with the downtown area of Bozeman. Elderly are less mobile than families and young singles and the accessibility of downtown Bozeman offers a commercial area within walking distance. This, in turn, offers an opportunity for exercise; an element needed in the lives of elderly who are so often shut-ins.

In terms of the adaptability of the Blackmore Apartments, the present layout would be best suited to elderly housing. The building presently contains 33 apartments of which only six are two-bedroom units. The remainder are one-bedroom and efficiency units. Family housing would require two and three-bedroom apartments.

CHAPTER X

Program

The design challenge for this project will include the adaptive reuse of the historic Blackmore Apartments plus an addition to this building to fulfill program requirements. I will attempt to maintain the historical integrity of the building and enhance important features both inside and out.

The formula for this program is based on the 1983 allocation and the projected allocation of 1984 for the City of Bozeman for the Section 8 Moderate Rehabilitation Program. Last year Bozeman received a 30-unit allocation, the allocation for this year could be as high as 40.⁵⁸ Of the 40-unit allocation, only those located in the existing building would qualify for HUD's rehabilitation funds. The residents in the units which will be added on to the building would still qualify for subsidized rent through the Section 8 Existing Program; this program directly affects the tenants, the landlord would receive no funding for the new construction costs.

Inventory of the Blackmore Apartments

Originally the Blackmore Apartments contained 31 units, there are presently 33 units in the building:

6 have been added in the basement

the southeast corner studios have been combined into
1-bedroom units on the first, second and third floors

the northeast corner studios on the third floor were
also combined into a 1-bedroom unit

10 two-bedroom units

12 one-bedroom units

4 studios

7 basement units (spatial arrangement unknown)

33 units TOTAL

These units range in size from 360 square feet to 900 square feet.

Total unit square footage: 23,200

Total building square footage with circulation: 29,100

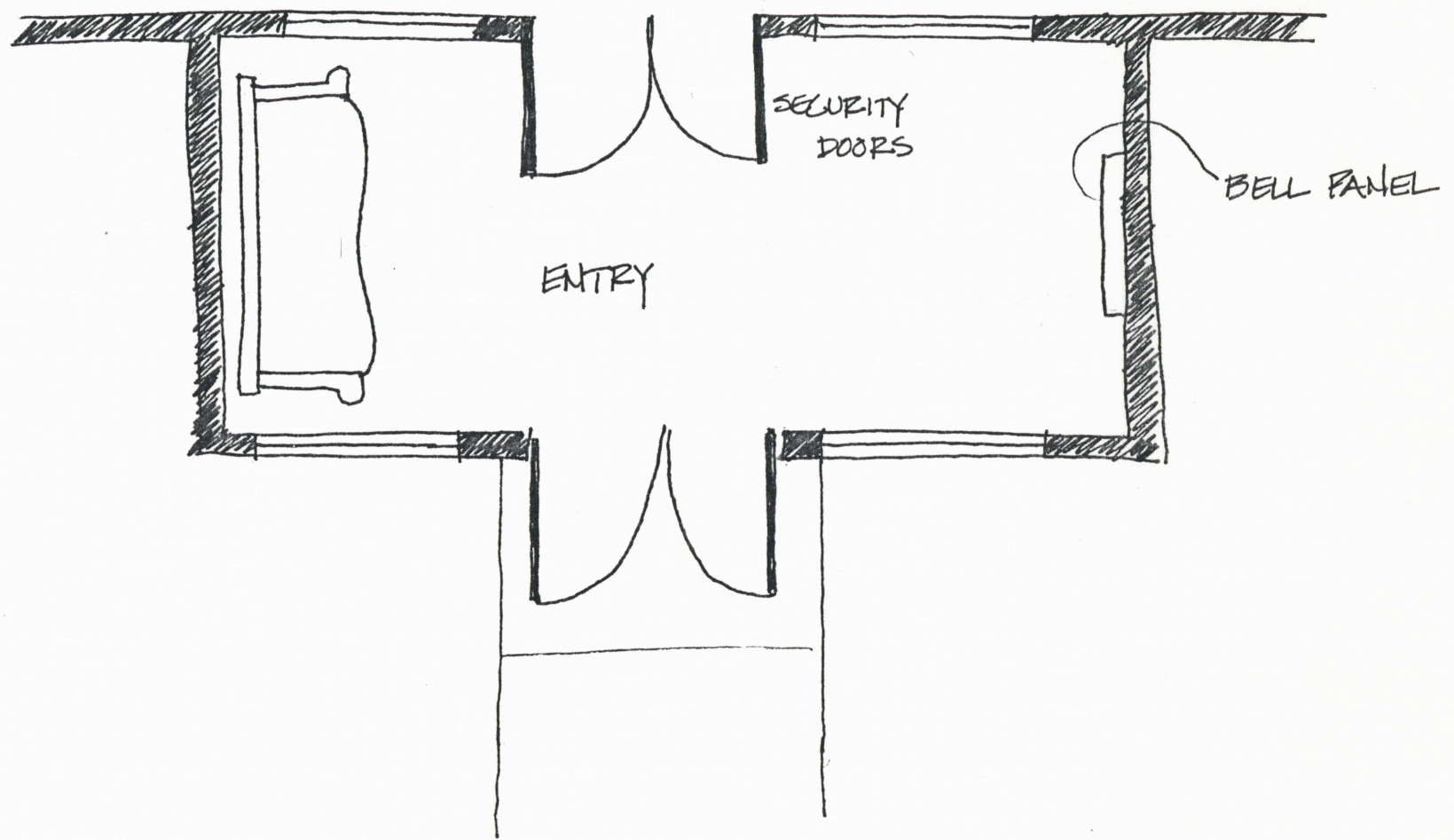
Site square footage: 29,000

MAIN ENTRY

- | | |
|-------------------------|--|
| A. Function | Control point for residents and visitors vestibule and air lock |
| B. Users | Residents and visitors |
| C. Degree of Privacy | Public |
| D. Spatial Requirements | Square Feet: 100
Special Needs or Equipment: bell system panel to residents' apartments |

The main entry shall serve as a transition zone from the outdoors to the indoors and vice versa for residents and visitors. It should function as a vestibule and air lock to the building. The main entry is important as a control point during the time when the building manager is off duty. The inner door would automatically lock in the evening and could be opened only with a resident's key. For security purposes, visitors entering the complex when the door is locked could gain admission to the building by ringing the appropriate bell and having the resident greet them. "Restricting the points of entry to the building to 2 doors is a feature designed to minimize uncontrolled access to the building, thereby addressing the tenants' potential concerns for security."⁵⁹

LOBBY



The area should be well defined as main entrance to the building. It should be well lit at night, both inside and out. Large windows would provide transparency from the inside to outside. A bench or chairs would be appropriate for waiting visitors.

LOBBY/LOUNGE

- | | |
|-------------------------|--|
| A. Function | Social interaction between residents and between residents and guests; meeting, greeting, conversing, waiting, neighboring

Mail distribution

Focal point for both horizontal and vertical circulation |
| B. Users | Residents and guests |
| C. Degree of Privacy | Public |
| D. Spatial Requirements | Square feet: 1000
Special needs or equipment: <ul style="list-style-type: none">a. public telephoneb. mailboxesc. elevatord. waiting area containing sofas, chairs, tables, plantse. view to out of doors |

The lobby/lounge should be directly accessible from the main entry. This area is a prime activity space. Circulation routes, both horizontal and vertical, should be well defined here. Small gathering nooks visible to the lobby and entry will provide seating spaces for viewing this activity area. Windows in these lounging areas provide the user with a visual connection with the outside and lobby activities. "Among the variety of

commonly shared rooms that can fit into a home for older people, the front lobby remains the single most important space. Residents will meet there if it is comfortable and safe and if there is enough activity inside and out ..."⁶⁰

One of the daily activities which is a central part of the elderly person's life is the arrival of the mail. Location of the mailboxes in the lobby area also warrants the need for visually adjacent lounge spaces in which the elderly can wait for the mailperson.

MANAGER'S OFFICE

- | | |
|-------------------------|--|
| A. Function | Administrative center for the apartment complex with an 8-hour a day manager on duty |
| B. Users | Building manager |
| C. Degree of Privacy | Semi-private but with high accessibility to the public |
| D. Spatial Requirements | Square Feet: 100-150
Special Needs or Equipment: <ul style="list-style-type: none">a. deskb. storage filesc. chairs |

The building manager's job is to supervise the housing program as set forth by HUD; reviewing applications of prospective tenants, administering to the residents' complaints or problems, and supervising the building's maintenance. This person would require an office in which to receive telephone calls and talk to residents. This space should be directly adjacent to the lobby with windows to visually link the two spaces so that the lobby could be monitored.

PUBLIC BATHROOMS

- A. Function Personal hygiene
- B. Users Residents and guests
- C. Degree of Privacy Private
- D. Spatial Square feet: 125 each
 Requirements Special Needs or Equipment
 - a. men's - one toilet stall, one sink
 - b. women's - one toilet stall, one sink

The public bathrooms would serve the lobby/lounge area, the manager's office, and the community room. These facilities would be handicapped equipped to serve those physically disadvantaged persons.

COMMUNITY ROOM

- | | |
|-------------------------|--|
| A. Function | Communal gathering space for large group activities; bingo, parties, meetings |
| B. Users | Residents and guests |
| C. Degree of Privacy | Public |
| D. Spatial Requirements | Square Feet: 2000
Special Needs or Equipment:
a. large tables and chairs
b. storage space for tables and chairs |

The community room is another activity center for the elderly, usually but not necessarily on a large scale and organized basis. Social gatherings such as parties, meetings, bingo games, and other recreational activities would take place here.

This space should be arranged to accommodate large-group tables and chairs. A storeroom area for these furnishings should be provided to make the community room a flexible activity space.

A kitchen space should also accompany the community room for large gathering food preparation.

An adjacent exterior space such as a patio would be an important feature for extending this space to the out-of-doors during good weather. 72

If an exterior space is not possible, large windows in the community room would provide a visual link with the outside world.

COMMUNITY KITCHEN

- | | |
|-------------------------|--|
| A. Function | Food preparation for large group gatherings |
| B. Users | Residents |
| C. Degree of Privacy | Semi-private but accessible to all residents |
| D. Spatial Requirements | <p>Square Feet: 100-125</p> <p>Special Needs or Equipment:</p> <ul style="list-style-type: none">a. counter spaceb. storage cabinetsc. stoved. refrigeratore. sinkf. dishwasher |

The community kitchen is an important feature for serving the community room. This space would serve the needs of food preparation for a potluck dinner or as a refreshment center on bingo night. The kitchen should be large enough for three or four people to work in comfortably.

LAUNDRY

- | | |
|-------------------------|---|
| A. Function | Washing, drying, and folding clothes |
| B. Users | Residents |
| C. Degree of Privacy | Semi-private with accessibility to all residents |
| D. Spatial Requirements | Square Feet: 125
Special Needs or Equipment: <ul style="list-style-type: none">a. two washersb. two dryersc. sinkd. sorting table |

The laundry room is a necessary feature for this complex so that residents would not have to go to a laundramat. This would be especially beneficial for handicapped residents and those without automobiles. The space should be clean and cheerful to alleviate the drudgery of laundry day.

MECHANICAL MAINTENANCE

- | | |
|-------------------------|---|
| A. Function | Mechanical system control point
Building maintenance equipment storage
Trash deposit point for residents |
| B. Users | Building manager and residents |
| C. Degree of Privacy | Semi-private |
| D. Spatial Requirements | Square Feet: 100
Special Needs or Equipment:
a. heating equipment
b. water heating equipment
c. trash bins
d. electrical equipment |

STORAGE

- | | |
|-------------------------|--|
| A. Function | Storage of residents' personal belongings |
| B. Users | Residents |
| C. Degree of Privacy | Semi-private |
| D. Spatial Requirements | Square Feet: 500
Special Needs or Equipment:
a. large locked communal storage space or
b. individually locked storage cages |

This space is to serve the extended storage needs of each resident that their apartments cannot offer. A building storeroom or individual closets would be convenient for a person's extras or seasonal belongings: suitcases, trunks, lawn chairs, recreational or hobby items. This space would be best located in the basement as windows would not be necessary.

EXTERIOR SPACES

A. Function

Extension of the residents' personal space to the out-of-doors informal space for sunning, neighboring, gardening

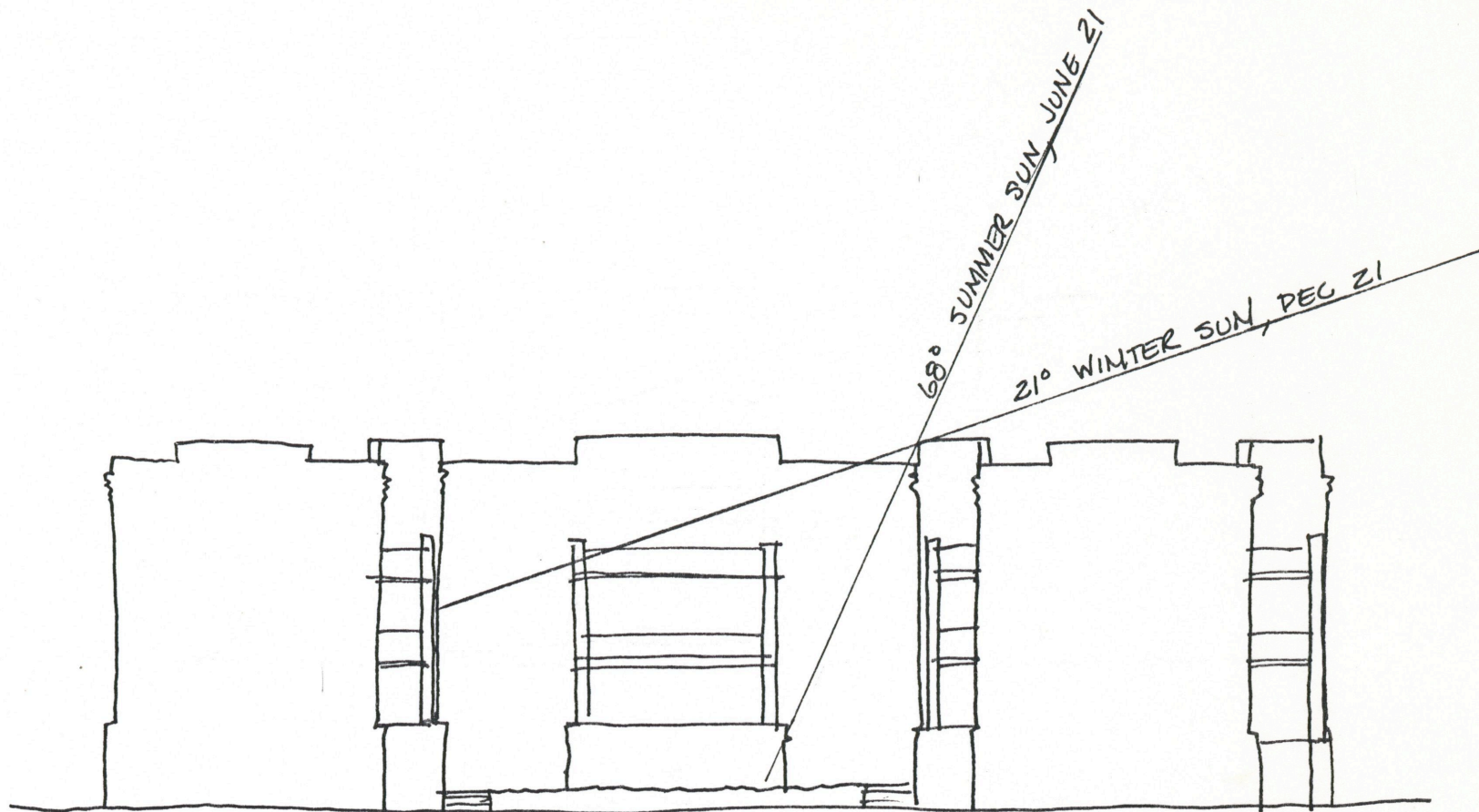
B. Users - Residents

C. Degree of Privacy - Semi-public

D. Spatial Requirements

1. Square Feet - variable
2. Special Needs or Equipment
 - a. porches
 - b. balconies
 - c. large communal space

A variety of exterior spaces are possible to include in this project. Porches and balconies already exist. A communal space to be defined is the large west courtyard. An area such as this is an excellent feature for elderly people. Being enclosed on three sides, it largely shelters this area from winds and noise. The large existing trees along South Black already provide some shade for this area from the strong western summer sun. This space would provide a prime gardening spot for the resident with a green thumb.



SUN ANGLES

WEST COURTYARD

PARKING LOT

- A. Function - Off-street parking of vehicles
- B. Users - Residents and guests
- C. Degree of Privacy - public
- D. Spatial Requirements
 - 1. Square Feet: 20-25 cars -- 5150 plus circulation
 - 2. Special Needs or Equipment
 - a. plug-ins for winter use
 - b. lights

In consulting Mike Money, Bozeman City Planner, many issues and variables must be taken into consideration for providing off-street parking for this project. The main issue to keep in mind is the user group: the elderly's driving habits are much less than other people's. This alone would justify a variance on the parking situation. Considering the existing off-street parking and the new user group, the position I will assume is to provide a greater percentage of parking spaces to units than is already available. Currently, only about 50% of the tenants' parking is accommodated on site. If I can increase that percentage, it would be a favorable route to take in satisfying the parking situation.

APARTMENTS

The following spatial requirements were figured by using the existing square footage in the Blackmore Apartment Building, the square footage in the case study, and the HUD minimum room sizes for multiple-family units (see Tables 10.1 and 10.2).

A. Efficiencies

1. Spatial Requirements	Square Feet
a. living room/bedroom/ dining room	250-300
b. kitchen	75-100
c. bathroom	<u>50- 75</u>
	375-475 TOTAL

B. One-bedroom

1. Spatial Requirements	Square Feet
a. living room	160-200
b. dining room	100-150
c. kitchen	75-100
d. bathroom	50- 75
e. bedroom	<u>120-150</u>
	505-675 TOTAL

C. Two-bedroom

1. Spatial Requirements	Square Feet
a. living room	175-200
b. dining room	125-150
c. kitchen	75-100
d. bathroom	50- 75
e. bedroom one	125-150
f. bedroom two	<u>125-150</u>
	675-825 TOTAL

TABLE 10.1

Minimum room sizes, multiple-family units
Department of Housing and Urban Development

<u>Name of Space</u>	<u>Efficiency Unit*</u>	<u>One Bedroom Unit*</u>	<u>Minimum Dimensions Shorter Wall</u>
<u>Separate Rooms</u>			
Living room	Not applicable	160	11'0"
Dining room	Not applicable	100	8'4"
Bedroom	Not applicable	120**	9'4"
Bathroom	Not given	Not given	
Kitchen	Not given	Not given	
<u>Combined Rooms</u>			
Living-dining area	Not applicable	210	
Living-dining-sleeping	250	Not applicable	
Living-dining-kitchen	Not applicable	270	
Living-sleeping	210	Not applicable	
Kitchen-dining	100	120	

*Areas given in square feet.

**In a one-bedroom living unit in housing for the elderly, the bedroom may have an area of 80 sq. ft. min. unless designed for occupancy by a wheelchair user.

Source: Department of HUD, Minimum Property Standards, Multi-family Housing, 1973 edition, revised May 1979.

TABLE 10.2

Minimum storage requirements, multiple-family units
Department of Housing and Urban Development

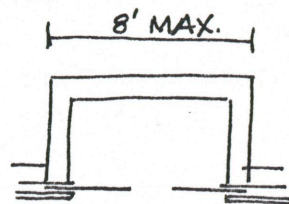
Name of space	Efficiency unit	One-bedroom unit
Bedroom closet	2' x 3'	2' x 5'
Coat closet at entry	2' x 2'	2' x 2'
Linen storage	10 square feet	10 square feet
Bathroom	Medicine cabinet	Medicine cabinet
General storage in cubic feet	100* 140**	150* 200**
KITCHEN		
(Minimal frontage in lineal inches)		
Sink	18	24
Countertop, each side	15	18
Range or cook top	21	21
Countertop, one side	15	18
Refrigerator space	30	30
Countertop, one side	15	15
Mixing Countertop	21	30
Minimum shelf area (square feet)	24	30
Minimum drawer area (square feet)	4	6
Minimum counter space (front feet)	3	4

*Option 1: this storage shall be located entirely within the unit.

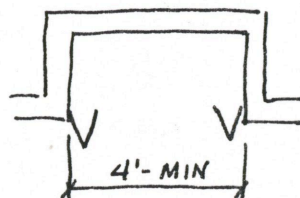
**Option 2: at least 1/2 of this storage shall be located within the living unit.

Source: Department of HUD, Minimum Property Standards, Multi-family Housing, 1973 edition, revised April 1977.

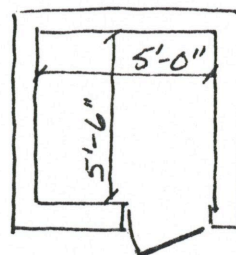
CLOSETS. ARCHITECTURAL GRAPHIC STANDARDS.



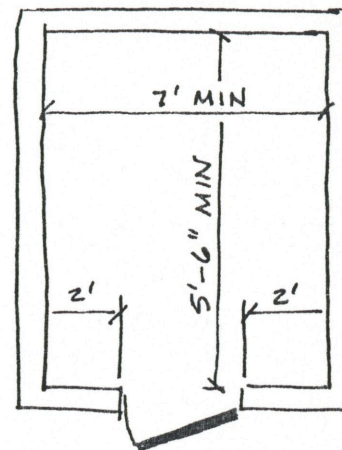
SLIDING DOOR
IN POCKET



BIFOLD
DOORS

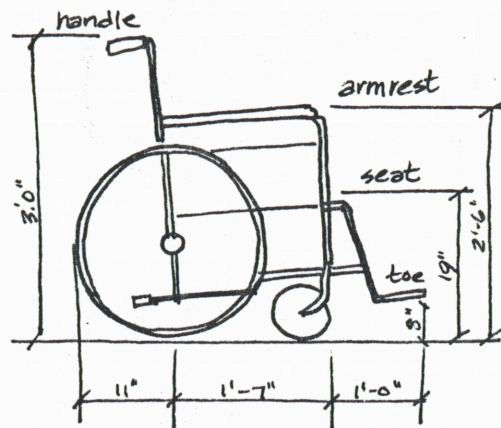


WALK-IN

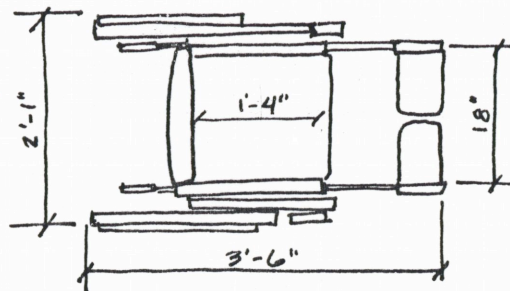


WALK-IN

THE WHEELCHAIR

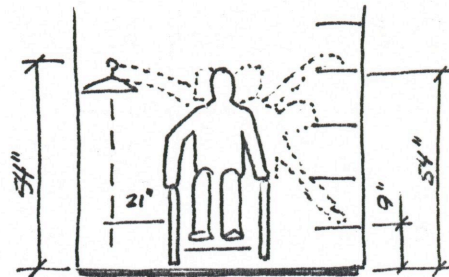


SIDE VIEW

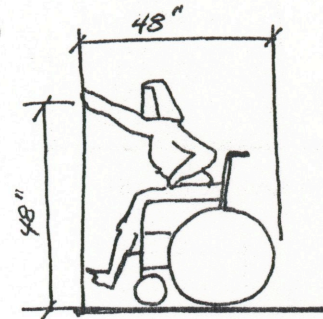


TOP VIEW

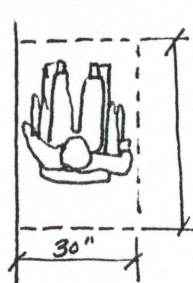
REACH SPECIFICATIONS FOR AVERAGE WHEELCHAIR USER:
ANSI A117.1 - 1980 SPECS.



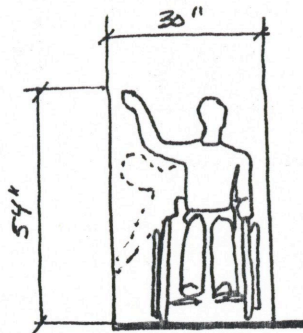
STORAGE
SHELVES & CLOSETS



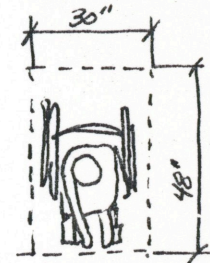
HIGH FORWARD REACH



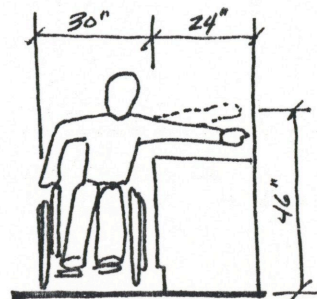
CLEAR FLOOR
SPACE



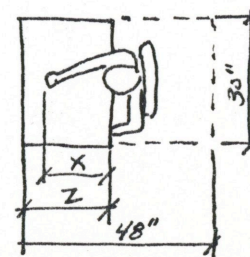
HIGH & LOW SIDE
REACHES



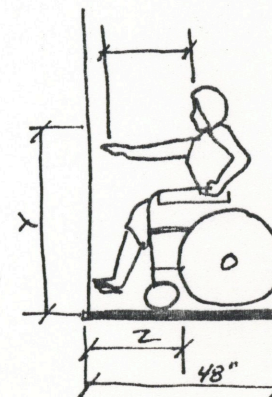
HIGH FORWARD REACH



MAXIMUM SIDE
REACH OVER OBSTRUCTION

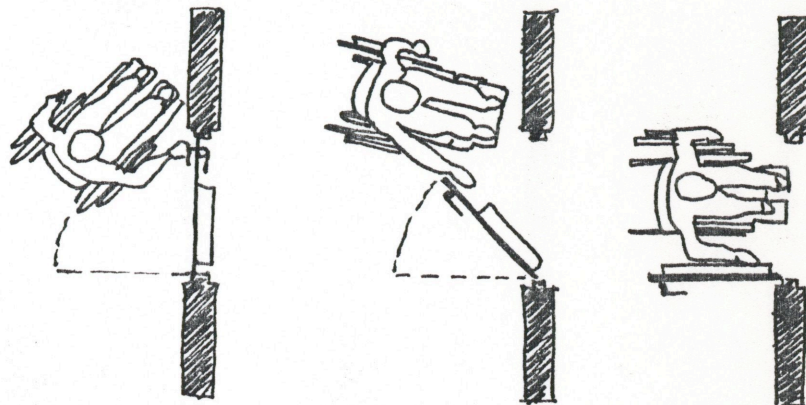


MAX. FORWARD
REACH OVER
OBSTRUCTION



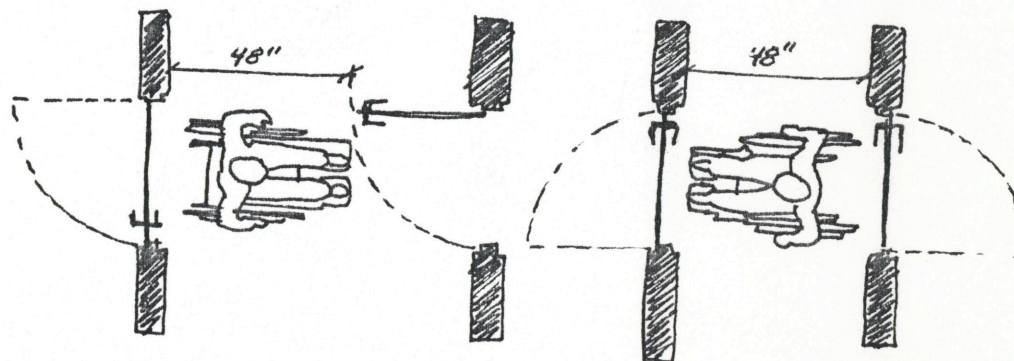
$$X \leq 25"; Z \geq X. \quad X < 20"; Y = 48". \quad X = 20" - 25"; Y = 44"$$

SEQUENCE OF
DOOR OPERATION



CLEARANCES
BETWEEN 2
HINGED DOORS

ANSI A117.1 1980



The following programming considerations were taken from the book Housing Interiors for the Disabled and Elderly, by Bettyann Boetticher Raschko.

Entry/Exit

- door should be 36" wide with a clear opening of 34"
- threshold should be level or beveled no more than 1/2"
- well lit so doorknob and keyhole are visible
- doorknob and light switch should be 36"-39" above the floor
 - a. special push handles for disabled who cannot grasp and twist
or
 - b. level handle
- kickplate 12"-18" deep across the bottom of the door
- push/pull bar on door
- conspicuous apartment number
- 60" x 60" maneuvering space for wheelchair users
- doorside shelf for packages at a height of 36"
- accessibility from all approaches

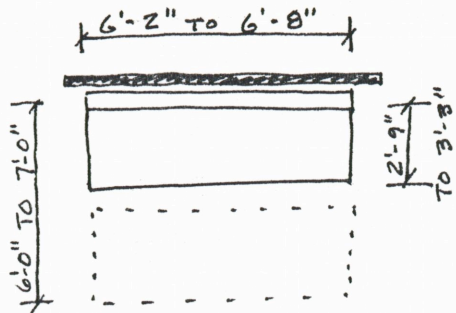
Living Room

- user should be able to relax and function with a minimum of effort
- disabled and elderly people in the living room due to decreased mobility and increased sedentary activities, therefore the living room should not have an institutional appearance
- furnishings
 - a. should provide independence and stimulation
 - b. should promote and maintain motivation and physical body functions
 - c. should provide safety and conservation of human energy needs
 - d. the arrangement should relate directly to personal daily activities
 - e. should include chairs, sofa, tables/desks, shelving/cabinets, and lamps

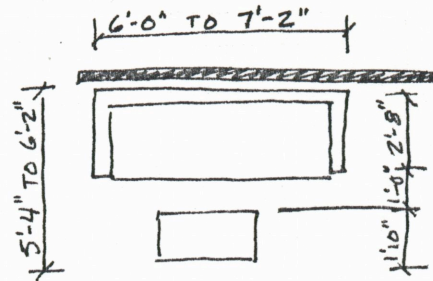
Kitchens

- four basic activities: food preparation, cooking and serving food, cleaning, and storage
- counter height
 - a. for elderly - 36"
 - b. for wheelchair users - adjustable to 28", 32", or 36"
- wall cabinets
 - a. for elderly - 12" above countertop
 - b. for wheelchair users - adjustable to 8" above countertop
- revolving shelves in corner base areas
- ovens mounted in tall cabinets with side opening doors
- identical countertop and appliance heights

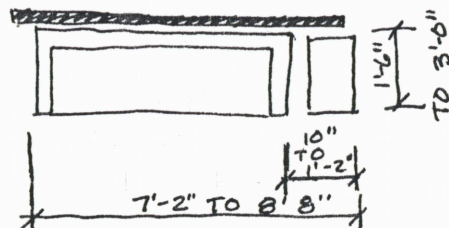
LIVING ROOM FURNITURE CLEARANCES. ARCHITECTURAL GRAPHIC STANDARDS.



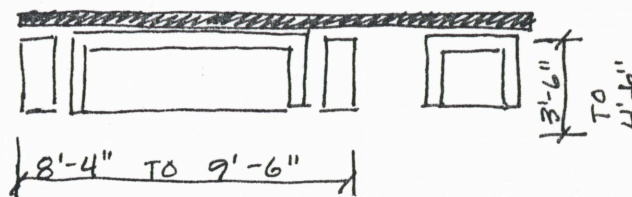
DOUBLE STUDIO
COUCH



SOFA WITH
COFFEE TABLE

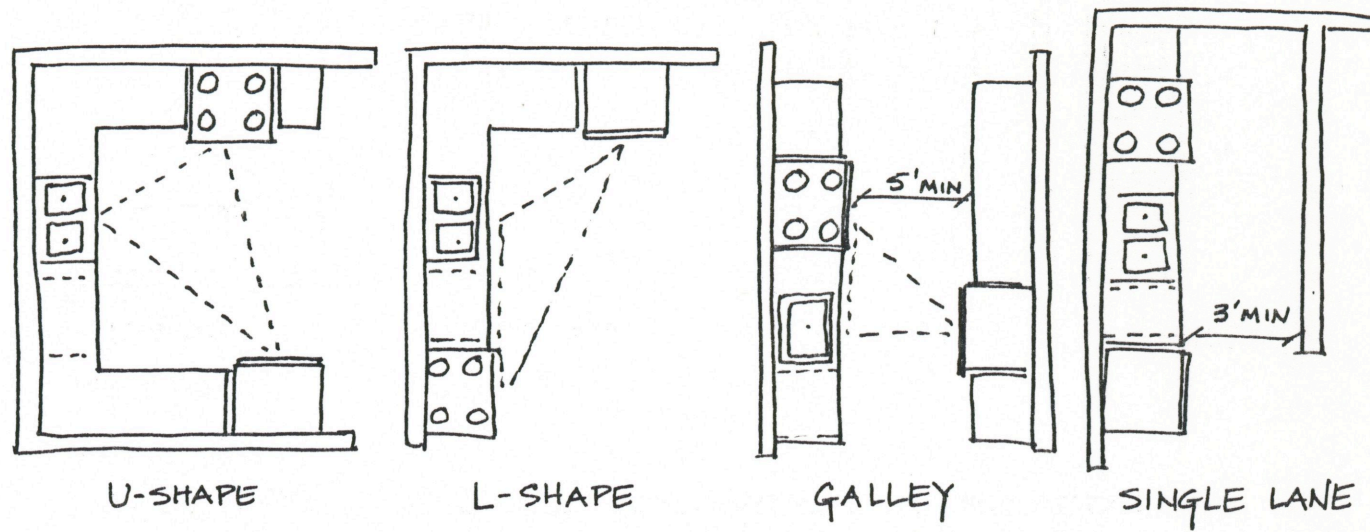


SOFA WITH
ONE END TABLE

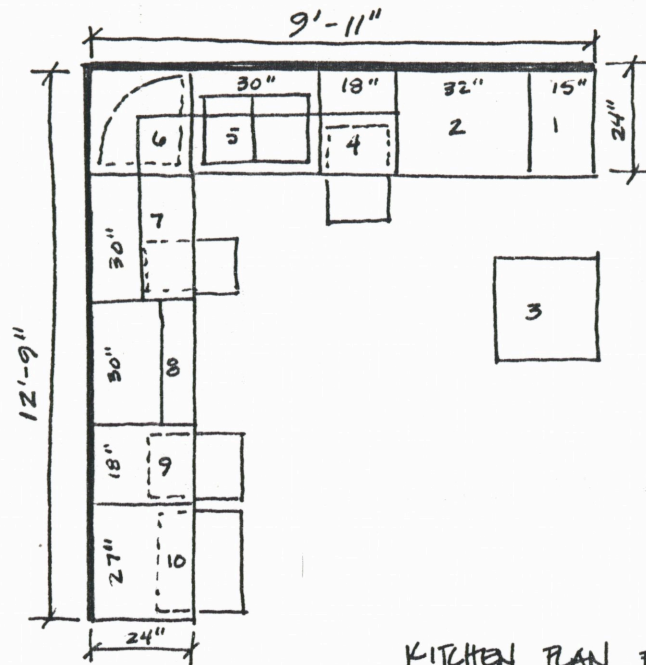


SOFA WITH 2
END TABLES

CHAIR

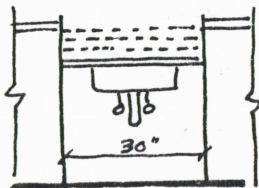


KITCHEN LAYOUT. ARCHITECTURAL GRAPHIC STANDARDS.

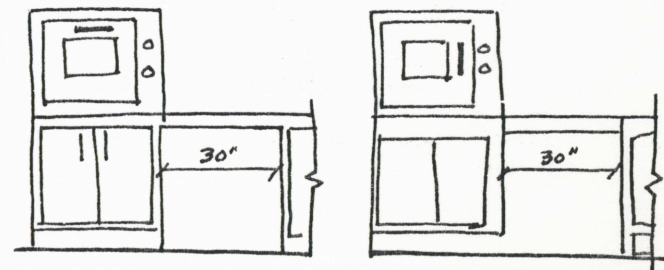
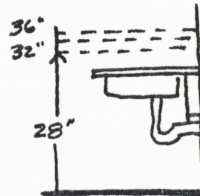


1. TALL CABINET - PANTRY
2. REFRIGERATOR, SIDE-BY-SIDE
3. DISHWASHER, ALTERNATE FOR 4
4. COUNTERTOP
5. DOUBLE SINK
6. CORNER COUNTERTOP
7. COUNTERTOP WITH 2 PULLOUT BOARDS
8. COOKTOP
9. COUNTERTOP
10. OVEN

KITCHEN PLAN FOR DISABLED AND ELDERLY. RASCHKO.

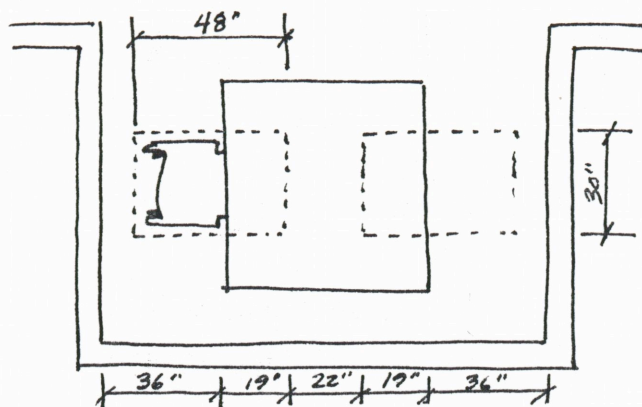


ADJUSTABLE SINK UNIT

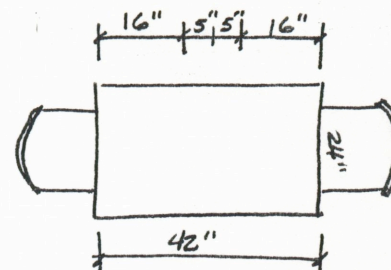


Ovens WITH BOTTOM AND SIDE-HINGED DOORS

ANSI 117.1-1980



MINIMUM CLEARANCES FOR
SEATING AND TABLE FOR
WHEELCHAIR USERS. ANSI A117.1-1980.



MINIMUM PLACE SETTING
10" WITH SHARED ACCESS ZONE.
RASCHKO.

Dining Room

- next to the kitchen with a 42" passageway between the kitchen and dining table
- accessible to the living room
- a window for illumination and communication with the outside world
- 34" between the table and the wall
- 24" of dining space at the table per diner

Bathroom

- swinging doors interfere with maneuverability or obstruct hallways if they swing outward; pocket doors or sliding doors are most preferred
- towel bars, grab bars, and sink edges must be designed to be sufficient enough to support a falling person
- ceiling vent and fan must be provided even in conjunction with an operable window
- heat lamps with timers give additional comfort
- clear space of 60" x 60" for wheelchair maneuverability
- concentrated lighting above lavatory and bathtub or shower stall
- slip resistant floors: textured tile or indoor-outdoor carpeting
- emergency call button

Toilets

- standard height is 15"-16". A higher position would be more desirable for elderly or disabled and/or grab bars to assist in sitting and rising. Grab bars should be located behind the toilet and on one or both sides at a height of 32" - 37".

Lavatory

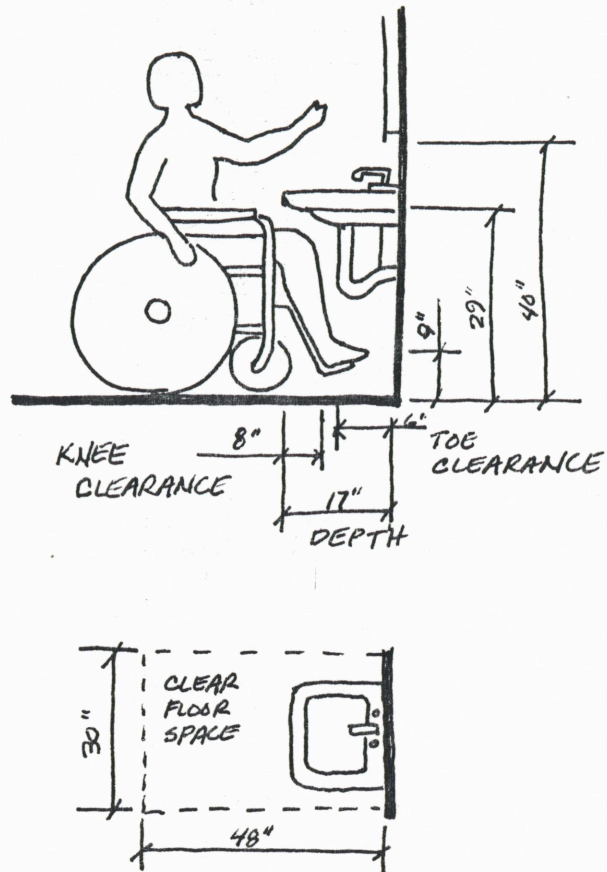
- single-control faucet with lever action or
- knee operated faucet or
- wrist operated faucet
- 27" high for wheelchair users
- 29" high for elderly users
- tilt mirrors for wheelchair users or small telescoping mirror attached to the wall
- electrical outlet located on apron below countertop
- medicine cabinet
- towel bars
- wheeled cabinet with drawers for wheelchair users

Bathtub

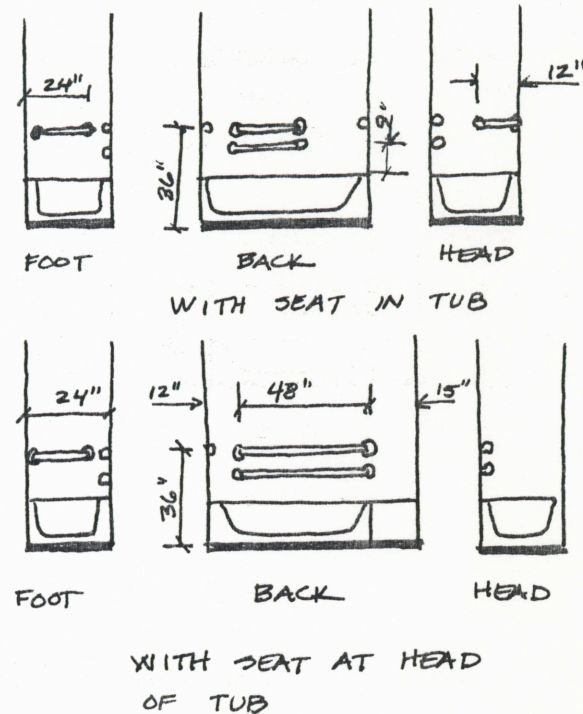
- non-slip bottom
- single mixing water control
- ceiling above tub should be reinforced for the possible need of hoisting equipment
- tub seat
- spray showerhead mounted on a flexible 6' hose
- grab bars; a vertical bar at the foot end and horizontal bars on the head and side walls

Shower Stalls

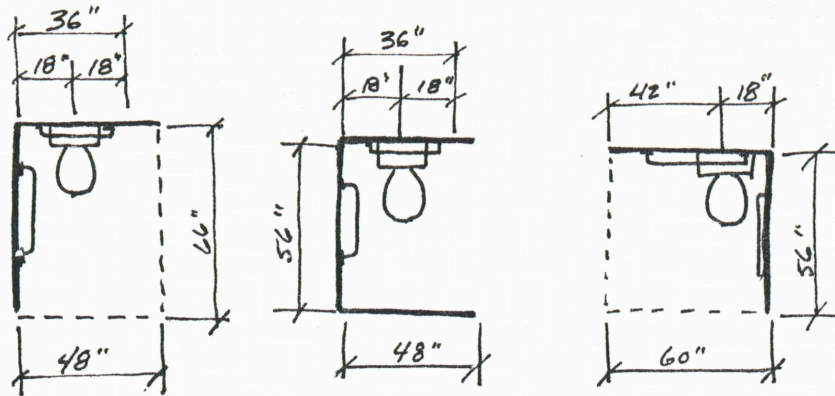
- wheelchair or shower chair can be wheeled in or
- built-in shower seat



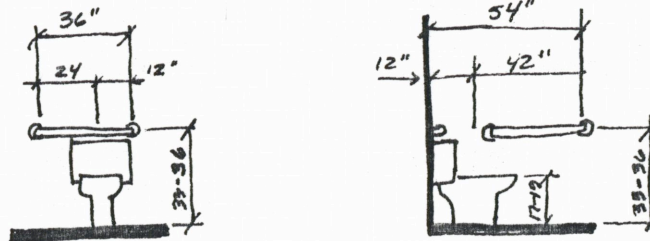
VAINETRY CLEARANCES AND
 CLEAR FLOOR SPACE FOR
 WHEELCHAIR USERS
 ANSI A117.1-1980



GRAB BAR LOCATIONS AT
 BATHTUBS

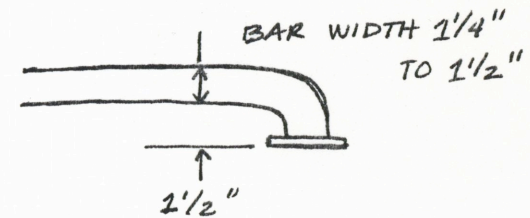


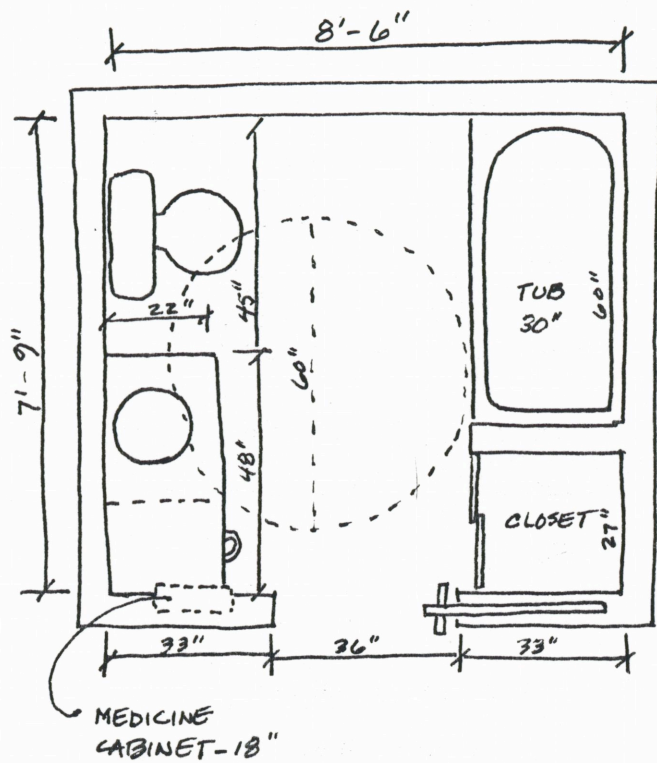
CLEAR FLOOR SPACE AT WATER CLOSETS



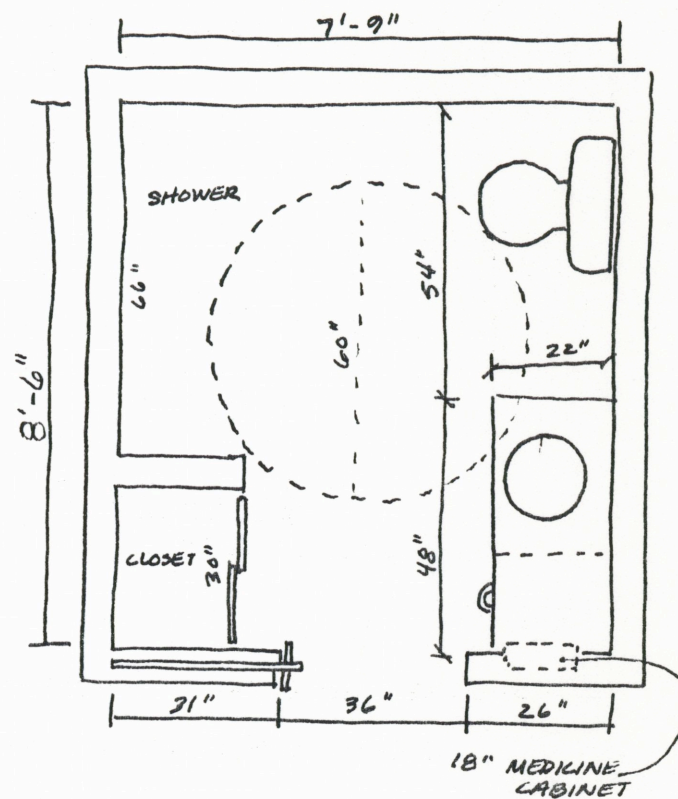
GRAB BARS AT WATER CLOSETS
ANSI A117.1-1980

AREA BETWEEN BAR
INTERIOR EDGE AND WALL



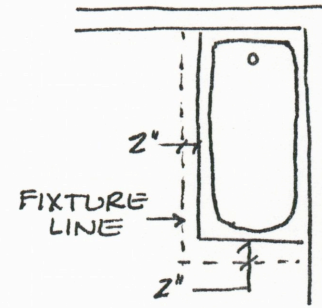
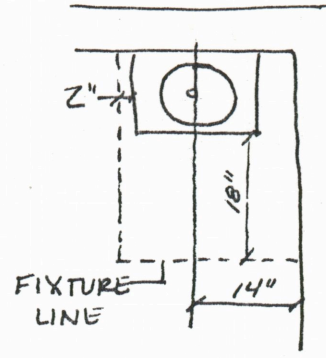
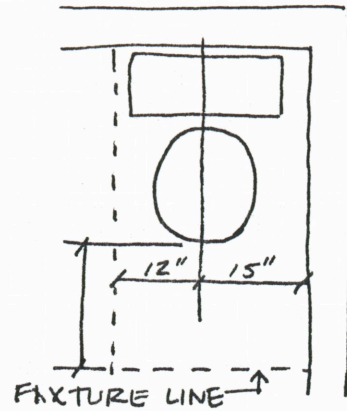


BATHROOM PLAN WITH TUB
FOR WHEELCHAIR USERS

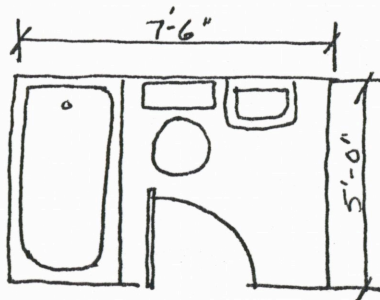
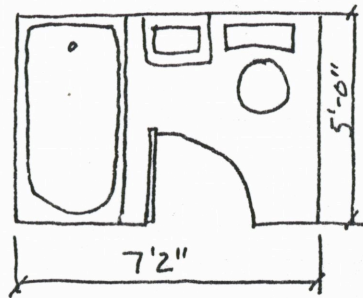


BATHROOM PLAN WITH SHOWER
FOR WHEELCHAIR USERS

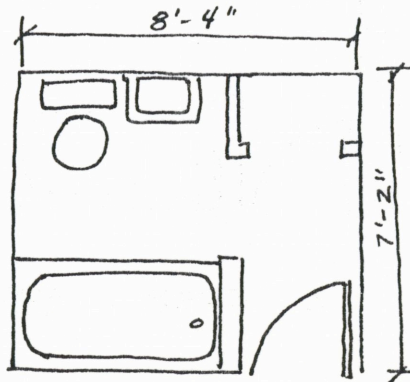
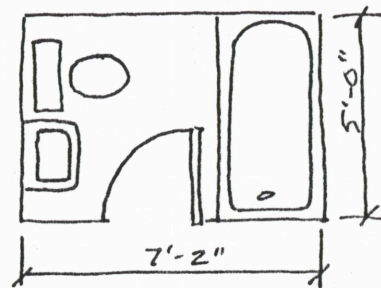
MINIMUM DISTANCES



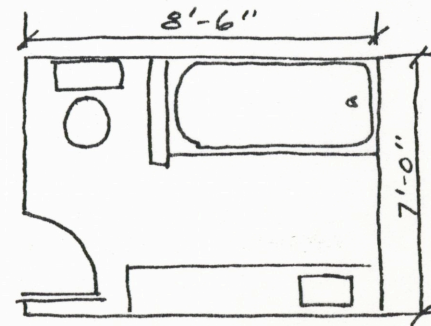
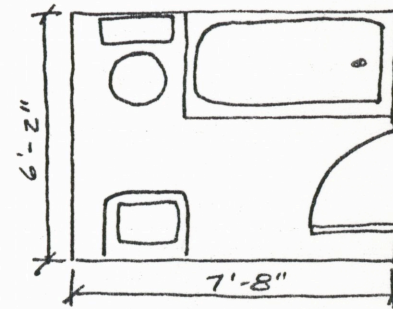
PIPES IN ONE WALL



PIPES IN 2 WALLS



PIPES IN 3 WALLS

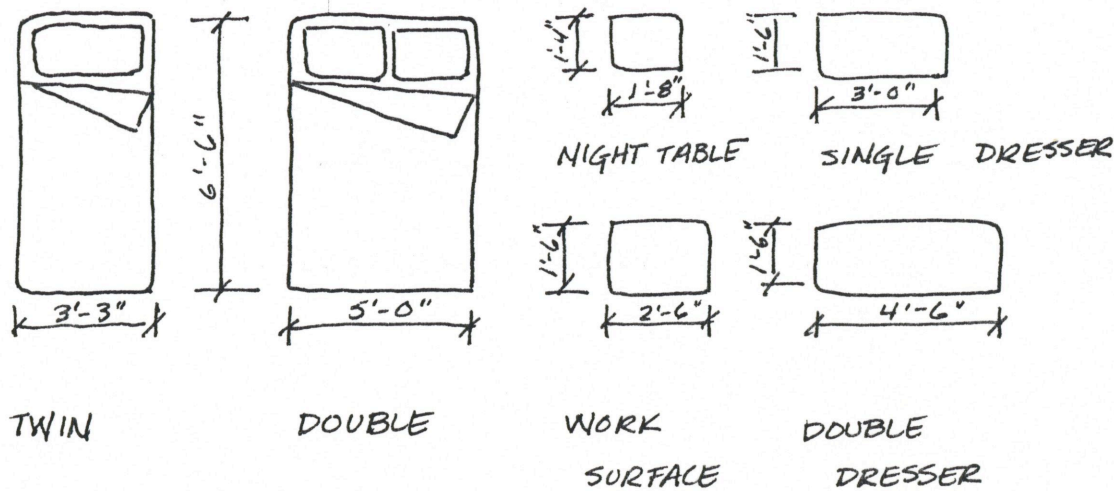
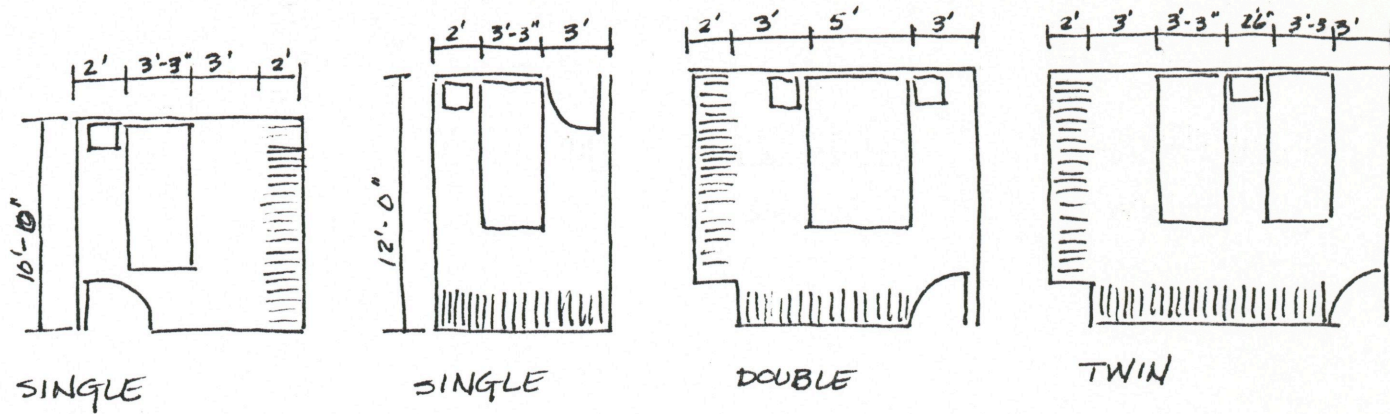


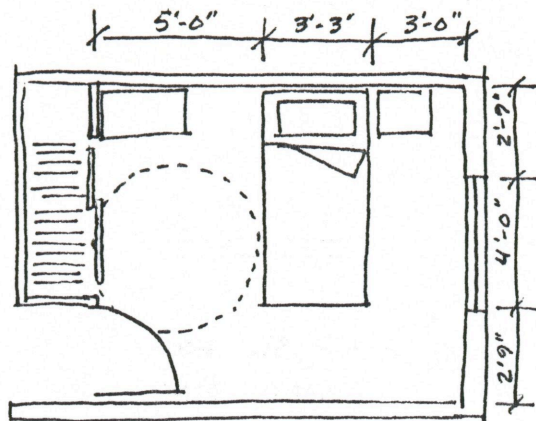
BASIC FIXTURE AND BATHROOM DIMENSIONS. ARCHITECTURAL GRAPHIC STANDARDS.

Bedroom

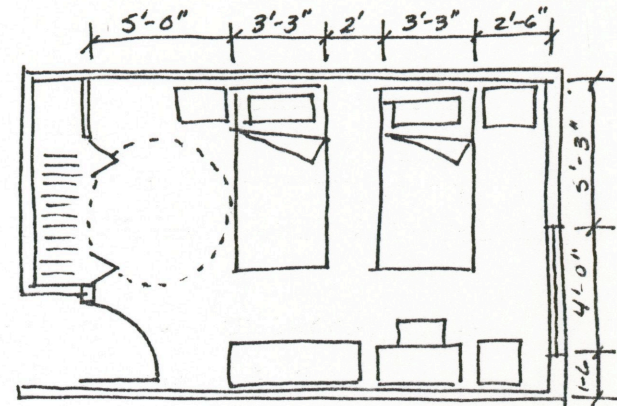
- large enough to accomodate two twin beds
- locate near the bathroom; 20' or less on a direct route
- locate away from the activity areas of the living unit
- locate a smoke alarm in the bedroom
- include a window
- bed sizes: twin 3' 3" x 6' 6"
double 4' 6" x 6' 6"
height: 16" - 17" for elderly
height: 19" for disabled
- closet should have an adjustable rod; 48" - 60" high or
include a wheeled wardrobe rack

TYPICAL BEDROOM ARRANGEMENTS. ARCHITECTURAL GRAPHICS STANDARDS.

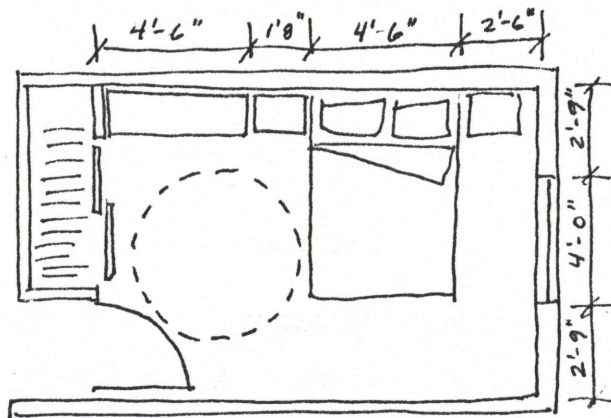




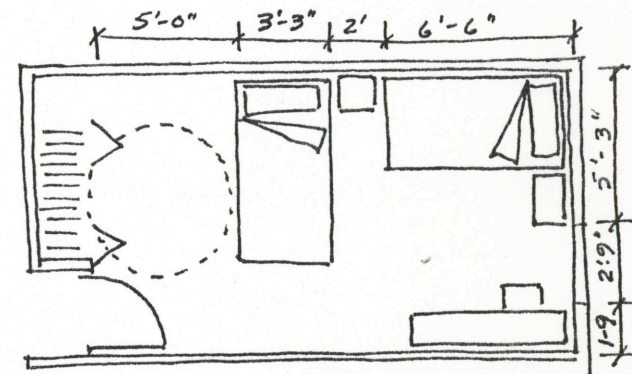
ONE-PERSON BEDROOM FOR
WHEELCHAIR USER.



TWO-PERSON BEDROOM, ONE
WHEELCHAIR USER.



2-PERSON BEDROOM FOR 1
WHEELCHAIR USER.



2-PERSON BEDROOM, 2
WHEELCHAIR USERS.
RASCHKO.

Mechanical Systems

Electrical

outlets

general - 27" from floor

kitchen - on apron below countertop

switches: 36 - 39" from the floor

light fixtures: pull down type for easy bulb replacement

Thermal

thermostats should be located 42" from the floor with large readable numbers

Ventilation

windows

sash or double hung are difficult to operate,

casement or sliding are easier to operate and are preferred

Communication

emergency alarm system

telephones

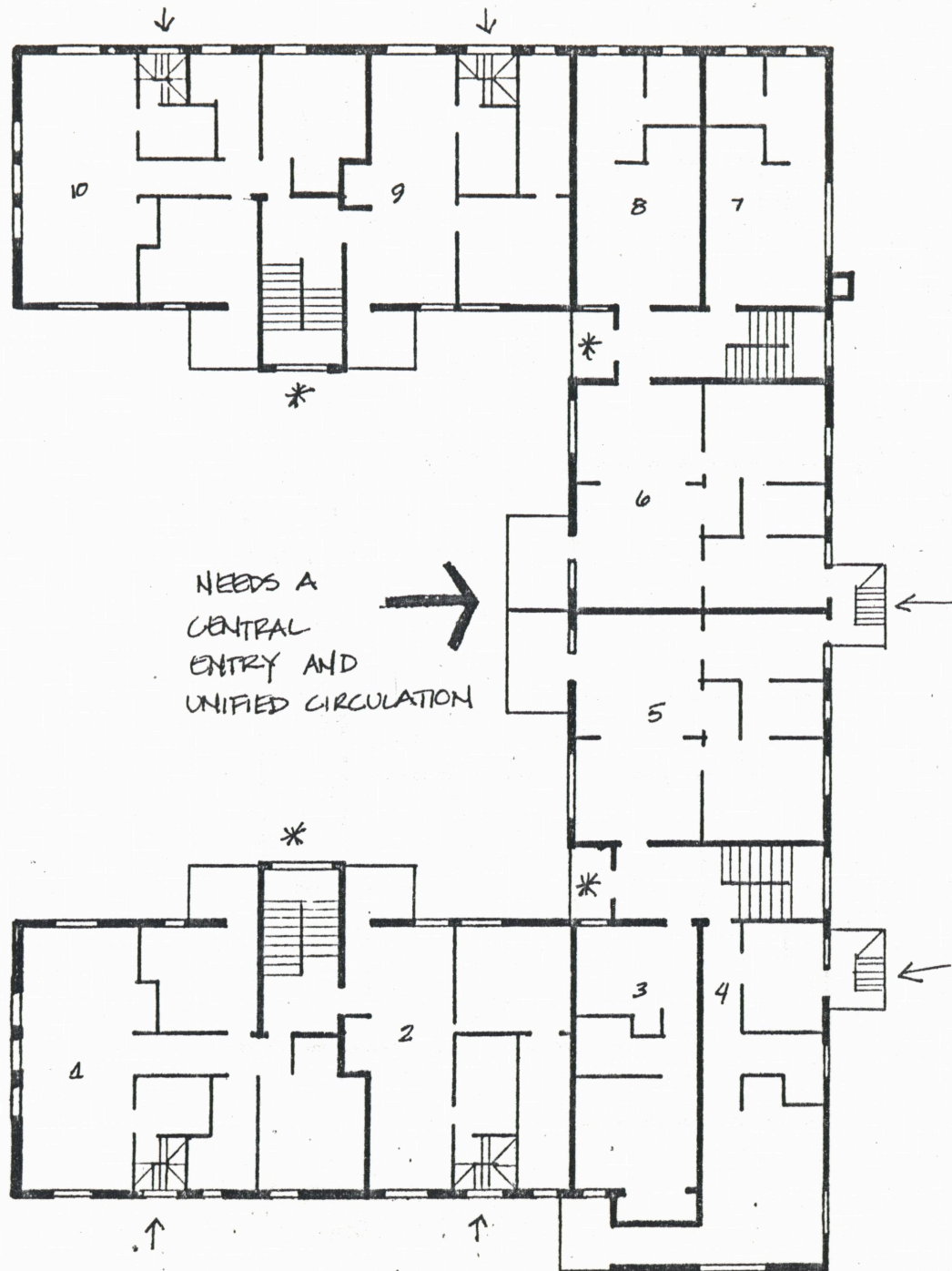
intercom system

Safety

smoke/heat alarms

CHAPTER XI

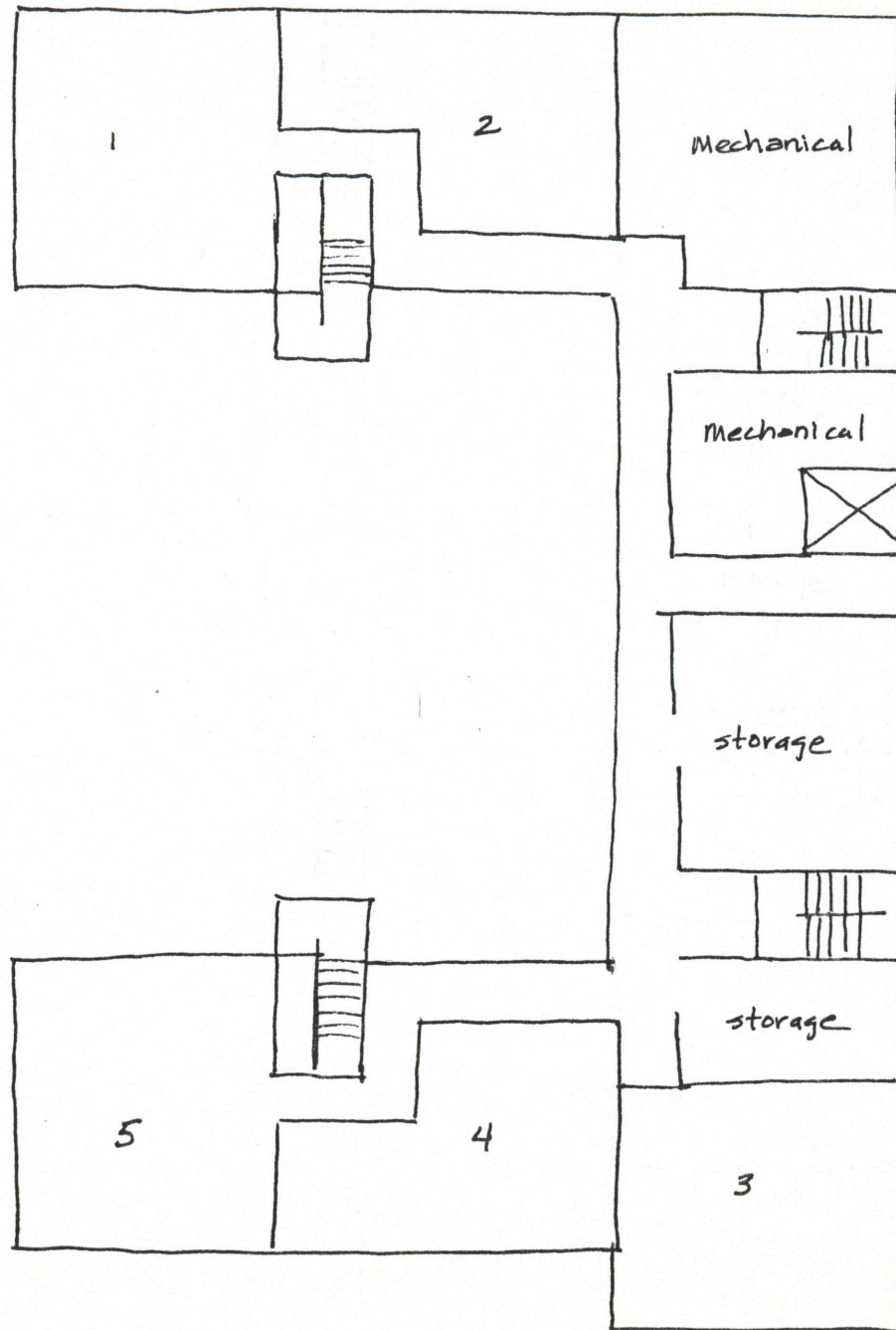
Design Criteria and Concepts



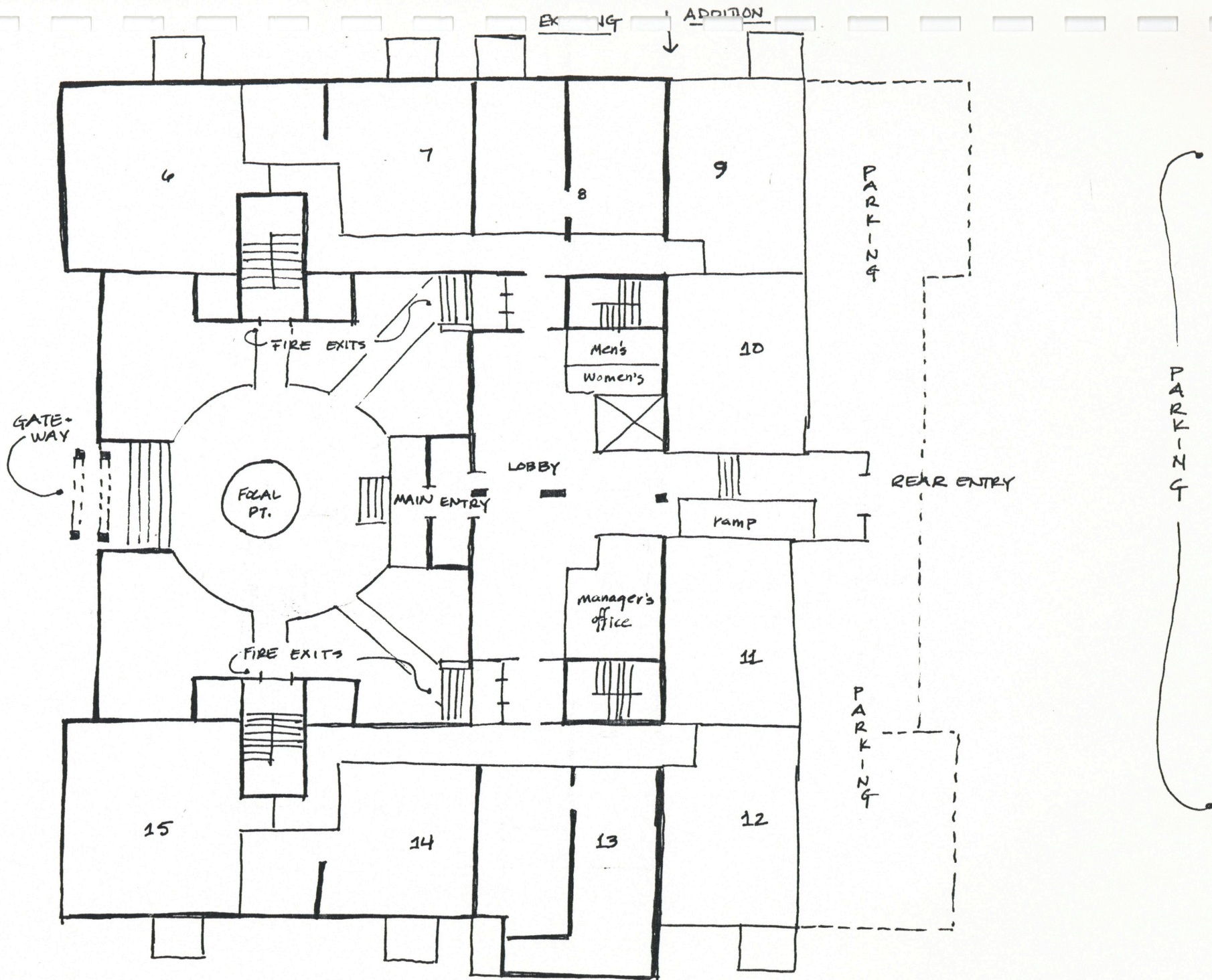
NEEDS A
CENTRAL
ENTRY AND
UNIFIED CIRCULATION

TYPICAL EXISTING FLOOR PLAN

* 4 MAJOR ENTRY POINTS
→ REAR APARTMENT ENTRIES



BASEMENT

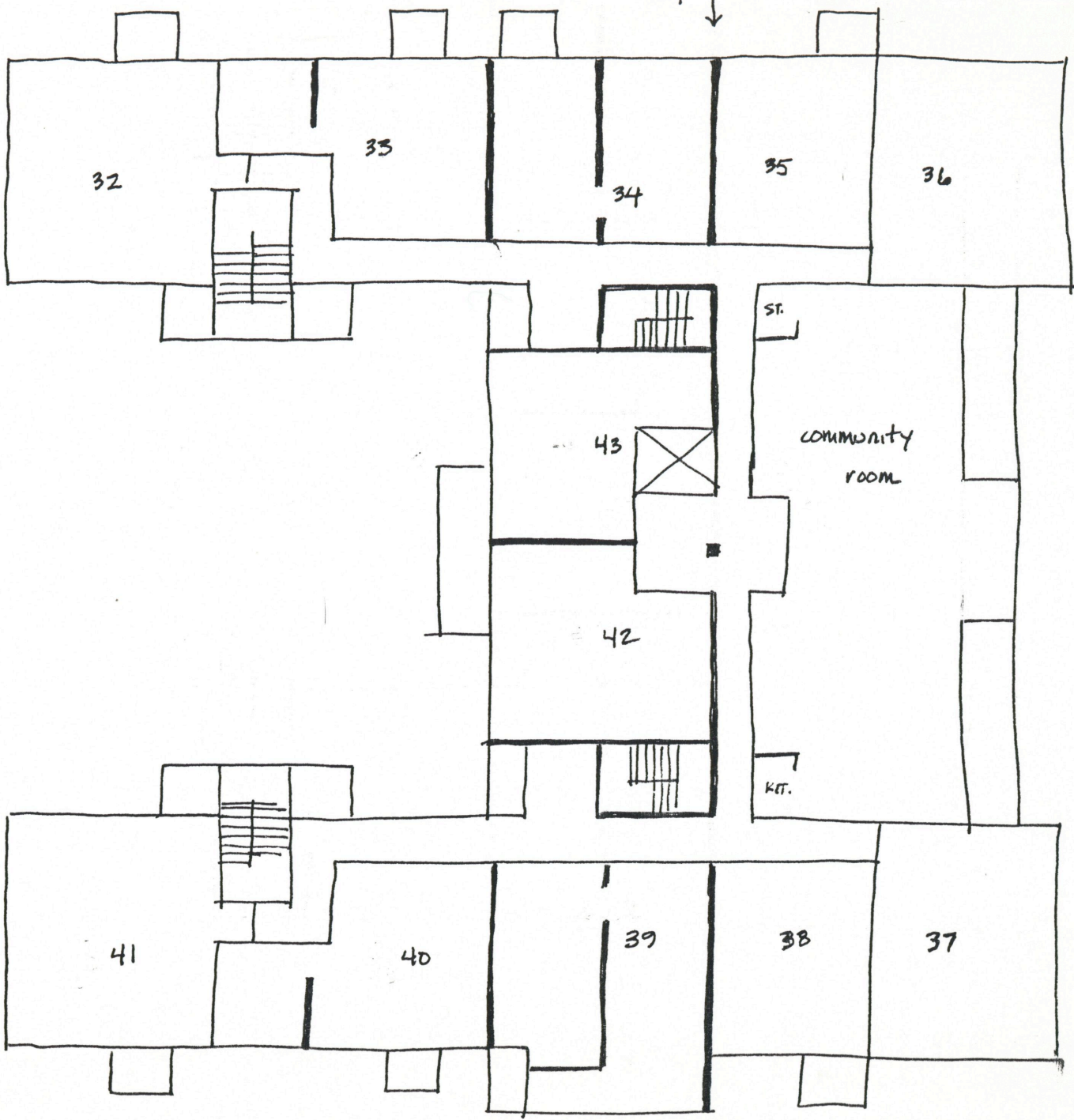


FIRST FLOOR

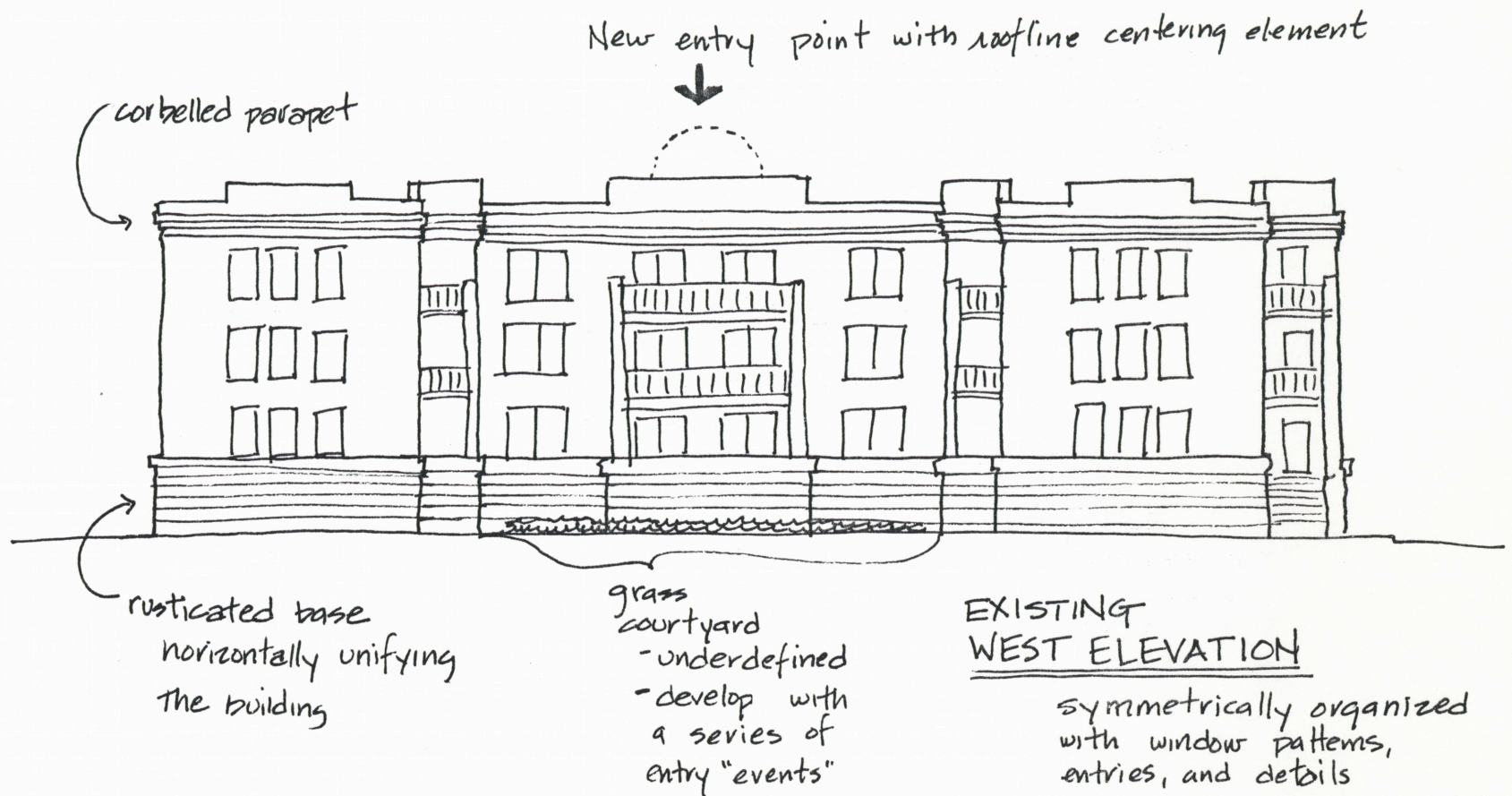


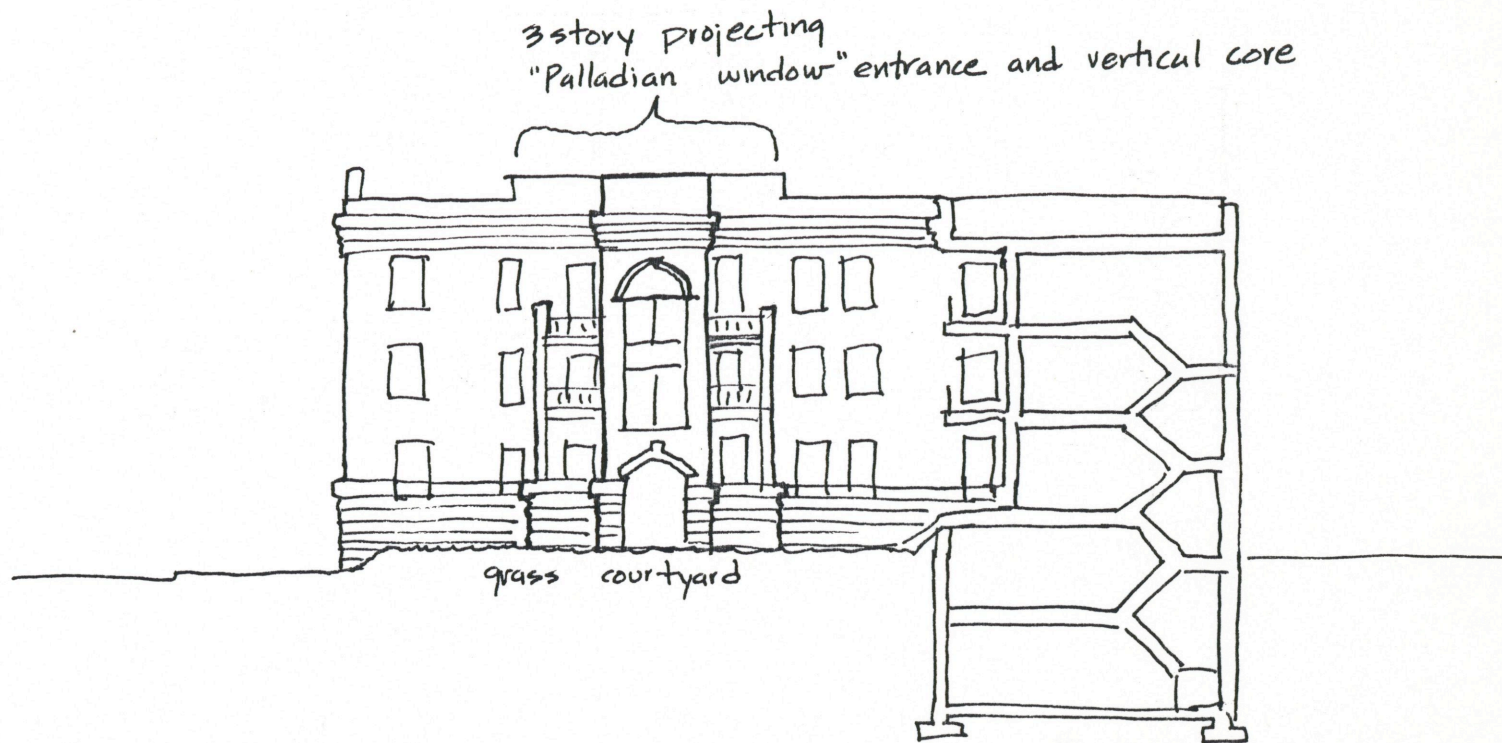
2ND FLOOR

EXISTING, ADDITION



3RD FLOOR



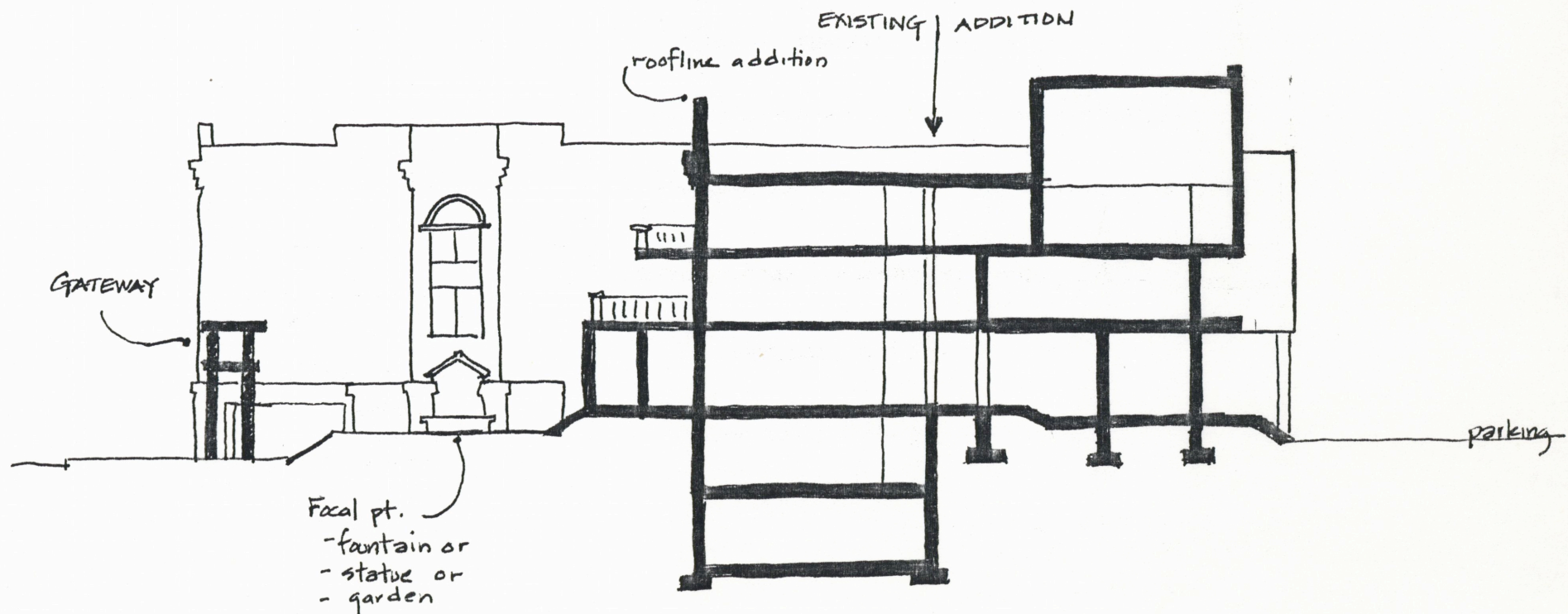


EXISTING COURTYARD ELEVATION
NORTH WING - SOUTH FACADE
AND SECTION



"Palladian" gateway
with stairway to courtyard level
New entry through existing porch.

COURTYARD - WEST ELEVATION



NORTH WING COURTYARD ELEVATION
AND SECTION WITH ADDITION

EXISTING
NORTH ELEVATION



ROUGH BRICK
AND CONCRETE
ON EXISTING BUILDING

↑ rear apartment stairways

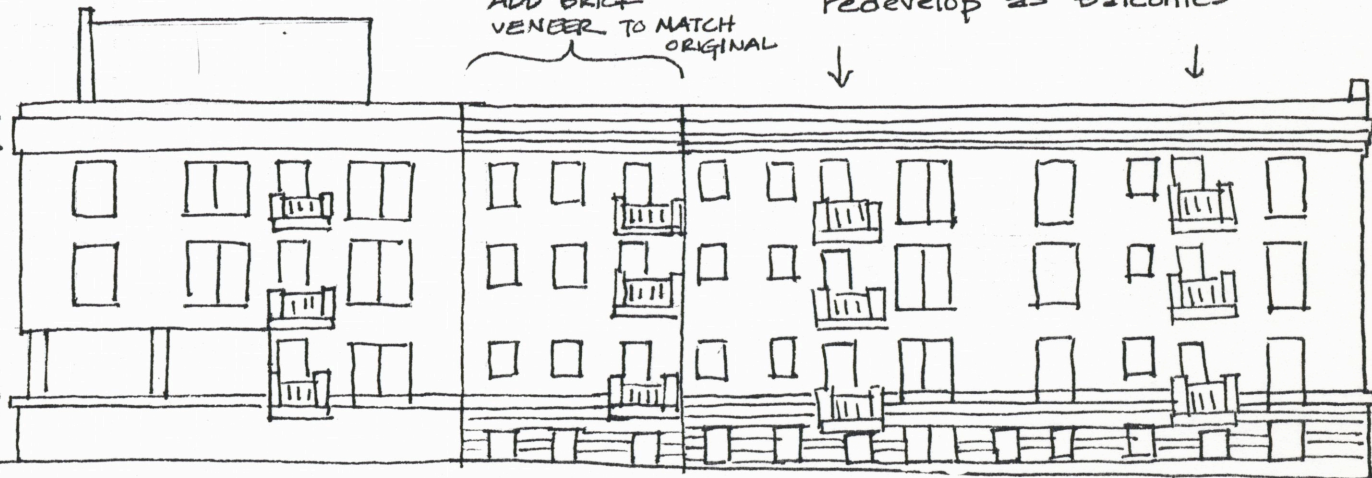
↓
ADD BRICK
VENEER TO MATCH
ORIGINAL

↓
redevelop as balconies

CARRY THROUGH
CORBEL LINES

MAINTAIN WINDOW
LINES AND SIZES

CARRY THROUGH
BASE LINES



ADDITION

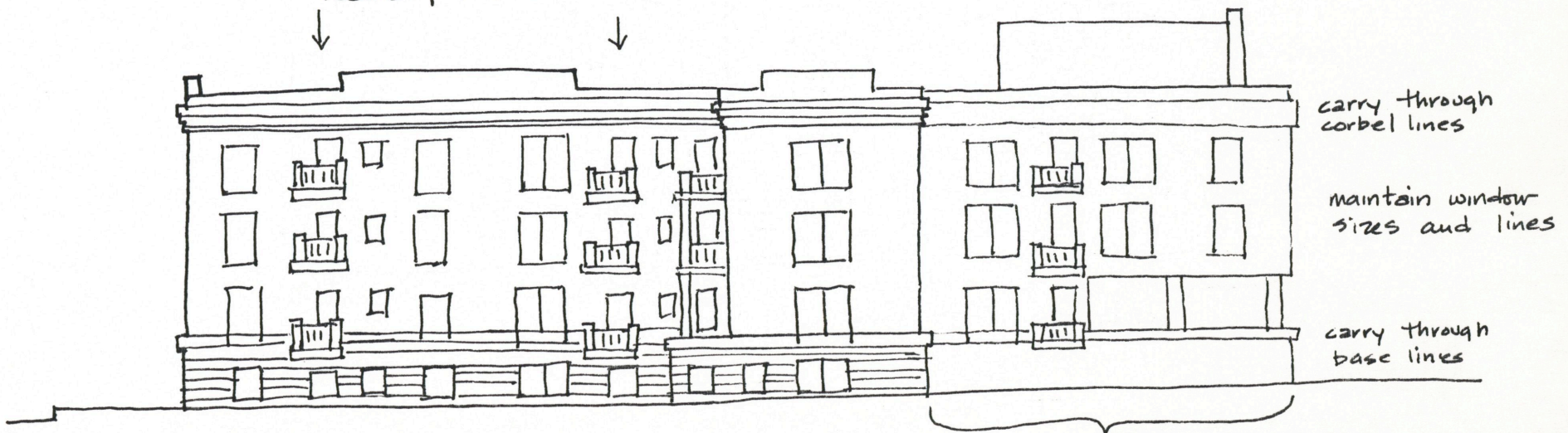
NORTH ELEVATION



EXISTING SOUTH
ELEVATION

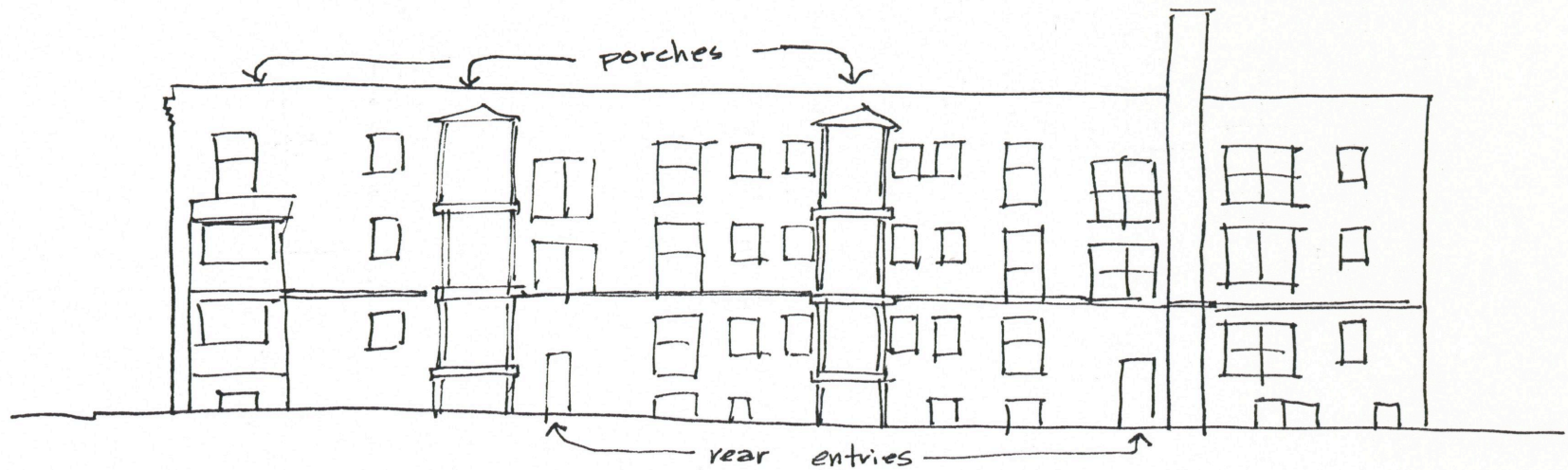
↑ ↑
rear apartment stairways

↓ ↓
redevelop into balconies

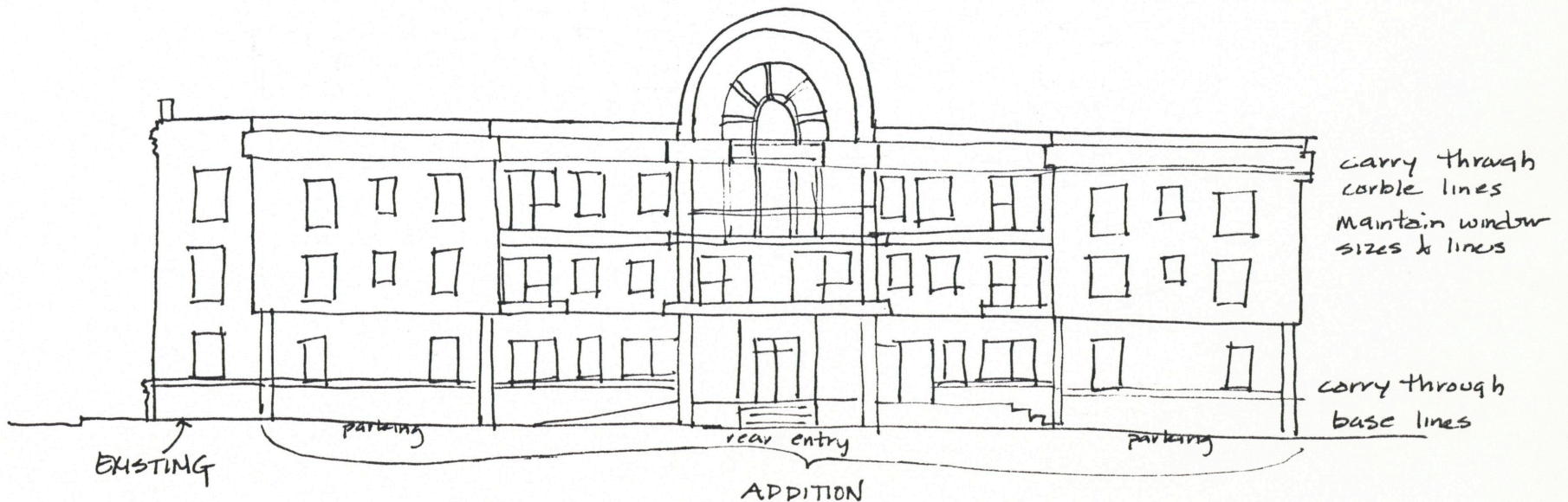


ADDITION

SOUTH ELEVATION

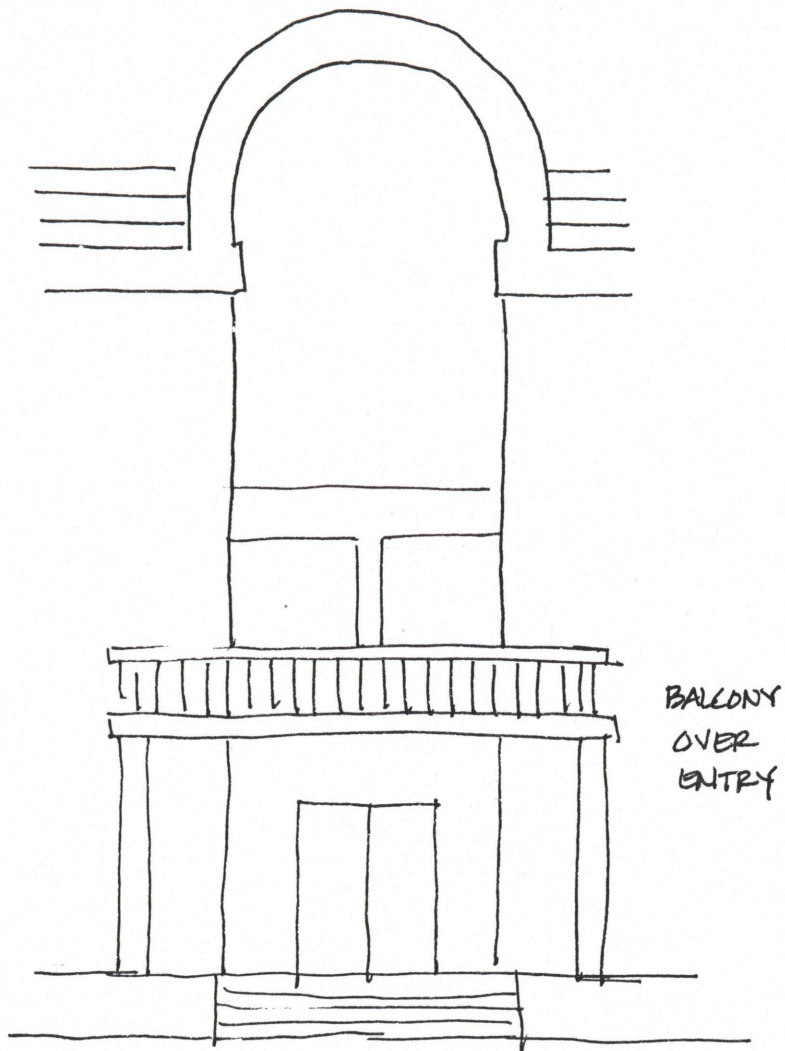


EXISTING EAST ELEVATION



EAST ELEVATION

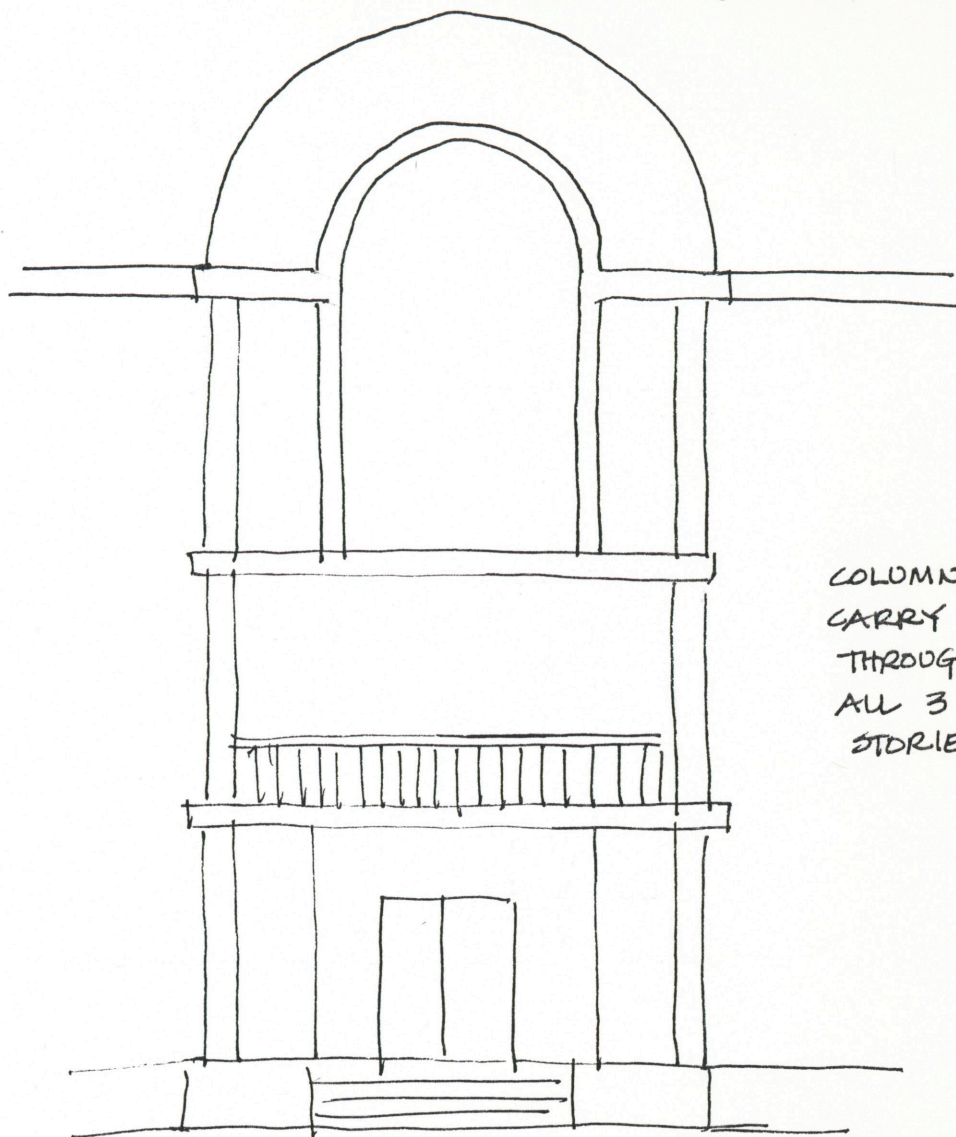
SMALL BAY



BALCONY
OVER
ENTRY

1

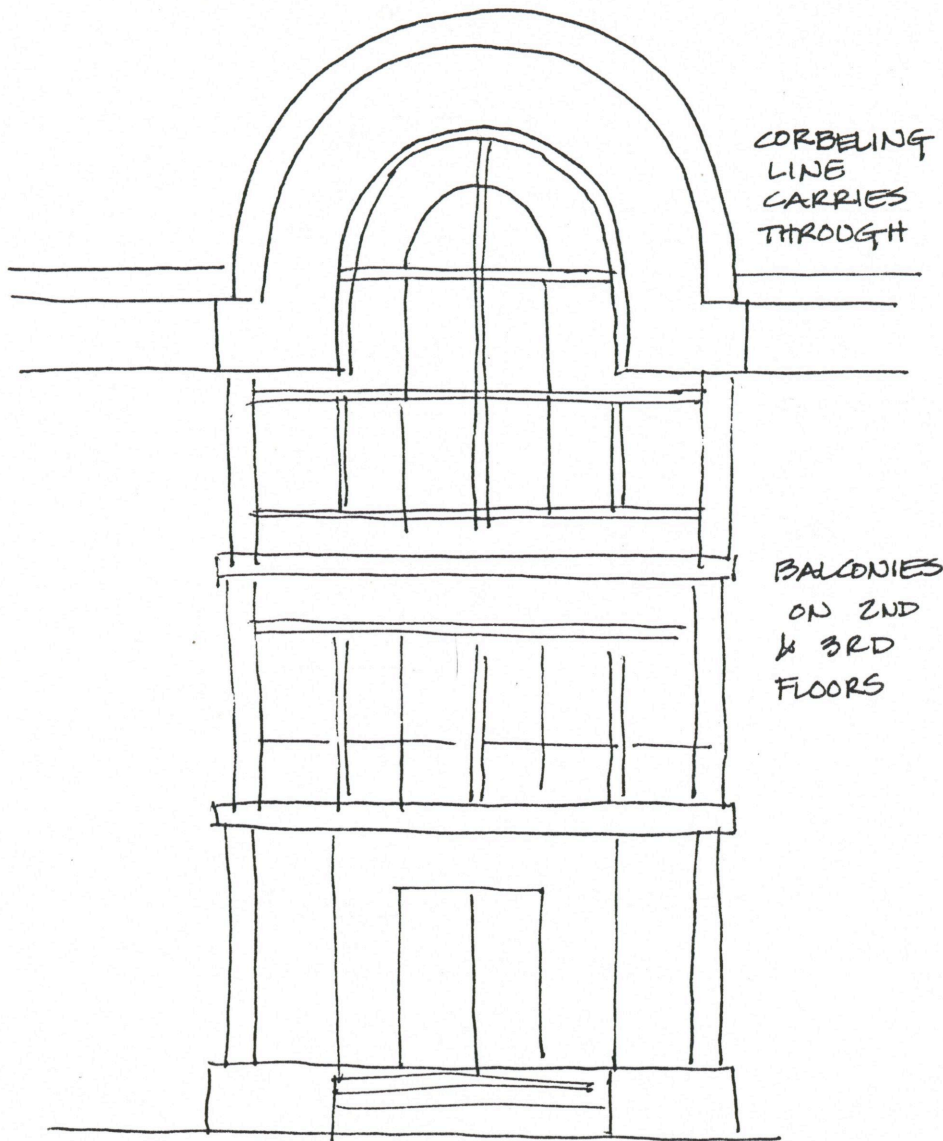
LARGER BAY PROJECTING OUT



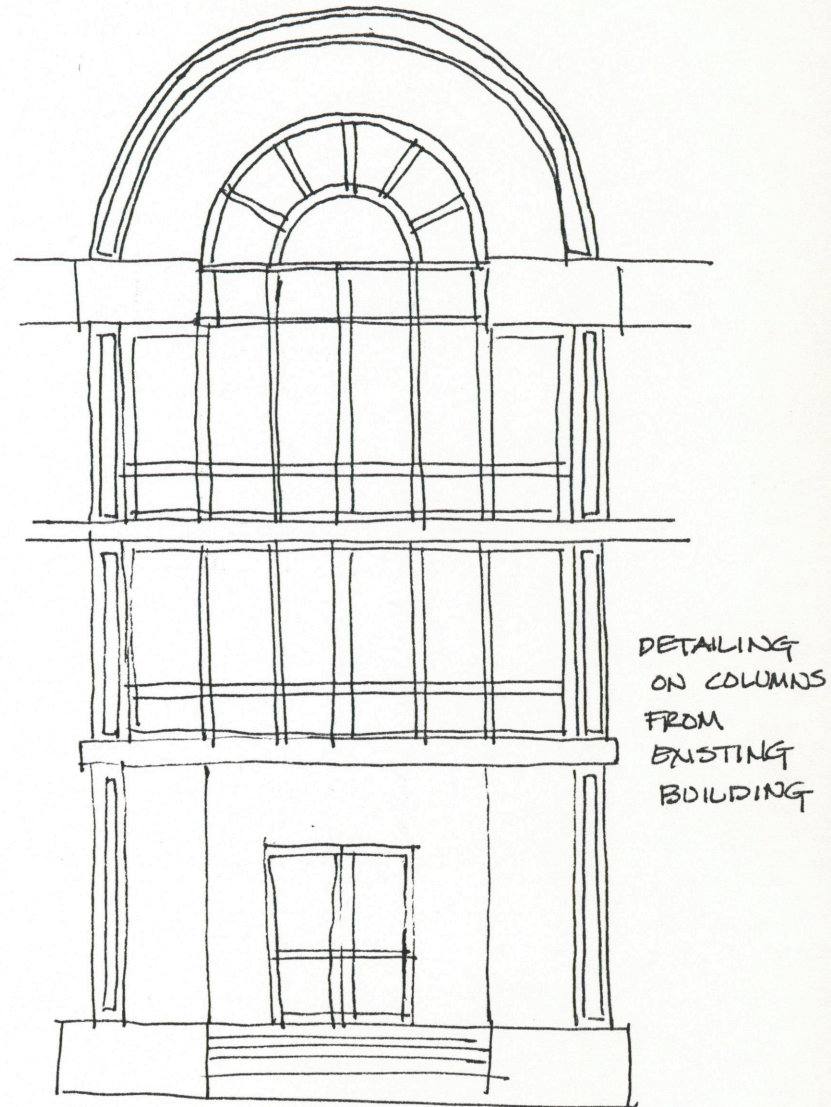
COLUMNS
CARRY
THROUGH
ALL 3
STORIES

2

EVOLUTION OF THE EAST ENTRY ELEVATION



3



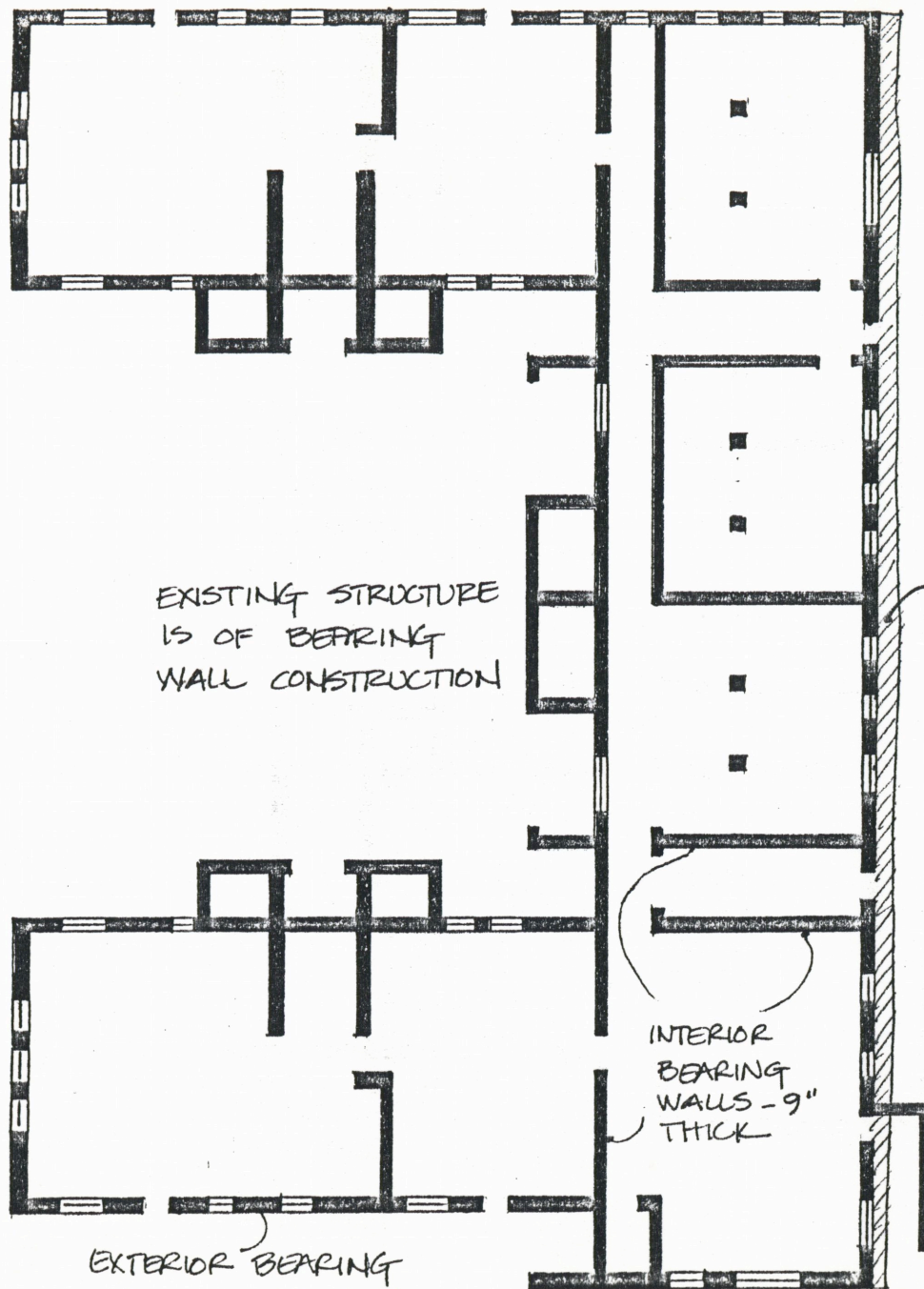
4



PROJECTING
SUN SPACE IN
COMMUNITY ROOM
WITH BALCONY
TO EACH SIDE

SHARED
BALCONY

ENTRY



EXISTING STRUCTURE
IS OF BEARING
WALL CONSTRUCTION

EXTERIOR BEARING
WALLS 1'-3" THICK

INTERIOR
BEARING
WALLS - 9"
THICK

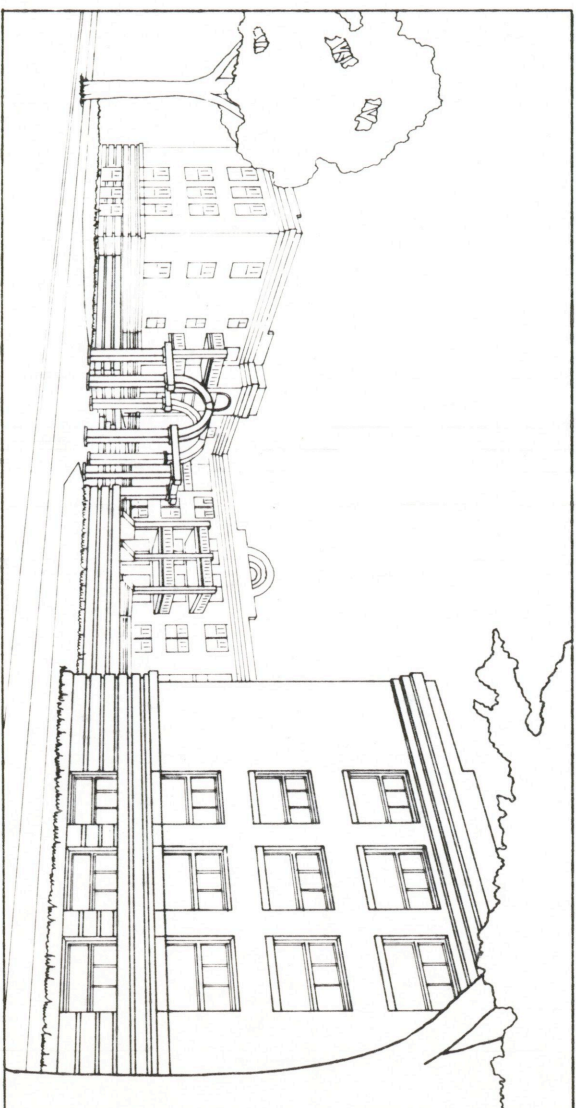
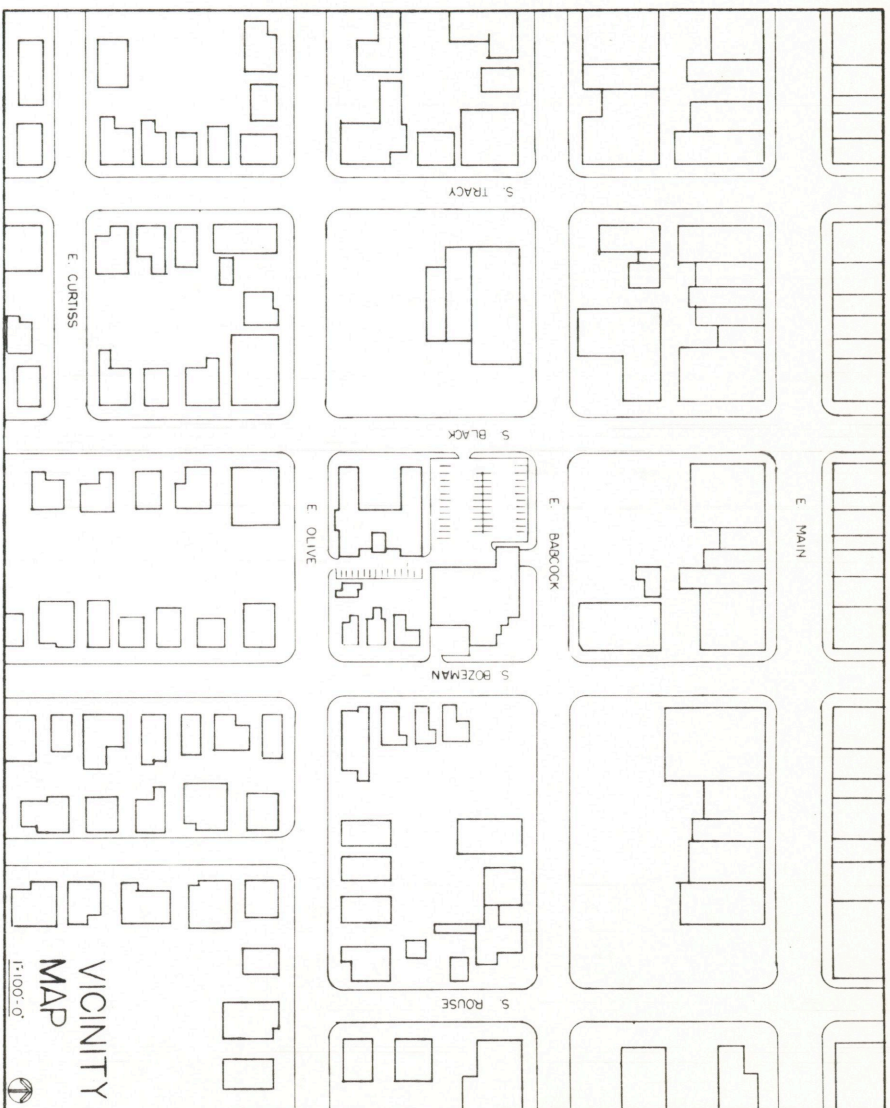
THE STRUCTURAL SYSTEM
OF THE ADDITION
WILL BE OF STEEL I-BEAMS,
BEARING WALLS, AND COLUMNS
WITH BRICK VENEER.

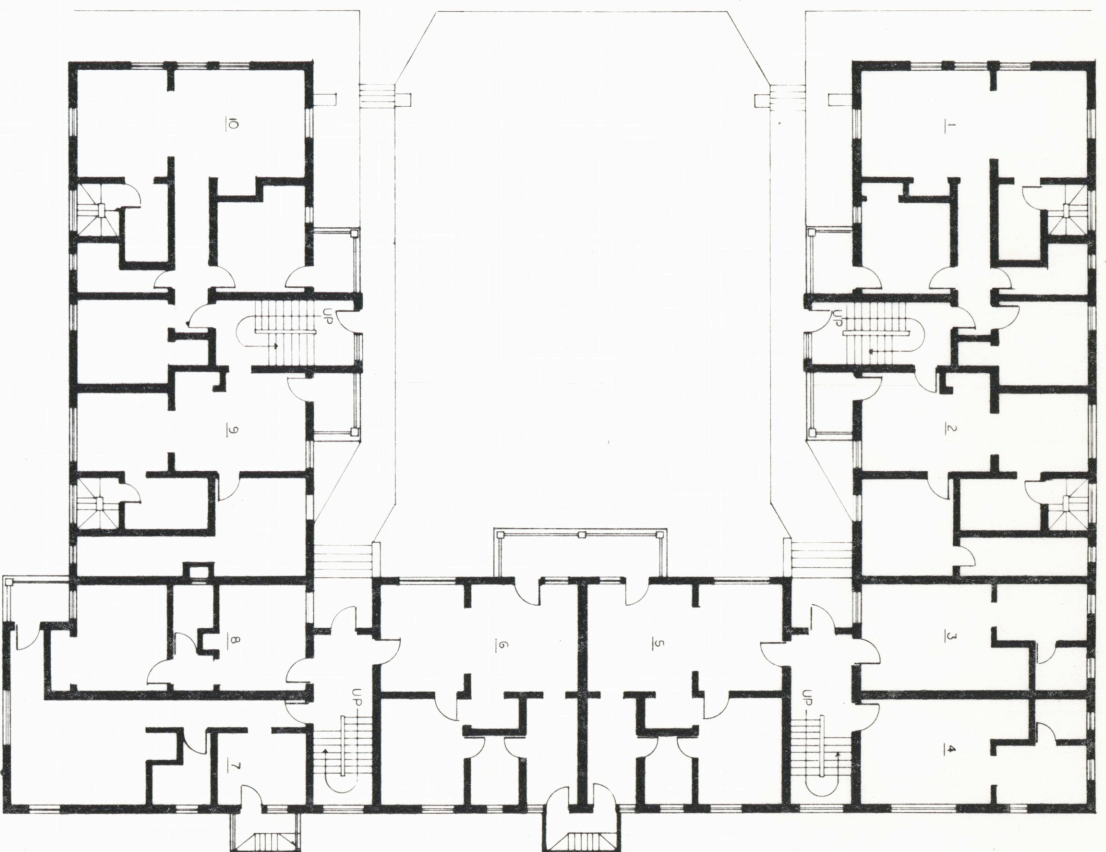
SHEAR WALL
OF REINFORCED
MASONRY
CONSTRUCTION
MUST BE
ADDED TO
EXISTING BUILDING

BASEMENT / STRUCTURE

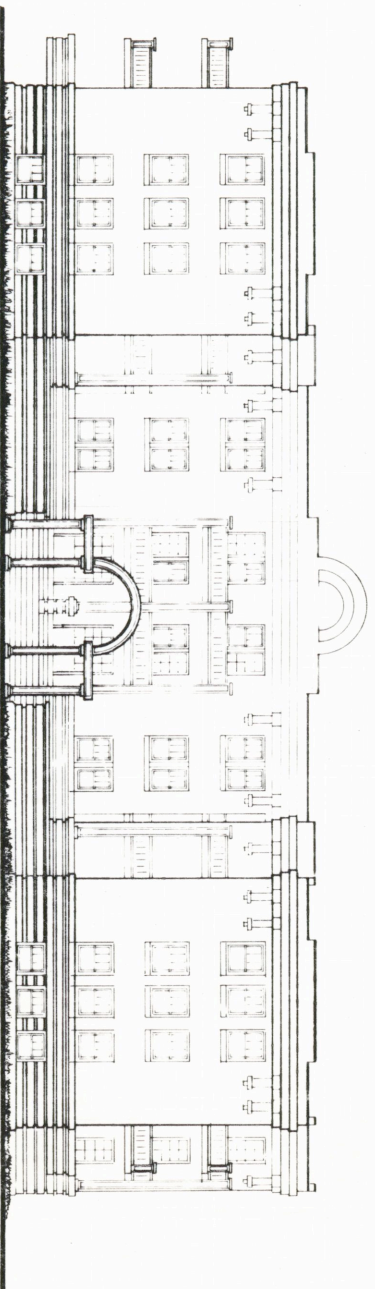
CHAPTER XII

The Design





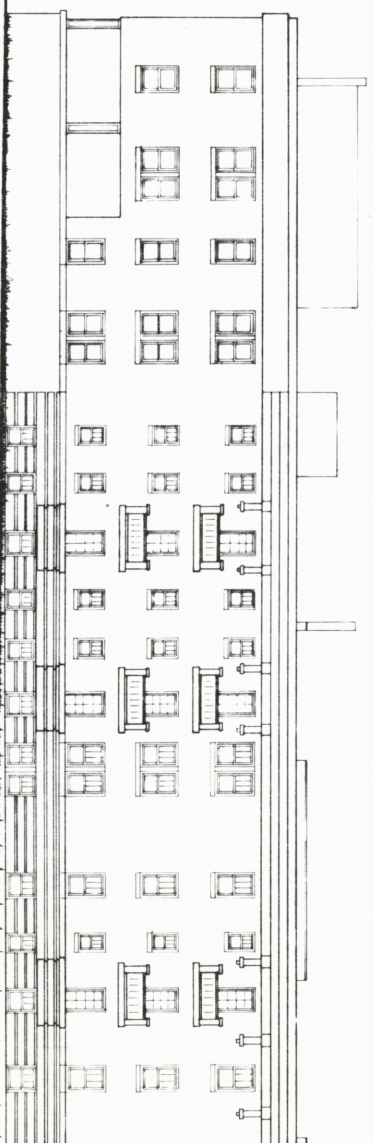
EXISTING FLOOR PLAN 1/8" = 1'-0"



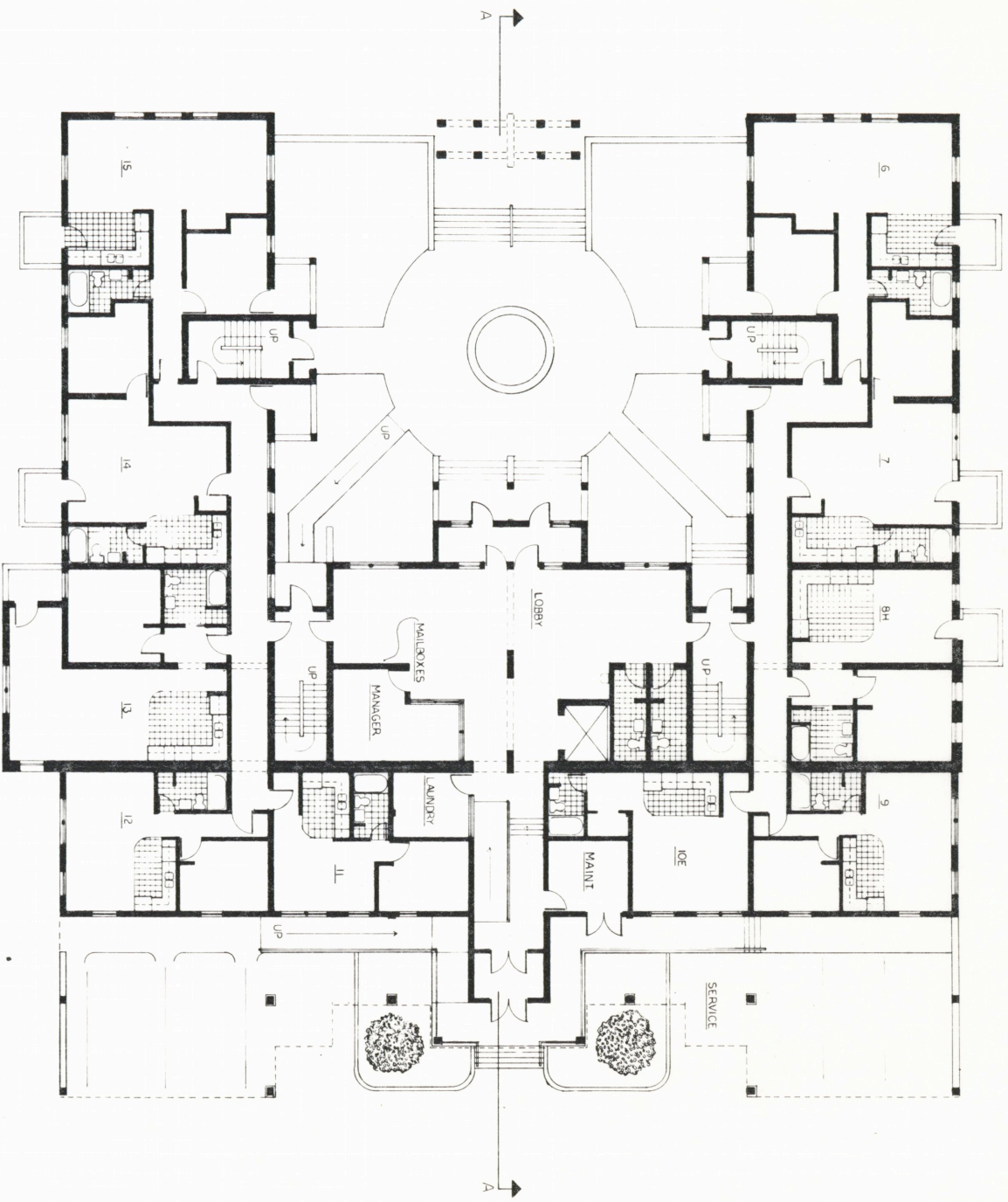
WEST ELEVATION 1/8" = 1'-0"



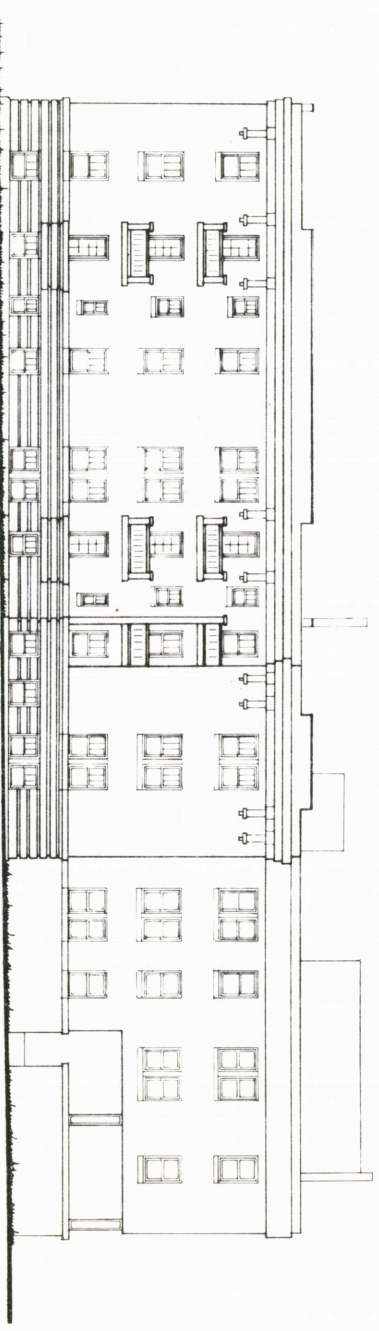
BASEMENT FLOOR PLAN



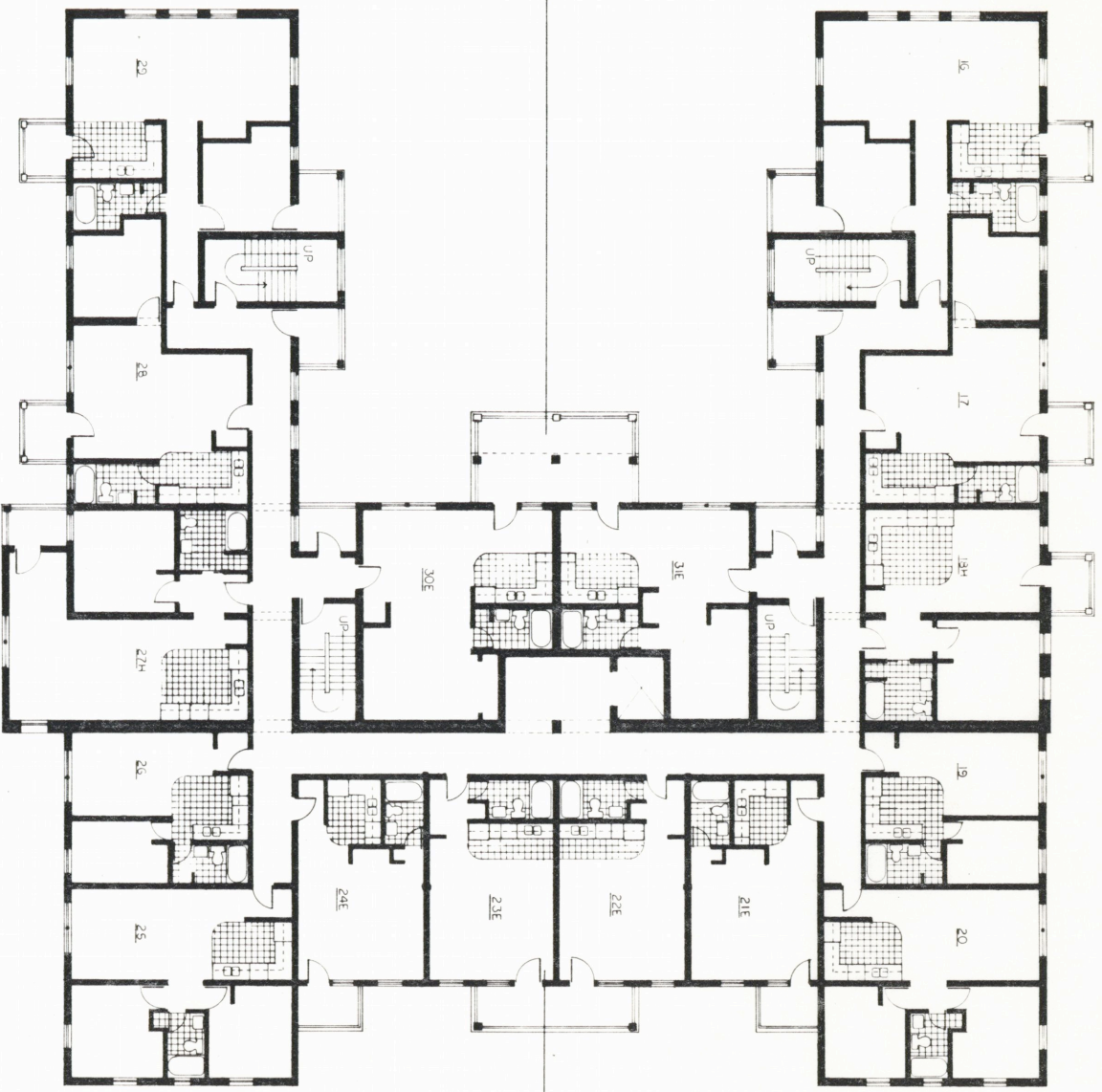
NORTH ELEVATION



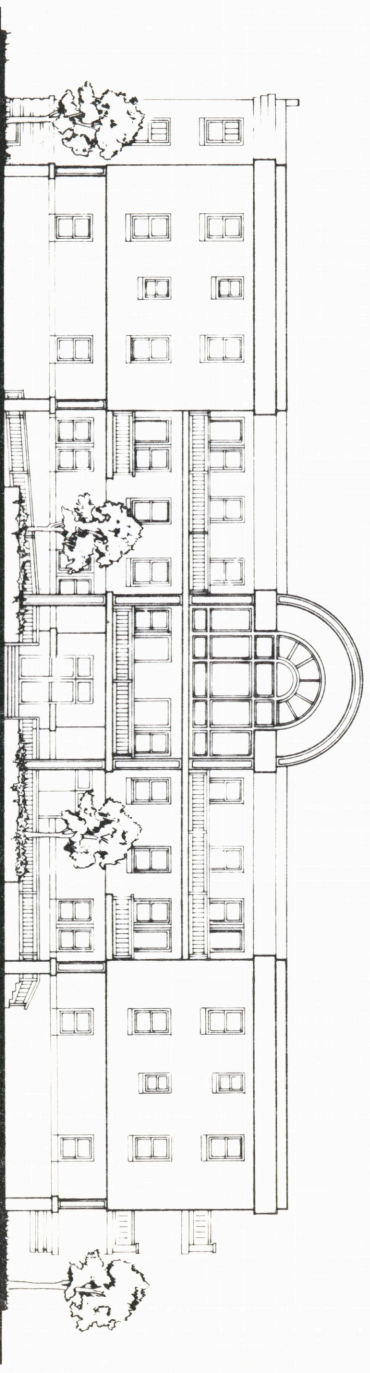
FIRST FLOOR PLAN



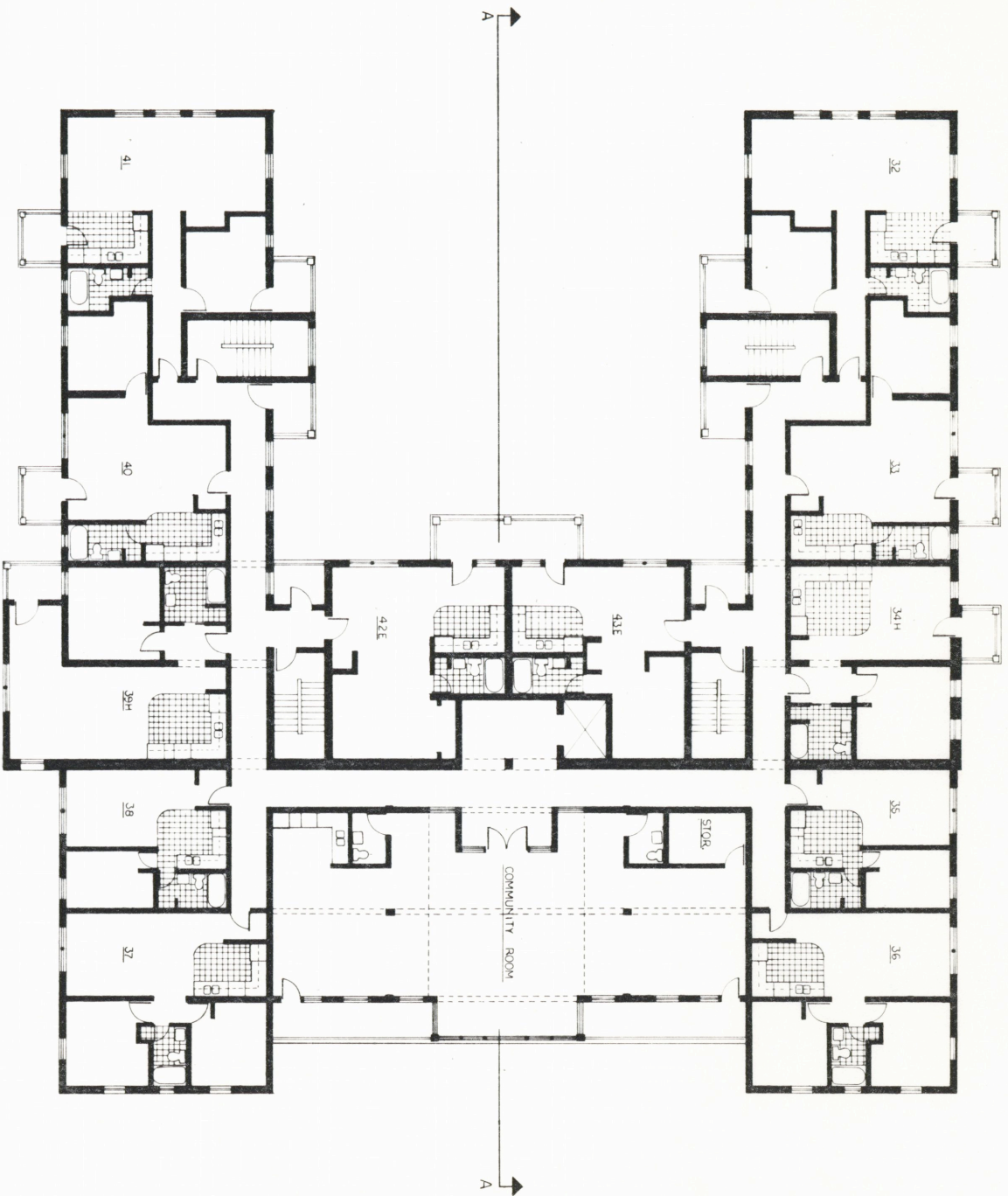
SOUTH ELEVATION



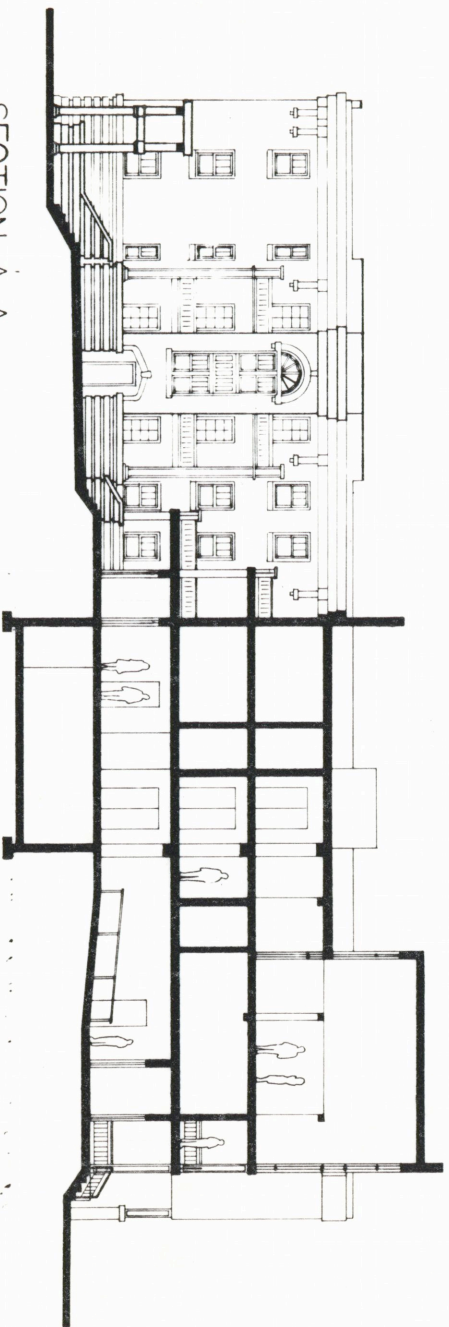
SECOND FLOOR PLAN



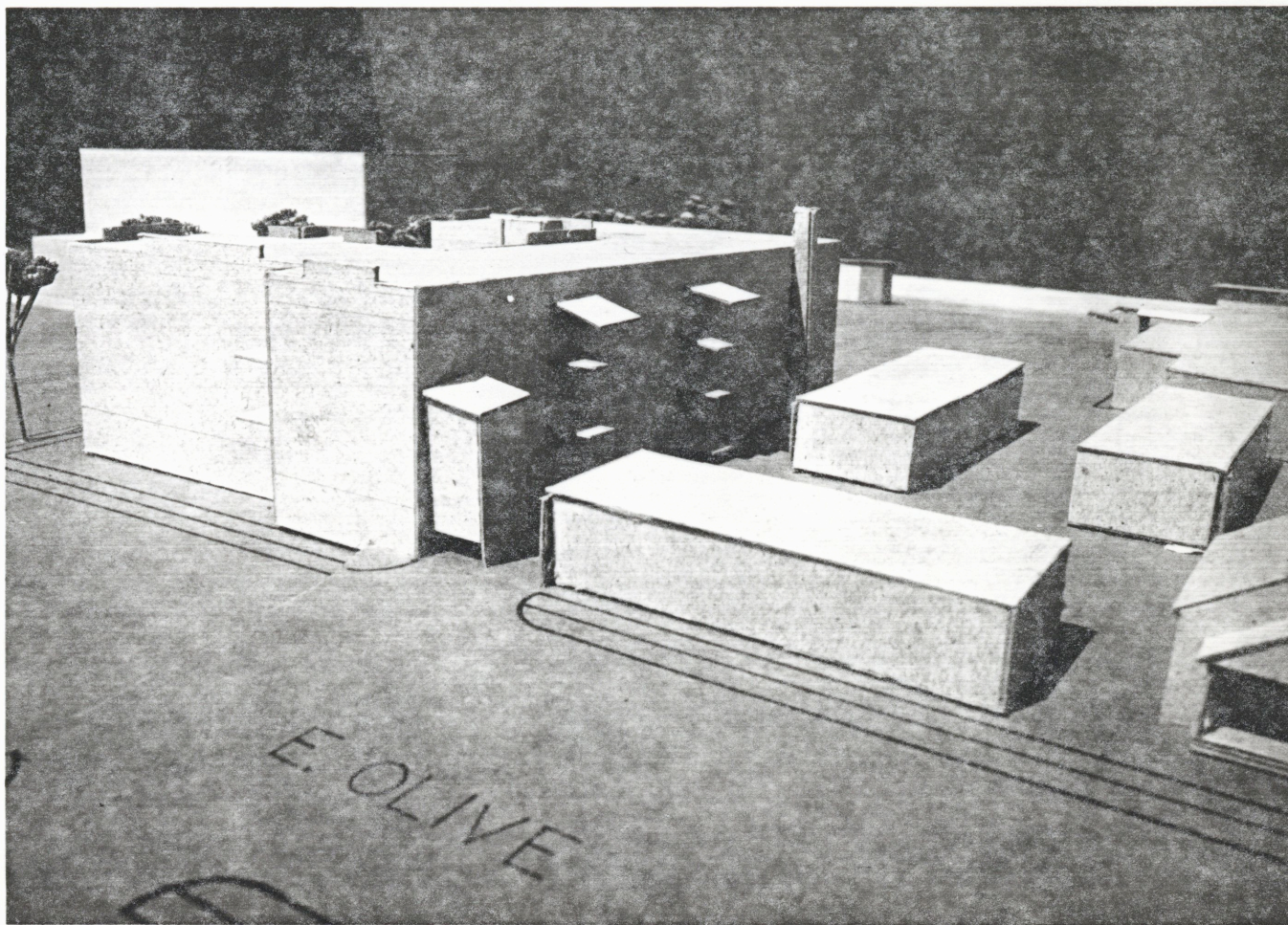
EAST ELEVATION



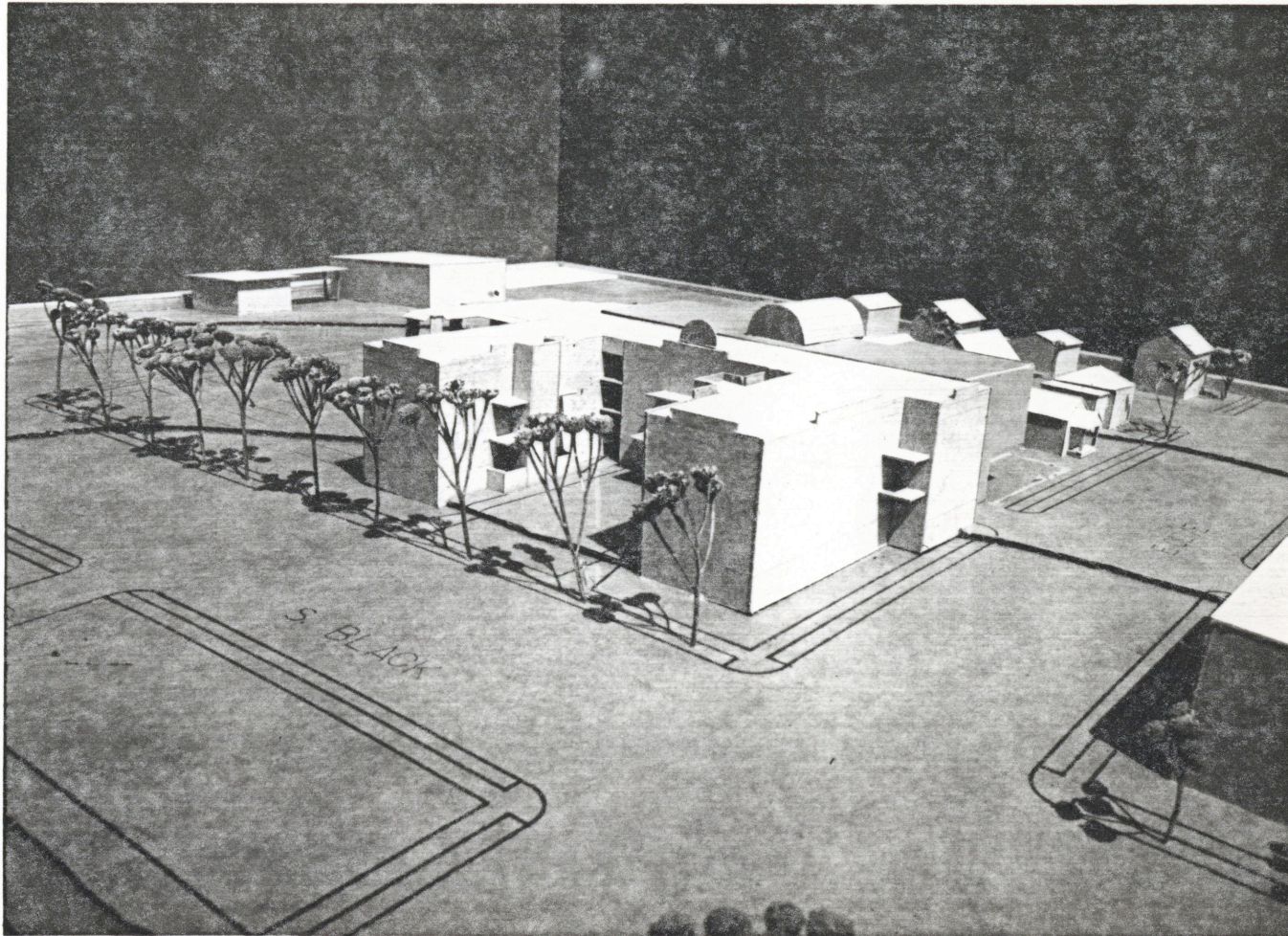
THIRD FLOOR PLAN



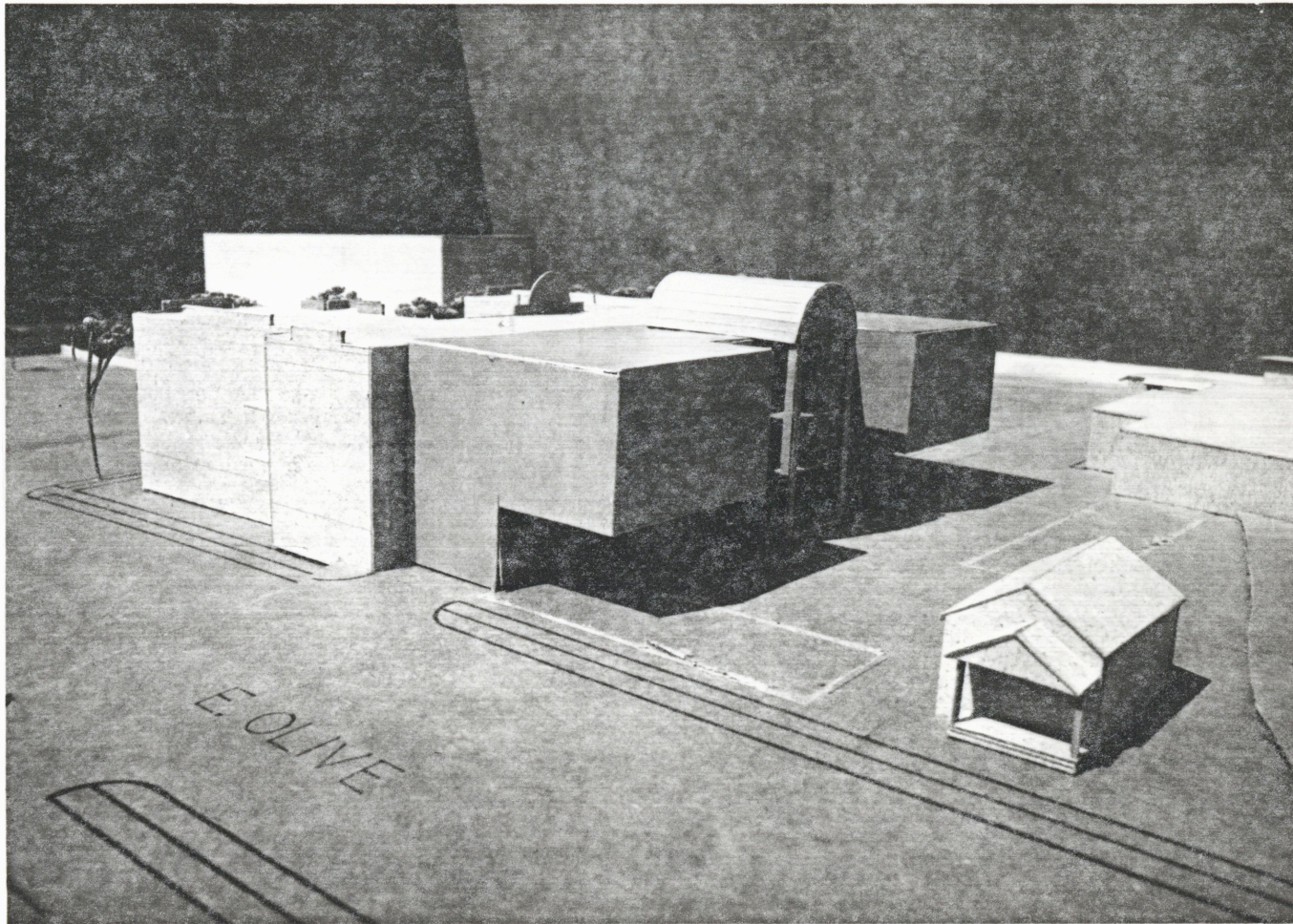
SECTION A-A



Study Model: Existing garages to the rear of the Blackmore Apartment building



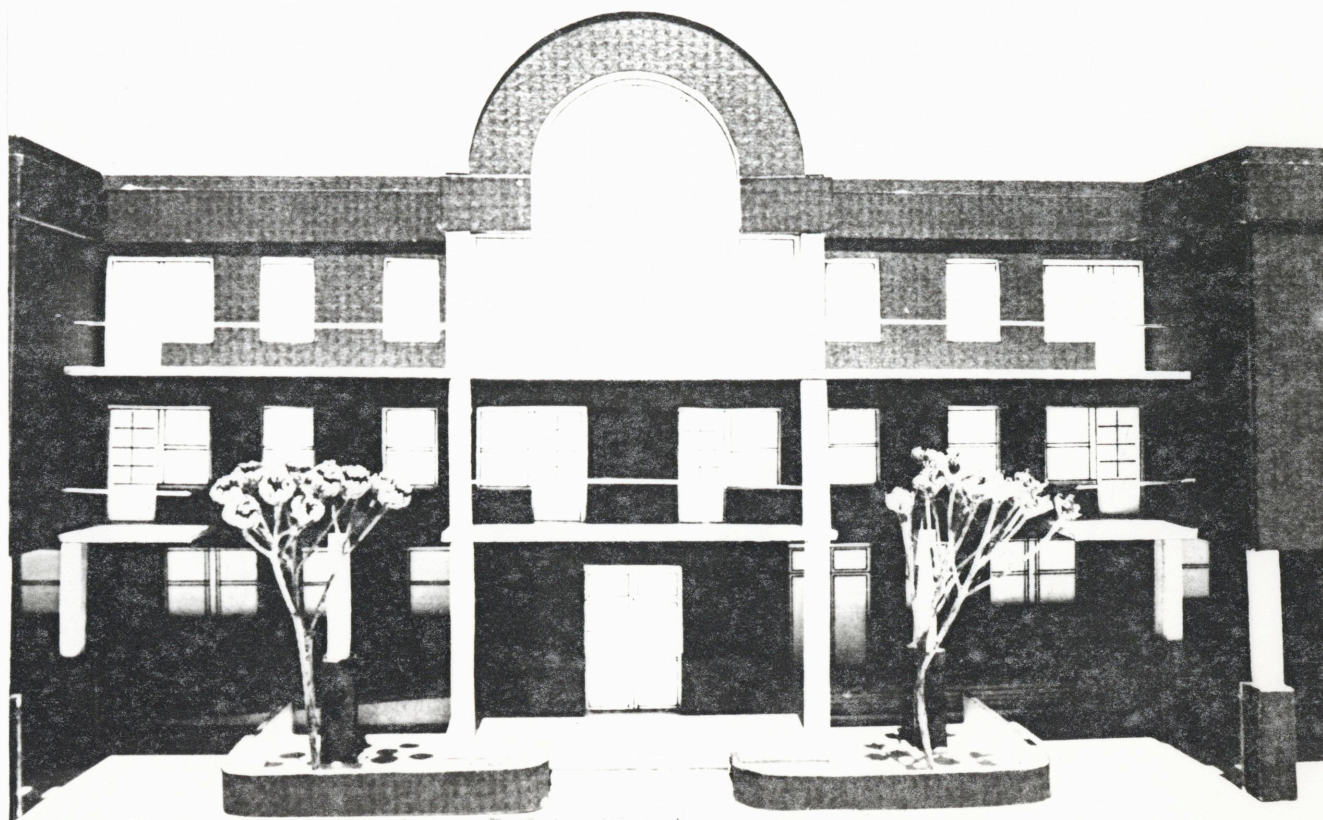
Study Model: Blackmore Apartments with rear addition



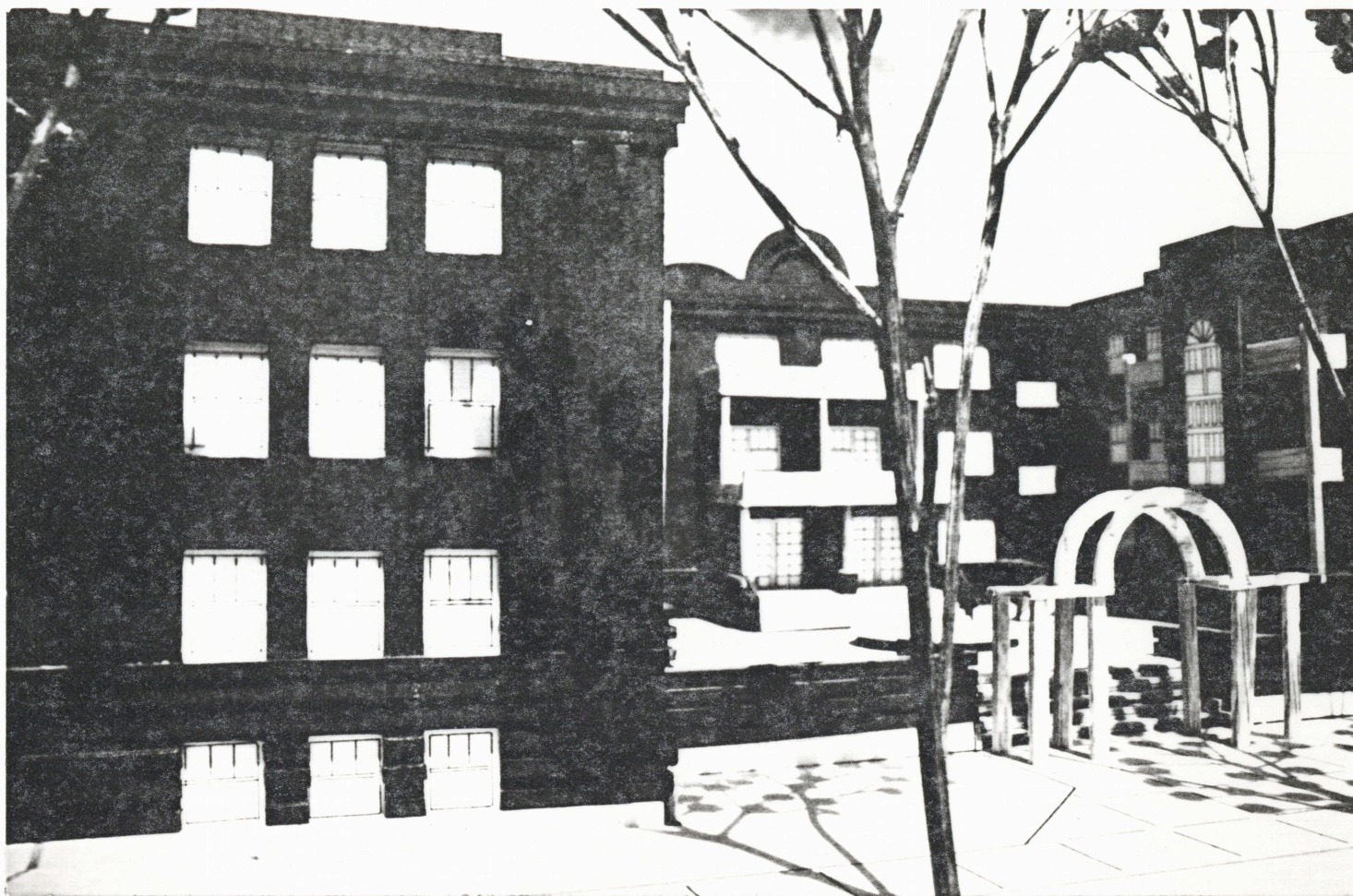
Study Model: Rear addition as seen from E. Olive Street



Final Model: Rear addition with parking lot



Final Model: Rear addition - secondary entrance and balconies

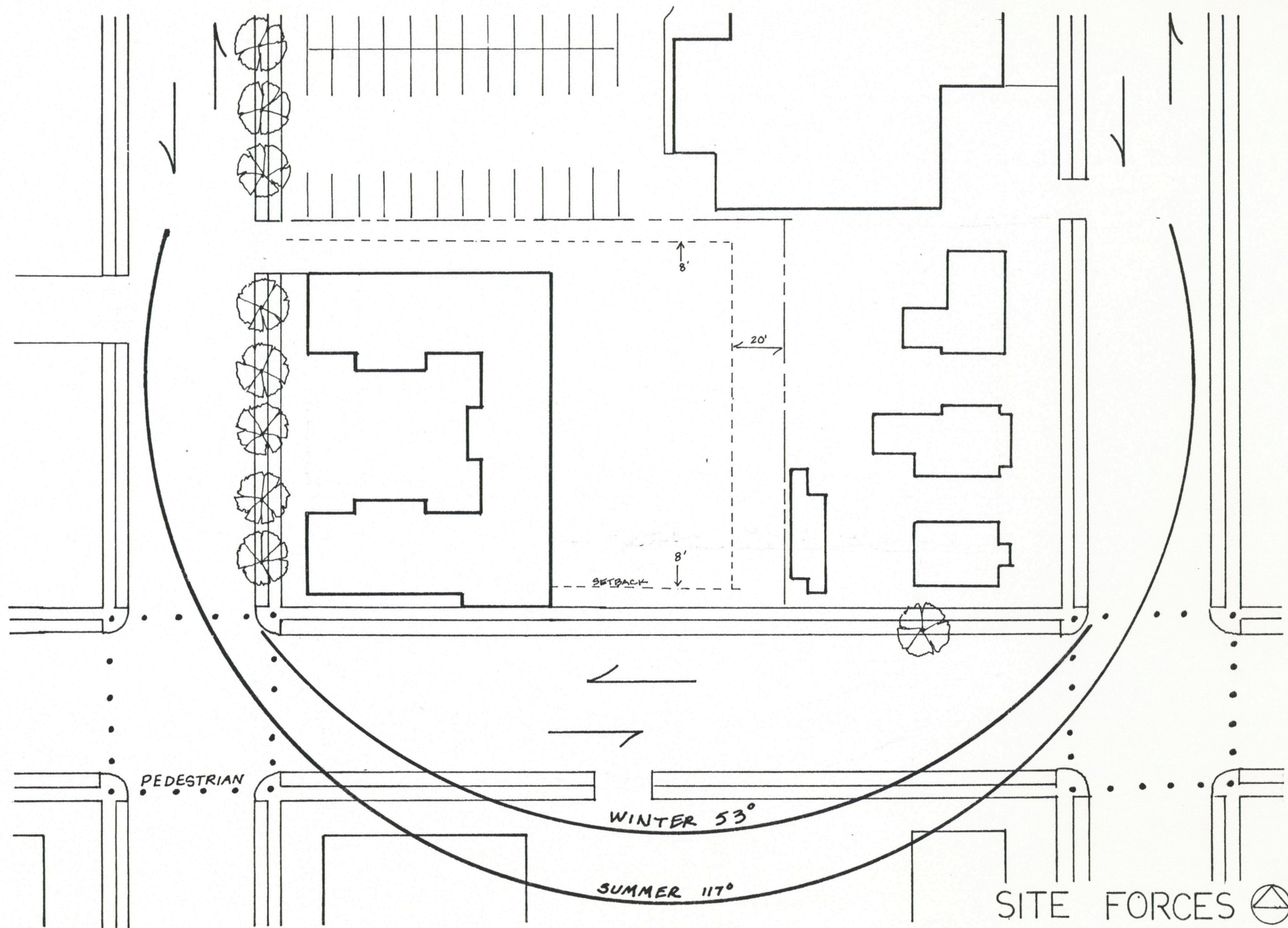


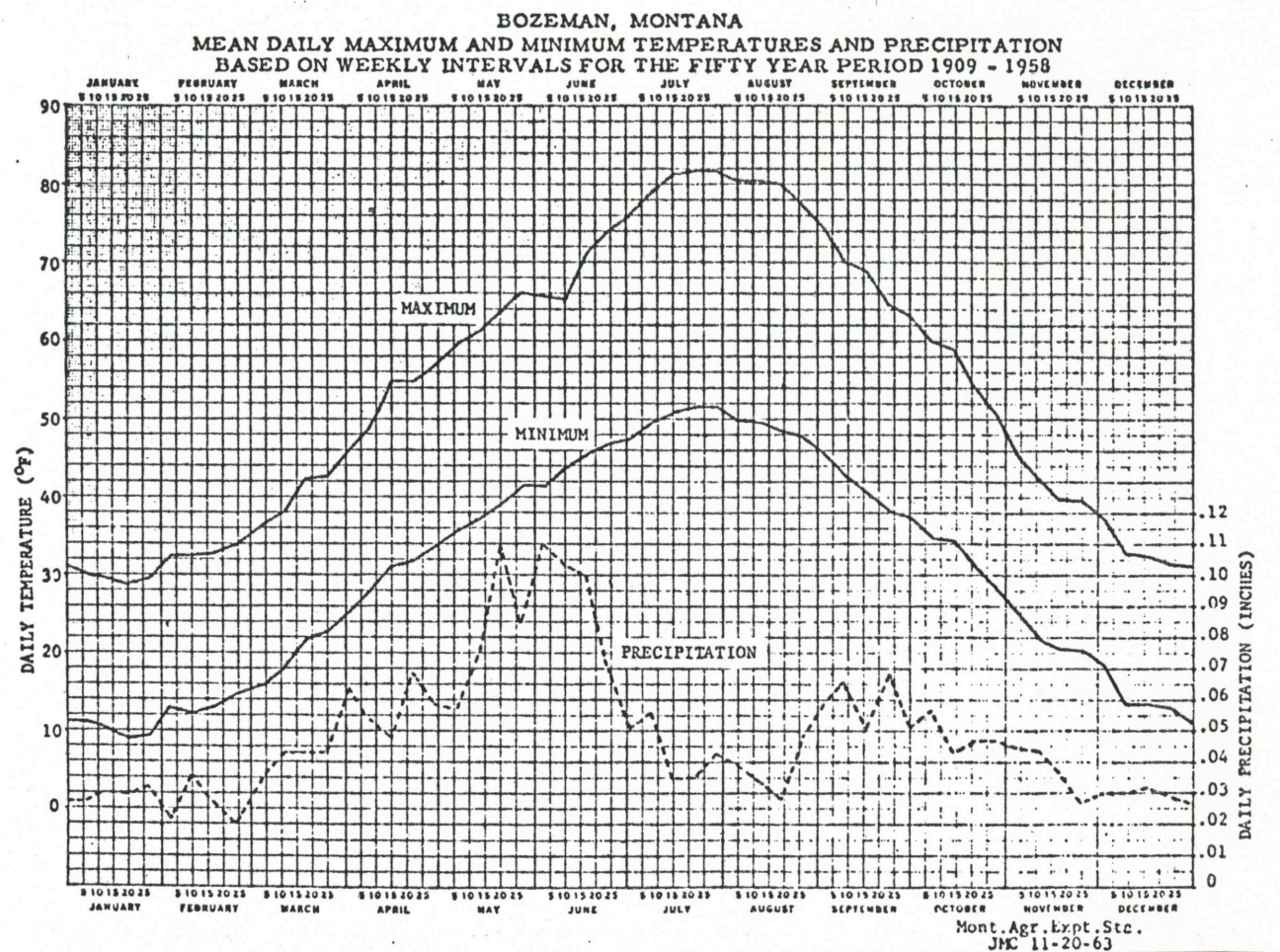
Final Model: North wing and courtyard as seen from S. Black Street



Final Model: Courtyard showing new entry and gateway

APPENDICES





Climatological data for Bozeman, Montana

NATIONAL REGISTER OF HISTORIC PLACES

The National Register was initially authorized under the 1935 Historic Sites Act which entrusted the National Park Service with the policy to preserve for public use historic sites, buildings, and objects of national importance. The expansion of the National Register in 1966 authorized its use by federal, state, and local governments, private groups, and citizens. Properties are listed in the National Register through nominations by the State Historic Preservation Officers. Potential properties are reviewed and evaluated against established criteria as follows.

The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the master, or that possesses high artistic values, or that represent a significant

and distinguishable entity whose components may lack individual distinction; or

- D. that have yielded, or may be likely to yield, information important in prehistory or history.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

UNITED STATES DEPARTMENT OF THE
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM**

INVENTORY - NOMINAL REGISTER OF

FOR NPS USE ONLY

RECEIVED

DATE ENTERED _____

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

[illegible]

3 SIGNIFICANCE	PERIOD — PRE HISTORIC — 1400-1499 — 1500-1549 — 1550-1599 — 1600-1699 — 1700-1799 — 1800-1899 — 1900	AREAS OF SIGNIFICANCE . . CHECK AND JUSTIFY BELOW — LANDSCAPE ARCHITECTURE — LAW — LITERATURE — MILITARY — MUSIC — PHILOSOPHY — POLITICS-GOVERNMENT — JUVENION	BUILDER/ARCHITECT	STATEMENT OF SIGNIFICANCE
PERIOD — PRE HISTORIC — 1400-1499 — 1500-1549 — 1550-1599 — 1600-1699 — 1700-1799 — 1800-1899 — 1900	AREAS OF SIGNIFICANCE . . CHECK AND JUSTIFY BELOW — LANDSCAPE ARCHITECTURE — LAW — LITERATURE — MILITARY — MUSIC — PHILOSOPHY — POLITICS-GOVERNMENT — JUVENION	BUILDER/ARCHITECT	STATEMENT OF SIGNIFICANCE	

3 MAJOR BIBLIOGRAPHICAL REFERENCES	
10 GEOGRAPHICAL DATA ACRONYM OF DOMINATED PROPERTY _____ UTM REFERENCE _____	
A ZONE C	B ZONE D
EASTING	EASTING
NORTHING	NORTHING
VERBAL BOUNDARY DESCRIPTION	
101 ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES STATE _____ COUNTY _____ CODE _____ STATE _____ COUNTY _____ CODE _____	
11 FORM PREPARED BY NAME / TITLE _____ ORGANIZATION _____ STREET & NUMBER _____ CITY OR TOWN _____ STATE _____ TELEPHONE _____	
12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS _____ NATIONAL _____ LOCAL _____ STATE HISTORIC PRESERVATION OFFICER'S SIGNATURE _____	
As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. DATE: _____	
TITLE _____ FOR YOUR USE ONLY I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER _____ DIRECTOR, OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION _____ ATTENTION _____ RECIPIENT OF THE NATIONAL REGISTER _____	

The National Register inventory-nomination form is a long narrative type of form. It requires considerably more expertise than checklist or short-answer forms. Instructions for completing this form are found in How to Complete National Register Forms (see bibliography). Forms must be accompanied by photographs and a map.



UNITED STATES DEPARTMENT OF THE INTERIOR
Heritage Conservation and Recreation Service
Office of Archeology and Historic Preservation
Washington D.C. 20243

HISTORIC PRESERVATION CERTIFICATION APPLICATION — PART 1

(Pursuant to the Tax Reform Act of 1976)

Instructions: Applicant should read the instructions carefully before completing application. No Certification may be made unless a completed application form has been received (P.L. 94-455). Use typewriter or print clearly in dark ink to complete the application form. If additional space is needed to complete Part 1, use the reverse side or a separate plain sheet of paper clearly indicating the owner's name and mailing address. Part 1 of this application may be completed and sent to the appropriate State Historic Preservation Officer at any time during the year, and may be sent separately or with Part 2.

PART 1 EVALUATION OF SIGNIFICANCE

1. NAME OF PROPERTY:

Address of property: Street _____
City _____ County _____ State _____ Zip Code _____
Name of historic district in which property is located: _____

2. DESCRIPTION OF PHYSICAL APPEARANCE:

(see instructions for map and photograph requirements—use reverse side if necessary)

3. STATEMENT OF SIGNIFICANCE:

(use reverse side if necessary)

Date of construction (if known): _____ ☐ Original site ☐ Moved Date of alterations (if known): _____

4. NAME AND MAILING ADDRESS OF OWNER:

Name _____
Street _____
City _____ State _____ Zip Code _____
Telephone Number (during day): Area Code _____

I hereby attest that the information I have provided is, to the best of my knowledge, correct, and that I am owner of the property described above.

Signature _____ Date _____

For office use only

The structure described above is included within the boundaries of the National Register historic district and ☐ contributes ☐ does not contribute to the character of the district.

The structure ☐ appears ☐ does not appear to meet National Register Criteria for Evaluation (36 CFR 60.6) and ☐ will likely ☐ will not be nominated to the National Register in accord with the Department of the Interior procedures (36 CFR 60).

The structure is located in a district which ☐ appears ☐ does not appear to meet National Register Criteria for Evaluation (36 CFR 60.6). ☐ will likely ☐ will not be nominated to the National Register in accord with Department of the Interior procedures (36 CFR 60), and ☐ appears ☐ does not appear to contribute to the character of said district.

Signature _____ Date _____
State Historic Preservation Officer

This property has been evaluated according to the criteria and procedures set forth by the Department of the Interior (36 CFR 67) and, if subject to depreciation under section 167 of the Internal Revenue Code of 1954,
☐ is hereby certified a historic structure.

☐ does not contribute to the character of the historic district and does not merit certification as a historic structure. Reasons given on the attached sheet.

Signature _____ Date _____
Keeper of the National Register

UNITED STATES DEPARTMENT OF THE INTERIOR
Heritage Conservation and Recreation Service
Office of Archeology and Historic Preservation
Washington D.C. 20243



HISTORIC PRESERVATION CERTIFICATION APPLICATION — PART 2

(Pursuant to the Tax Reform Act of 1976)

Instructions: Applicant should read the instructions carefully before completing application. No Certification may be made unless a completed application form has been received (P.L. 94-455). Use typewriter or print clearly in dark ink to complete the application form. If additional space is needed to complete Part 2, attach additional blank sheets. Part 2 of this application may be completed and sent to the appropriate State Historic Preservation Officer at any time during the year and may be sent separately or with Part 1.

Part 2 DESCRIPTION OF REHABILITATION

1. NAME OF PROPERTY:

Address of property: Street _____ City _____ State _____ Zip Code _____

If located in National Register historic district, local or State designated district, specify: _____

2. DATA ON EXISTING STRUCTURE:

Date of construction: _____ Existing floor area: _____ sq. feet _____
Original use: _____
Type of construction: _____

3. DATA ON REHABILITATION PROJECT:

Project starting date (est.): _____ Project completion date (est.): _____
Estimated cost of rehabilitation: _____ Proposed use: _____
Number of housing units to be created (if applicable): _____
Has the property received Federal or State financial assistance? ☐ yes ☐ no
If yes, specify source: _____
Are architectural plans and specifications available for review? ☐ yes ☐ no
Architect's or developer's name and address: _____

Telephone Number: _____

4. DETAILED DESCRIPTION OF REHABILITATION/PRESERVATION WORK—includes site work, new construction, alterations, etc. Complete blocks below.

NUMBER

1

Architectural feature _____

Approximate date of feature _____

Describe existing feature:

Describe work and impact on existing features:

Photo no. _____ Drawing no. _____

NUMBER

2

Architectural feature _____

Approximate date of feature _____

Describe existing feature:

Describe work and impact on existing features:

Photo no. _____ Drawing no. _____

NUMBER

3

Architectural feature _____

Approximate date of feature _____

Describe existing feature:

Describe work and impact on existing features:

Photo no. _____ Drawing no. _____

NUMBER

4

Architectural feature _____

Approximate date of feature _____

Describe existing feature:

Describe work and impact on existing features:

Photo no. _____ Drawing no. _____

NUMBER

5

Architectural feature _____

Approximate date of feature _____

Describe existing feature:

Describe work and impact on existing features:

Photo no. _____ Drawing no. _____

Continuation sheets attached: ☐ yes ☐ no

Name and mailing address of owner:

Name _____

Street _____

City _____

State _____ Zip _____

Telephone Number (during day): _____

I hereby apply for certification of rehabilitation work described above for purposes of Section 2124 of the Tax Reform Act of 1976. I hereby attest that the information I have provided is, to the best of my knowledge, correct, and that I am owner of the property described above.

Owner's Signature _____

Date _____

Building Codes for Historic Structures

The following "Standards for Rehabilitation" are used by the Secretary of the Interior when determining if a rehabilitation project qualifies as "certified rehabilitation" for federal tax purposes.

1. Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration of the building, structure, or site and its environment, or to use a property for its originally intended purpose.
2. The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.
3. All buildings, structures, and sites shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create an earlier appearance shall be discouraged.
4. Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.

5. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site shall be treated with sensitivity.
6. Deteriorated architectural features shall be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.
7. The surface cleaning of structures shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic building materials shall not be undertaken.
8. Every reasonable effort shall be made to protect and preserve archeological resources affected by, or adjacent to any project.
9. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural or cultural material, and such design is compatible with the size, scale, color, material, and character of the property, neighborhood or environment.
10. Wherever possible, new additions or alterations to structures shall be done in such a manner that if

such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

SAFETY AND CODE REQUIREMENTS

Recommended

1. Complying with code requirements in such a manner that the essential character of a building is preserved intact.
2. Working with local code officials to investigate alternative life safety measures that preserve the architectural integrity of the building.
3. Investigating variances for historic properties allowed under some local codes.
4. Installing adequate fire prevention equipment in a manner that does minimal damage to the appearance or fabric of a property.
5. Adding new stairways and elevators that do not alter existing exit facilities or other important architectural features and spaces of the building.

Not Recommended

1. Adding new stairways and elevators that alter existing exit facilities or important features and spaces of the building.

The Secretary's Standards take precedence over other regulations and codes in determining whether the historic character of the building is preserved in the process of rehabilitation and should be certified.

Possible Areas of Conflict

Use and occupancy
Exits
Handicapped access
Sanitary facilities
Light and ventilation
Fire protection
Seismic

The Uniform Building Code (Section 104f) provides the following regulations for historic buildings.

Repairs, alterations, and additions necessary for the preservation, restoration, rehabilitation or continued use of a building or structure may be made without conformance to all the requirements of this code when authorized by the building official provided:

1. The building or structure has been designated by official action of the legally constituted authority of this jurisdiction as having special historical or architectural significance.
2. Any unsafe conditions as described in this code are corrected.
3. The restored building or structure will be no more hazardous based on life safety, fire safety, and sanitation than the existing building.

FOOTNOTES

Chapter I

¹Pierre Schneider, "Converting the Past," Architecture Plus, March/April, 1974, p. 64.

²Marsha Glenn, Historic Preservation: a Handbook for Architecture Students (Washington, D.C., 1974), pp. 19-20.

³Steve Weinberg, "Lobbying Congress ... the Inside Story," Historic Preservation, January/February, 1982, p. 25.

⁴Stanley Abercrombie, "Big in the 70s: Recycling and Restoration," AIA Journal, January, 1980, p. 55.

⁵Ibid., pp. 55-56.

⁶Ibid., p. 56.

Chapter II

⁷Paul Edward Parker, Jr., "Preservation Can Make a Profit," Historic Preservation, September/October, 1979, p. 22.

⁸"Preservation: the Trend Gathers Force, Abetted by a Tight Economy," AIA Journal, Mid-May, 1980, p. 252.

⁹Ibid., p. 252.

¹⁰Ibid., p. 258.

¹¹Charles M. Tseckares, Economic Benefits of Preserving Old Buildings (Washington, D.C.: The Preservation Press, 1976), p. 76.

¹²Andrea O. Dean, "Adaptive Reuse: Economic and Other Advantages," AIA Journal, June, 1976, p. 28.

¹³Andre Shashaty, "The Deal Makers," Historic Preservation, May/June, 1983, pp. 14-23.

¹⁴Baird Smith, "Conserving Energy in Historic Buildings," Preservation Briefs #3, April, 1978, p. 1.

¹⁵Don Klabin, "Tomorrow's Energy from Yesterday," Progressive Architecture, April, 1980, p. 131.

¹⁶Allen, Booz, and Hamilton, "Study Proves Preservation Energy Efficient," Progressive Architecture, April, 1980, p. 25.

¹⁷*Ibid.*, pp. 25-26.

¹⁸*Ibid.*, p. 26.

¹⁹Giorgio Cavaglieri and George M. Notter, Jr., Economic Benefits of Preserving Old Buildings, (Washington, D.C.: The Preservation Press, 1976), p. 59.

²⁰*Ibid.*, p. 53.

²¹*Ibid.*, p. 56.

²²*Ibid.*, p. 56.

²³Ibid., p. 55.

²⁴Ibid., p. 56.

²⁵Ibid., p. 56.

²⁶Andrea O. Dean, "Adaptive Use: Economic and Other Advantages," AIA Journal, June, 1976, p. 27.

²⁷Ibid., p. 27.

²⁸Ibid., p. 27.

²⁹Ibid., p. 27.

³⁰Mel Gamzon, "Adaptive Reuse: Important Force in the Development Industry," Architectural Record, February, 1980, p. 63.

Chapter IV

³¹Sally Jo Wyers, "Economic Influences on Early Boarding Houses and Hotels in Bozeman" (paper for Kingston Heath's Architecture 422 class, Autumn Quarter, 1983), p. 2. (Typewritten.)

³²Ibid., p. 4.

³³Ibid, p. 4.

³⁴Ibid., pp. 3-5.

³⁵Matt W. Alderson, Bozeman, A Guide to Its Places of Recreation (1883), p. 41.

³⁶ Merrill Burlingame, A History of MSU, (Bozeman: Office of Information Publication, 1968), p. 2.

³⁷ W. E. Ellsworth, A History of the Gallatin Valley and the City of Bozeman (Bozeman: Avant Courier Publishing Co., 1898), p. 9.

³⁸ Ibid., p. 9.

³⁹ "Blackmore is Now Tenanted: Completion Promised This Month," Bozeman Weekly Courier, June 10, 1914, p. 2.

⁴⁰ Ibid., p. 2.

Chapter V

⁴¹ "Exterior of Handsome New Flats is Built," Bozeman Weekly Courier, January 14, 1914, p. 1.

⁴² Ibid., p. 1.

⁴³ Plans and elevations adapted from the original drawings by Fred Willson, 1913.

Chapter VI

⁴⁴ Figures were taken from a memorandum by the Bozeman Fair Housing Coalition, Board of Directors, June 24, 1983 and the 1983 Montana Community Development Block Grant Program Application.

⁴⁵ City of Bozeman, 1983 Montana Community Development Block Grant Program Application, p. 9.

⁴⁶Ibid., p. 9.

⁴⁷Figures were taken from a memorandum by the Bozeman Fair Housing Coalition, Board of Directors, June 24, 1983 and the 1983 Montana Community Development Block Grant Program Application.

⁴⁸Montana Department of Community Affairs, The Section 8 Moderate Rehabilitation Program, (Helena: Community Development Division, 1983), p. 1.

⁴⁹Ibid., pp. 2-3.

⁵⁰"State's Housing Program Generates Little Response Locally," The Bozeman Chronicle, October 26, 1983.

Chapter VII

⁵¹"A. W. Miles Building Part of Early-Day Entrepreneur's Legacy," Livingston Enterprise, December 17, 1982, p. 8A.

⁵²"Miles Building Renovation Was a Unique Project," Livingston Enterprise, December 17, 1982, p. 2A.

⁵³"Miles Building Apartments," Livingston Enterprise, December 17, 1982, p. 1A.

⁵⁴Ibid., p. 1A.

⁵⁵"Apartments Combine Old and New," Livingston Enterprise, December 17, 1982, p. 5A.

Chapter VIII

⁵⁶ Margaret Opsata, "When a Factory is a Home," Historic Preservation, October, 1978, p. 23.

⁵⁷ Ibid., p. 23.

Chapter IX

⁵⁸ Mike Money, Bozeman City Planner, Interview, February 7, 1984.

⁵⁹ "Post Occupancy Study Leads to Insight on Elderly," Architectural Record, September, 1979, p. 70.

⁶⁰ Margaret Bemiss, "What Do the Real Clients, the Aging, Think About the Current Facilities?", Architectural Record, May, 1977, p. 138.

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An adaptive reuse of the Blackmore Apart



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