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A PROPOSITION FOR TRANSITION


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A PROPOSITION FOR TRANSITION
MONTAQUA ADULT COMMUNITY

AN UNDERGRADUATE THESIS IN
ARCHITECTURAL DESIGN BY

JEANE K. MCDONALD

SUBMITTED TO THE SCHOOL OF ARCHITECTURE AS
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF

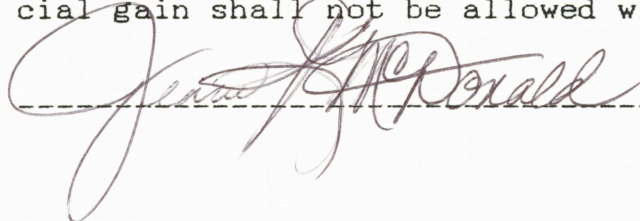
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Jeane Kathleen McDonald was born May 23, 1962 to Robert G. and Marion G. McDonald. She grew up, attended schools, and graduated from High School in Circle, Montana. She has pursued a double major at Montana State University, Bozeman, Montana, and will be graduating with a Bachelor of Art in Architecture and Art Education K-12 Broadfield, Winter Quarter 1986.

ACKNOWLEDGEMENTS:

In attempting to dedicate this book to all who have played important roles in the successful completion of these dreams, a few may be left out, but truly, never forgotten.

I therefore dedicate this book, and acknowledge their part to:

- My parents, Bob and Marion, who have stood by me through all the years, sleepless nights, tearful decisions, grumpy vacations, financial difficulties, and long, long phone calls!
- My brother, Robbie, who has supported me, chaffed me, encouraged me, and most of all, put up with me.
- My grandmother, Emma, who, although she died before the completion of this project, was a primary example of the dignity of the aging, and whose ceaseless encouragement in the pursuit of this goal of education will always remain alive in my heart.
- Scarlett, Darlene, Chris, Sandy, Alison, Allison, Denise, Dea, Craig and Brian for living with my temper, strange moods and hours, and still remaining my friends.
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- Larry, Bob, Angie, and the rest of the Biochemistry Lab crew for understanding the quirks in my schedule, and never failing to make my day in some way.
- Bob and Myra for all the patience and guidance.

".....the TRANSITION from middle aged maturity to old age is a long process, and if we meet it imaginatively at the earlier period, we can make the transition without a jar....." /

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CHAPTER ONE

Then a mason came forth and said, Speak to us of
Houses.

And he answered and said:

Build of your imaginings a bower in the wilderness
ere you build a house within the city walls.

For even as you have homecomings in your twilight,
so has the wanderer in you, the ever distant and
alone.

Your house is your larger body.

It grows in the sun and sleeps in the stillness of
the night; and it is not dreamless

Does your house dream? and dreaming leave the
city for grove or hill-top?

K. Gibran
"The Prophet"

THESIS STATEMENT- PROPOSAL FOR MONTAQUA COMMUNITY

This Thesis proposes to create a community for the aging that not only meets criteria as far as the physical needs of this group of people are concerned, but will also provide a satisfaction of some of their basic emotional needs as well. This community must integrate with the surrounding communities in order to provide a realistic and probable solution.

The problem of providing a home for people who are aging is not a new one. The biggest problems seem to occur when the number of years a person may spend in such a place is not considered. National studies have shown the average life expectancy has risen to age 75, so when a person may be contemplating where he/she would like to live for the rest of his/her life, they can easily be looking at a residency of approximately 20 years. For most people who are now at this "stage" of their lives, life has changed in many ways compared to the other "stages" they have lived through, such as education, rearing a family, career, etc. This does not mean their days of enjoyment and usefulness are now over. Many of the current solutions for housing the aging only deal with the time in people's lives that requires constant physical care. What is often ignored is the time in a person's life when they do not need constant care, but desire such things as increased security and physical comfort, as well as a decrease in responsibility and worry where decisions concerning health, travel, and entertainment are concerned. Most of the options in making decisions and choices about individual living situations are not considered as primary concerns in many of today's arrangements for housing the aging. The purpose of this thesis is to provide an alternative housing option that will satisfy many of these needs in a facility located near Mont Aqua, Montana.

For the purpose of this thesis, the stage of life this group of people are at will be called the transitional phase, primarily because of the implications concerning change in the word transition. Proposed buildings in this project will not include a facility that provides constant care for the aging, because, although there are still many changes at that time of life, this thesis would like to explore the implications of housing the aging in a community responding to the needs of people in a somewhat more complex, changing time of their lives. Some of the most obvious needs concern the physical changes occurring in an aging person's life. Some of the biggest physical needs are those concerned with meeting those physical changes in suitable housing alternatives.

K. Gibran approaches some philosophical aspects of a house, and in doing this, provides a point of view that could be interpreted as an ideal goal to be reached in the process of physical design of a house. In a project such as this with so many clients of varying tastes, this design must be tailored to meet the individual needs of the tenants, while not losing a sense of communal identity and coherence. Hopefully, this thesis will succeed in providing a housing alternative for the aging that truly is their "larger body", and which will not find itself dreaming of a hilltop or grove in an unfilled fashion.

This housing must also provide a sense of belonging as well as having an identity. Issues such as security and adequate spacial requirements and relationships must also be integrated into the planning and design of the community. By integrating these goals of a well-designed living environment with an aesthetically pleasing image of identity, a successful community for adults in an aging transition can be achieved as well as;

"Clear our minds of the persistent stereotype of old age as a period of physical decline and social dependency and mental deterioration and provide for some degree of diversity as any other social class."²

THESIS STATEMENT-DEFINITION

In defining a Thesis, one must define the goals set. Personal design goals have be outlined in the Thesis Proposal , but specific project design goals are as follows:

To integrate:

- 1) Housing for aging people
- 2) Access/path (pedestrian, vehicular)
- 3) Landscaping/creek (existing, manmade)
- 4) Retail/convenience
- 5) Health/entertainment
- 6) Public interface facilities (municipal building, inn)
- 7) Security/privacy

To provide:

- 1) Appealability
- 2) A relationship to the creek, external site forces, as well as the highways and roadways, and their respective accesses.
- 3) A sense of place through image and identity (unity, clarity, coherence, contextural fitness.)
- 4) Service access
- 5) Climate control where possible

Specific goals in the integration of housing, access, landscaping, retail, health, entertainment, security, privacy, and public interface facilities will involve design details as well as the overall integration of specific elements. One of the major concerns in this project is to provide a sense of identity for this community. The main conflict with identity is the idea of where the sense of individuality comes into play. There must be a continuity in materials, construction, and style, while still allowing a certain amount of freedom for personal choice and taste.

The nature of this project implies that there is a difference between this and other small communities. Of course this difference is due to the age group of people who will be living here. Other communities have many of the same facilities, recreational, commercial, civic, etc. A big factor in choosing a place to live is in deciding what one particular place has to offer over another. If this community is to be successful, it must provide some options, or facilities that are not available in other small communities. This idea brings up another specific goal: To provide facilities that would enhance or support activities specific to the group of prospective clients.

The activities that will be planned for in this project primarily involve outdoor recreation-particularly on site. This site was picked for a number of reasons, but one of the major ones was due to the stream. Rock Creek is a well known fly-fishing heaven, and the possibilities for walkways and fitness (obstacle) courses abound. A golf course was proposed in the early stages, but the closeness of golf courses in Billings, Laurel and Red Lodge, plus the feasibility of maintenance, and economics put that decision on hold. If the residents approved this idea, further land could be purchased adjacent to this property for this purpose. A driving range could be integrated on this site with no problems and other outdoor activities such as horseshoes, lawn-bowling, croquet, badminton, and tennis are provided for. A complete indoor recreation facility will be provided, with the activities included being: racketball, squash, bowling, running, court sports such as basketball or volleyball, square or ballroom dancing, weight lifting, swimming, pool or billiards, card playing, and any number of crafts.

Retail, convenience, and health care facilities will all be provided as a general service. Special services included here would be a transportation facility and rental store. Many people in all age groups are finding it much more convenient to rent equipment either on a part time or trial basis as an alternative to/before purchasing. A non-extended care facility for health purposes will be provided, with a lengthy explanation found in the Thesis proposal concerning long-term health care.

The integration between this particular community and the surrounding communities would encourage a valuable link in public activities. By designing a civic center that not only houses a theatre, but a gallery and library, and then opening up this facility to the surrounding public, any ideas of isolating this group of aging citizens would be gone. This will provide more of a challenge as far as security and privacy, but this is where the general layout of the community plan will play an important role. The Montagua Inn will also allow an integration between the general public, visitors, and residents by providing guest rooms, pool, lounge, and a quality place to dine out.

The idea of following a particular architectural language is highly important in distinguishing the Mont Aqua Community from those in Arizona, Florida, or California. As a person native to Montana, it is important to this individual designer that the Montana or Western Regional vernacular be used to its fullest potential. A plus when using a Western vernacular is the sense of recognition, or comfort within a certain style. The materials of wood, brick, and stone are all native to this site, and would enhance the sense of "belonging" rather than one of alienation, or of a generic identity. This style also will allow a certain amount of individuality in design, because the materials and well-known design elements will provide a continuity in visual perception. Some such elements would be entry, porch, and fenestration.

In conclusion, the primary goals would be resolve the inherent conflicts within this project. To reiterate, these would be: those between community and individuality; privacy/security and isolation; pedestrian and vehicular traffic; and generic versus specific identity.



CHAPTER TWO

"Full of merit, yet poetically, man dwells on this earth."

Holderlin

"This means: Man's merits do not count much if he is unable to dwell poetically, that is, to dwell in the true sense of the word. Thus Heidegger says: "Poetry, does not fly above and surmount the earth in order to escape it and hover over it. Poetry is what first brings man into the earth, making him belong to it, and thus brings him into dwelling." Only poetry in all its forms (also as the "art of living") makes human existence meaningful, and meaning is the fundamental human need.

Architecture belongs to poetry, and its purpose is to help man to dwell. But architecture is a difficult art. To make practical towns and buildings is not enough. Architecture comes into being when a "total environment is made visible", to quote the definition of Susanne Langer.

The basic art of architecture is, therefore, to understand the "vocation" of the place."⁵

PURPOSE

The purpose of this community for the aging is to provide a housing option to them as they make the transition from middle age to old age. Many other options are available to people of this age group, but not many are available that take into consideration this transitional occurrence of aging.

This community is ideally for a population of approximately 500 residents of varying geographical and financial backgrounds. As in any other community, the conveniences required for everyday life must be provided, as well as the housing itself. The special conditions of the aging must be taken into consideration in all aspects of this design problem; circulation, proximity, convenience, image, lack of isolation, identity, etc. These all can be approached pragmatically, but the purpose of this project is not pragmatic alone. To express housing of any type is an interesting problem in itself, but adding the special needs of the aging make for a challenging exploration into what actually constitutes a housing option that is emotionally pleasing as well as physically well-planned for the aging client.

Even though the prototypical nature of this project may seem unfamiliar, many of the ideas used may seem familiar. The reasoning behind this facility involves planning for an increased aging population.

INTRODUCTION-IMAGE

The "vocation" of the place of aging people has often been a misplaced or forgotten area in our society. By recognizing the aging and their special considerations as an important role in our society, we are recognizing our own future, our own fate. By recognizing a problem or challenge, one has often taken the first step in reaching a solution. In many ways this first step is the most important because it gives us a change to meet, or be introduced to the problems ahead.

We all tend to project an image when a problem is introduced to us, and by exploring the "place" of the problem, we often can find many ways of integrating the problems of design into a suitable solution. This "place" does not only imply the actual location of a problem or project, but emphasizes contextural and social ramifications as well. What is right in Arizona or Florida may not be right for Montana, and this principle applies to such things as clientel, community, and purpose as well as climate, materials and building design.

By introducing a problem and recognizing an image, we have often faced two of the hardest steps in design-those of definition and identity. These two steps are often as philosophical and diverse as the individual taking them, which is what makes architecture such an individual art. The final step of "dwelling poetically" is an ideal one, and one that only the residents of this community would be able to attain, but if one works toward that final step, this introduction does not seem as far away from the final goal, especially with the aid of the image the designer carries within.



CHAPTER THREE

"Although getting older affects persons in a variety of ways, there are some similarities among older persons that are not shared with younger people. For some, aging can mean loneliness, greater dependency on others, and less (physical) strength. Older persons are likely to experience a sense of loss in social position particularly as worker, spouse, and parent. Retirement and fewer family obligations mean that many older persons find themselves with fewer opportunities outside the home. This frequently leads them to withdraw from the larger society, and to depend more on their immediate residential environment for social dependence, and is reinforced by a reduction in their physical strength and coordination. As chronic disease increases, older person's mobility becomes more painful and difficult, limiting even more their total activity space.

With diminished (diminishing) senses, older persons receive less information about their surroundings and their personal sense of competence is increasingly threatened by complicated or ill-marked settings. This sense of incompetence can lead to still further avoidance and withdrawal.

As a result of these problems, older persons have special environmental needs that differ from those associated with other age groups, although older residents themselves will have different backgrounds, life styles, and attitudes. Some environmental needs can be met by more responsive housing design. Some design elements which are much better planned are small details - height and location of steps, types of doorknobs, locations of electrical outlets and light switches. Architects address such small scale elements in the final stages of a design. But if larger scale design issues fundamental to the whole conceptual design approach have not been responsive to an older person's needs, then small elements do little to make resident's lives more comfortable."⁴

PEOPLE

- Tenants
 - 50+ Years
 - Non-constant care by/from skilled nursing professionals
 - Retired, semi-retired, non-retired
 - Middle-Upper middle class income group
 - Couples
 - Singles
 - Montana residency not required

PEOPLE

-Visitors-Temporary Users

- Families of residents
- Future clients
- Surrounding community (see Community-Area users)

-Service Personnel

- Administration
- Management
- Employees in other areas, volunteers
- Service/garbage/power/maintenance
- Security/fire
- Storage
- Transportation/mechanical
- Maid/janitorial
- Health care

Community-Area Users

- People from surrounding areas
- Tourists
- Visitors (see Visitors-Temporary Users)
- Guests (see Visitors-Temporary Users)
- Small conference/seminar groups

PEOPLE-SCENARIOS

Mr. and Mrs. McCabe are both in their late 50's, have resided in Montana all their lives, and are looking for a retirement situation suitable to their needs.

Both have college educations and have held professional positions in a small eastern Montana community during the last 35 years. Their children are grown and have moved out of the family home, and no other family obligations bind the McCabes to their present location.

Neither of the McCabes want to leave Montana, but housing for the aging is not a top priority in Montana as in other states such as Arizona, Florida and California. When they heard about a potential community for the aging near Billings, Montana, they appeared quite interested in further information.

Mr. and Mrs. Bryon are in their late 60's, retired, and living in a large western Montana college town. They own a large home there, and though their present home is very pleasant, it has become a large and cumbersome place to maintain. Both are very mobile and highly active with the college and community, but not pleased with their present alternatives to approaching a new lifestyle.

Both the Bryons enjoy Montana and its climatic and recreational aspects. They are reluctant to leave, but the responsibility involved with the upkeep of their present home presents an inevitable problem. The Bryons would prefer to move to a place where maintenance and conveniences are available, while being able to continue their present style of living. When a community near Billings was proposed, both were quite excited because of the location, and definitely wanted to know more about the development.

Mr. McKenna is presently 65 years old and living on a large ranch in northern Montana. He and his family have owned this property for many years, and his two sons and their families are now running the operation. Since his wife's death two years ago he feels at loose ends. Mr. McKenna is tired of the responsibility of the ranch and its livestock, but enjoys living away from the city. He has always been an active fisherman, and enjoys skiing when it's available. Mr. McKenna has worked hard all of his life and feels ready for a change. He doesn't want to become his family's responsibility, but he does not feel ready for a conventional nursing home or retirement facility by any means.

Upon hearing about a small community for the aging Mr. McKenna's interest was piqued. He was very interested in hearing more about this option for his retirement.

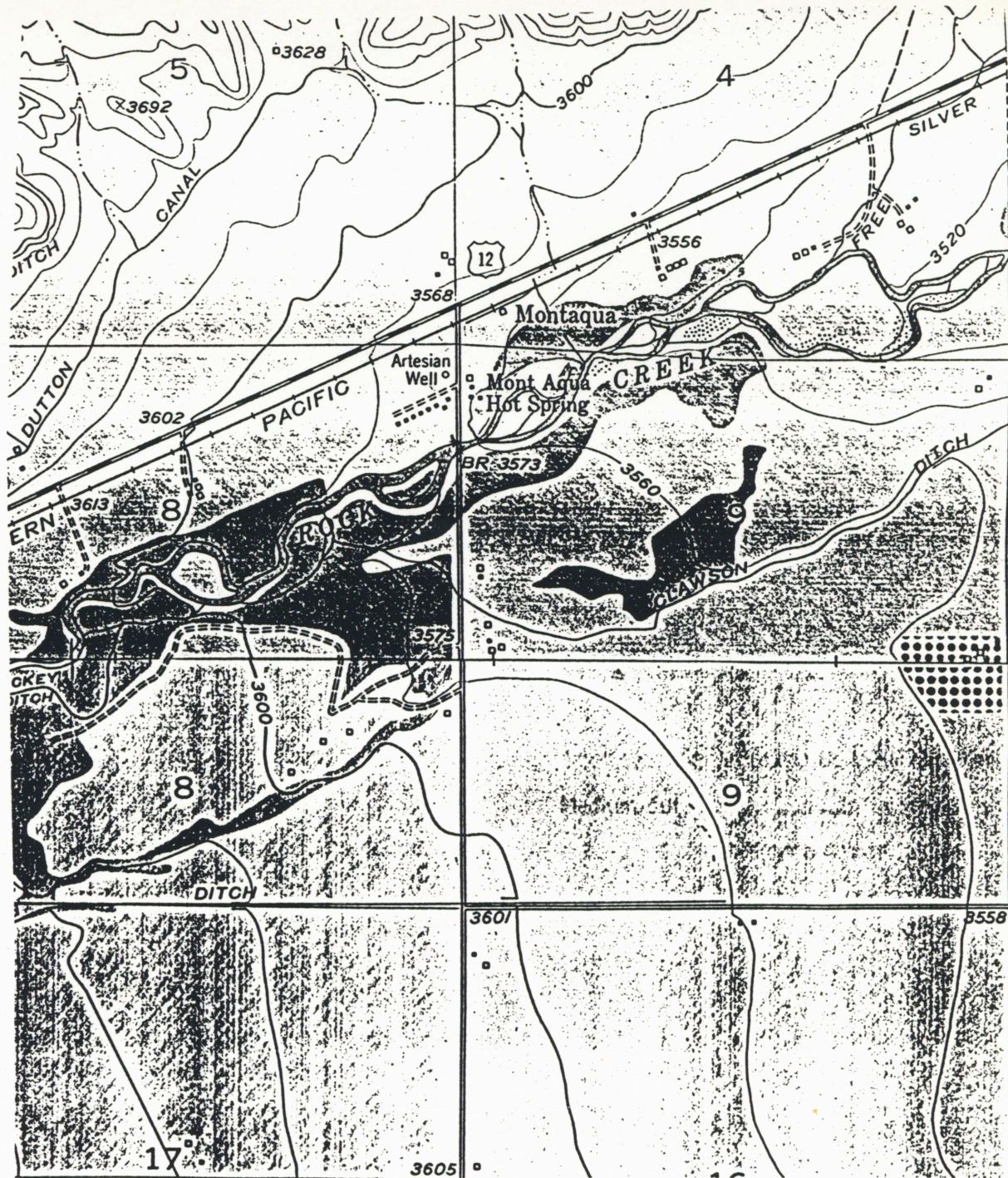
Dr. and Mrs. St. James presently reside in Chicago, are in their early 50's, and have recently decided to retire, with the option of working in a semi-retired situation. Dr. St. James has been a general practioner for 25 years in a large Chicago hospital, while Mrs. St. James has worked as a graphic designer for the past 30 years.

Both have enjoyed past vacations in Montana and upon hearing about this proposed community, expressed much interest in the situation at Mont Aqua. The idea of this community being near Billings was appealing to both of the St. James, because of its size and employment opportunities, as well its travel and recreation benefits

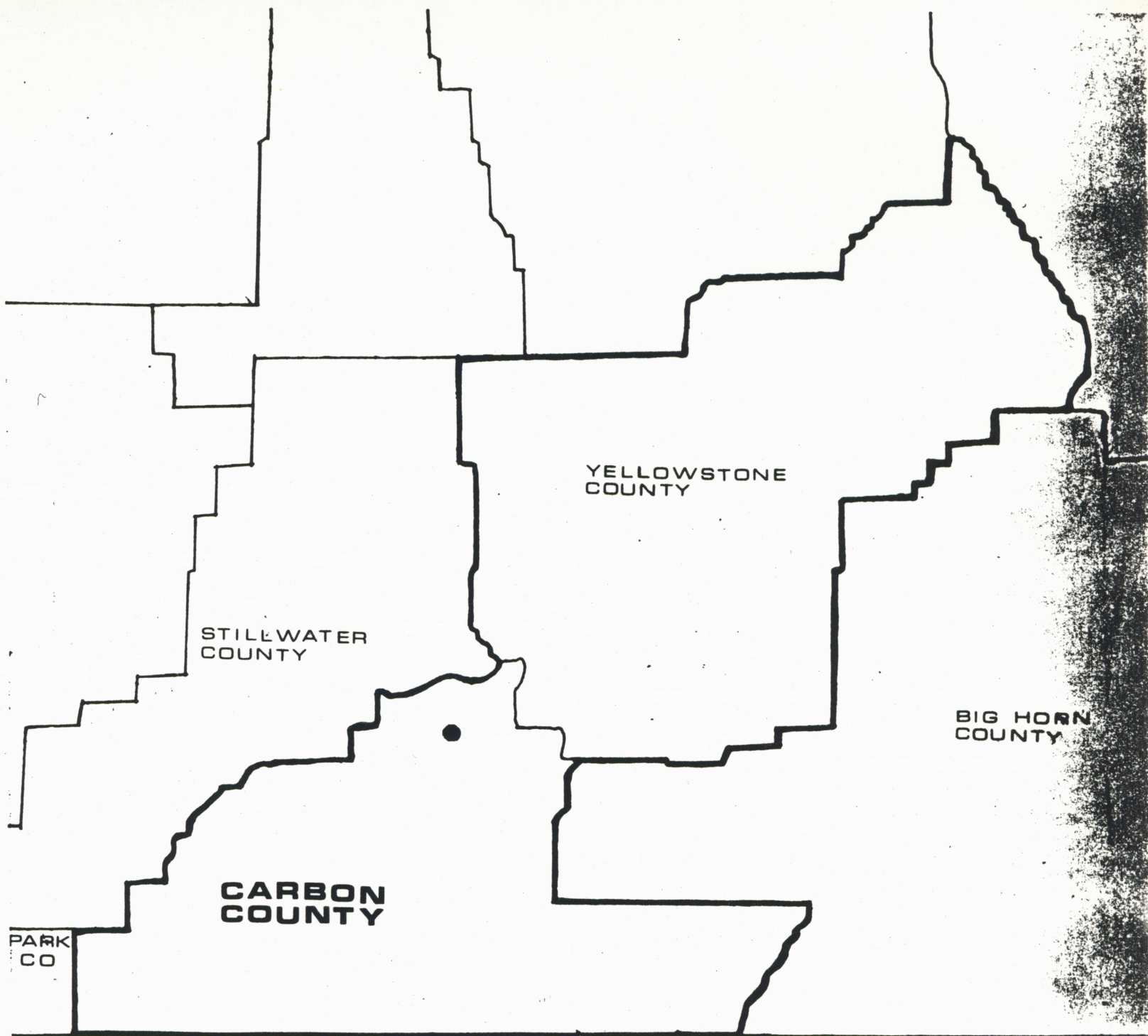
Mrs. Logan is a widow from California and has resided there for the last 20 years. Her husband has been dead for the past 10 years. Her four children are all grown and have moved away. They all live in the Idaho/Wyoming area, and have often expressed a desire to see her move closer to them. As an electrical engineer for a large firm, her husband was privilaged to a large salary, and substantial pension plan. Mrs. Logan is therefore financially secure for the rest of her life.

At age 62, Mrs. Logan is not ready to give up her freedom or become what she terms a "burden" to anyone, especially her children

yet she realizes her special needs as an aging person. The situation at Montaquia is very appealing to her in a number of ways, with the location and lifestyle being primary attractions.



CHAPTER FOUR



SITE-HISTORY
CARBON COUNTY

The Lewis and Clark expedition was the first group of white men to visit in 1806 the area in Montana now known as Carbon County. Many fur traders and trappers visited this area, some of the better known being John Colter and Manuel Liza. Jim Bridger and John Bozeman blazed trails in the area, although Chief Joseph of the Nez Perces tribe somewhat dampened the enthusiastic influx of white men.

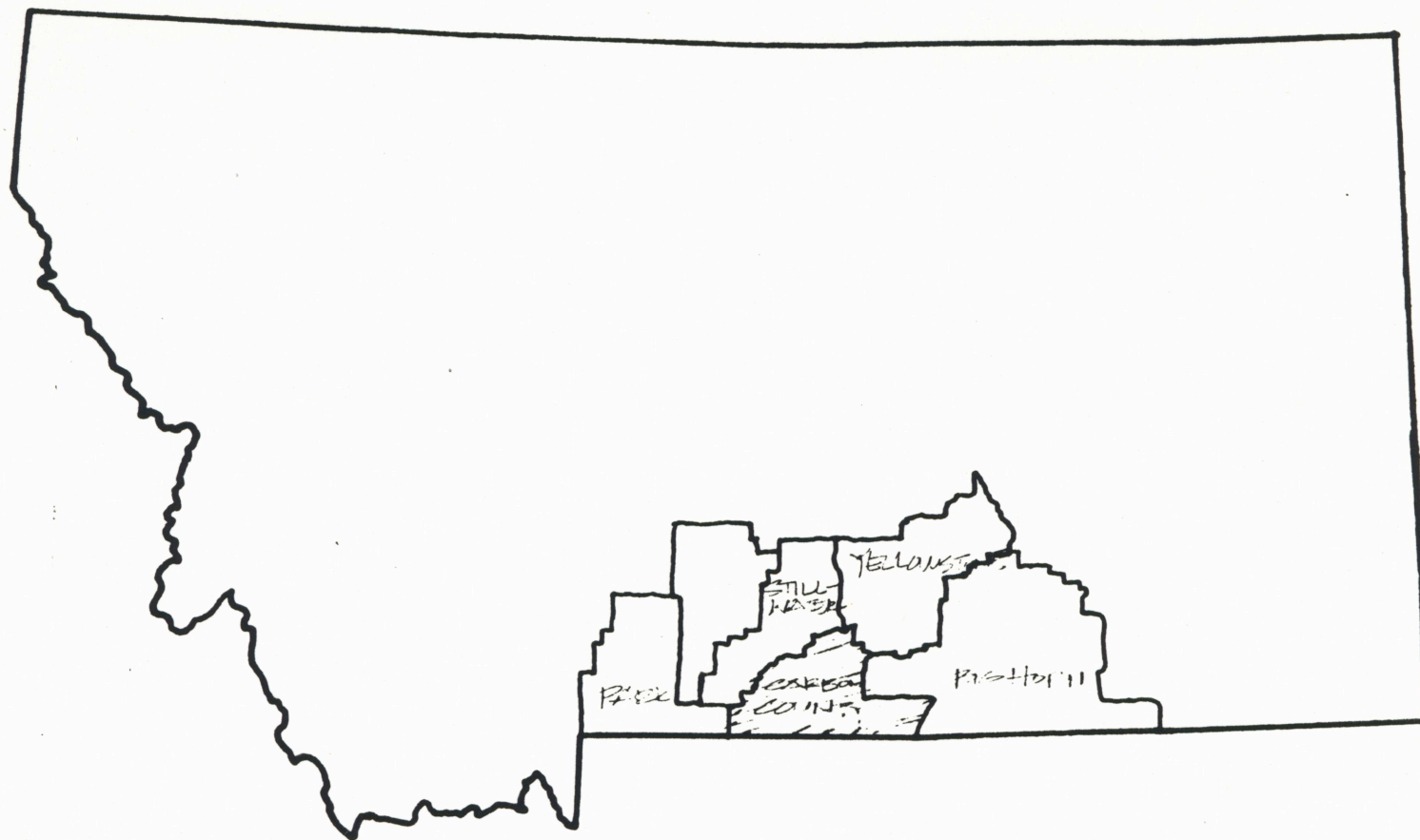
The present land of Carbon County was originally part of the Crow Indian Reservation until 1877. At that time a small area around Red Lodge was withdrawn so that coal deposits there could be developed. By 1878 Red Lodge had grown to a size of 400 residents. By 1879, the Rocky Fork Branch of the Northern Pacific Railroad had been completed between Laurel and Red Lodge, which resulted in an even larger influx of settlers, and an expansion of mining activities. When these settlers' requests for admission onto the Indian Reserve were heard in Washington, D.C., the area was opened to settlement in 1892.

Carbon County came into being on March 4, 1895, claiming pieces of Park and Yellowstone Counties in the process. Red Lodge was the temporary county seat, and defeated Joliet for permanent possession of that title in 1896.

Carbon County is located in the south-central area of Montana, and is bounded by Wyoming on the south, Big Horn County on the east, Yellowstone County on the northeast, Stillwater County on the north, and by Park County on the West. The Pryor Mountains bisect the eastern wing shaped section and the Beartooth Mountains, some of the highest peaks in the state, are found in western Carbon County. The Yellowstone River forms the northern boundary of the county. The Clark Fork River, Rock Creek, and Red Lodge Creek all drain into the Yellowstone River, along with their tributaries. The East Rosebud River and Big Horn River drain the northeastern and eastern parts of the county, respectively.

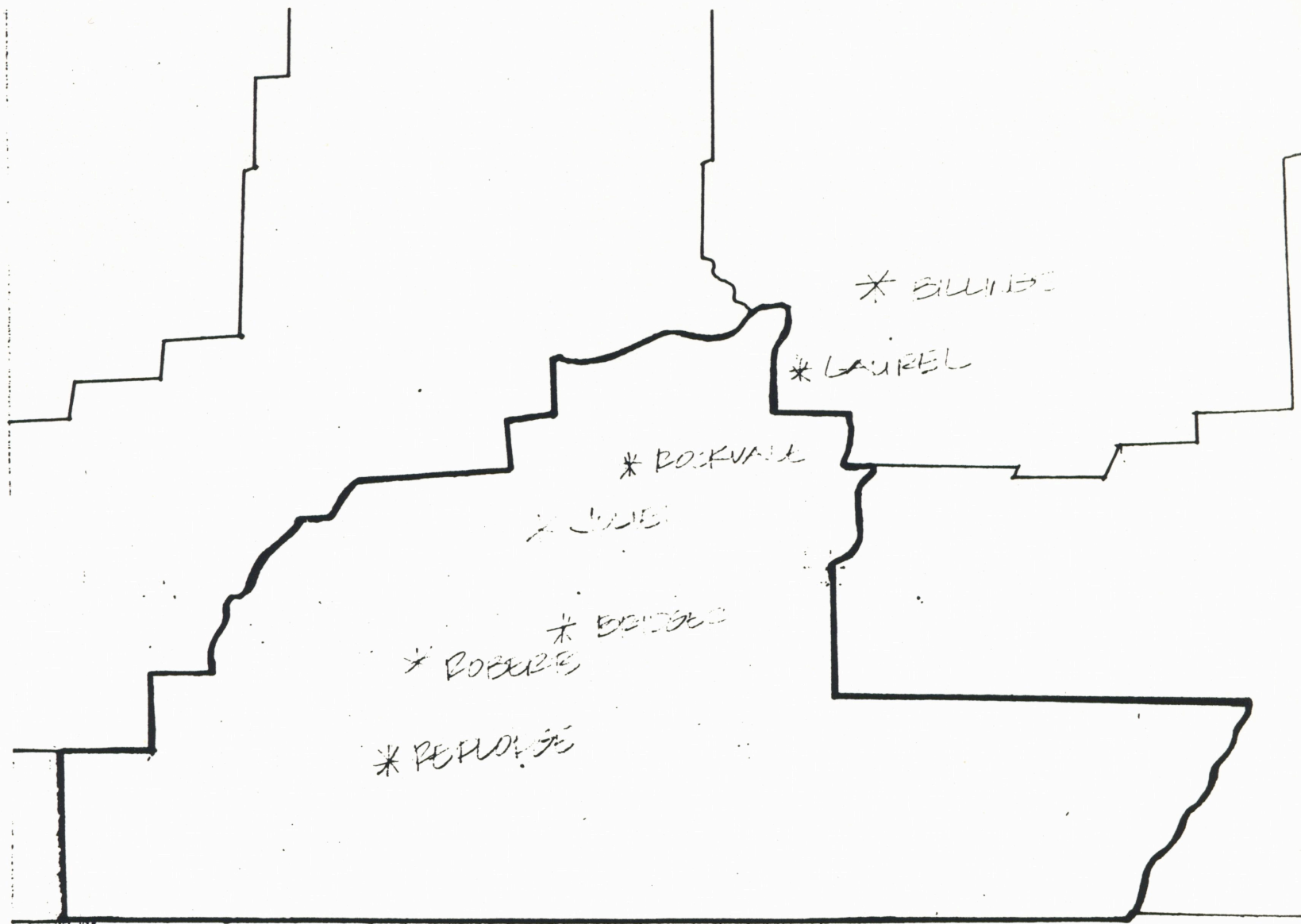
Oil and gas field discoveries in Montana eventually brought about a decline in the coal mining industry. Oil was discovered in the southwestern part of Carbon County in 1900, where oil was seen oozing out of the ground. These wells from southwestern Carbon County supply Billings, Bridger, Fromberg, Edgar, and Joliet with natural gas. The wells in the Elk Basin field supply Red Lodge, Roberts, and other southern towns with natural gas.

Agriculture is the largest source of income for Carbon County, although livestock production and forms of irrigation have proved to be lucrative ventures in the past and present.



Red Lodge is the largest town in Carbon County, with a population of 1989. During the summer months, many tourists pass through Red Lodge over Cooke City Highway to the northeast entrance to Yellowstone National Park, Silver Gate. Recreation in the area consists mainly of hunting, fishing, and boating in the summer, and skiing and snowmobiling in the winter.

Carbon County has a land area of 2070 square miles and a population of 8300, as of 1982.

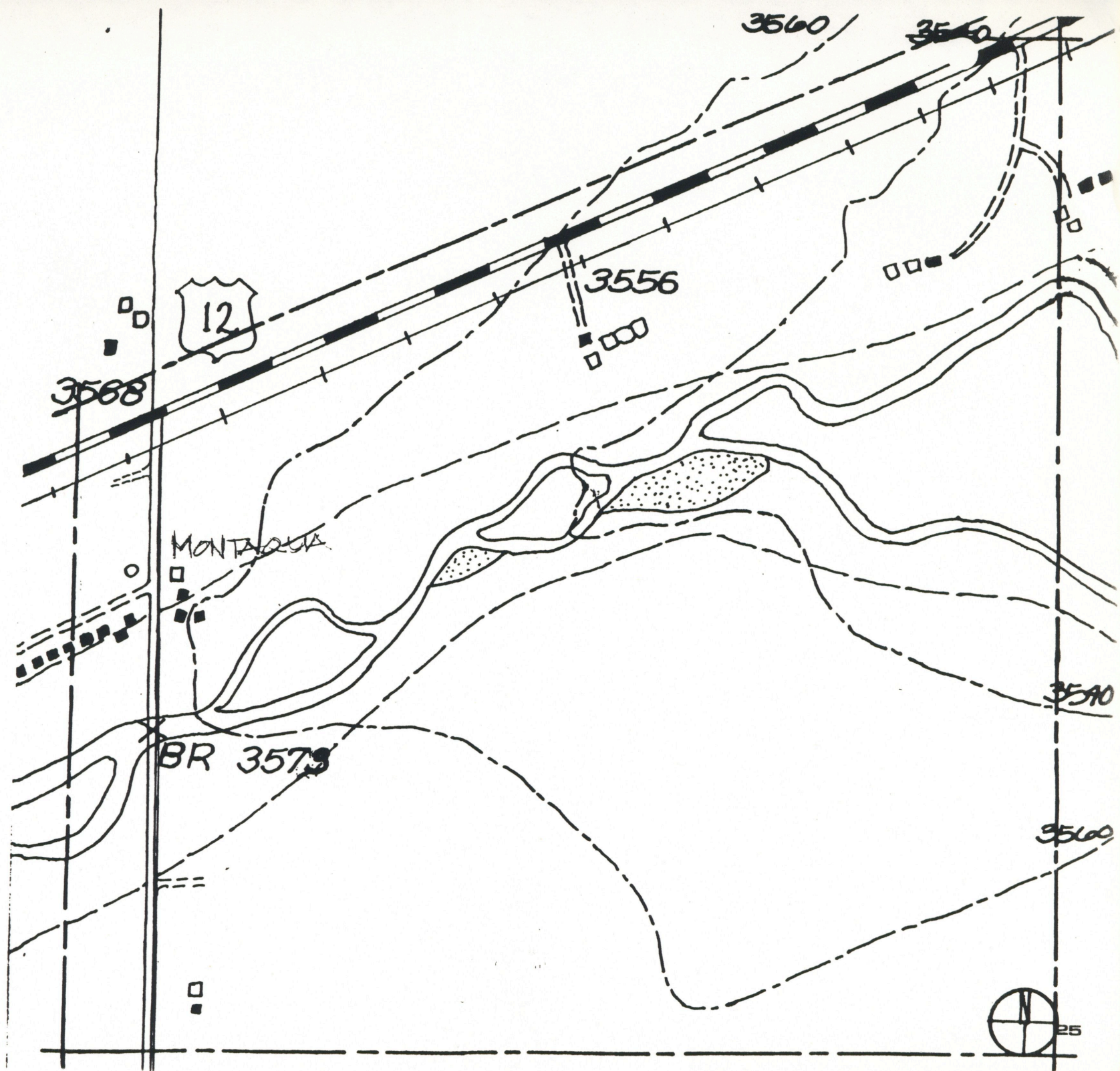


MONTAQUA

Originally a railroad siding, with a sugar beet dump for the area farmers, Montaquia was known as the Dutton Beet Dump. The railroad had named the siding Keown, but this was not a well-known name in the area.

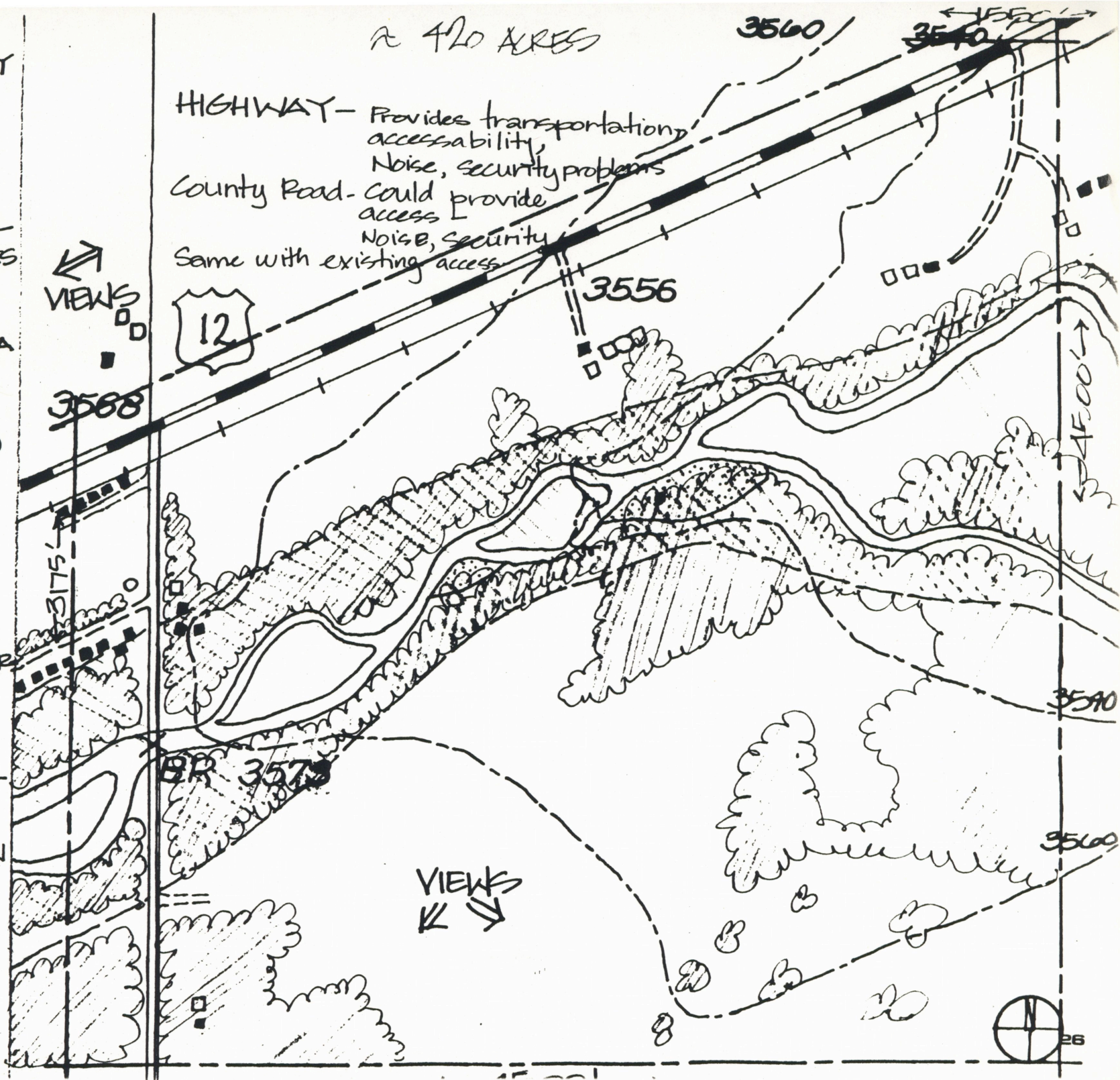
A man named Hoyt sunk an oil drilling rig there in 1918. James West bought the rig and named it Hossier Oil Company. The ultimate result of the well was not oil or natural gas as expected, but hot mineral water. A health resort was started with the beneficial hot water. Although a thriving venture originally, more trouble was to occur. The well casing started to crumble due to age and rust, allowing cooler surface water to enter the line. This destroyed the therapeutic value of the well and proved beyond economic repair. The Montaquia Mineral Well Company had to go out of business, and the well was soon abandoned. At the present there is an artesian well still flowing.

Speculation about a development near Rockvale has been heard recently. A natural hot spring has supposedly been located there, and a financial backer found. Rockvale is located approximately 2 1/2 miles northeast of Montaquia on the Montana 12 highway.



- 1) TWO-LANE HIGHWAY
 - 2) COUNTRY ROAD
 - 3) EXISTING ACCESS
 - 4) O - ARTESIAN WELL
 - 5) ■ - EXISTING HOUSES
 - 6) FLOOD PRONE AREA
 - 7) SITE OF RAILWAY (NO LONGER THERE)
 - 8) ROCK CREEK
 - 9) EXISTING TREES, BUSHES, LANDCOVER
 - 10) AVAILABLE SITE (SEE LARGE MAP)
 - 11) CONTOURS
 - 12) - DIRECTION
- EXISTING FEATURES & VEGETATION
- LEGEND

SCALE $\approx 1" = 500' - 0"$



1) TYPE
WINDS

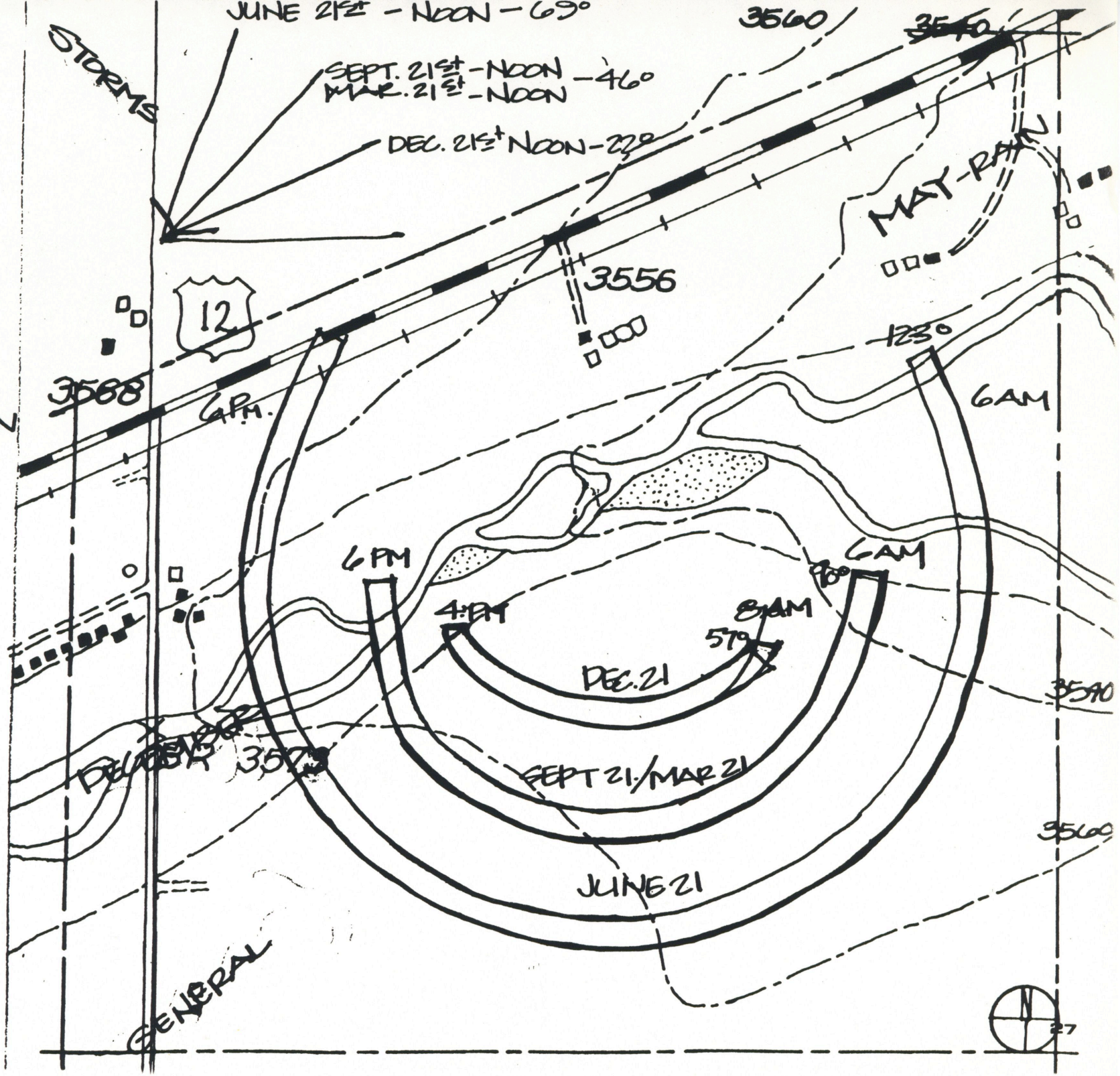
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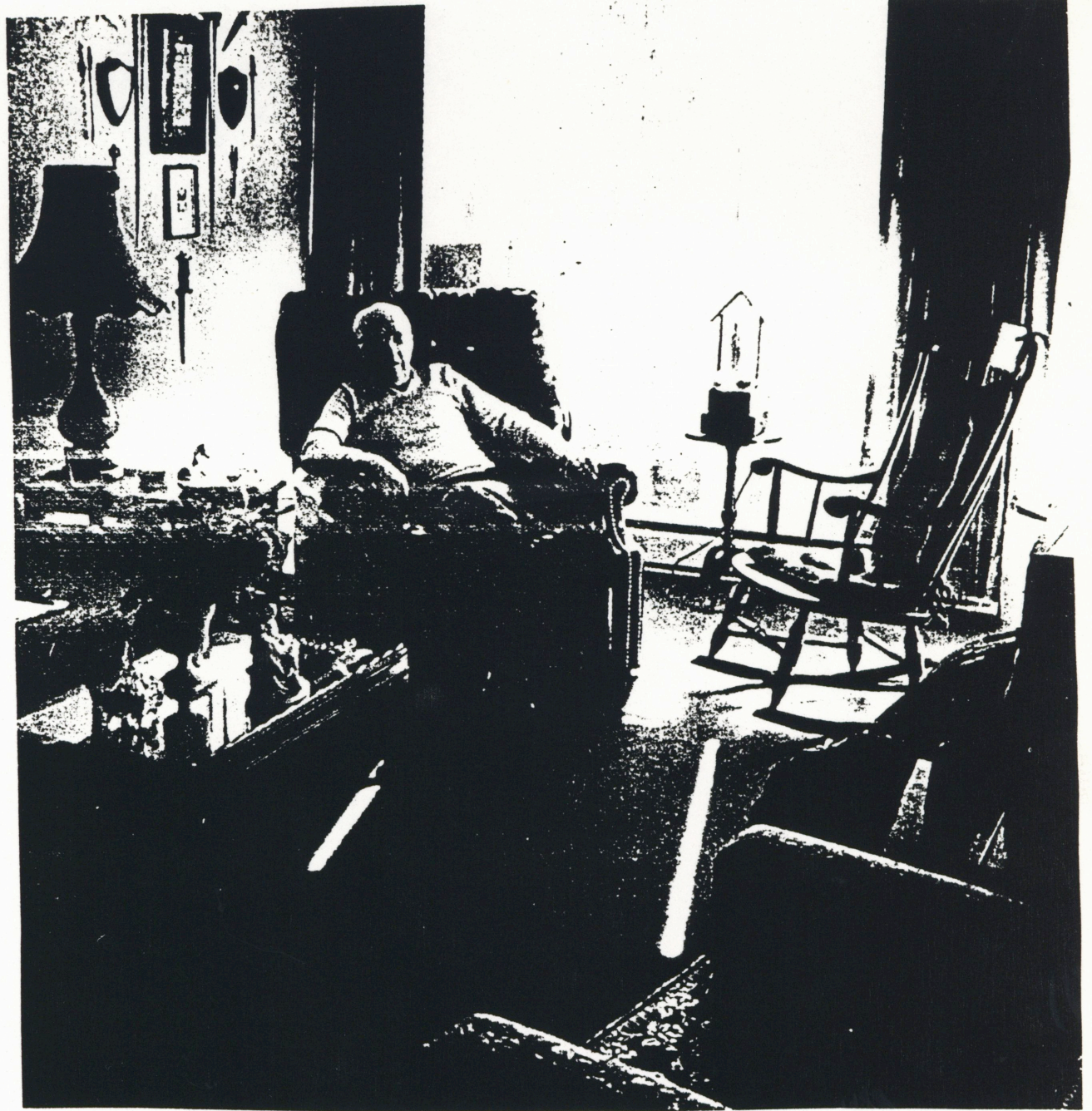
3) () SOLAR
AZIMUTH

4) ⊕ DIRECTION

CLIMATIC
LEGEND

SCALE 1" = 500' - 0"



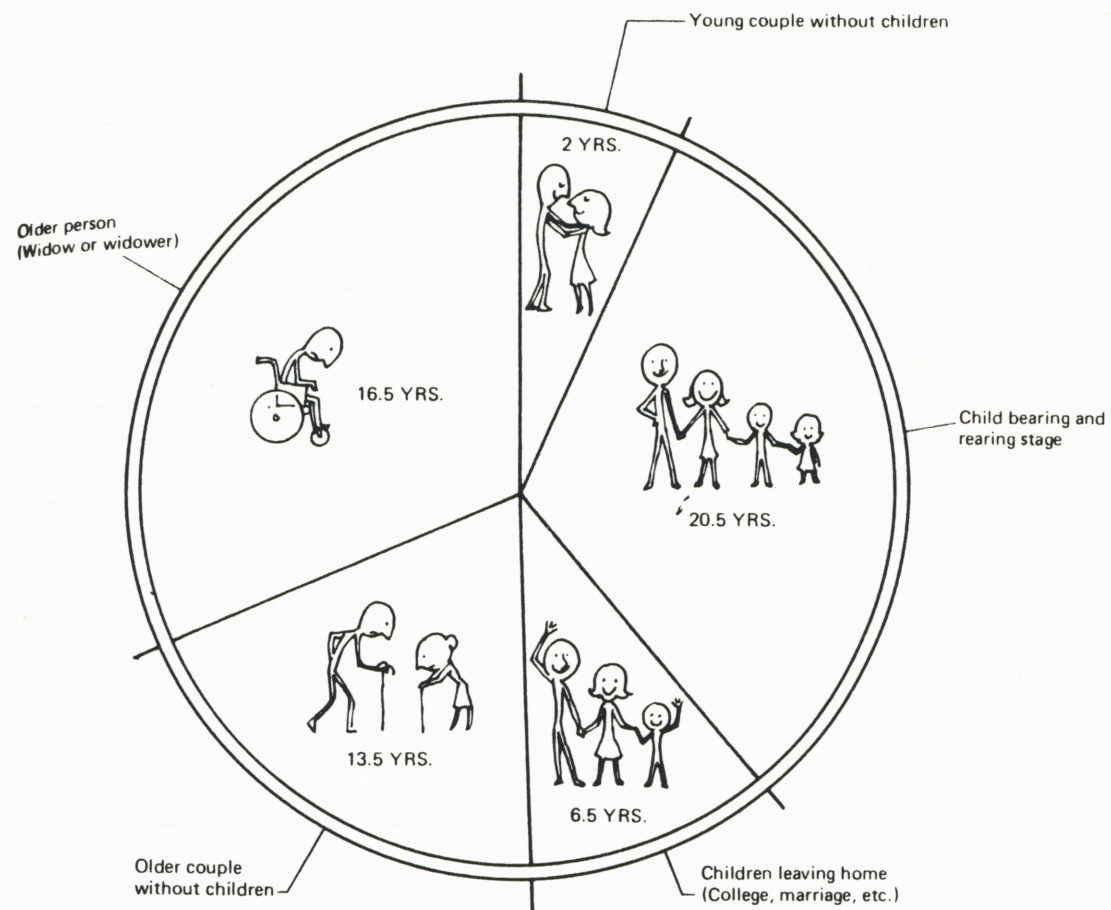


CHAPTER FIVE

PATTERNS AND PROSPECTS

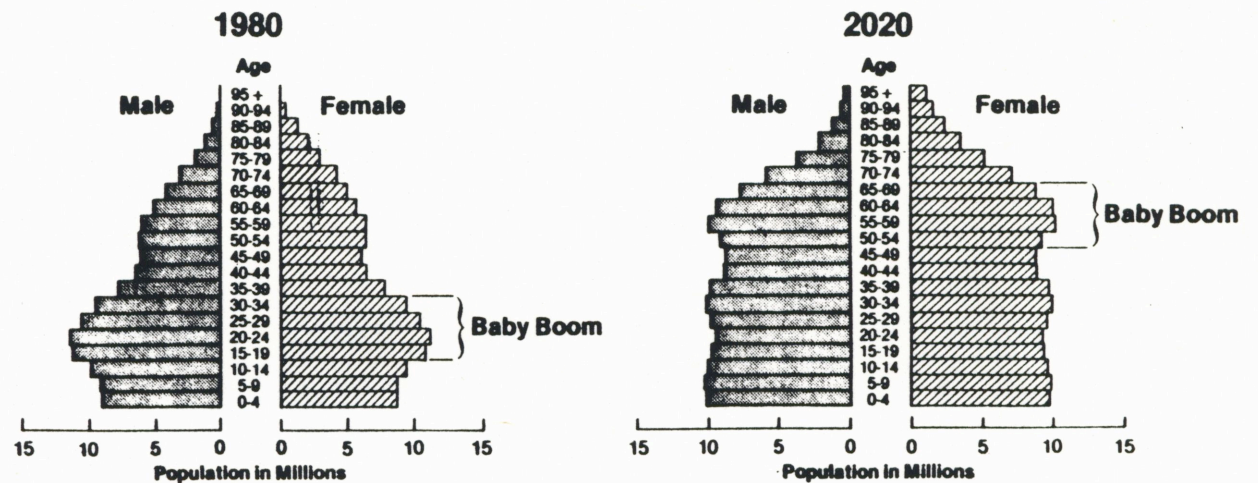
The following information is a series of graphs and diagrams that show future projections of the growth in the various age groups in the United States, and how this growth will affect and change the population distribution, dependency, and markets of the future.

A summary of this information shows that there is a very noticeable increase in the age of our population. This, in turn, creates an increase in dependents and marketing needs (housing included) for these older adults.



! Typical time periods in the family life cycle. Adapted from Handbook for the Home, U.S.D.A. Yearbook, 1973 (Washington, D.C.: U.S.G.P.O.), p. 7.

Age Distribution of the U.S. Population



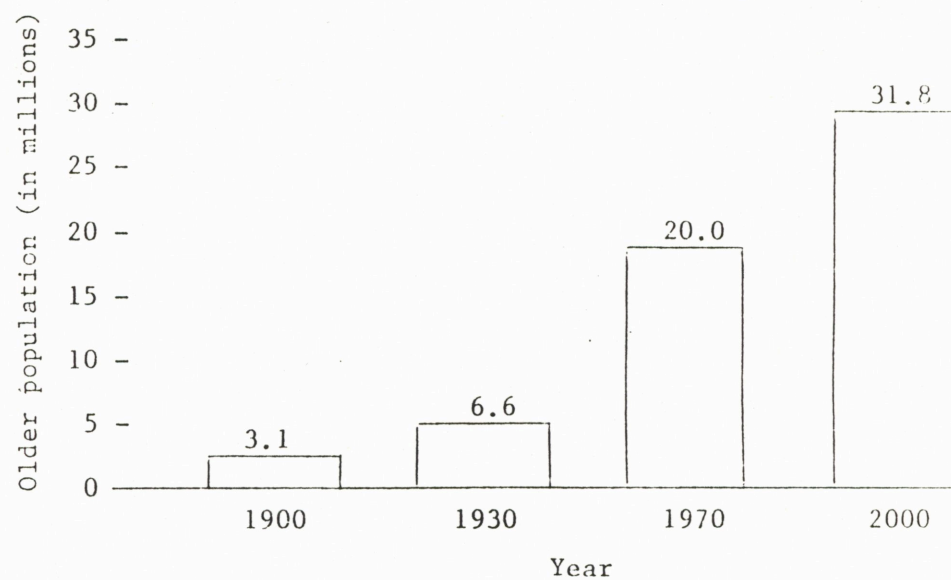
The size of the baby-boom generation in 1980, and the projected size in 2020, compared with the rest of the population. The ratio of working-age Americans to those 65+ will decline to 2:1 as baby-boom retirements increase, considerably under today's 3:1. (Source: The Social Security Administration)

Table 1. Life expectancy at birth in the United States, 1900-1976

Year	Life expectancy (in years)		
	Total population	Male population	Female population
1900	47.3	46.3	48.3
1910	50.0	48.4	51.8
1920	54.1	53.6	54.6
1930	59.7	58.1	61.6
1940	62.9	60.8	65.2
1950	68.2	65.6	71.1
1960	69.7	66.6	73.1
1970	70.9	67.1	74.8
1976	72.8	69.0	76.7
1983	74.3	70.3	78.3

SOURCE: U.S. Bureau of the Census, Statistical Abstract of the United States: 1978, U.S. Government Printing Office, Washington, D.C., 1978, p. 69; and National Center for Health Statistics, Vital Statistics of the United States, vol. 2, U.S. Government Printing Office, Washington, D.C. 1973.

Table 2. The growth of the older population in the twentieth century.



SOURCE: National Clearing House on Aging, Facts About Older Americans, 1978, U.S. Government Printing Office, Washington, D.C., 1979.

Younger and Older Dependents			
Year	Number under 18 per 100 aged 18-64	Number 65+ per 100 aged 18-64	Total
1930	58.9	9.1	68.0
1940	48.9	11.0	59.9
1950	51.0	13.4	64.4
1960	65.1	16.8	81.9
1970	61.4	17.7	79.1
1980	47.2	18.6	65.8
1990	43.5	20.0	63.5
2000	43.2	19.9	63.1
2010	39.2	20.2	59.4
2020	41.2	26.0	67.2
2030	42.0	31.8	73.8
2040	41.2	30.6	71.8
2050	41.7	30.2	71.9

Projections of the numbers of "dependents" in the U.S. population, young and old (derived from U.S. Census figures by Herman B. Brotman, a consulting gerontologist). The table shows that while the proportion of those over 65 will steadily increase, the relative numbers of those under 18 is generally decreasing. Thus, the total "burden" on the working-age population of both young and old would not be unreasonable. In fact, the proportion of dependents may have been higher in 1960 and 1970.

The Youth Market

Age Group	Number in 1990 (millions)	Percent Change 1980-1990	Number in 2000 (millions)	Percent Change 1990-2000
10-14	16.8	- 8.0%	19.5	16.4%
15-19	17.0	-19.7	19.0	11.8
20-24	18.6	-14.1	17.1	-7.8

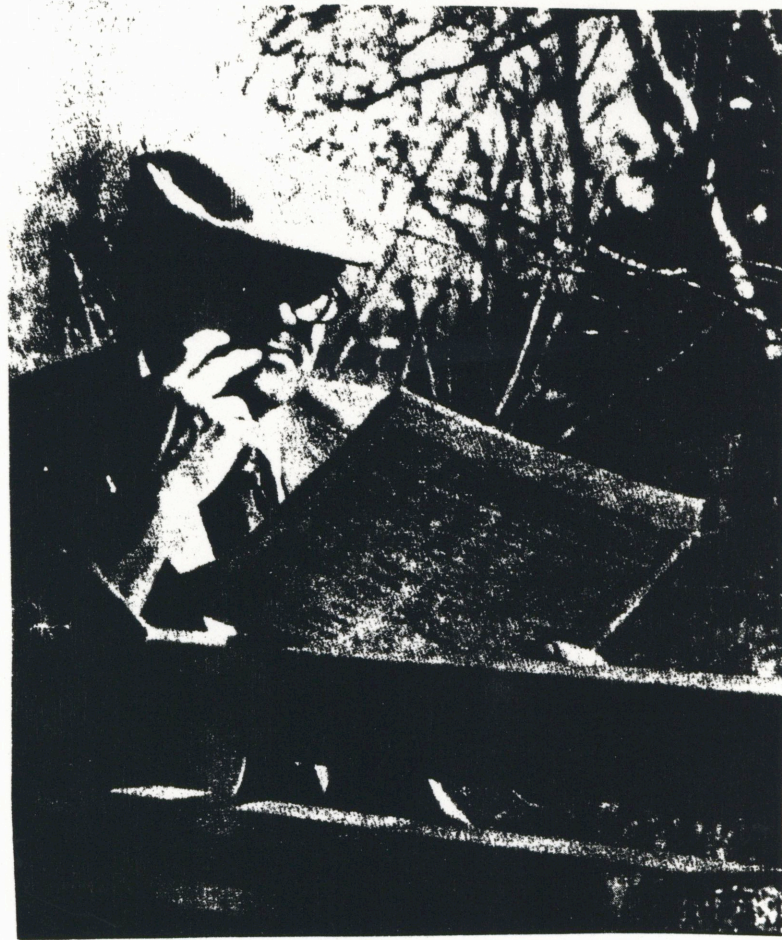
The Middle Market

Age Group	Number in 1990 (millions)	Percent Change 1980-1990	Number in 2000 (millions)	Percent Change 1990-2000
35-39	20.0	41.6%	21.7	8.7%
40-44	17.8	51.8	22.0	23.2
45-49	14.0	26.5	19.8	41.4

The Elderly Market

Age Group	Number in 1990 (millions)	Percent Change 1980-1990	Number in 2000 (millions)	Percent Change 1990-2000
55-59	10.5	-10.1%	13.3	27.1%
60-64	10.6	5.0	10.5	-1.4
65-69	10.0	13.6	9.1	-9.0
70-74	8.0	17.6	8.6	6.6
75-79	6.2	29.3	7.2	16.4
80-84	4.1	36.6	5.0	22.3
85+	3.5	52.2	5.1	48.4

Source: Census Bureau Projections, 1982



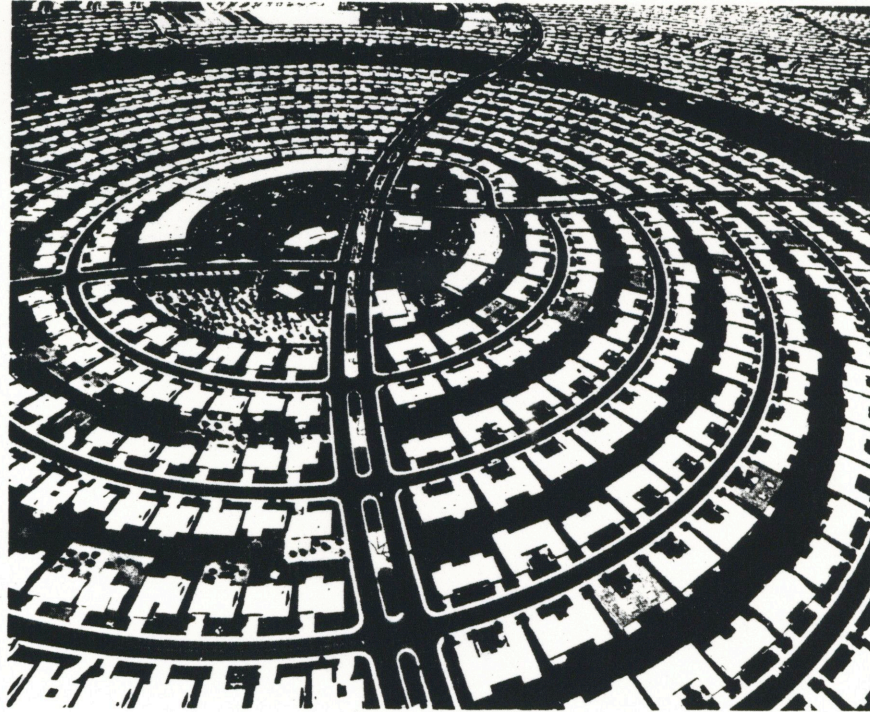
CHAPTER SIX

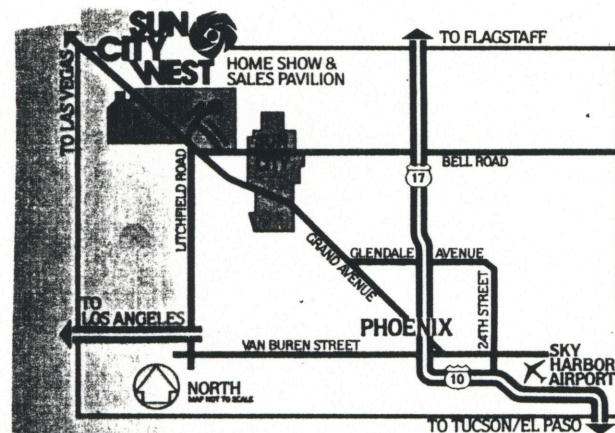
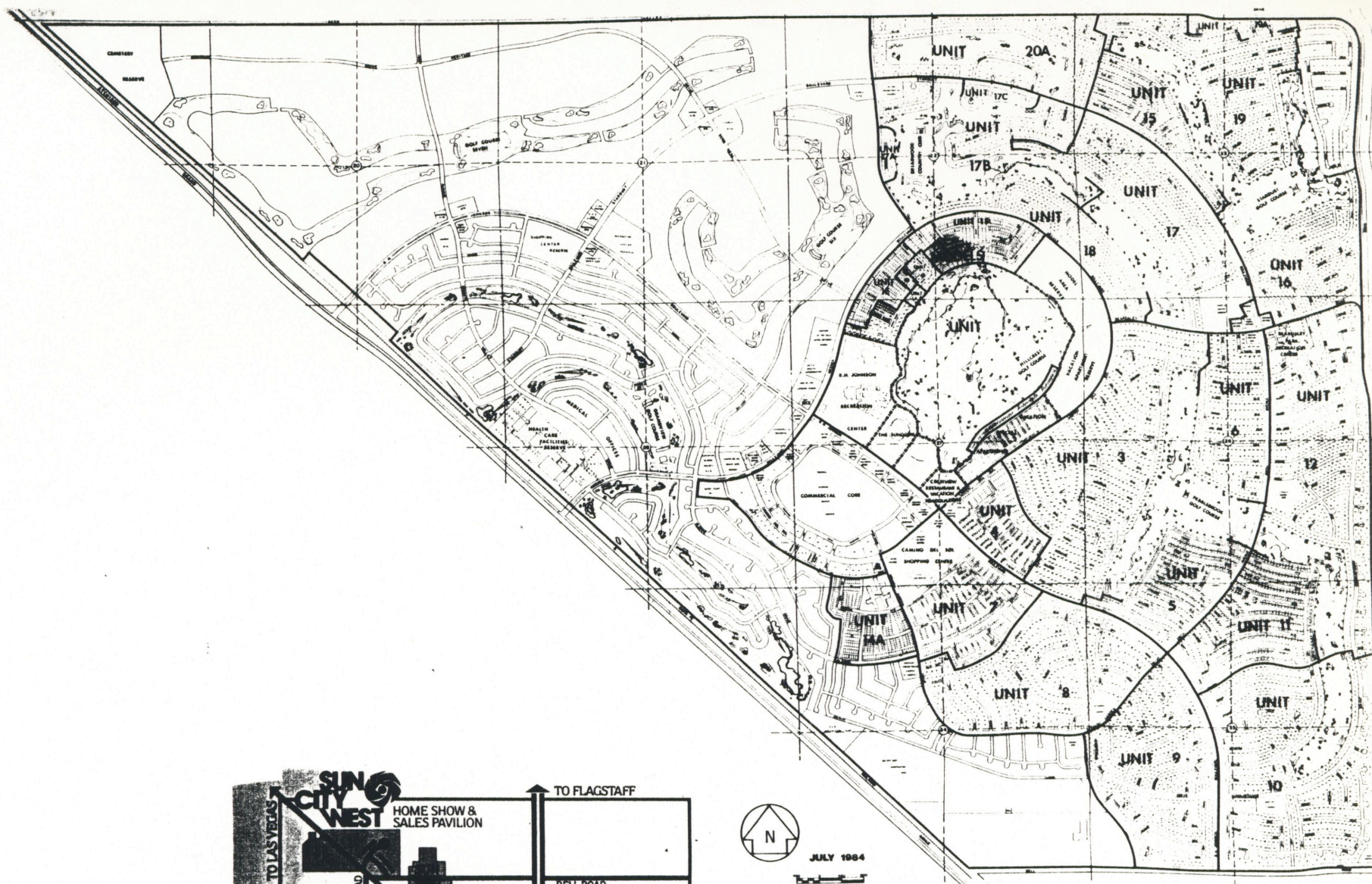
PRESECEDENTS

Many approaches have been taken for housing the aging, but few deal with the idea of transitional care for the elderly. The precedents listed below have been chosen in an attempt to learn about the types of housing available for the aging. Not all of them deal specifically with housing for the aging but many approach aspects such as climatological design and living arrangements of communities in an interesting and possibly applicable manner.

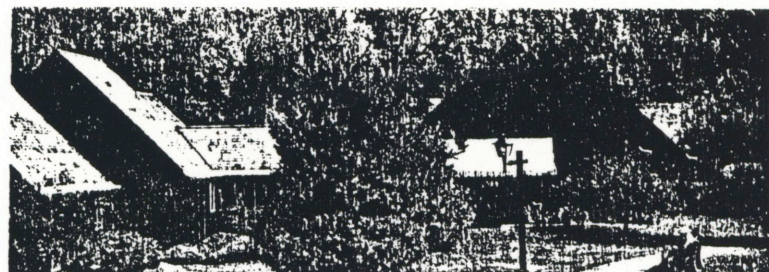
- Sun City, Arizona
- Sun City West, Arizona
- Mutual Help Model, Mutual Help for Community Elderly,
Missouri
- Concord Green Apartments, Massachussetts
- Noble Horizons, Connecticut
- Woodrun Place, Colorado
- The Fairway Condominiums, British Columbia
- Ghent Commons, Virginia
- Boca Del Mar, Florida
- Roosevelt Senior Citizens, New Jersey
- Guild House, Pennsylvania

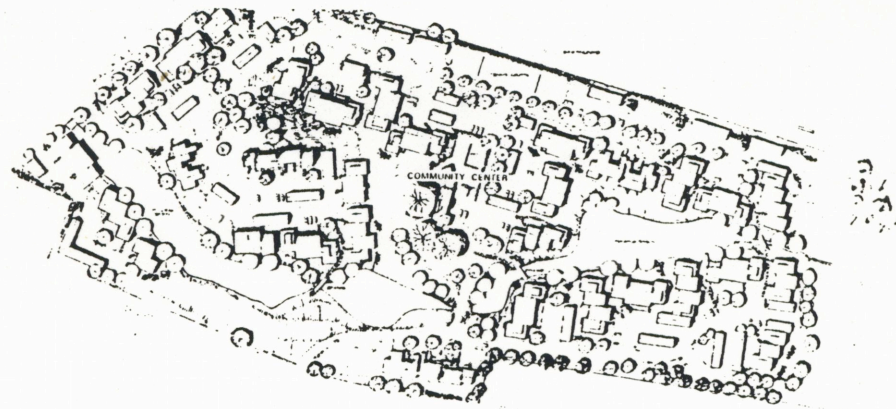
B. A resort retirement community centered around business and recreational areas, Sun City, Arizona. Courtesy of Del Webb Inc.



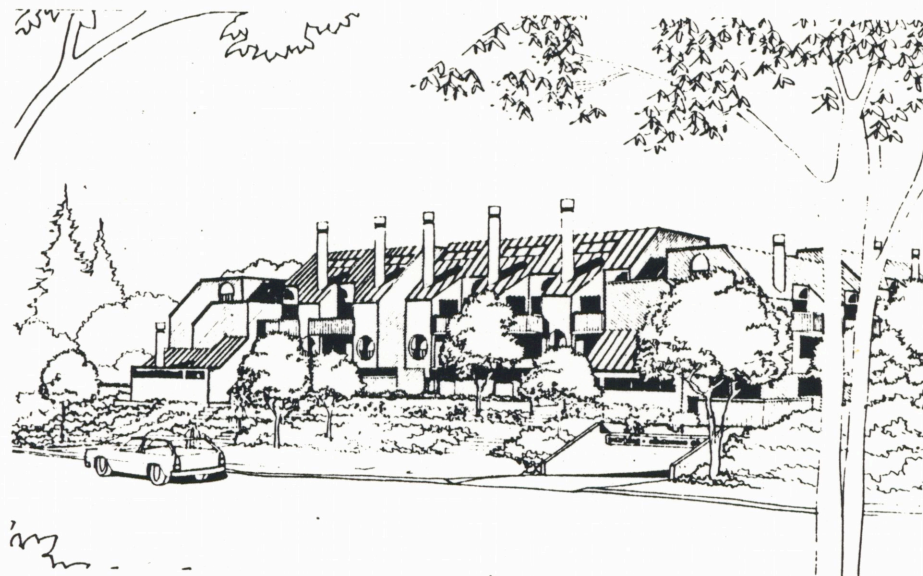


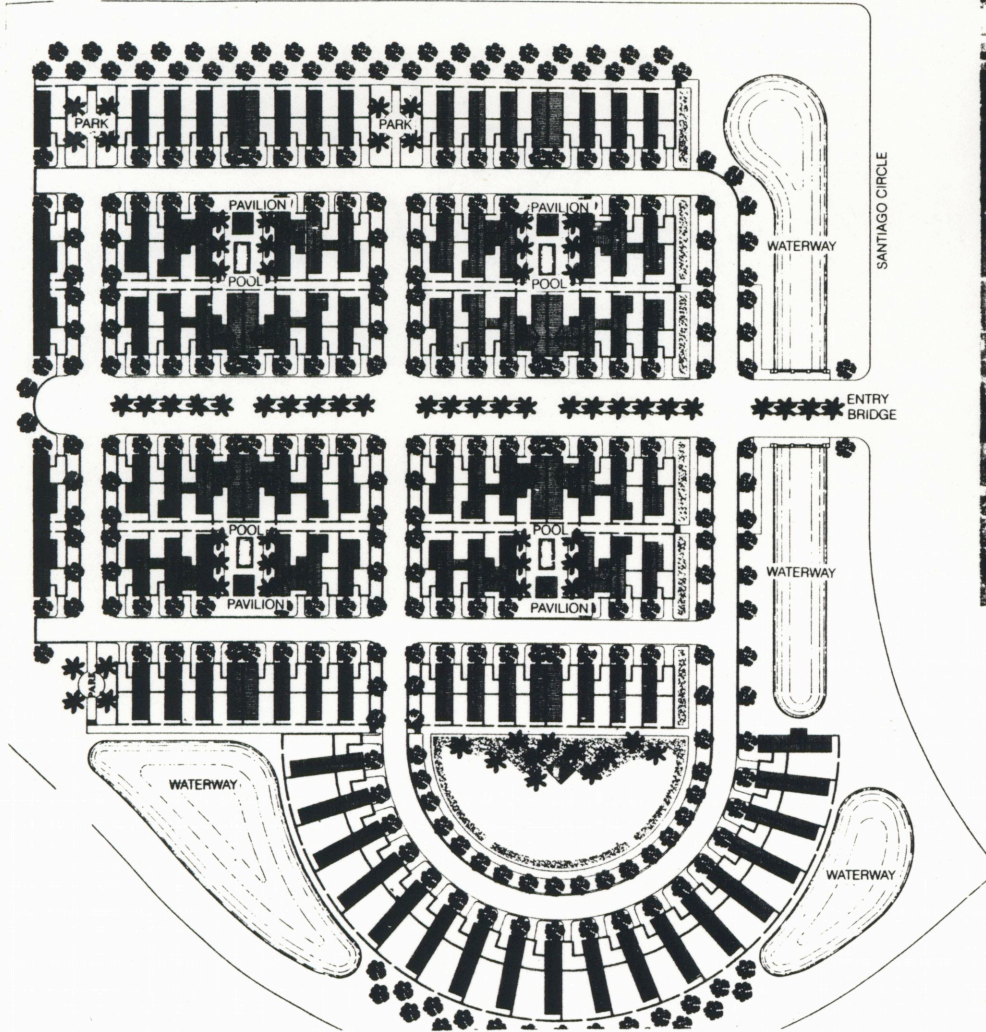
FROM I-17, WEST ON BELL ROAD 12½ MILES
TO R. H. JOHNSON BLVD. (JUST 2½ MILES
PAST DEL WEBB'S ORIGINAL SUN CITY.)

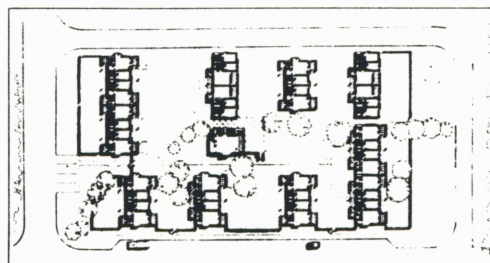




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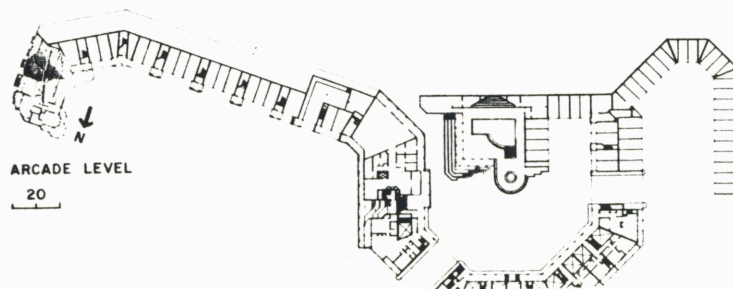




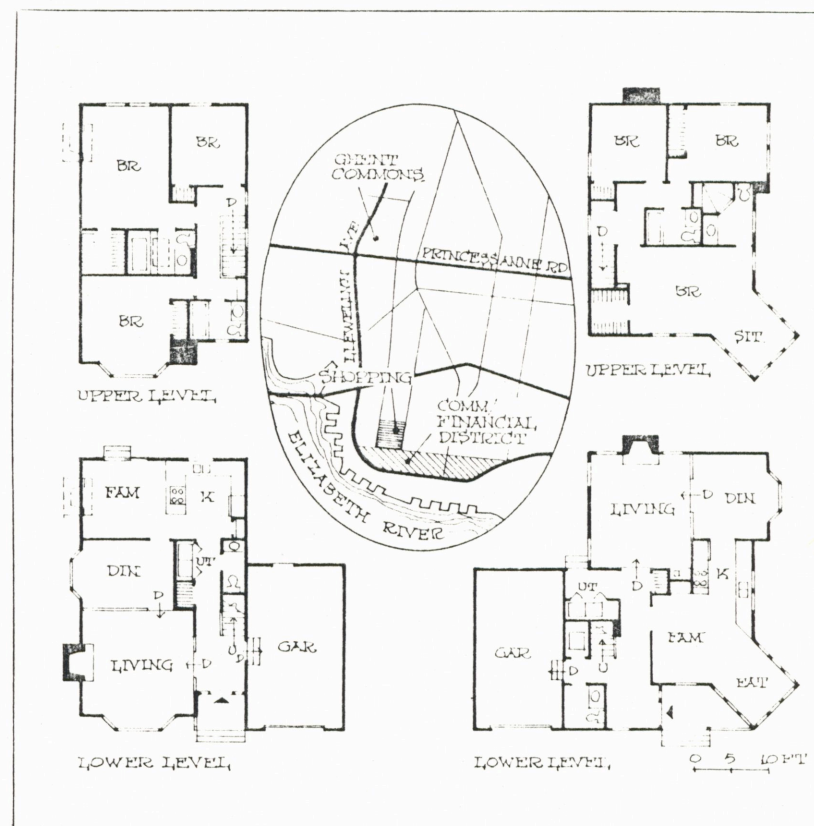
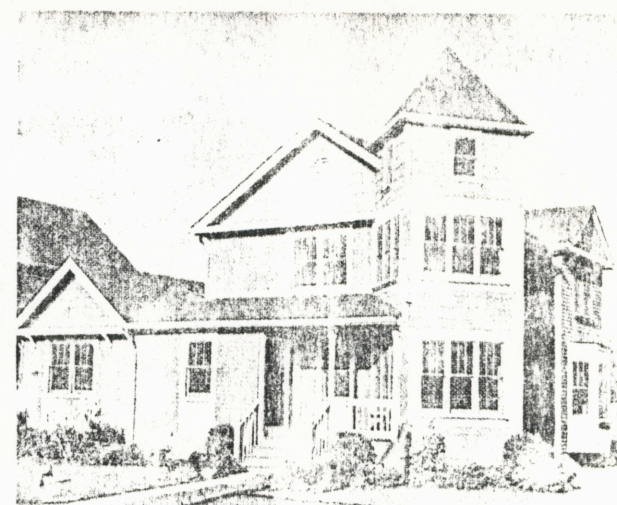
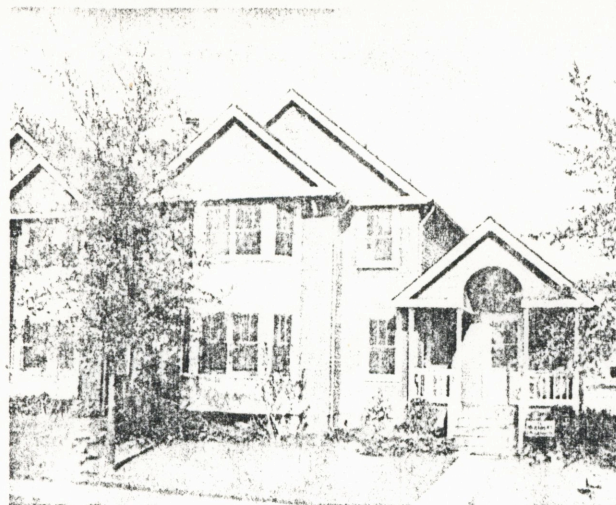


Photographs by O. Baatz, Inc.





ARCADE LEVEL
20





CHAPTER SEVEN

PROGRAM-FUNCTIONAL REQUIREMENTS SUMMARY

While making a list of the functional buildings this designer has determined necessary, a few of the alternatives were either tossed out or added at a later date.

The mix of multi-family and single family housing was one of the first things to change past conception of this idea. On the advise of my advisers and committee people, the overall density of the housing of this project was increased to that of suburban density or 4/units per acre. An increase of multi-family housing due to the desire of convenience and a simplified lifestyle made the overall housing density go to 5.1/units per acre. The location of this housing in a relatively ordered pattern was compatible to the radial organization of the site plan. This organization provides a formal ordering devise without an extremely rigid grid. This scheme also provides several different options for even single family residences. The location of the residences on the far side of Rock Creek provides increased security simply by the lack of ready accessability, and also increases the privacy level by providing a buffer through the trees and creek. Available square footage varies to also provide more options for the residents.

CRITICAL DISTANCES

An area considered important in the locational analysis of this type of facility (elderly housing) is an area that is found under "critical distances". Based on the ability and the frequency of use of various support services, critical distances have been established which define the maximum distance a person is willing to travel for a number of frequently used resources.

Table 5. Use of resources, travel time, and distance to resources, compiled from several studies

Resource	Median % using	Modal frequency use (users)	Modal frequency of use (all)	Modal travel time (users)	Modal use distance	Modal nearest distance
Grocery	87	2/week	1 or 2/week	7 min.	1-3 blocks	1-3 blocks
Physician	86	several/year	several/year	15 min.	20 blocks	4-10 blocks
Visit one or more children	98	1/week	1/week-never	20 min.	10 blocks	
Shopping other than grocery	70	1 or 2/month	never			
Church	67	1/week	1/week	12 min.	4-6 blocks	
Bank	64	1/month			4-6 blocks	4-10 blocks
Visit friends	61	2 or 3/week	never	7 min.	4-6 blocks	
Visit relatives other than children	57	several/year	never	35 min.		
Beauty/barber shop	40					1-3 blocks
Restaurant	31	several/year			20 blocks	1-3 blocks
Park	30				1-3 blocks	
Clubs, meetings	29	1/month	never	15 min.	20 blocks	
Entertainment	19	1/month	never	15 min.	20 blocks	11 blocks
Library	18					11 blocks

Source: Bourg (1975), Cantor (1975), Carp (1974, 1975c), Lawton and Nahemow (1975) and Nahemow and Kogan (1971).



PIECES OF THE PUZZLE-SITE ORGANIZATION

The following section of the book will offer spacial requirements and explanations of the elements of the spaces, buildings, and/or facilities that are all parts of the whole community. What that section does not explain is how these pieces are organized.

Some of the organization options explored in Thesis I were: grid, colliding grid, superblock, linear (grid), radial, and organic. These plans are shown visually under the Thesis I section. The biggest problem with all of them was the lack of consideration for some of the more important organic elements of the site-the stream, and the trees. It was suggested that a re-examination of these features be considered. Since the site vegetation plays a large part in the aesthetic value of the community, and the stream is an integral part of the unique sense of identity with this project, it was decided that they both should play a more important role in site planning.

What evolved still ended up being a formal organization that was centered around two separate cores connected both visually and physically. The plan is radial in form, and incorporates the idea of superblocks into the housing layouts. The housing is organized with the density increasing towards the commercial district. This commercial core and housing is placed across the stream, therefore making it more unaccessable primarily through distances. A public interface core is placed on the northern side of the stream, nearest Highway 12, making this area easily accessible to the people who will be sharing building use with the community's residents. By connecting these two cores both physically and visually, a sense of orientation and connections is found, while the visual and physical barrier of the stream sets up the needed mental image of privacy. Any of the bridges used could be closed off if the residents found it necessary at a later date. The public is invited in to the southern core as visitors, but in general only residents and their guests would have access and use of the facilities provided here, exceptions such as emergencies withstanding.

This scheme of a formal radial layout complements the urge for organization in living styles by aging people, yet still allows a freedom from typical "corridors" found in the well known street grid organization. This radial is small enough that confusion due to things looking alike shouldn't be a valid complaint. Because of the two primary cores being linked both by visual and physical accesses, a distinct sense of location and orientation should be present at all times.

The two endpoints of this visual/physical connection are two buildings that have similar functions, but a difference in the level of privacy. In the northern core we have the endpoint of the Civic Center. This is a public gathering space, and is the central space of community social civic activities. In the southern core, the endpoint of this axis is the Church. This is also a public gathering space, and is the central place of community religious civic activities. Because the idea of religion being a personal relationship with a higher Being, as well as the sense of sharing fellowship, it was felt that the Church would provide a complementary endpoint to that of the more public fellowship and functions of the Civic Center. These endpoints also provide a sense of visual and mental orientation.

This radial scheme provides adequate room for expansion of housing, commercial, and recreational facilities. It also provides a formal geometry that is fun for the designer to work within, while trying to make the overall feeling not one of rigidity, but more casual or relaxed as assumed by the overall concept of "retirement community".

In conclusion, it is felt that although this organization may not appeal to every designer, there has been sound reasoning used in thinking out this plan. By using a formal geometry some of the possibilities allowed in more organic schemes are limited, but the overall concept still allows for the special senses of identity, place, and most importantly, individuality, to emerge for the Mont Aqua Community.

PIECES OF THE PUZZLE-SPACIAL REQUIREMENTS

RESIDENCES - 500 Residents

- Housing Units-approximate density (total) 5.1 units/acre
- 75 Single Family Residences-1/5-1 1/2 acre sites, located near the "edges" of the community, approx. 35 acres.
- 180-200 Multi-Family Residential Units-broken into housing housing types such as apartment(4-story) buildings, town houses, and duplexes, located near the "middle" of the community, approx. 15 acres.

50 acres - Housing
15-20 acres - Open space
10-15 acres - Parking

75-85 acres - Total

The duplexes, townhouses, and apartments will have two ownership options. They are: a) that of owning the duplex, townhouse, or apartment, and b) that of a time-share situation with a retirement community in Arizona or other region. If there are not enough interested parties in a time-share program, then the corporation would retain the other 3 or 6-month "ownership", and rent or lease the residential unit to interested vacationers, or to small convention groups.

The administration of the Montaquaa Adult Community is based on a corporation. The corporation would own the entire Montaquaa site. When buying into the community, the client is buying into the corporation. Although the client has the two ownership options available as far as the residential units are concerned, this covers only the residence itself. The corporation retains ownership of the land. Service options such as maid and yard care will vary with the individual's choice. The single family residences are basically "self-care" packages. The yard care services are available for a fee above and beyond the original cost of the residence. In the duplex units there are two arrangements to choose from at the outset- a) self-care and, b) MAC corporation care. In the case where two different packages are arranged in the same duplex, a combination would be used. Usually this will be hopefully avoided, but this isn't always possible, especially considering the changing health of the residents.

The townhouses and apartment buildings will come with the MAC corporation care package. If a resident desires, special areas will be set up both indoors and outdoors for gardening activities

If the client changes his/her mind during their stay at Montaquá, the service will added or subtracted, and the charge adjusted subsequently.

The maid service is optional for all residents. This service would be provided using a "pool" of employees that are available on a 2-3-day advance notice for regular or irregular cleaning arrangements.

RECREATION CENTER

-Multipurpose gymnasium.....	7500 s.f.
-(2)Raquetball courts.....	1200 s.f.
-Pool/Sauna/Jacuzzi.....	2500 s.f.
-Weightroom.....	1300 s.f.
-Bowling Alleys(3-4).....	1500 s.f.
-Card Room.....	250 s.f.
-Craft Room.....	250 s.f.
-Pool/Billiards.....	250 s.f.
-Meeting Room.....	250 s.f.
-Equipment storage/Rental.....	500 s.f.
-Lockers/Showers.....	1000 s.f.
-Storage.....	500 s.f.
-Service.....	250 s.f.
-Circulation.....	5750 s.f.

-Total.....	25,000 s.f.

The Recreation Center is the main indoor activity facility for the Montauqua Adult Community. Residents have an automatic pass for the facility, and guest and visitor passes will be available.

HEALTH CARE CENTER

-Reception.....	250 s.f.
-Nurses station.....	400 s.f.
-Doctor's office.....	200 s.f.
-Exam rooms (2).....	400 s.f.
-X-ray/Research.....	500 s.f.
-Patient rooms (10).....	2000 s.f.
-Dental reception.....	250 s.f.
-Dentist's office.....	200 s.f.
-Exam rooms (2).....	400 s.f.
-Services.....	250 s.f.
-Storage.....	500 s.f.
-Kitchen.....	500 s.f.
-Dining.....	500 s.f.
-Waiting/Lounge.....	500 s.f.
-Maid/Linen.....	250 s.f.
-Circulation.....	1900 s.f.

-Total.....	9000 s.f.

The Health Care Facility is a small center for short-term and emergency care. A doctor will be available for appointments from 8:00-5:00, Monday through Friday. All other times there will be a physician on call. The emergency service is a 24-hour, 365-day situation.

This facility could house up to 20 patients at one time, if necessary, but is intended for immediate emergency care and short term illness- colds, flu, etc., only. One of the major advantages to the location near Billings is the availability of some of the most advanced health care specialists in the Northwest region. There is a HELP helicopter available for situations requiring the utmost urgency.

The attending physicians could easily be semi-retired, and living in the Montaquia Adult Community, or any other of a number of possibilities, such as being hired, or volunteered from one of the surrounding communities.

Patients needing constant care would need to hire a skilled nursing professional if it was for longer than a short-term illness. This would have to be worked out with each individual situation, but the understanding would have to be made clear that the MAC does not have the facilities for extended long term constant care.

MINI-MARKET

-Grocery.....	20,000 s.f.
-Drug/Dry Good.....	10,000 s.f.
-Fastbank autotellers(3).....	900 s.f.
-Postal Service.....	900 s.f.
-Beauty/Barber shop.....	900 s.f.
-Bakery.....	900 s.f.
-Dry cleaners.....	900 s.f.
-Transportation services.....	600 s.f.
-Service.....	300 s.f.
-Circulation.....	6600 s.f.
-Total.....	42,000 s.f.

This retail facility for Montagua should enable the residents have all their retail goods readily available and nearby. Guest and visitors may also use the service, but outside of these groups, the general public will not be invited to use this facility.

The transportation services are of major importance in that residents would not have to use their own vehicles. Small buses and vans would run on a schedule daily to Laurel and Billings in the northeast, and to Red Lodge to the southwest. This transportation service could eventually be integrated into a larger network due to the growing population of the outer areas around Billings and Laurel.

CHAPEL

Chapel.....6000 s.f.

The Montaquia Chapel is a facility that will provide a non-denominational religious space for the residents of MAC. Area ministers, pastors, priests will be invited in to provide services on a weekly rotating basis. Another option would be to utilize the services of a MAC resident if one would be interested. The MAC would then reimburse him as an employee.

ADMINISTRATION CENTER

-Reception/Lobby/Waiting.....	500 s.f.
-Offices (5).....	1000 s.f.
Administrator	
Assistant Administrator	
Manager (residential)	
Manager (public interface)	
Security	
-Accounting	250 s.f.
-Chaplain.....	250 s.f.
-Conference rooms (2).....	500 s.f.
-Services.....	250 s.f.
-Maid and Janitorial.....	500 s.f.
-Storage.....	250 s.f.
-Circulation.....	1000 s.f.

-Total.....	4500 s.f.

The Administration Center building is one of four buildings to be located on the north side of Rock Creek on the site. In addition to housing administrative functions, it also serves as the administrative hub of the public interface functions and the Montaquá Adult Community, and the surrounding communities. It will be the first stop for visitors and guests to pick up information for all activities.

CIVIC CENTER

-Theatre.....	40,000 s.f.
-Library.....	1000 s.f.
-Gallery.....	1000 s.f.
-Box office.....	250 s.f.
-Meeting rooms (2).....	1000 s.f.
-Storage.....	1000 s.f.
-Service.....	1000 s.f.
-Kitchen/Cafeteria.....	2500 s.f.
-Coffeeshop/Lounge.....	500 s.f.
-Circulation.....	11,750 s.f.

-Total.....	60,000 s.f.

The Civic Center is also one of the four buildings that is located on the northern side of the site. This building will house a theatre, gallery, library, and meeting rooms and will be able to serve the Montaquá residents, as well as the surrounding communities that are not large enough to afford a center of this type at each. The cafeteria and coffee shop will provide an eating alternative to MAC residents, other than the more formal restaurant at the Montaquá Inn. This Municipal Center will function as the main public interface between the surrounding communities and the Montaquá residents.

MONTAQUA INN

Reception/Lobby.....	500 s.f.
Cloakroom.....	150 s.f.
Restrooms and ladies lounge.....	350 s.f.
Guest rooms.....	
10 Singles.....	3000 s.f.
15 Doubles.....	6000 s.f.
Restaurant.....	2500 s.f.
Kitchen/ Food storage.....	1500 s.f.
Lounge.....	1500 s.f.
Gift shop/Retail.....	500 s.f.
Service/Storage.....	1000 s.f.
Pool/Sauna/Jacuzzi/Changing.....	1500 s.f.
Game room.....	250 s.f.
Maid/Janitorial.....	250 s.f.
Employee Lounge.....	250 s.f.
Circulation.....	6750 s.f.

-Total.....	30,000 s.f.

Montaqua Inn is the third facility to be located on the north side of the creek. This building has the potential to provide a link between the old Montaqua resort and the new facility, even if the link is only visual. The Inn would be the main interface between traveling and visiting public, family members, and the MAC residents. It provides a solutions to the problems involved with housing guests, and gives them, the surrounding communities, and the MAC residents a dining option.

CLUBHOUSE

Lockers/Changing rooms.....	500 s.f.
Equipment storage/Rental.....	1000 s.f.
Service.....	500 s.f.

Total.....	2000 s.f

The Clubhouse is the fourth of four buildings to be located on the northern side of the Montaquia site. The main function of this building is to provide a storage and changing place for some of the outdoor activities. These activities will be: tennis, horseshoes, lawn bowling, croquet, and a driving range. A golf course will not be considered at this time due to the location of the MAC. There are several surrounding area golf courses in Red Lodge, Laurel and Billings. If a general consensus by the corporation dictates a change at a later date, additional land could be purchased and developed into a golf course facility.

PARKING REQUIREMENTS

Recreation Center.....	40,000 s.f.
(100)	
Health Care Center.....	10,000 s.f.
(25)	
Mini-Market.....	40,000 s.f.
(100)	
SUB-TOTAL.....	90,000 s.f.

2.07 Acres

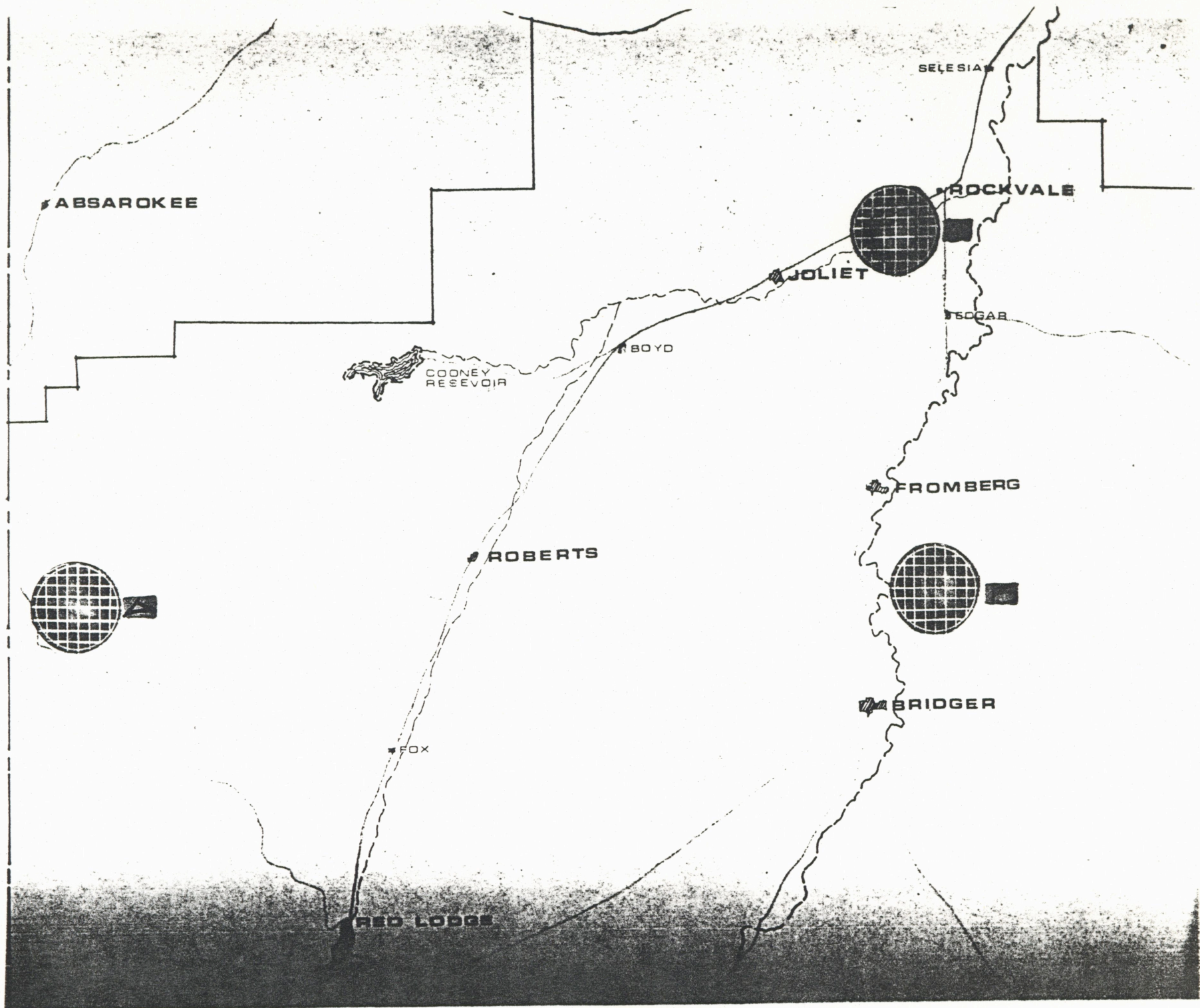
Administration.....	10,000 s.f.
(25)	
Civic Center.....	100,000 s.f.
(250)	
Mont Aqua Inn.....	20,000 s.f.
(50)	
Clubhouse.....	10,000 s.f.
(25)	
SUB-TOTAL.....	140,000 s.f.

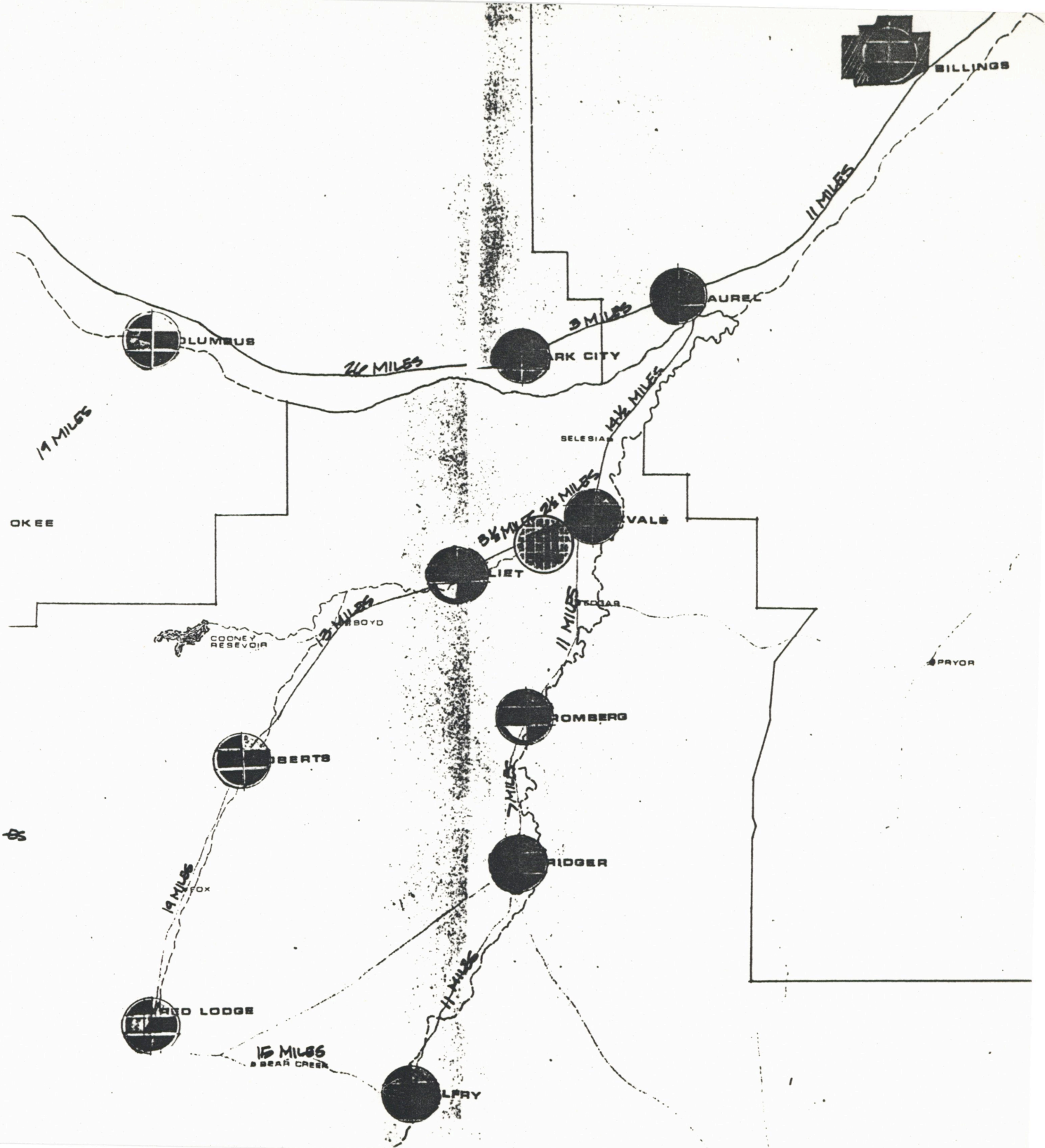
3.22 Acres

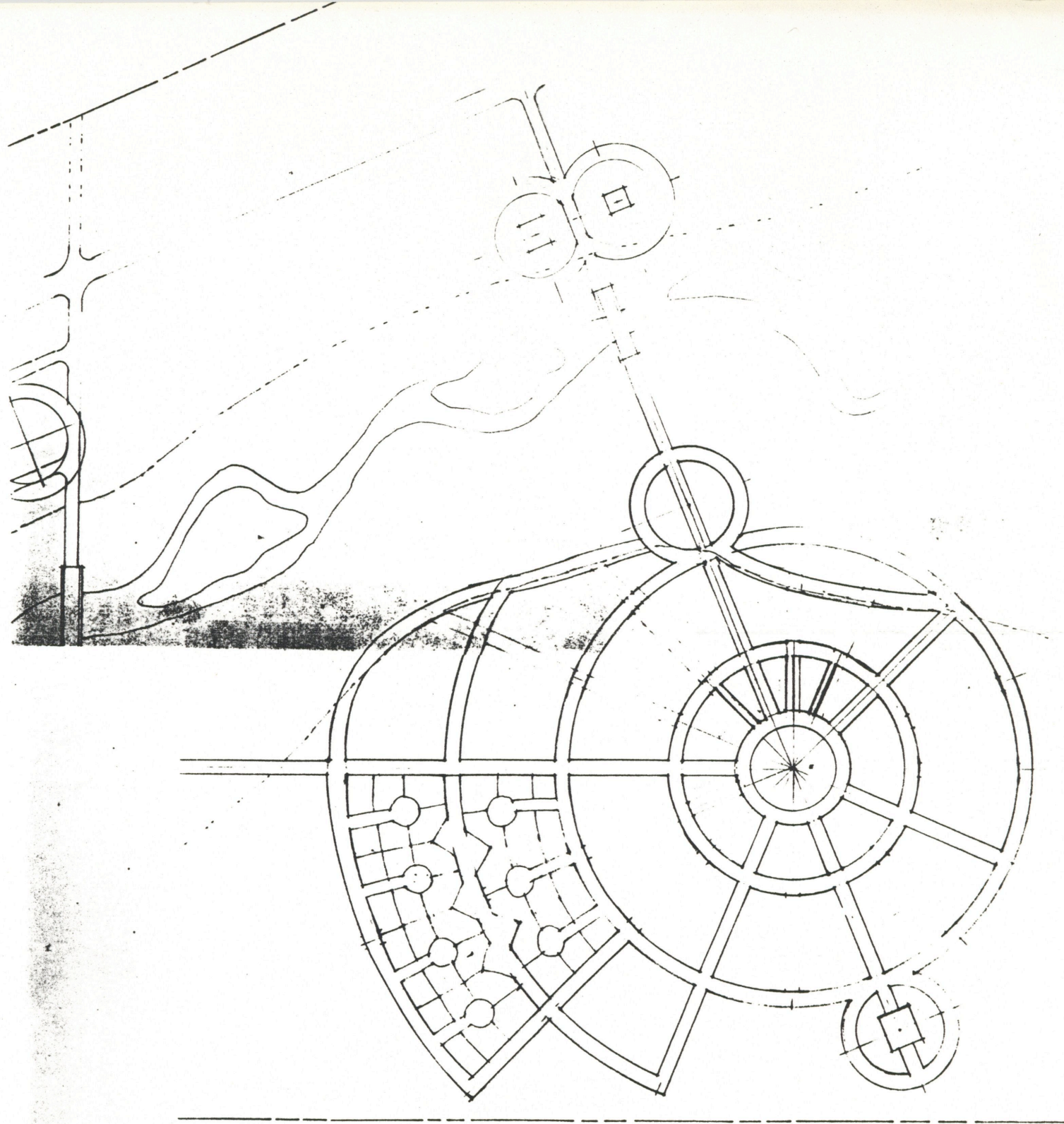
TOTAL.....	230,000 s.f.
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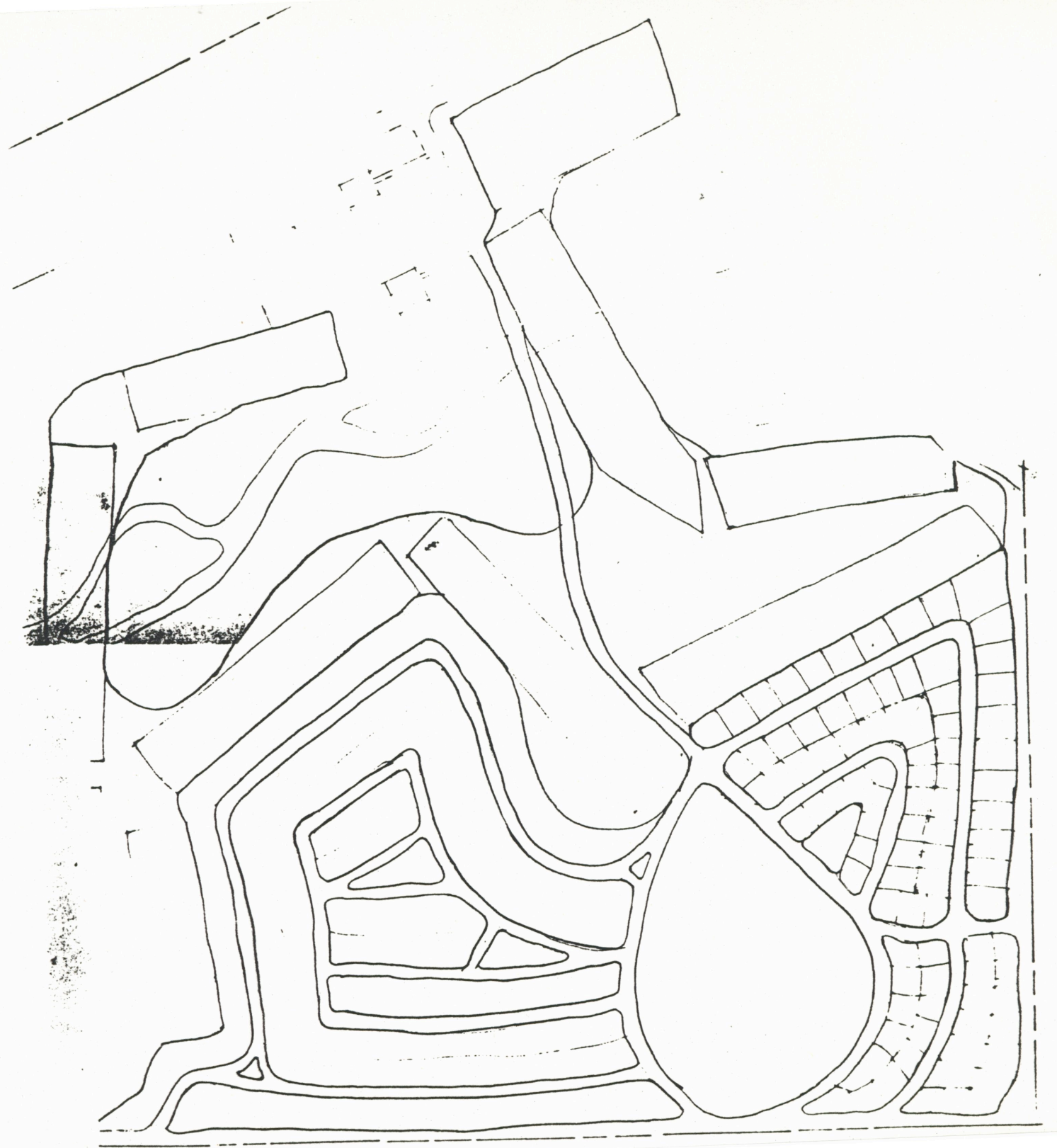
5.29 Acres

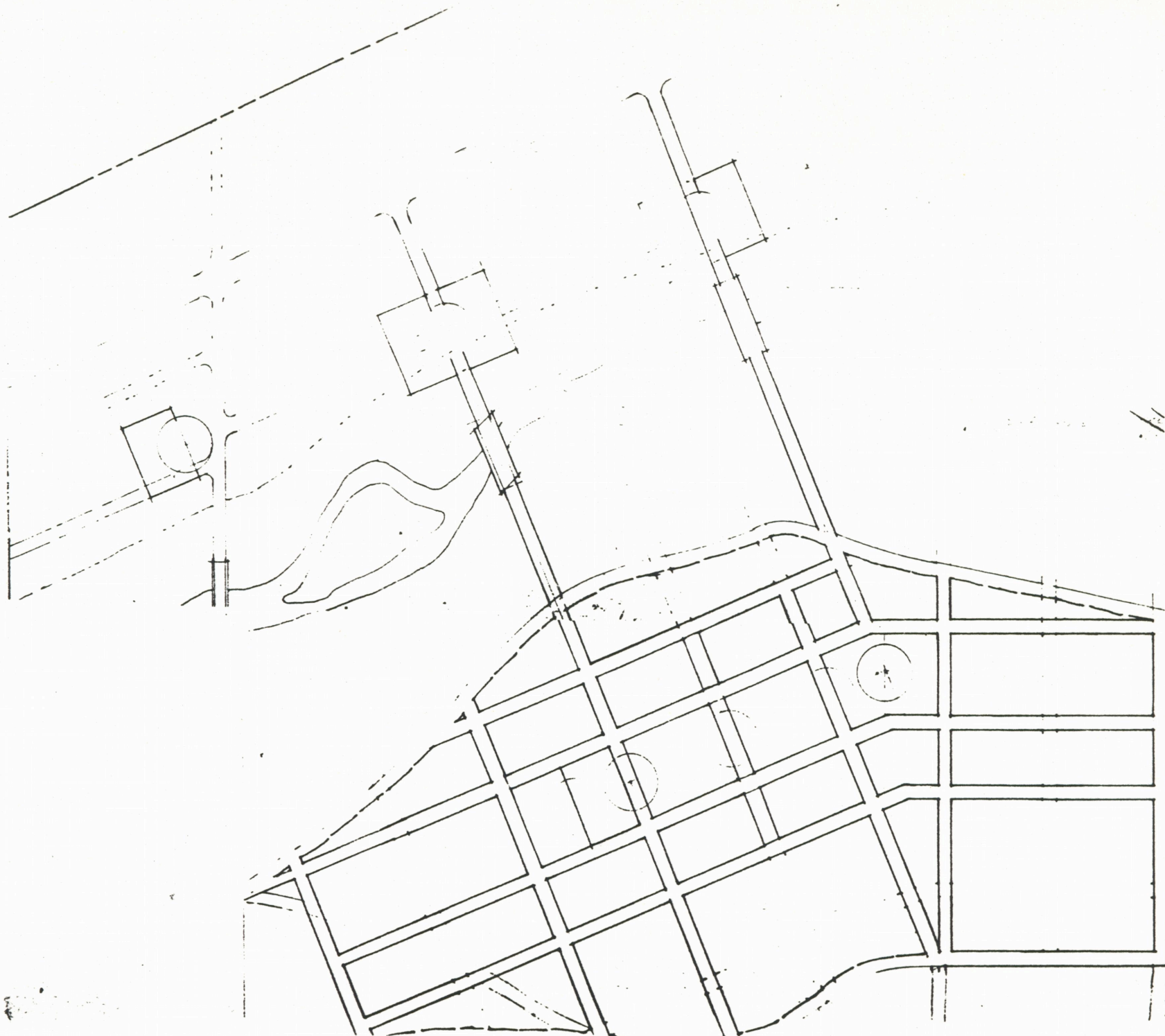
CHAPTER EIGHT

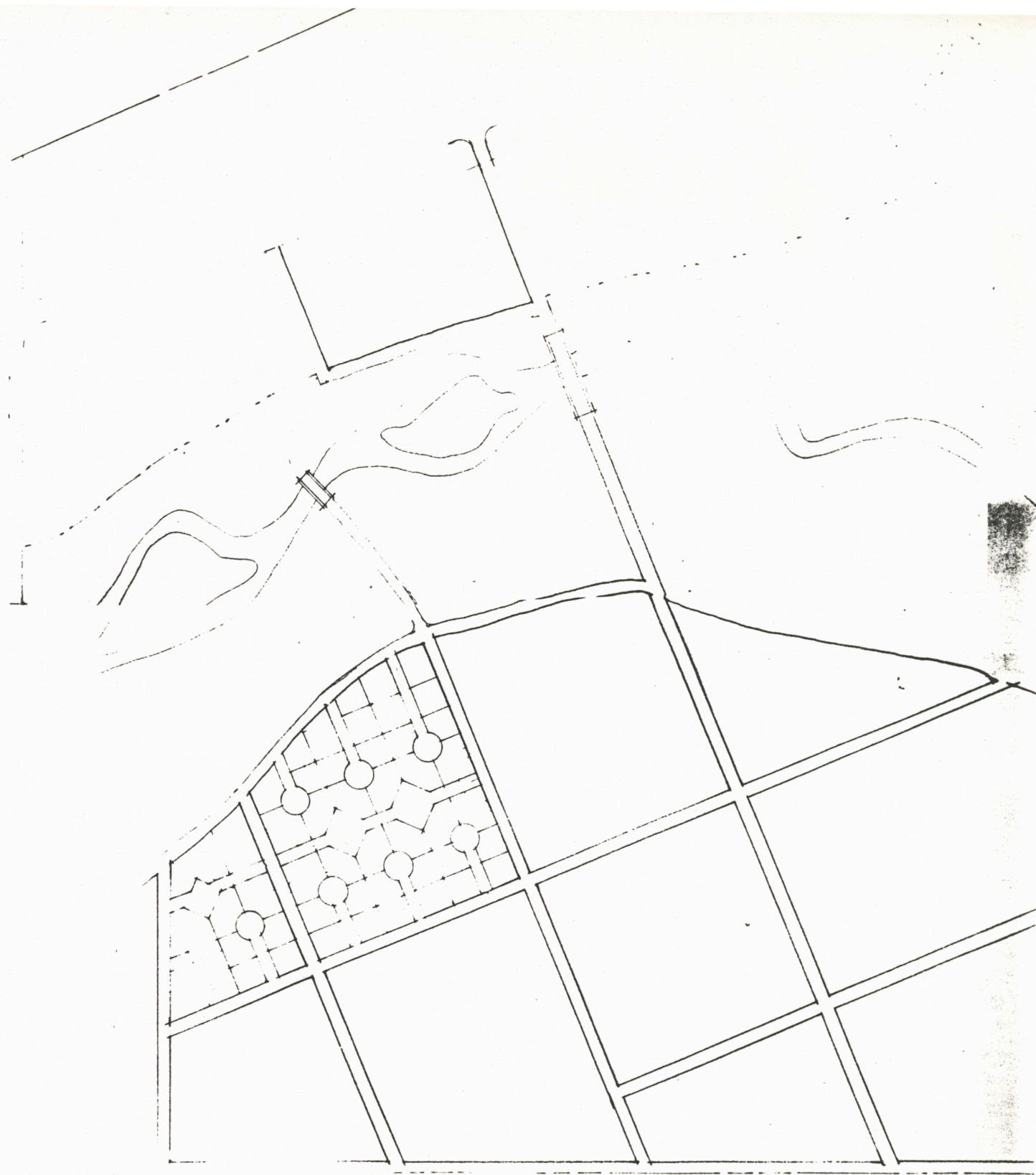








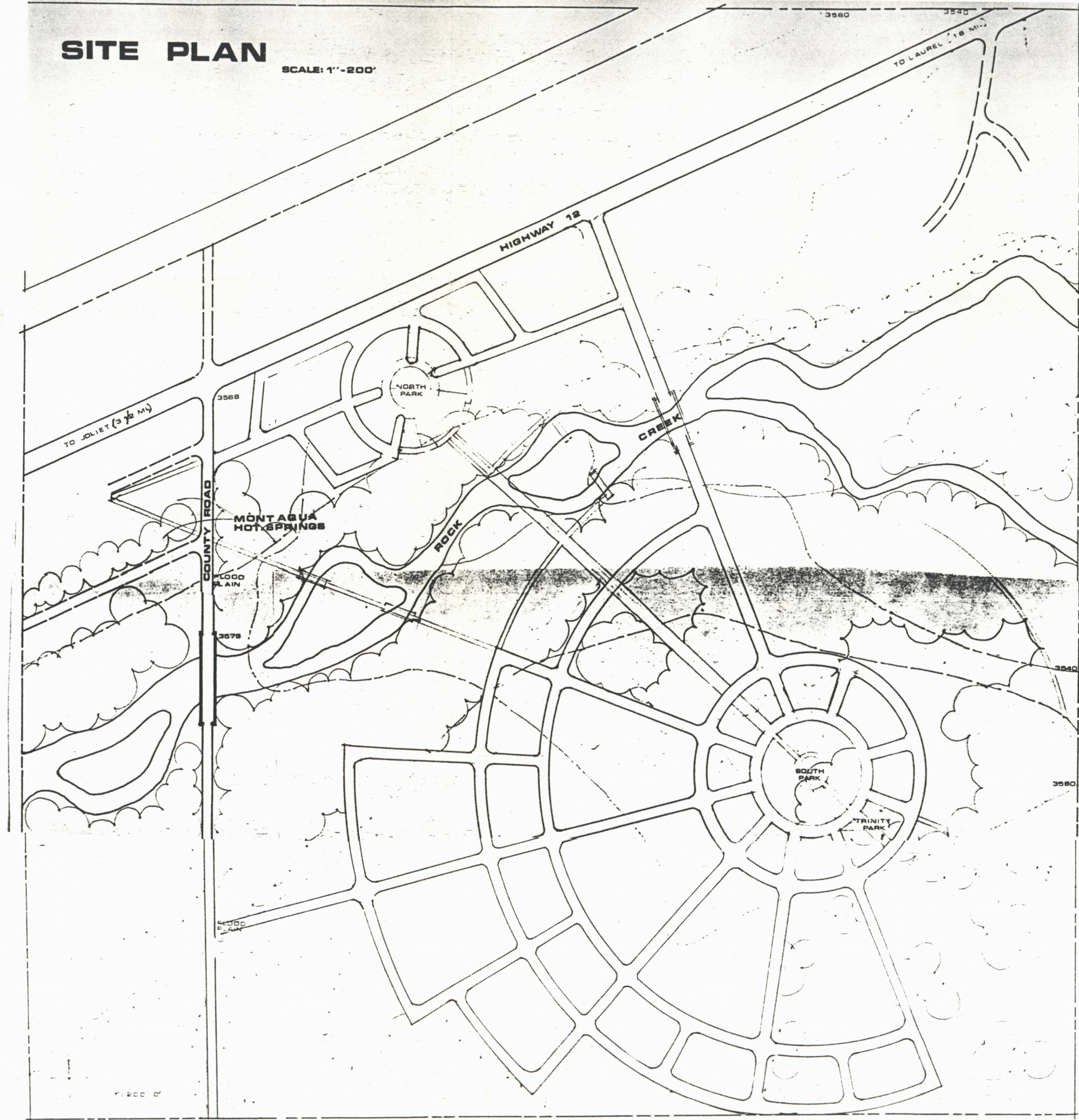




CHAPTER NINE

SITE PLAN

SCALE: 1" = 200'



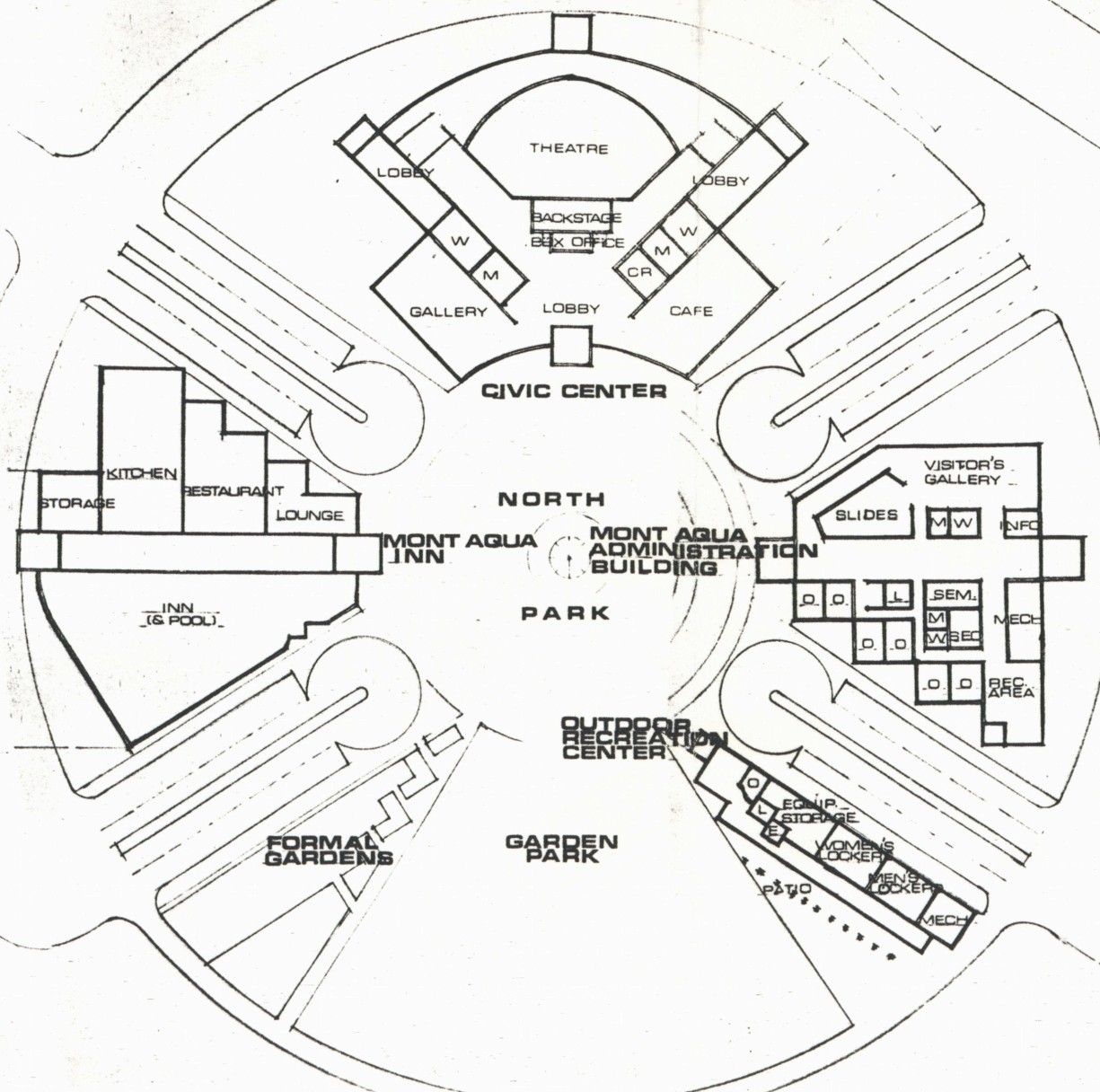
FLOOR PLANS

SCALE: 1" = 50'

CIVIC CENTER
PARKING

HIGHWAY 12

INN
PARKING

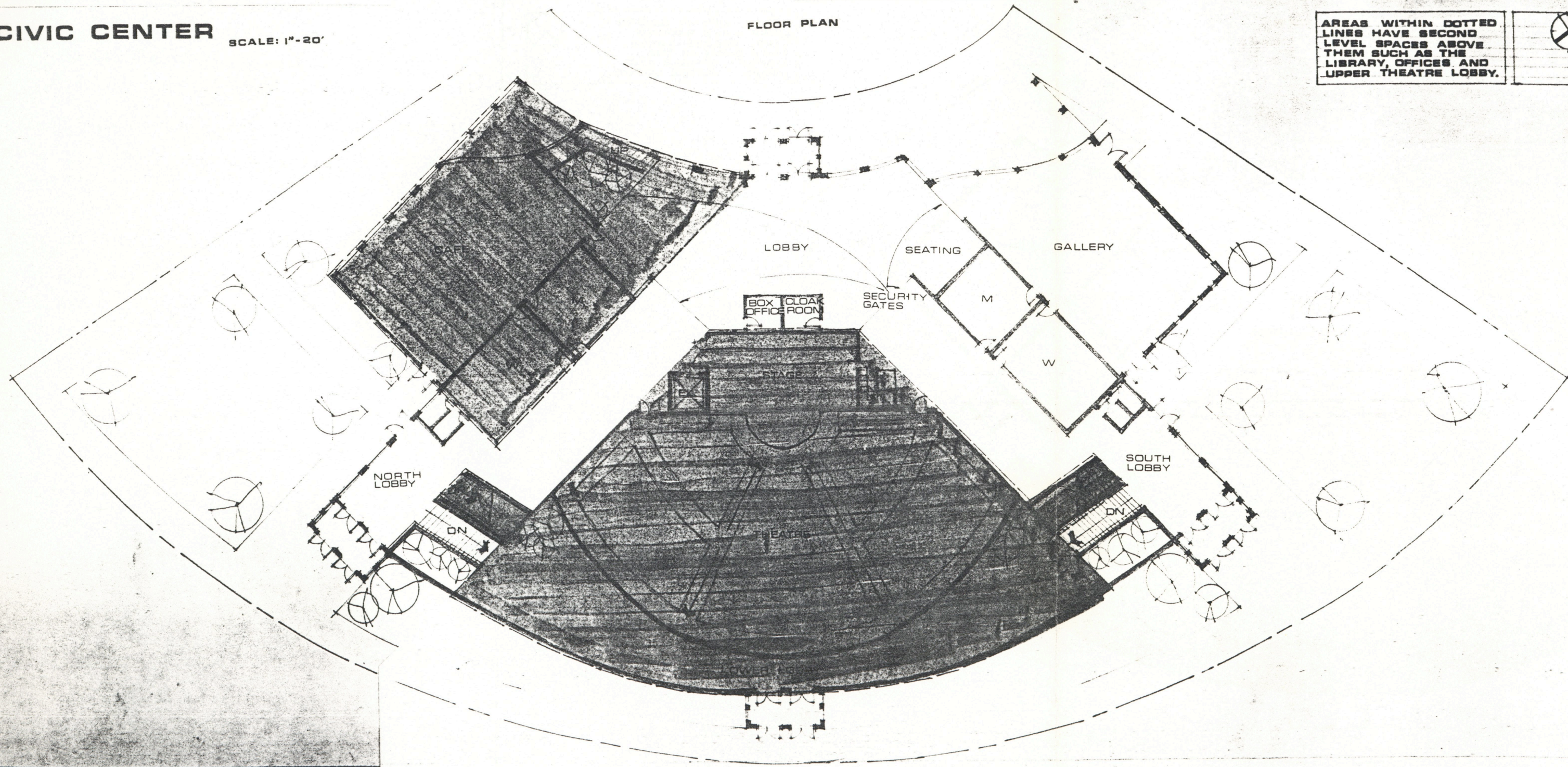


CIVIC CENTER

SCALE: 1"=20'

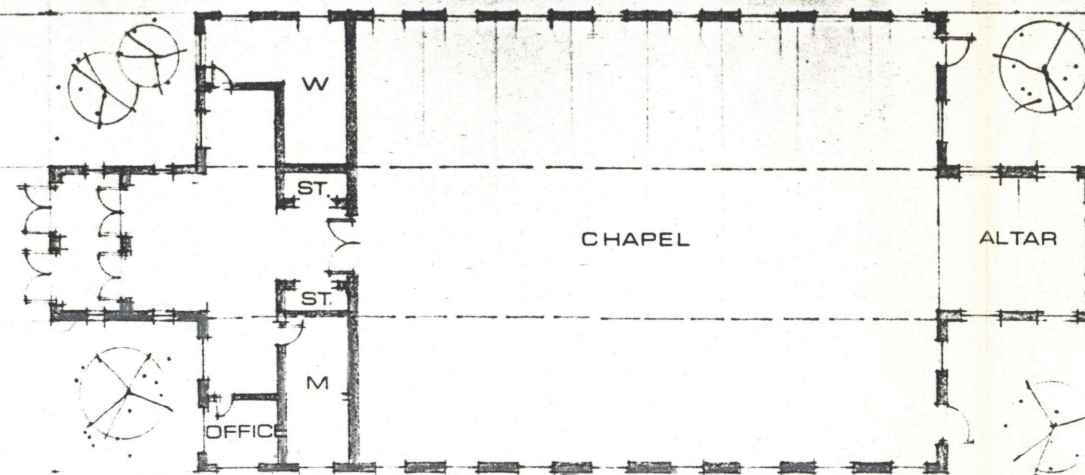
FLOOR PLAN

AREAS WITHIN DOTTED
LINES HAVE SECOND
LEVEL SPACES ABOVE
THEM SUCH AS THE
LIBRARY, OFFICES AND
UPPER THEATRE LOBBY.

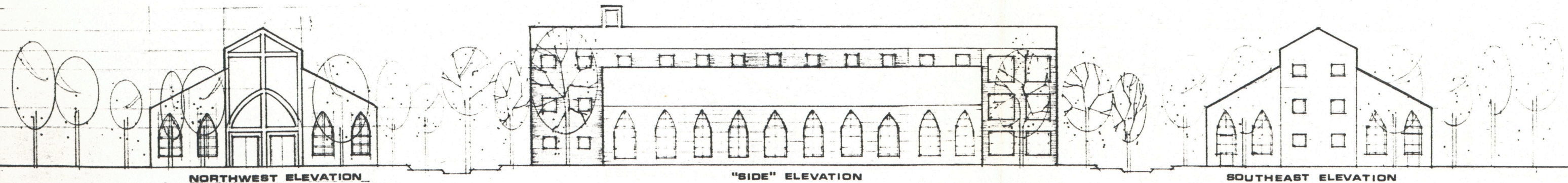


CHURCH

SCALE: 1" = 20'



FLOOR PLAN



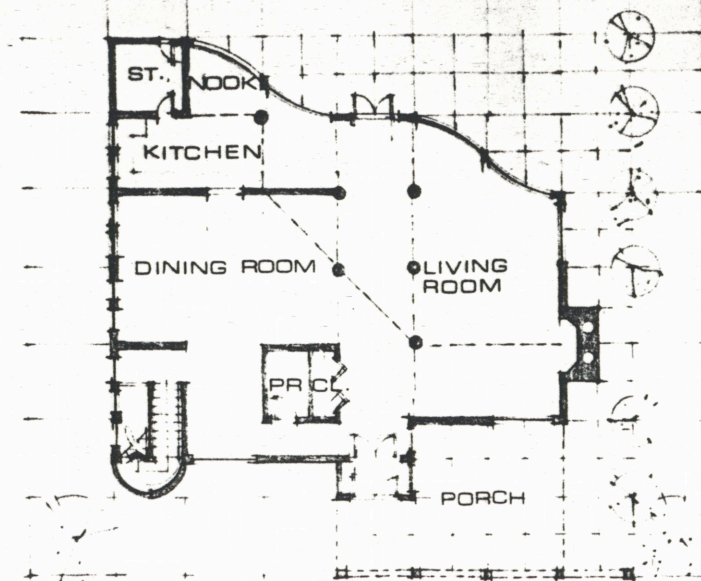
NORTHWEST ELEVATION

"SIDE" ELEVATION

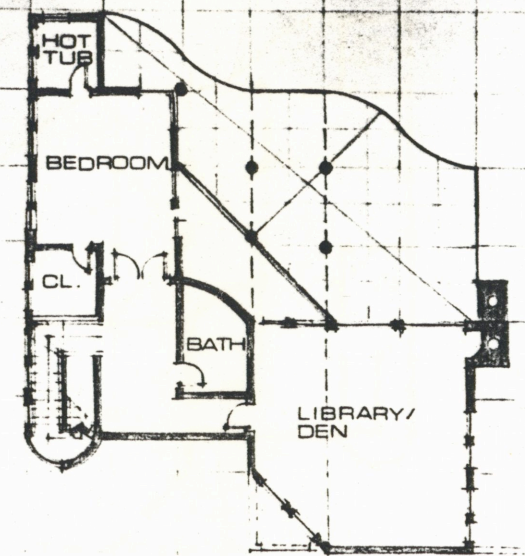
SOUTHEAST ELEVATION

RESIDENCE (DELUXE UNIT)

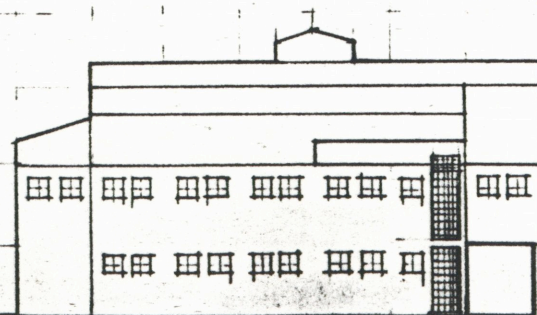
SCALE: 1" = 16'



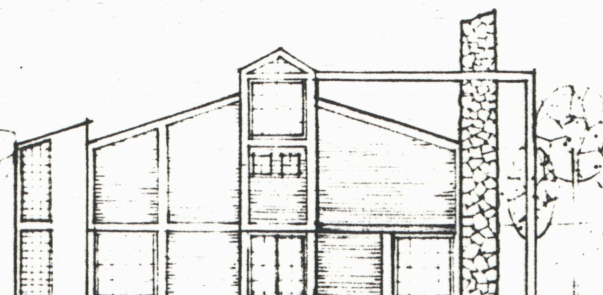
FIRST FLOOR PLAN



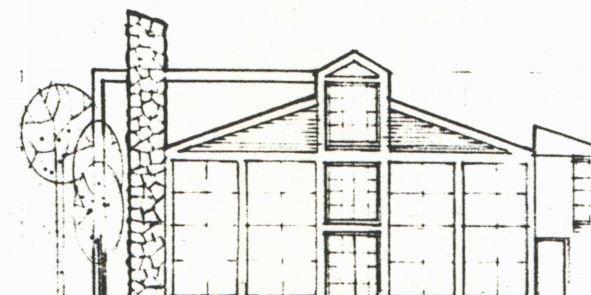
SECOND FLOOR PLAN



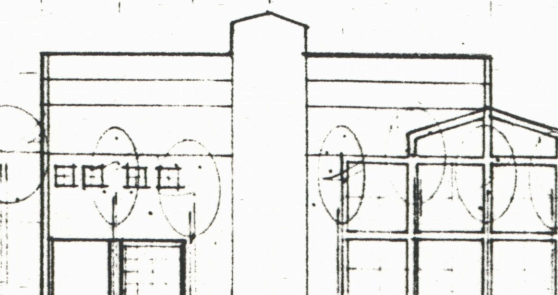
NORTH ELEVATION



WEST ELEVATION



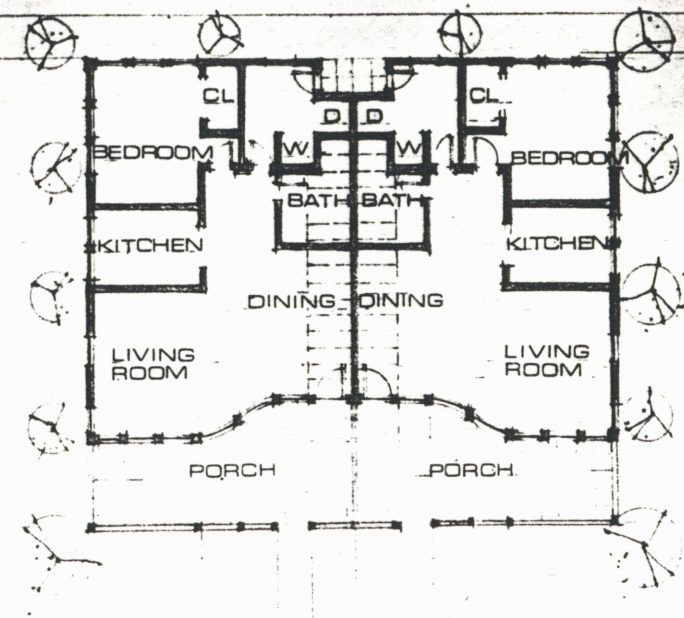
SOUTH ELEVATION



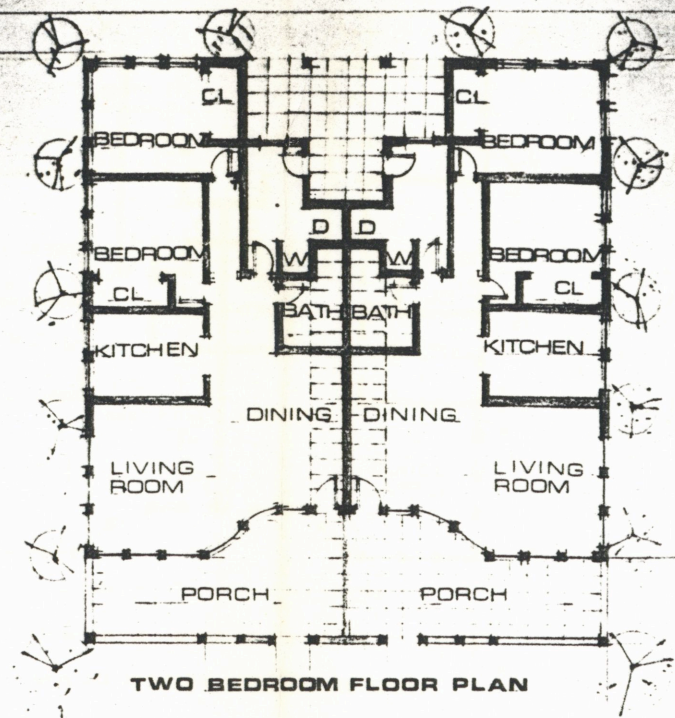
EAST ELEVATION

DUPLEX UNITS

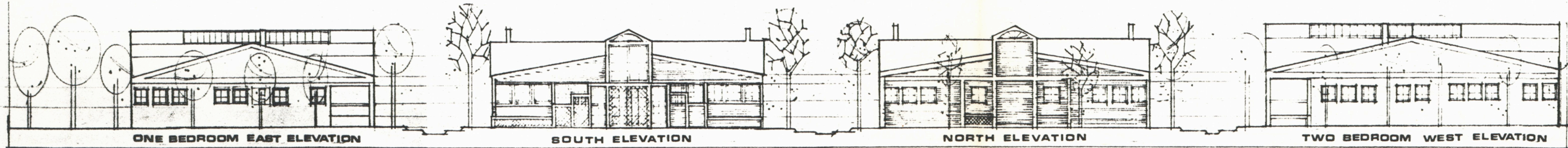
SCALE: 1"=16'



ONE BEDROOM FLOOR PLAN

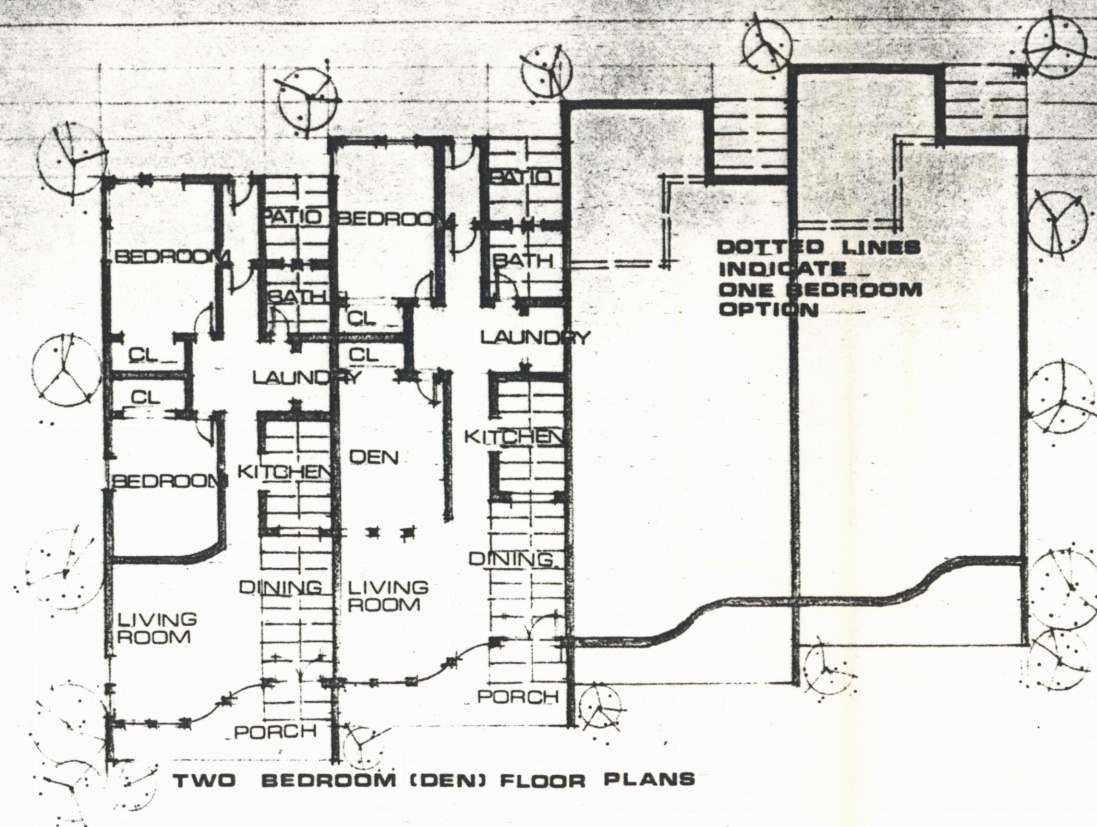


TWO BEDROOM FLOOR PLAN

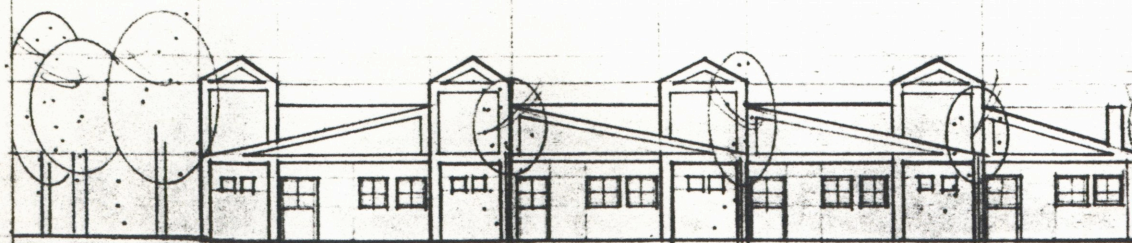


TOWNHOUSE UNITS

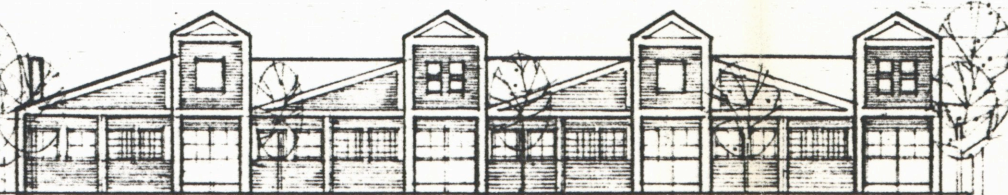
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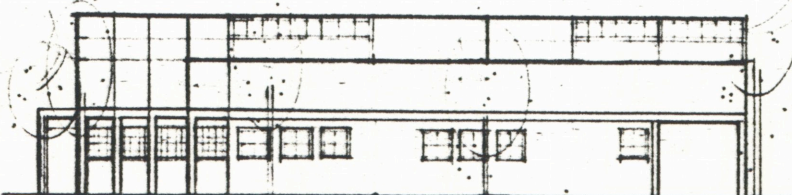
TWO BEDROOM (DEN) FLOOR PLANS



NORTH ELEVATION



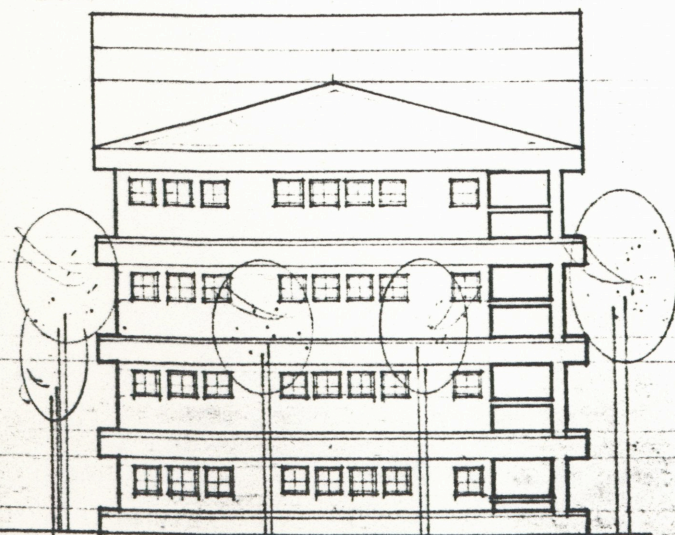
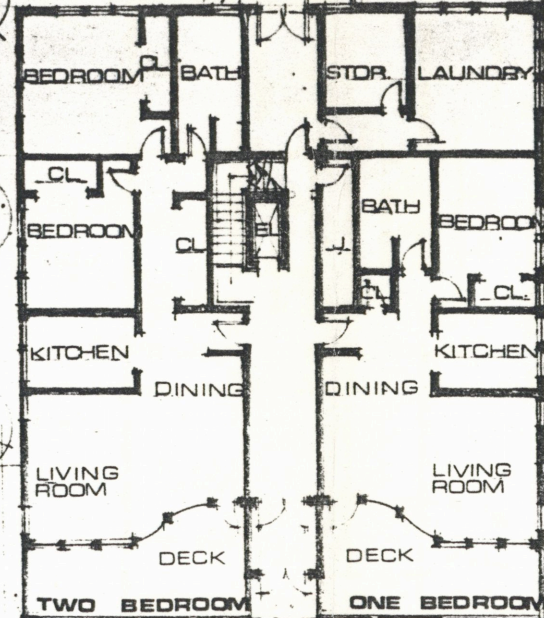
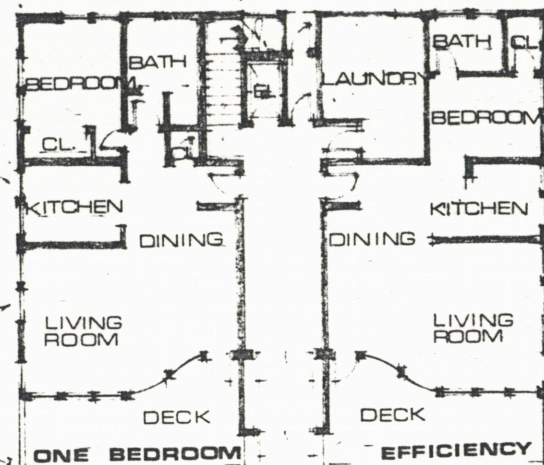
SOUTH ELEVATION



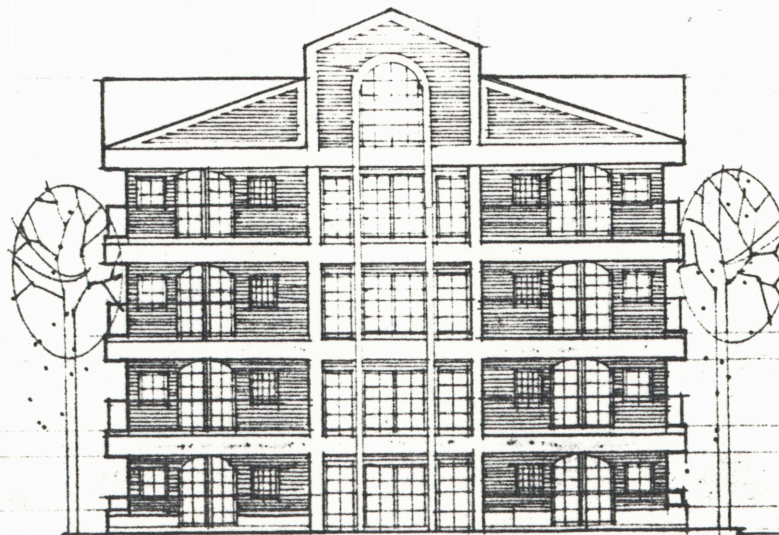
WEST ELEVATION

APARTMENT UNITS

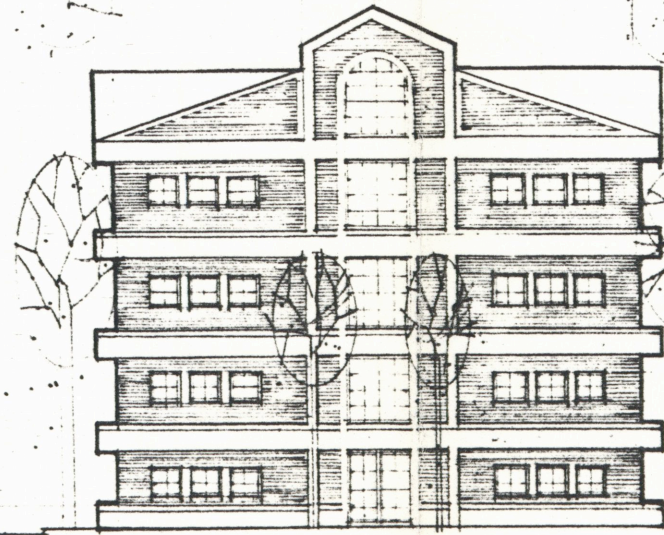
SCALE: 1"=18'



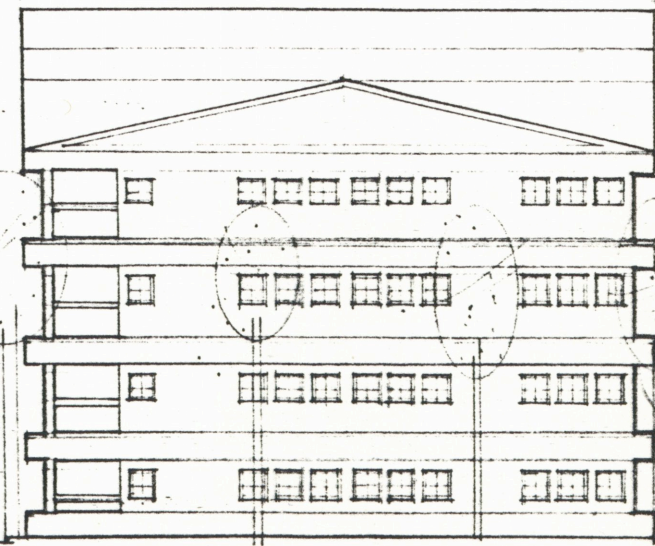
ONE BEDROOM WEST ELEVATION



SOUTH ELEVATION

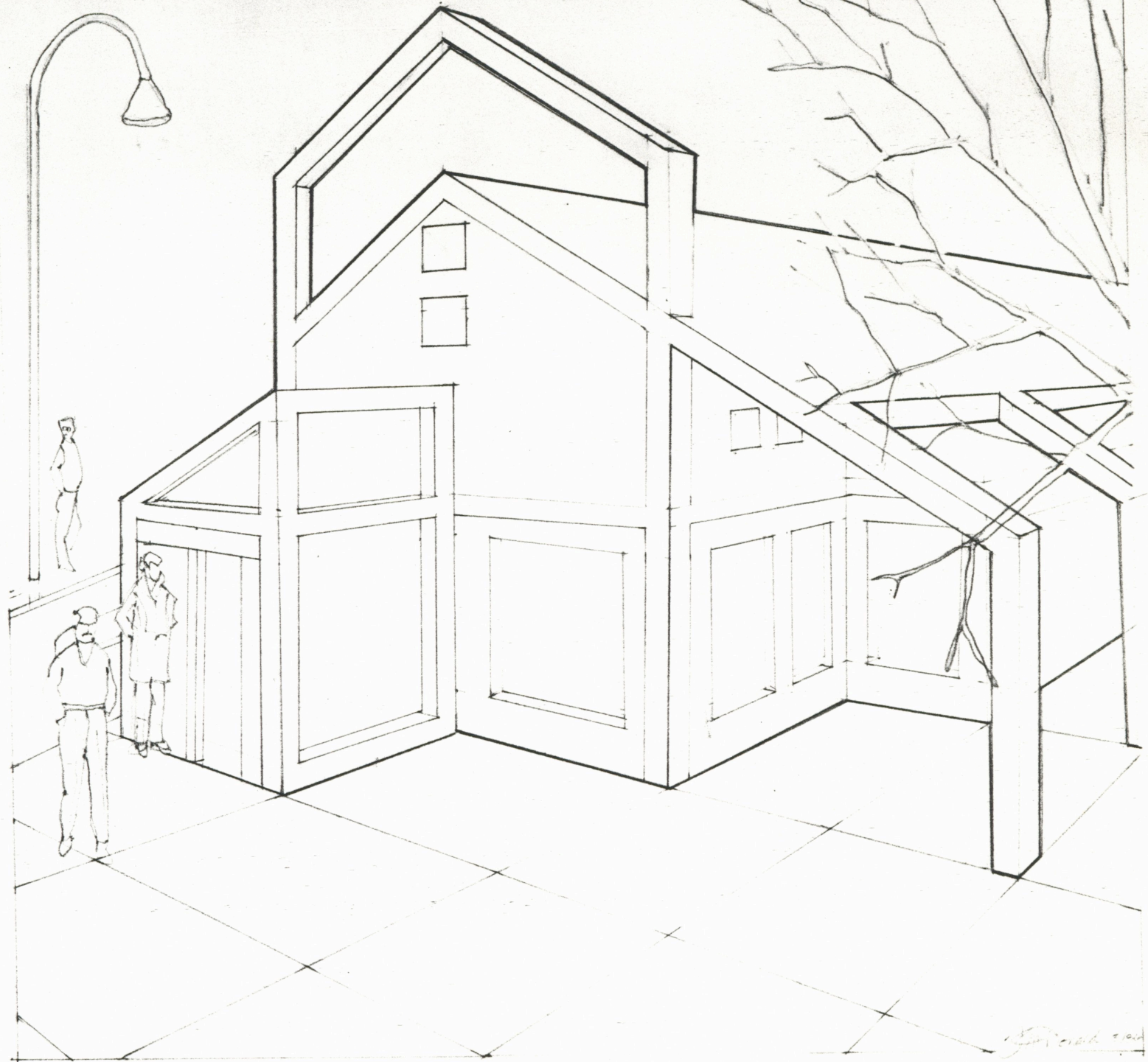


NORTH ELEVATION

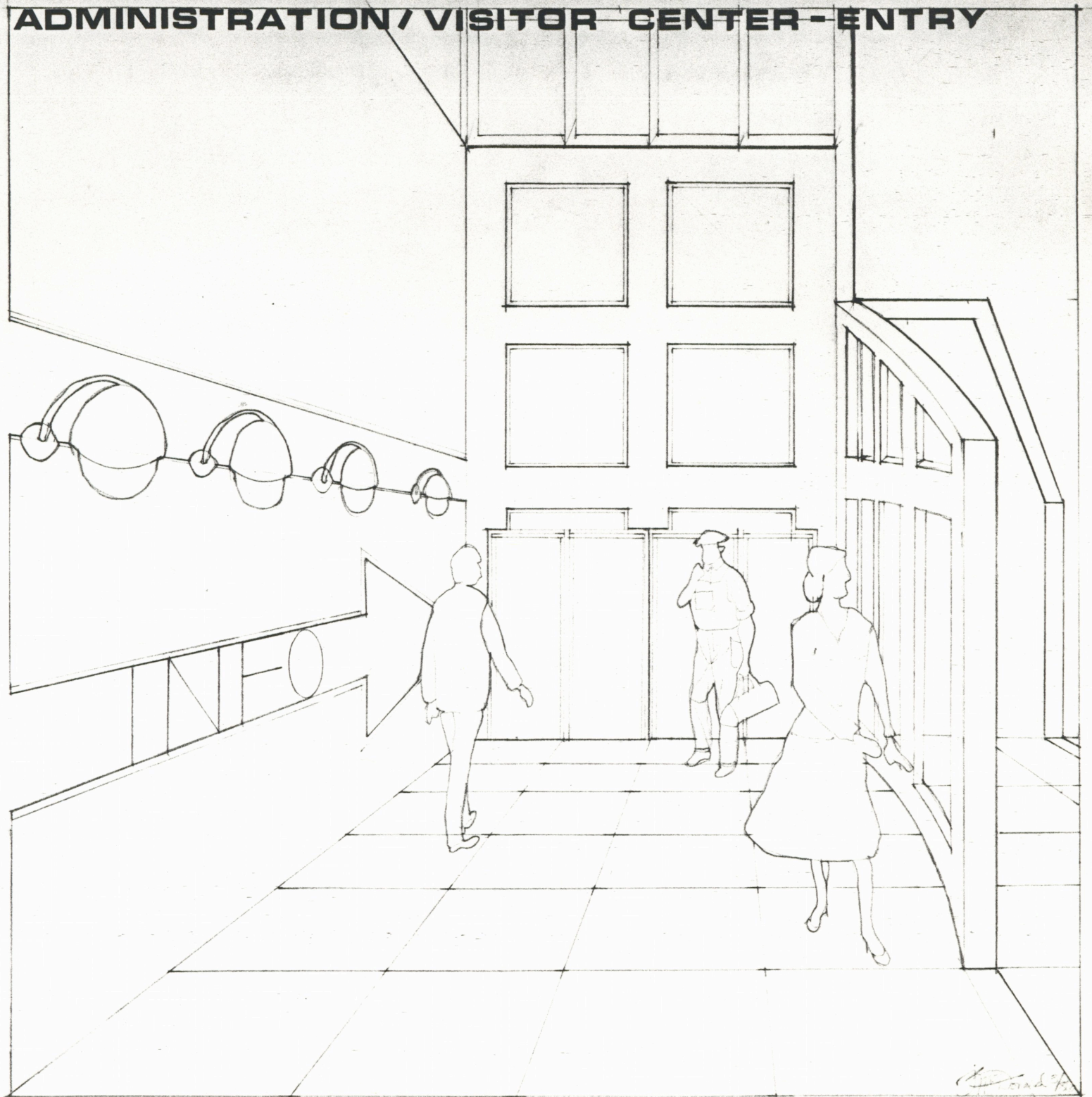


TWO BEDROOM EAST ELEVATION

OUTDOOR RECREATION CENTER - ENTRY



ADMINISTRATION / VISITOR CENTER - ENTRY



APPENDICES

SITE/CLIMATE

TEMPERATURE

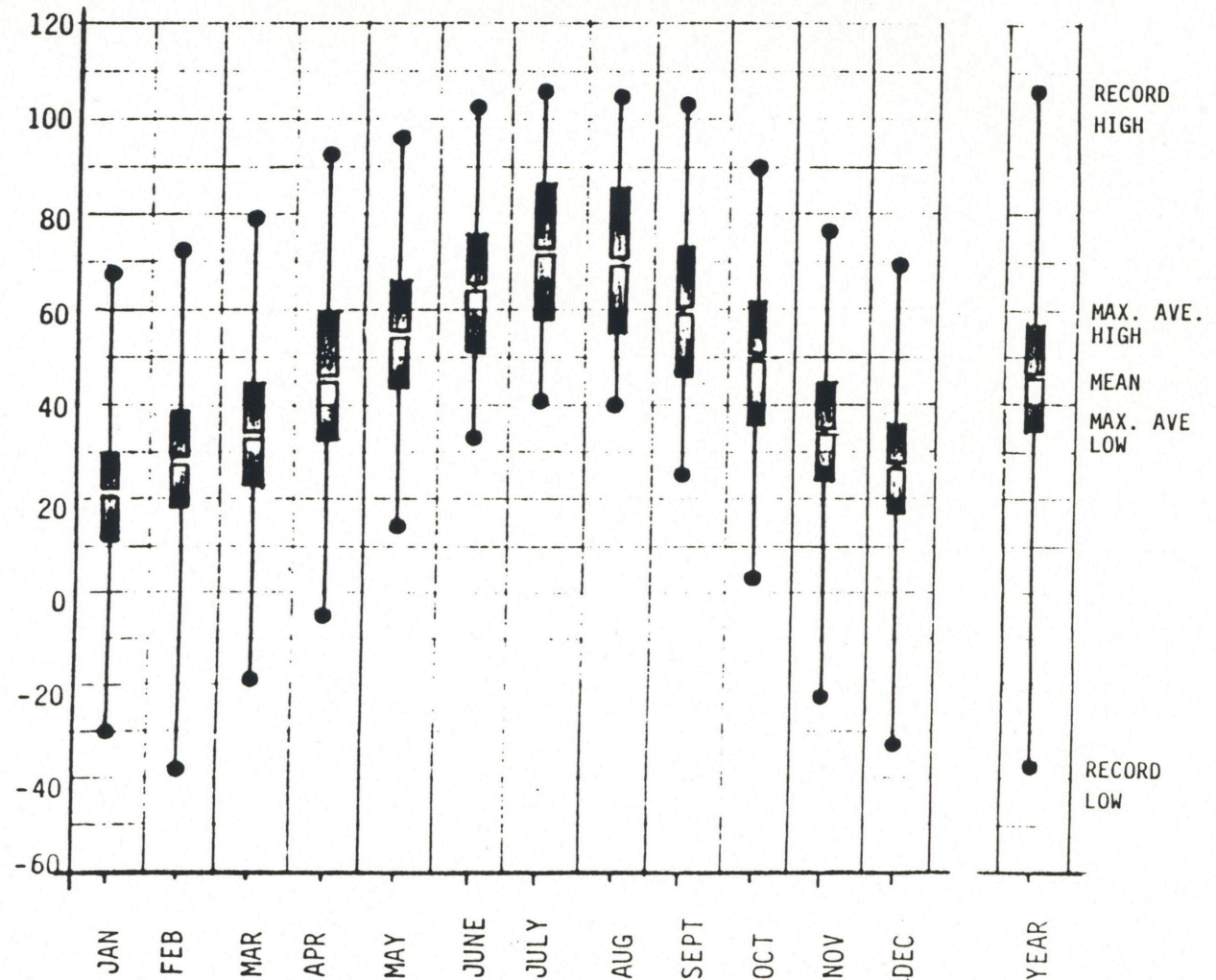
The climate in the Billings, Laurel and Joliet area is generally mild. The temperatures range from the low 50's to the mid 70's, but going higher in the summer. The average daily temperatures are around 60 from June until September. Winter temperatures range from 15 to the high 40's, making an annual average around 45. The extreme range has gone as high as 106, and as low as -35, but this is not a regular occurrence. The area around Montaquia stays mild enough for small fruit orchards to remain intact.

TEMPERATURE

Station	Years of Record	Elev.	Highest Year of Record	Lowest Year of Record	January Average	July Average	Annual Average
Bridger	1908-60	3680	110 (1933)	-35 (1936)	22.7	70.5	46.4
Joliet	1957-64	3700	104 (1960-61)	-34 (1963)	22.3	69.1	45.9
Red Lodge	1894-60	5575	101 (1931)	-40 (1899)	20.9	63.4	40.9

NORMALS & EXTREMES

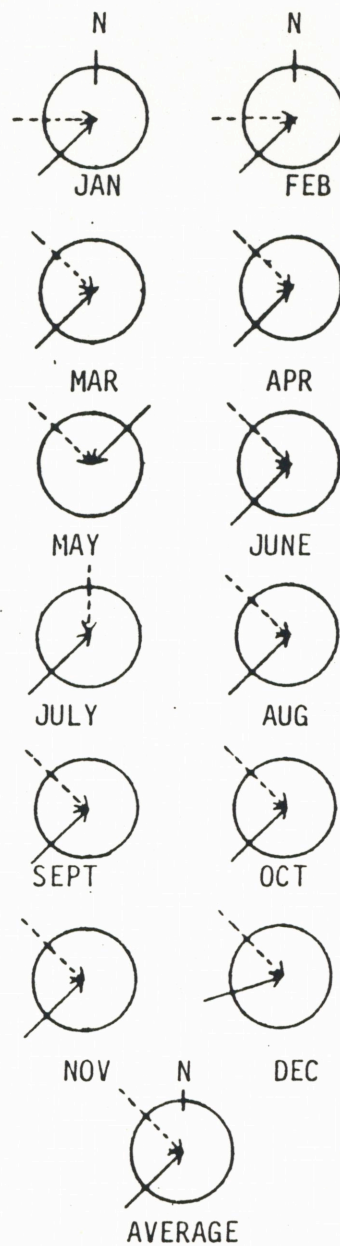
(in °F)



WIND

The predominant wind direction in the Montagua area is from the southwest. With the exception of May and December this holds true throughout the area. In May there is a northeast wind that brings many rain showers, and in December there is a west-southwest wind direction bringing in snowstorms. The most severe storms occur when a strong northwest wind brings them in. These storms provide most of the area's precipitation.

WIND DIRECTION



PRECIPITATION

Less than 20% of the yearly precipitation falls in this area between November and February. There are about 15-16 inches of annual precipitation with approximately 5-6 inches of that falling between May and June. Thunderstorms may occur from May through September accompanying the warmer seasonal temperatures.

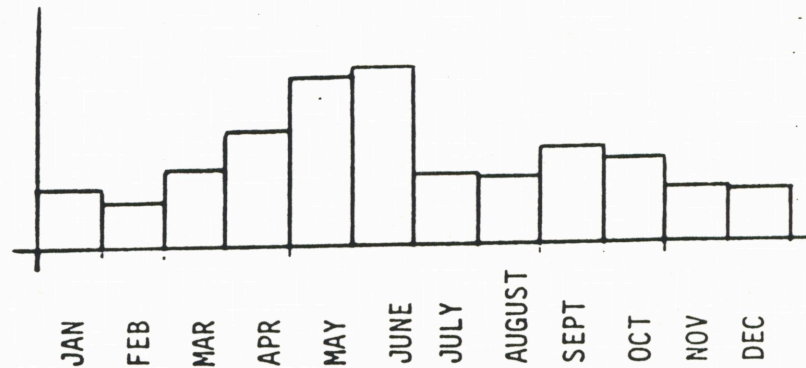
SNOWFALL

The heaviest snowfall occurs in the fall and spring months coming from the storms brought in by the north and northwest winds. Although the snow may be heavy at any time, it rarely stays longer than a few days due to the southwest chinook winds.

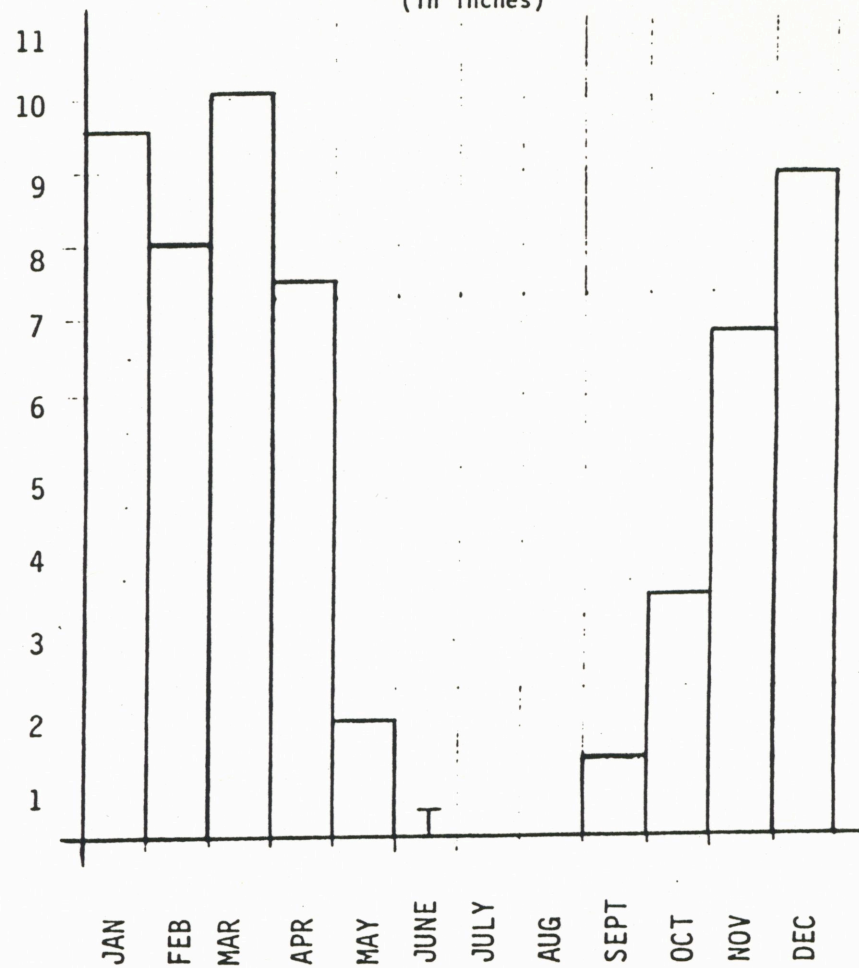
PRECIPITATION

Station	Years of Record	Elev.	Yearly Average Total	Growing Season Average Total	Percent Falling In Growing Season	Wettest Year	Driest Year
Belfry (9 SSW)	1951-60	4024	5.51	4.25	77	9.30 (1957)	2.97 (1960)
Bridger	1908-60	3680	10.23	7.19	70	15.94 (1944)	6.77 (1960)
Edgar (6 E)	1941-50	4063	15.98	11.22	70	21.67 (1944)	12.28 (1949)
Edgar (9 SE)	1951-60	4000	15.05	10.06	67	24.99 (1957)	10.42 (1960)
Joliet	1951-64	3700	14.09	10.05	71	22.13 (1957)	7.82 (1960)
Red Lodge	1894-60	5575	19.91	13.38	67	34.90 (1923)	11.17 (1914)
Red Lodge (18 SW) ..	1952-64	8608	35.23	21.05	60	43.13 (1955)	27.37 (1960)
Roberts	1951-60	4570	15.45	10.52	68	25.15 (1957)	9.79 (1960)

PRECIPITATION (in inches)



SNOWFALL (in inches)

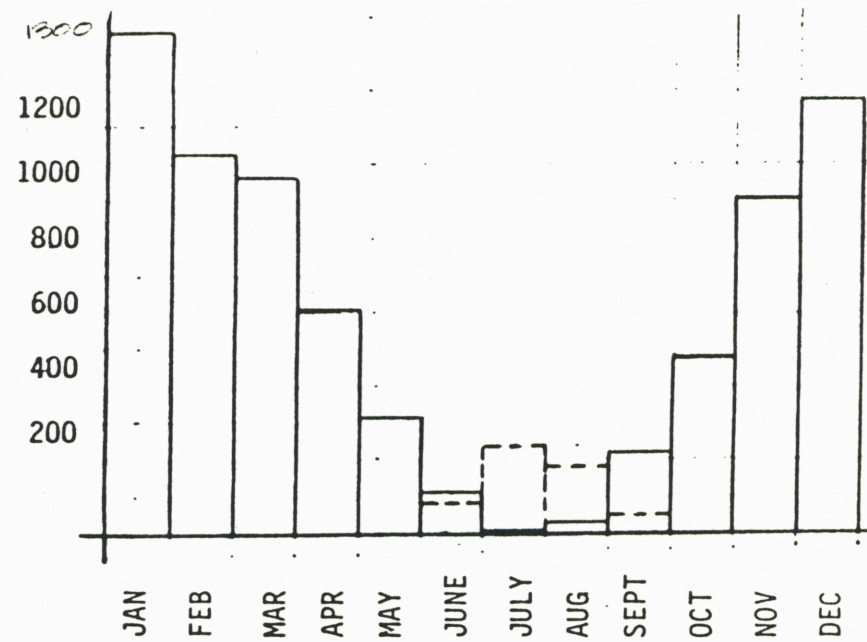


T = TRACE

HEATING AND COOLING DEGREE DAYS

During the times from September through May, heating can be a major concern. The most severe times in this range are from November through March. Only a small amount of cooling is needed during the summer months, with the most needed in July.

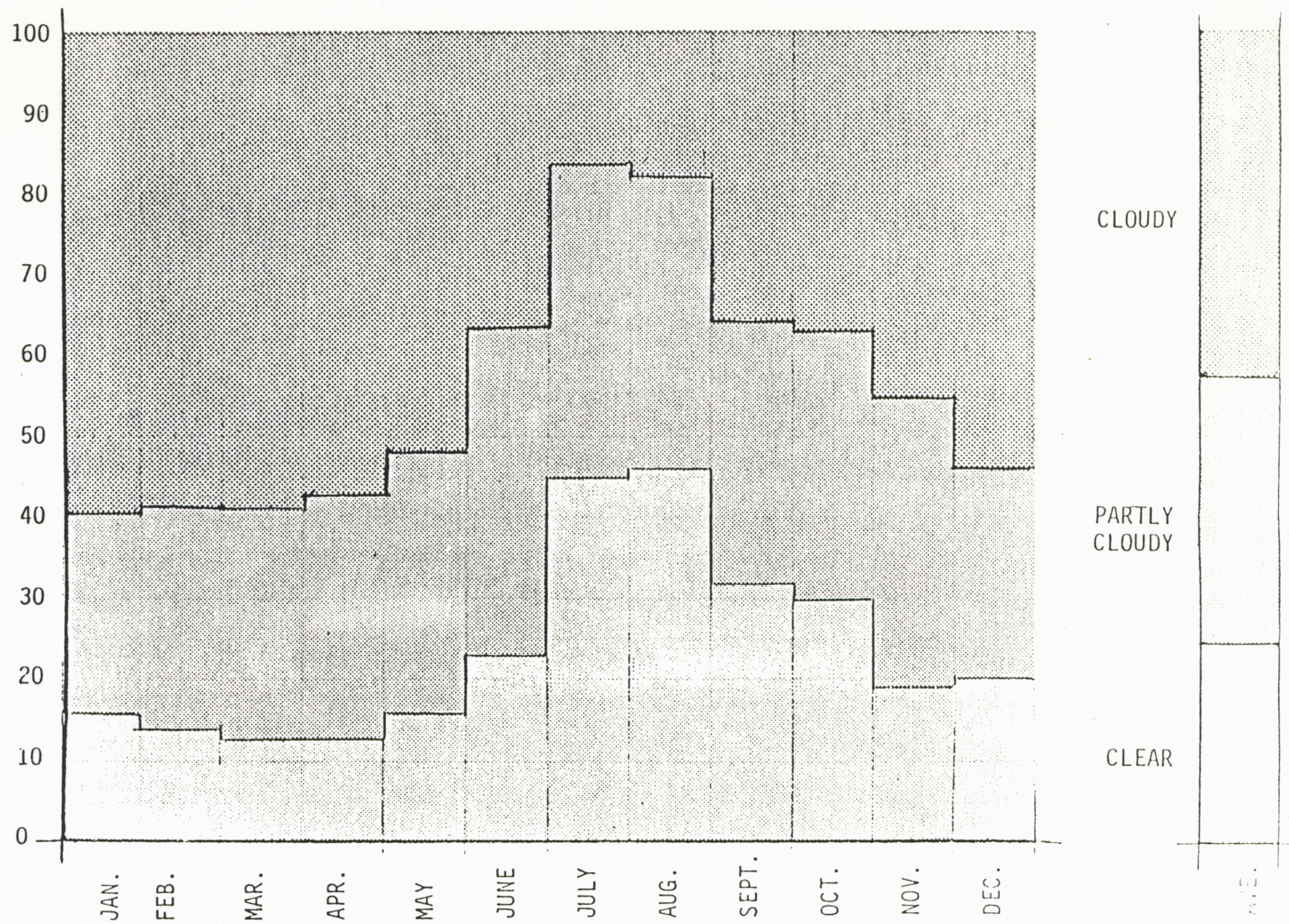
HEATING/COOLING DEGREE DAYS



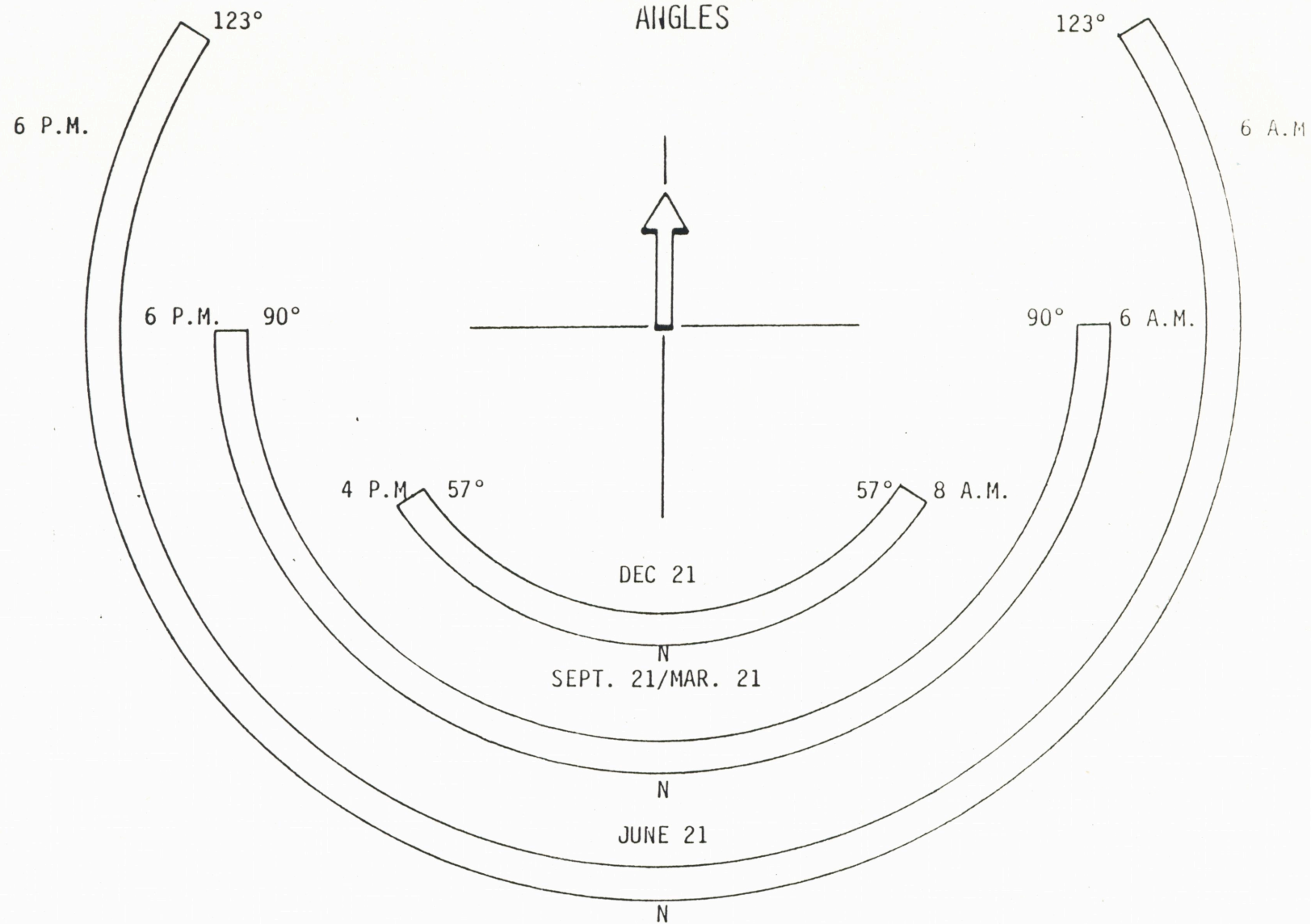
SKY CONDITIONS

The sky conditions for the area around Montaquá are as follows: annually there are about 25% clear days, 32% partly cloudy days, and about 43% cloudy days. A large number of the cloudy days fall between December and May, with the clearest days happening from July through October.

SKY CONDITIONS (in percent)

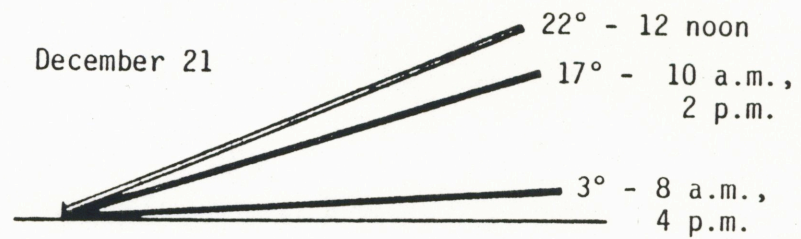


SOLAR AZIMUTH ANGLES

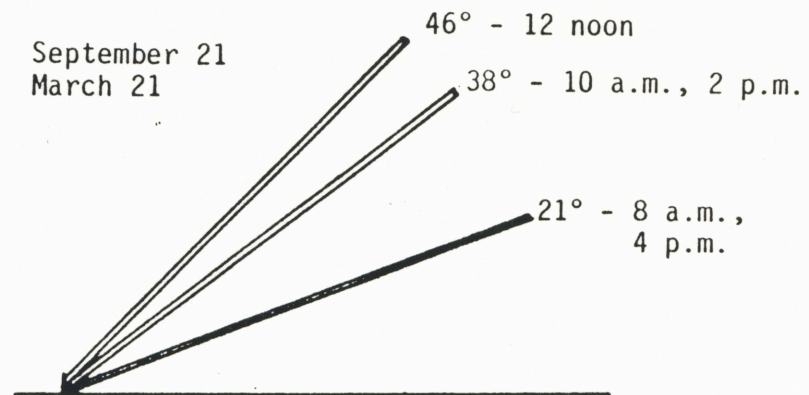


ALTITUDE ANGLES

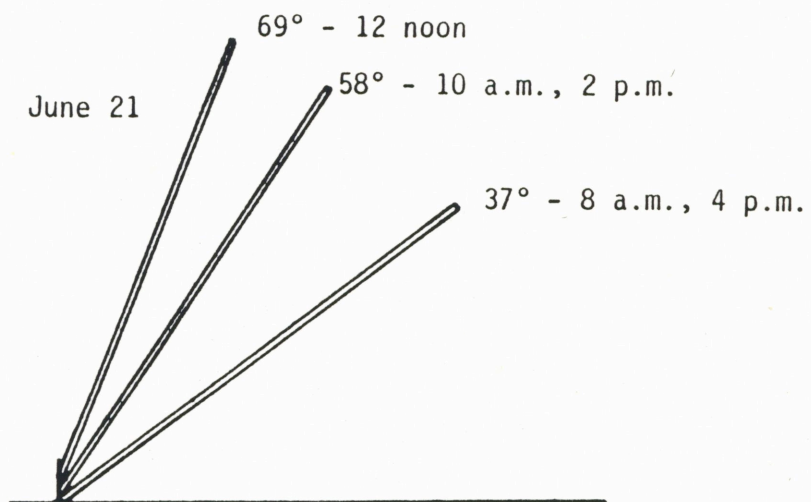
December 21



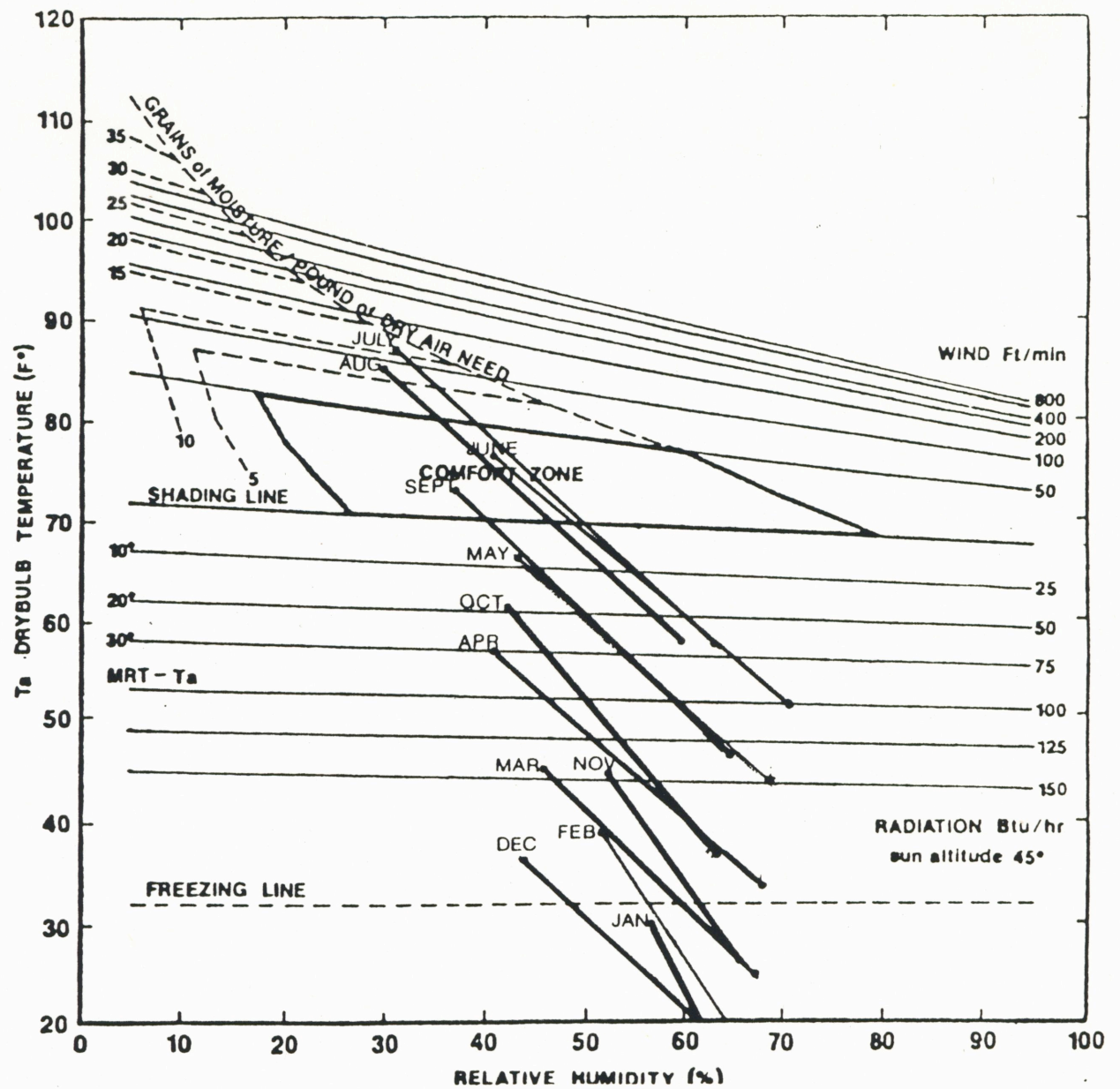
September 21
March 21



June 21



BIOCLIMATIC CHART



SITE-MONTANA FACILITIES

RETIREMENT HOMES/FACILITIES - MONTANA

-Cambridge Court
Great Falls

-Deaconess Skilled Nursing Center
Great Falls

-Downtowner
Great Falls

-Montana West Retirement Home
Great Falls

-Miles City Eagles Manor
Miles City

-Deer Run Manor
Kalispell

-Immanuel Lutheran Home
Kalispell

-King's Retirement Home
Bozeman

-Havre Eagle's Manor
Havre

-Penkay Eagle's Manor
Helena

-Sunset Capital Apartments
Helena

-Liberty County Retirement Home
Chester

-Manicke's Manor
Libby

-Clark Fork Manor
Missoula

-Maplewood Manor
Missoula

-Genesis House Inc.
Stevensville

-Julie's Boarding House (for Senior Citizens)
Stevensville

-Montana Pioneer Manor
Plentywood

-Foster Home
Billings

-Carefree Retirement Home
Billings

-Lutheran Retirement Home
Billings

-St. Joseph Apartments
Polson

- * CRITICAL
- * IMPORTANT
- DEPENDENT

ACTIVITIES	CHARACTERISTICS				
	physical and visual accessibility	security	orientation	furnishability and equipment	spatial characteristics dim., vol., signage, etc.
site entry exit	*	*	*	○	*
arrival court	*	*	*	*	*
parking	*	*	*	*	*
service	*	*	*	*	*
recreation	*	*	*	*	*

CONSIDERATIONS

I	important
M	moderate
S	slight
	none

KITCHEN

	natural light required	natural light undesirable	noise	requires quiet	requires view	view undesirable	security measures necessary	odor control necessary	resident view undesirable	resident view desirable
receiving		I	I				I		I	
janitor closet	S		I					I	I	
chef office	M				S				I	
employee dining	S		I		S			I	I	
kitchen			I					I	I	
meals on wheels			I						I	
dishwasher		M	I					I	I	
employee lockers			S						I	

NURSING

	natural light required	natural light undesirable	noise	requires quiet	requires view	view undesirable	security measures necessary	odor control necessary	resident view undesirable	resident view desirable
rooms	I		I	I	I		I			
linen									I	
doctor exam room								M	I	
corridors			M				I	I		I
housekeeping	S				S				I	
storage		I						I	I	
public tele. & fount.	M		I	M	S	S	I	I		I
lounge	M		I	M	S	S	I	I		I
nursing station	M		I		I		I			I

SERVICES

	natural light required	natural light undesirable	noise	requires quiet	requires view	view undesirable	security measures necessary	odor control necessary	resident view undesirable	resident view desirable
chapel	M			I		S				S
crafts	M			I						S
therapy	M			I			S	S		S
beauty shop	M									S
craft shop	I				S		S			I
solarium	I				S		S	I		I

CONSIDERATIONS

I	important
M	moderate
S	slight
	none

RESIDENTIAL

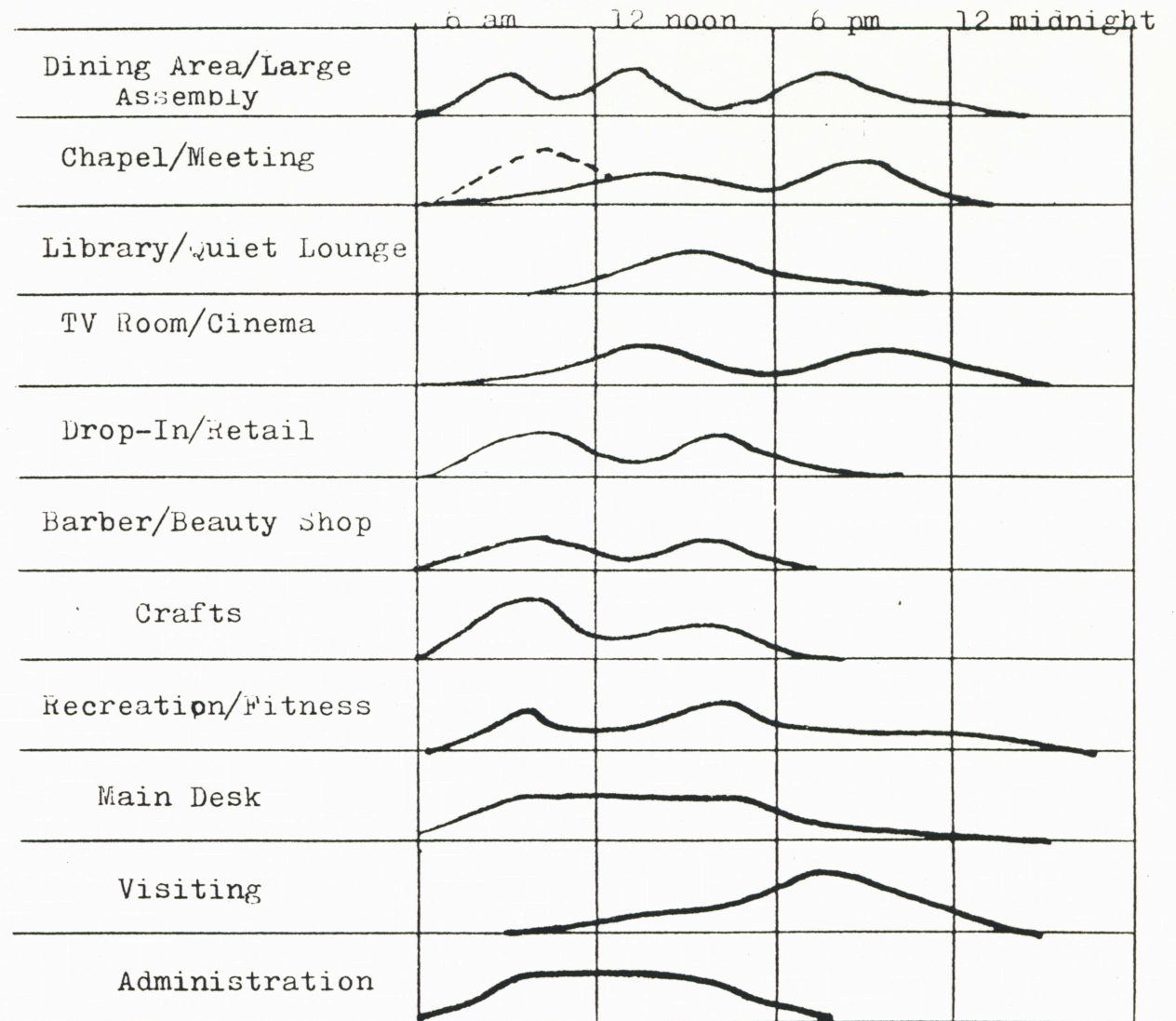
	natural light required	natural light undesirable	noise	requires quiet	requires view	view undesirable	security measures necessary	odor control necessary	resident view undesirable	resident view desirable
lobby	M		I	M	S	S	I	I		I
public toilets		M	I				M	I		
corridors			M				I	I		
reception			M				I	S		
conference room		S	I		S		S	S		
dining	I		I		I			I		
bookkeeping	S		S						M	
secretary	S		S						M	
manager's office	M		S		S				I	
heat/vent			I			I		I	I	
service entrance			I					I	I	
storage		I						I	I	
loading dock								S	I	
maintenance			I					I	I	
linen room									I	
housekeeper office	S				S				I	
chaplin	S								I	
activities director	S				S		S		I	
employee space	S		I						I	
assist. mgr. office	M				S				I	
mailroom	S		M		S		M		I	
lounge	I		I	M	I			I		I
rooms	I		I	I	I		I			

Daily Activity Cycles

	S	M	T	W	T	F	S
Dining Area							
Chapel/Meeting							
Library/Quiet Lounge							
Crafts							
Recreation/Fitness							
TV Room/Cinema							
Drop-In/Retail							
Beauty/Barber Shop							
Main Desk							
Visiting							
Administration							
Maintenance and Shipment Deliveries							

* taken from Chris Bergum Class book

Hourly Activity Cycles



* taken from Chris Bergum Class book

ENDNOTES

ENDNOTES:

Endnotes for this publication will be listed with: a)the endnote number, b)the source number as found in the selected bibliography, c)the source title.

1. 11; "Low-Rise Housing for Older People"
2. 2; "Architecture for the Aged"
3. 15; "The Poetics of Space"
4. 11; "Low-Rise Housing for Older People"

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9. Steiner, Reto; "Aging in Place, an Architectural
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15. Holderlin; "The Poetics of Space"

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