This is dedicated to my parents and grandparents. I am grateful for their wisdom and support which helped me through my education.

LAKEWAY
CONTINUING CARE COMMUNITY
FOR THE ELDERLY

by

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A THESIS

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PREFACE

In researching various books and magazine articles and reviewing case studies, I found that there is a trend towards providing retirement communities with the philosophy of continuing care. This means supplying independent housing. It allows many individuals to move, as their physical and mental capabilities diminish, from one type of living to another without having to leave the very environment which they have come to know and neighbors whom they love.

An important decision is where to locate a facility for the aged. While elderly people especially value privacy, they should not be totally isolated from civilization. They need the services offered by a populated area. Additionally, they enjoy watching other people and activities and should be made to feel that they are a part of things. For this reason, I did not choose a secluded rural site. However, I did not choose an urban site within a large city because these areas often are too built up at the expense of the natural environment. Additionally, sky-high land costs and crime problems figure in to such locations. In view of all these considerations, I feel that the city of Lakeway provides a near-ideal setting for a continuing care facility.

In order to be truly responsive to its residents, a continuing care elderly facility must do more than providing living quarters, meals and medical service. It should encourage residents to engage in social and physical activities. Because of this, I found it necessary to research in depth the possible activities which elderly persons can engage in. As a result, a good part of this program is devoted to the analyzation of these activities.

It is very important to consider these subjects where the aged are concerned. The elderly should never just be left in isolated, gloomy surroundings and be allowed to sit and deteriorate. It must be kept in mind that elderly persons possess an abundance of wisdom and experience and that they still have much to contribute to society.

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THESIS/MISSION

Abraham Maslow described a human being's "hierarchy of needs." He wrote about the importance of self-esteem in this hierarchy and how having it would lead to the attainment of the highest need, self-actualization. This hierarchy process deals primarily with humans and their relationships with their social and psychological environments. It is crucial that people attain happiness in recognition in their lives; for without these, the basic essentials of food, shelter and clothing are not enough. The attainment of happiness and recognition comes from knowing that one is loved and needed. The physical environment itself also plays an important part in human beings' lives. The proper physical elements, such as receiving warm sunshine and fresh air, can provide a lively, friendly atmosphere which will invigorate the individual and facilitate activity.

However, due to a combination of cultural, economic, social, psychological and physical factors and problems, many elderly persons are deprived of the self-esteem necessary to begin the self-actualization process. Until recently, society has to readily accepted the notion that old age is the time at which people stop participating in most activities. It was forgotten that elderly people need to maintain normal life activities despite their reduced physical abilities. Thus, many institutions for the aged only supply medical and nursing care and do not take into account the residents' social and psychological needs. Additionally, economic constraints often prevent the proper interaction of people with their surrounding physical environments. The results are often institutions with dreary settings which reduce the motivation for activities of living.

An ideal facility for the elderly would foster new self-esteem for its residents by providing a natural and built environment specifically sensitive to the elderly's unique needs. It is hoped that such a healthy and stimulating environment would be conducive to the maintenance of sound mental and physical health and, in cases of disability and assumed terminal illnesses, make life easier or induce remission or even rehabilitation.

The providing of social, psychological and physically responsive living conditions is the basis for which elderly people can continue interacting and living in harmony with themselves, other people and their environments.

SCOPE/LOCATION

PROJECT SCOPE

The number of residents which a continuing care retirement facility can accommodate should be large enough to bring in the necessary income to finance the project. However, too large of a population would produce an exceedingly large building area at the expense of the sites natural environmental character and spaciousness. Just as importantly, population overcrowding would reduce space for activities and have an adverse effect on the elderly residents' needs for privacy and persoanl space. Therefore, it is important to set a reasonable limitation on the facility's population capacity.

This specific continuing care retirement facility will accommodate 100-125 persons and (40-50 assisted living and full nursing care elderly and 60-80 independent elderly) over the site's 25 acres. This should give the residents an abundance of space in which to have privacy, to engage in indoor and outdoor activities and to enjoy the site's natural environment.

LOCATION

The facility will be located in the city of Lakeway, Texas. Lakeway, located 20 miles northwest of Austin, is a resort oriented community with a sizeable population of elderly residents. (See Contextual Environment section)

NEEDS/GOALS

The design of a continuing care retirement facility must address many needs if it is going to be successfully responsive to its residents. The following is a brief discussion of the more important types of needs and the goals which are required to satisfy them.

NEIGHBORHOOD/COMMUNITY ENVIRONMENT

NEEDS

The majority of elderly have less mobility than younger persons and therefore need to be in closer proximity to community facilities and services. The surrounding community should have clinics, barber/beauty shops, churches, grocery and drug stores, restaurants, recreation facilities and employment opportunities.

Additionally, the elderly need the availability of public transportation. Physically handicapped elderly who are still active or work and who don't have their own vehicles most likely view public transportation as a necessity. It also provides the elderly with a means of keeping contact with the community and surrounding area.

The elderly facility should be located in a neighborhood which has a relatively low crime rate. Elderly persons who are more frail present an easier target for crime. Therefore, security becomes an important need for the aged.

The idea of "aging in place" should be given consideration when selecting a site for elderly housing. An aged person, who has been living in a certain community for a long time, has the need to stay in the same area where his or her roots are and where friends and neighbors would be close by to lend support.

GOALS

A program for a continuing care retirement facility should set the following goals concerning the neighborhood environment:

*Provide a location for the facility which is close to the major services and facilities which the elderly need. This will promote resident involvement in the surrounding community.
*Provide a location which is in a friendly, safe and well-established neighborhood
*Locate the facility so it will be accessible to a major road.

*Provide a stopping place for public and private transportation for these residents desiring it.

SITE

NEEDS

Many elderly persons are sensitive to noise and pollution because of hearing and breathing problems. The site selected to house the elderly should not be overwhelmed by streets and traffic nor should it be located near industries which give off noxious odors.

The mobility requirements of many elderly persons dictate that the site should have a generally level topography. This will minimize the number of stairs and steep walks which the elderly will have to negotiate.

The site area needs to be large enough to accommodate spatial outdoor areas for the residents' use and should have both natural and man-made points of beauty and interest. Additionally, a larger site size would allow for any needed automobile circulation.

The site needs to allow for flexible development. Residents can take advantage of the local climate if structures are properly oriented.

GOALS

The following goals should be kept in mind when choosing and developing a site:

*provide a site which is not bounded on all sides by streets
*select a site which is away from an industrial area and is located (preferable) in an area of fresh air and "country" feel
*provide both large and intimate outdoor spaces in which the residents can interact with the environment
*preserve interesting and beautiful natural elements on the site which can contribute to a joyful outdoor experience
*preserve and enhance any views of distant or nearby hills, water bodies and wooded areas
*provide protection of any wildlife indigenous to the site. This would enable the facility's residents to become a part of an integrated environment

FACILITY DESIGN AND PROGRAM

NEEDS

Many elderly persons have some type of handicap or chronic illness. Obviously, the residents of a nursing facility need physical and medical attention for these ailments.

Due to the loss in acuity of the senses, many aged individuals find it difficult to distinguish between objects or areas within buildings. In order to retain their independence, such persons need to be able to make their own way around without anyone's help.

The need for privacy is important to all people. Privacy allows an individual a peaceful time to reflect, think and relax. In many institutions, the residents' privacy and personal space are frequently intruded upon.

Many institutions have rigid schedules for dining and other activities which their residents must adhere to. However, adults of all ages need to be able to choose when and how they will engage in an activity.

The need to explore one's own environment is important to the socialization and interaction process. However, many current facilities retain an "institutional" look which does not psychologically encourage the elderly residents to leave their rooms.

GOALS

Goals to keep in mind when designing a continuing care facility should include:

*moderate any institutional effects
*increase amount of privacy in individual rooms
*provide scheduling fexibility for dining and other activities
*provide various activities and opportunities which will help the residents continue their patterns of living, recreating and socializing
*provide varying visual, tactile and auditory qualities to help resident orientation
*avoid the closed-up institutional look and provide open views to nature scenes
*provide areas which will foster patient involvement and increase social interaction
*orient the structures to give residents maximum advantage of the local climate and of the site's environment
*provide basic services such as personal care and help in daily activities
*provide medical and rehabilitative services to improve resident functioning
*provide all the necessary handicapped accessible furnishings within the building and in outside areas

BACKGROUND INFORMATION

In order to provide resident-responsive institutions for the retired elderly, society must realize that the elderly's concerns go far past that of merely receiving medical attention. There are many other needs that the aged must satisfy in order to lead a productive life. This is especially important because of current demographic trends and ever increasing needs for retirement institutions, assistance for the elderly and the programs which fund them.

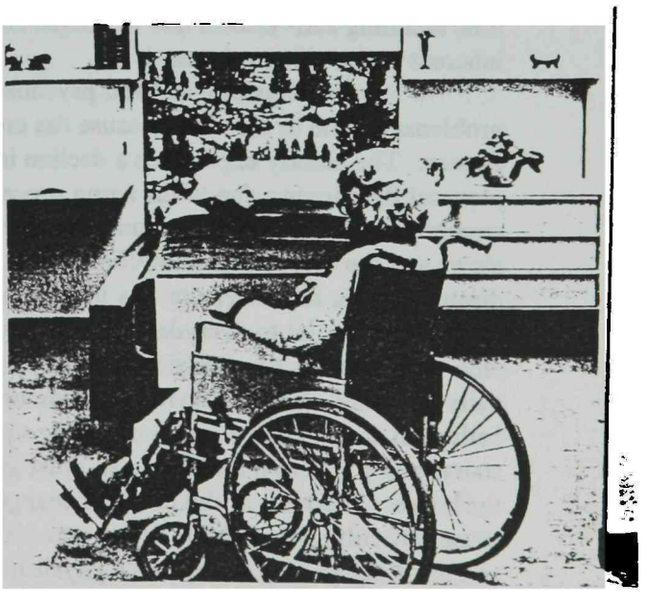
In Motivation and Personality, Abraham Maslow describes a "hierarchy of needs" which must be satisfied in order for the individual to successfully develop a feeling of self-importance and usefulness in life. In this hierarchy, gratification becomes an important concept as far as motivating is concerned. The organism is dominated and its behavior organized only by unsatisfied needs. If hunger is satisfied, for example, it becomes unimportant in the current dynamics of the individual (Maslow, p. 38). The need for food and water is the most basic of the physiologic needs; however, these needs are only the starting point. After these, man must attain the "safety" needs such as security, stability and protection and next, the belongingness and love needs. The satisfaction of all the above in turn, will lead to the esteem needs.

Self-esteem is an extremely vital need for the individual and the satisfaction of it leads to feelings of self-confidence, worth, strength, and of being useful and necessary in the world (Maslow, p. 45). However, much of the time, the attaining of the esteem needs is not enough for man.

Even if all self-esteem needs are satisfied, we may still expect that new discontent and restlessness will soon develop, unless the individual is doing what he, individually, is fitted for. A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. Thus, an individual must try to be all he or she can be. This need is what Maslow called self-actualization. It refers to man's desire for self-fulfillment, namely, to the tendency for him to become actualized in what he is potentially (Maslow, p. 46). Self-actualizing people can more readily distinguish reality from the abstract and thus have a better relationship with the real world.

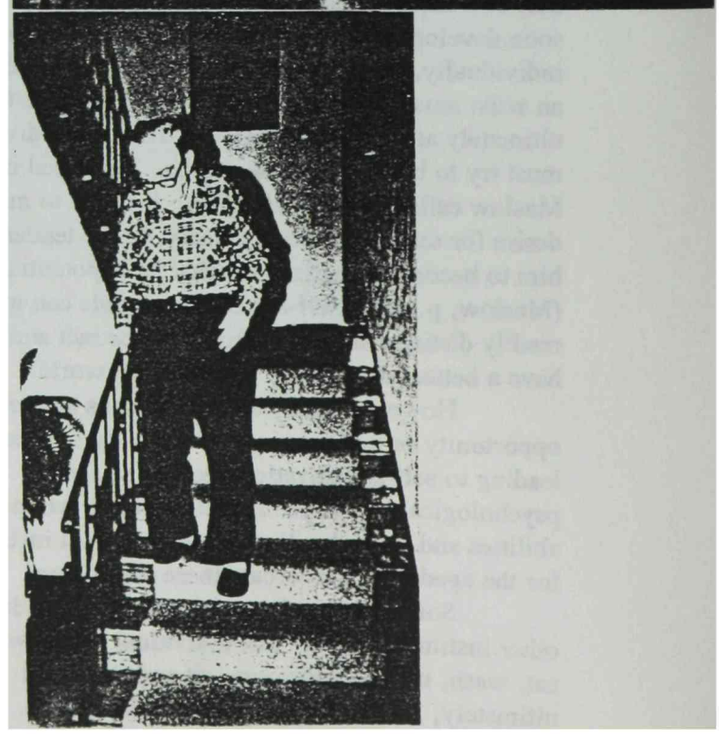
However, many elderly persons are denied the opportunity or not encouraged to satisfy the needs leading to self-actualization because of social, psychological and physical factors which hamper their abilities and everyday lives. Many current institutions for the aged only exacerbate these conditions.

Some nursing homes devaluate the elderly as no other institution does. The individual is told when to eat, wash, use the bathroom, sit and sleep and ultimately, lose control over their own bodies. Frances



J. Storlie, a registered nurse and Phd who spent time in six nursing homes, observed the process of the "infantilization" of the adult. She noted that the elderly patients are scolded, restrained and given salutations and postures condescending in nature. These, in conjunction with the staff's caresses, pattings and fondling, contribute to the patient becoming an infant in the body of an adult (Storlie, p. 556). This process is bound to erode an elderly person's self-esteem, take away autonomy and contribute to feelings of helplessness and loss of control.

The structures we build for the institutionalized elderly add to the problems. Most seem to resemble hospitals more than homes. They retain an institutional "look" with their long corridors, specified dining rooms, "clean" and "dirty" utility rooms and large bathrooms with toilets separated by small partitions. It should be kept in mind that the physical environments which architects create can psychologically affect the users. In an article written for U.S. News and World Report, Miriam Horn notes that such impersonal institutionalized environments have been shown to create a sense of anxiety and helplessness which can impose additional stress on a patient (Horn, p. 48). In several facilities, all doors leading to the outside are wired with alarms which sounded whenever anyone attempted to leave (Storlie, p. 556). This makes a clear message that none of the patients are to stray away from their rooms unsupervised, which only adds to the infantilization process. Storlie noted that freedom of choice was also taken away in some nursing homes. The elderly residents could not decorate and furnish their own rooms, were forced to eat in the dining room at a specific time and could not even select their own clothes to wear each day (Storlie, p. 557). Aside from these problems, the elderly already have a difficult enough time attaining self- esteem due to unique conditions inherent to the aging process.



Several physiological and psychosocial problems unique to the elderly cause the eroding of self-esteem. The elderly experience a decline in overall physical functioning due to the aging process. Muscle strength diminishes, bones become brittle response time slows and the senses dull (Newcomer, p. 11). These disabilities can all contribute to a lack of mobility. Mobility is crucial to everyday living and without it, the elderly person has great difficulty in carrying out normal daily activities. These activities include using the bathroom and kitchen equipment, going up and down stairs, going in and out of home and just getting around the house. In addition, the physical changes of aging cause difficulty in kneeling, lifting and reaching. Losses and resulting grief occur as one's physical health

declines, as mobility becomes impaired, as family ties are weakened and as spouse and peers pass away. These losses have the potential of causing the elderly individual to feel neither needed nor useful. The elderly person often thinks "my family doesn't need me anymore", or "I feel so useless" (Hirst/Metcalf, p. 74). These feelings can only be exacerbated by the act of being institutionalized. Another area of concern is that of sensory deprivation. As an individual ages, both visual acuity and hearing decline. These physiological changes can cause a reduction in self-esteem, prompting individuals to retreat inward and withdraw from the world around them. Sensory deprivation in the elderly can also be caused by monotonous daily routines and confinement of a resident to a limited area, either from immobility or physical restraints (Hirst/Metcalf, p. 75).

The physical environment is also a very important factor in elderly living , as it can affect self-esteem. Social ecologists have identified several major concepts dealing with relationships of the elderly to the physical and social environment in their institutions. Privacy was identified as a basic right and need of the elderly. It allows the individual time and space for self-evaluation, reflection, imagination and thoughts of life experiences. However, the lack of privacy in many institutions makes them poorly suited to this need (Tate, p. 2). The elderly are forced to sleep in multiple-bed rooms and must share activity, lounge and dining areas with many others. Even bathrooms must be shared. Lack of privacy can cause adverse effects, on personality, overdependence on others and a loss of interest in things and events (Tate, p. 2).

Territoriality is a commonly found behavior in elderly institutions. Research has shown many cases of individuals who have a favorite place which they claim for their own. Invasion of this space can cause aggressive and antisocial behavior (Tate, p. 3). The problem of invasion is common in health care institutions (Hirst/Metcalf, p. 75). One example is the institutional worker who causes an intrusion by walking into a client's room and moves chairs, and opens personal lockers without permission or acknowledging that this is territory belonging to the client. While the worker might not be aware of it, such actions are bound to give the elderly client a feeling of loss of control and authority.

In addition to the personal space issues of privacy and territoriality, the self-esteem components of roles touch, meaningful relationships, sexuality and independence are important to the elderly (Hirst/Metcalf, p. 74). Roles help create self identity and foster self-esteem. As people reach later life, they can become increasingly removed from social roles. The parent growing old often comes totally unprepared for a

reversal of his or her parenting role. The realization that one's mature children, no longer needing their parents to fulfill the "parent" role, act like parents is likely to bring frustration and despair (Storlie, p. 555). Other instances are the loss of the husband or wife role, work role or friendship role. Society has not yet created replacement roles of equal social value to roles lost through the aging process (Hirst/Metcalf, p. 74).

In addition to affecting roles, the aging process affects meaningful relationships. Through interactions with individuals important to us, we gain acceptance of ourselves and also have opportunities to practice social skills (Hirst/Metcalf, p. 74). Obviously, the number of these meaningful relationships decrease as one loses spouse, siblings or peers and as one's children move away.

Sexuality relates to how one perceives one's self. Self-esteem is fostered by the knowledge that one is perceived by another as attractive and desirable. Society often equates old age with sexlessness (Hirst/Metcalf, p. 74). Such an attitude undoubtedly adds little to the maintenance of self-esteem.

Independence is very important to self-esteem and helps one feel in control over one's life. However, the elderly individual entering a health care institution is vulnerable to loss of self-esteem because of the loss of independence which comes with entering that institution (Hirst/Metcalf, p. 74).

In addition to the social and psychological needs, the physical environment in which the elderly live is also important. As noted earlier, a bad architectural environment can have adverse effects on an individual's psychological and physiological well being. Lyle Way, president of the Carillon, a continuing care facility in Lubbock, notes that the environment has a definite effect on the psychological well being of the residents. He noticed, for instance, a marked increase in complaints from the residents on cloudy, dreary days and, conversely, noted a large drop in complaints on sunny days. In her article for U.S. News and World Report, Miriam Horn noted a study in which patients were instructed to gaze for five minutes on a nature scene (trees, water, hardens, birds, etc.). The results showed that, after the five minutes, the patients' blood pressure dropped and tight muscles relaxed. Also, patients in units with nature views were shown to have higher satisfaction levels and more rapid recovery times than those with smaller windows without such views (Horn, p. 49).

In addition to addressing psychological, social and environmental concerns, a life care facility should also promote good physical health habits for its elderly residents. People over 65 are less aware of effects of

behavioral patterns on health since education and screening exams are, on the whole, provided less frequently to the elderly (Radeck/Cowell, p. 299). There has been much study done supporting the link between specific behaviors and health. Health promotion and positive changes in behavior can delay dependency and increase longevity and quality of life later on (Radeck/cowell, p. 300). Low impact, low-level activities such as walking for 20-30 minutes and hobbies such as gardening are identified good health habits for the elderly. In-place exercising should be carefully done and the elderly resident should initially be shown how to exercise. Many elderly are more sedentary in general (R/C, p. 301) but should be encouraged to engage in good health habits. David Lowenthal (MD, Phd) commented on the effects of good health habits in an article for Geriatrics. He noted that "exercising for some terminal cancer patients might be the only thing that is keeping them going." Thus, it is extremely important that a continuing care retirement facility encourages residents to engage in physical activity.

The process of taking care of the elderly in society is obviously more complex than just providing necessary medication. Social, psychological, environmental and physical needs must be met in order for the elderly individual to function as well as his or her health permits.

DEMOGRAPHIC CHANGES

Today, more than ever, there is an urgency to address the complexities of the elderly's needs. The subject of institutional and residential housing for the elderly will become increasingly important because the elderly are the nation's fastest-growing population group.

Three demographic changes are causing America to grow older. One important change is that an overwhelming number of people born before WW II have reached the age of 65. Another is that improvements in public health, medical technology, sanitation, diets, exercise habits and lifestyles have resulted in longer longevity of life. An equally important change is an overall steady decline in the proportion of children in the population. This has resulted in the increase of both the numbers and percentage of those over age 65 and the decrease of the percent of the population which is under 16 years of age. In 1900, the age 65 and older group made up 4% of the population. Currently this group numbers near 30 million and represents 12% of America's population (Friedland, p. 6).

The lifespan of people has increased since the turn of the century. Between then and 1985, life expectancy at birth increased by 28 years. Moreover, life expectancy at age 65 increased five years (from age 77 to age 82) during this same period. Estimates indicate that by the year 2025, the life expectancy for 65 year olds will be 20 years (Friedland, p. 7).

In addition to people living longer, fertility rates have been declining since 1800. The number of children born to each woman decreased by one half between 1800 and 1900, and fell again by one-half between 1900 and 1980. This trend indicates that there will be less younger adults to contribute to the care of the increasing number of elderly.

The baby boomers born during the 20 years after WW II are the only exceptions to the overall declining birthrate in America. However, this group could pose many problems for the future of long term care. As this group aged and entered the labor force , it dramatically affected the education system, the labor market, the housing market and the goods and services markets. The parents of this group are now of the ages at which they are at greatest risk for needing long term care. As the baby boomer generation itself retires, the capacity of the economic system, along with the retirement income and health care systems, will be tested (Friedland, p. 8).

The elderly, especially those aged 85 or over, are the fastest growing age group in the United States (Friedland, p. 11). The next 25 years will have an increase of 1.7 percent per year of age-65 and older

persons and an increase of 4.1 percent per year of those aged 85 and over. Additionally, it is estimated that by the year 2020, the elderly will represent 18 percent of the total population (Friedland, p. 13). This group will become an even larger political force which will push for more long term care. This will exacerbate existing problems in the financing and delivery of long term care. More resources will have to be channeled into the long term care market from other areas.

The baby boom generation will also affect the "dependency ratio." This is the ratio of potential dependents to the working age population. This ratio is not expected to rise a great deal even when the entire baby boom generation is aged 65 and over. However, the difference is that, instead of children, the dependents will be retirees (Friedland, p. 13). The baby boomers will probably be the largest group of retirees in America's history. Society would probably prefer that long term care costs and insurance be prefunded over an individual's working years. If so, the time to start this funding process for the coming baby boomer retirees is now (Friedland, p. 13).

Long term care costs and availability will be even more of a problem if society waits.

In addition to the problem of increasing numbers of dependent elderly, the ratio of social security covered workers to beneficiaries is expected to continue declining. The number of workers paying into the system relative to beneficiaries has declined 1.5 percent per year since 1960 and is expected to increase to 1.6 percent per year (Friedland, p. 16).

However, if worker productivity continues to increase, the impact of the declining ratio of covered workers to beneficiaries will be felt less sharply. Since this ratio will have decreased from 5.1 in 1960 to 1.6 by the year 2030, output per worker (productivity) must increase to compensate. The worker of today produces 65 percent more than a worker produced in 1960 (Friedland, p. 16). However, there is no guarantee that workers will be able to increase productivity. If not, the taxpayer will be even more burdened.

Public policy will be further affected by the current shifts in population. Social security and medicare will require more contributions from active employees unless the average retirement age increases. However, workers are currently retiring earlier. Since 1957, the number of men aged 55 to 64 participating in the labor force has decreased by 21 percent. The rate for women has also decreased, but not as sharply as many women have been coming back into the labor force later than men (Friedland, p. 17). Additionally, the average age of acceptance of social security benefits has steadily decreased.

Retirement has a definite effect on public programs. A decline in labor force participation results in lower federal and state tax revenues and potentially results in an increase in public program expenditures (Friedland, p. 20). Publicly financed programs such as social security, Medicaid and Medicare are very important sources of retirement income for the elderly. The effect on these will have a direct impact on the availability of long term care.

LONG TERM CARE

Long term care, although not necessarily a total solution, provides a good response to these current demographic trends. However, long term care is costly and largely dependent on government programs.

Long term care consists of the financing, organization and delivery of care to people who are not able to function independently. This care is usually given over a long period of time and helps to compensate for functional dependency. An elderly person becomes functionally dependent when physical and/or mental limitations set in. Such an individual often is not able to perform daily activities such as eating, bathing and dressing and needs assistance to do so. A majority of elderly long term care is provided informally by family, friends, neighbors and volunteers. Formal care can be provided by home health agencies, community based services or institutions such as nursing homes (Friedland, p. 3).

The need for long term care is likely to be in increased demand because of the shift to an older population from a younger one. Just as importantly, medical technology has lessened the chances of death from an acute episode such as a heart attack, stroke or massive infection. Instead, people are likely to pass away from a long term illness. Such illnesses, which can progressively limit the individual's ability to function independently, will require long term care for the individual.

Long term care's cumulative costs can be very expensive. The average annual nursing home costs are near $30,000. For those in need, long term care, in general, and nursing care, in particular, represent the largest out-of-pocket health care expense. In 1987, for example, over $40 billion was spent on nursing home care. Medicare paid $600 million of this, private insurance paid $400 million, Medicaid paid about $18 billion and direct payments by residents and their families made up the rest. Additionally, $15 billion was spent on home and community based care with almost 80 percent being funded by the public (Friedland, p. 45).

PROGRAMS AIDING LONG TERM CARE

Social Security, Medicare and Medicaid are largely financed by current employers and employees. These programs help the elderly to pay for the large costs of long term care.

Social Security is a primary income source for retirees. The poor and near-poor elderly are especially dependent on it. In 1986, Social Security made up more than 75 percent of poor family income. The well-off elderly were more dependent on pensions, earnings and assets and less on Social Security (18 Percent). (Friedland, p. 172).

Medicare was created in 1965 under Title XVIII of the Social Security Act. It is a publicly financed program providing protection against the high cost of acute and ambulatory health care (Friedland, p.21). All recipients of Social Security are eligible for Medicare at age 65. Medicare consists of two parts: Part A pays for acute health care expenditures and is an entitlement program for Social Security recipients aged 65 or older, anyone receiving Social Security disability payments for two years and anyone with end-stage renal disease (ESRD). This is financed by payroll taxes on a pay-as-you go basis, similar to Social Security. Part B is an optimal program that pays for ambulatory physical services. It is financed through premiums paid by beneficiaries who choose to participate in the program and through general revenues (Friedland, p.21). Most home health agencies offered nursing services only at the time Medicare was enacted. Medicare requires medical and social services and homemaker home health aide services in addition to nursing services.

Medicaid, the chief public financer of nursing home care, is a welfare-based health care financing program for the poor. In 1986, 36 percent of the $44 billion in Medicaid payments went to pay for nursing home care (Friedland, p.27). Medicaid pays the health care expenses of those whose Social Security income is low enough to be eligible for Supplementary Security Income programs and for people aged 65 or older whose health care costs exceed their income. Medicaid constitutes the primary source of public financing of long term care.

TYPES OF INSTITUTIONAL CARE

There are several different types of long term care institutions. However, this paper will be limited to the discussion of the two most used and needed institutions types, the nursing home and the life care community.

Long term institutions are classified according to the level of intensity of care (residential care, intermediate care, skilled nursing care); auspices

(public, nonprofit or proprietary); and primary services offered (nursing care home, personal care home with nursing service, etc.) (Johnson and Grant, p.13)

A nursing home is defined as a small scale homelike setting for the care of those who can no longer care for themselves(Johnson and Grant, p. 17). Those who enter a nursing home are individuals who are physically impaired (to the extent that they cannot care for themselves), psychiatrically impaired, and are without a primary support network (Johnson and Grant, p. 44).

There are two types of nursing homes. The skilled nursing facility (SNF) provides medical interventions (intraveneous feeding, intensive twenty four hour nursing care, etc.). Skilled care services are rendered under the supervision of a physicial and additionally require the skills of registered nurses and physical therapists, for example. Intermediate care nursing facilities (ICF's), do not provide professional nursing care on a twenty four hour basis. They do provide health related care and services to individuals who do not require skilled nursing but do need care and services which are only available through institutional facilities.

Life care communities (also called continuing care retirement communities) merge the financing and delivery of housing and long term care. Life care communities are typically a campus-type setting which includes apartments, nursing, central eating and recreation facilities. These communities enable active individuals to remain independent in their own apartments and engage in many social activities. Residents are offered many choices. For example, they can have their meals in the public dining facility if cooking becomes too difficult, or home health aides can deliver meals to the residents' own apartments.

Ninety-Eight percent of life care communities are non profit. They are financed like an insurance plan, with an entry fee (a low of $35,000) and a uniform monthly fee (average low of $650) which together guarantee housing, nursing and social services. These institutions can serve an old-(over 80) population who can change living situations without drastic relocation as their needs change (Johnson and Grant, p. 157). The integrated delivery and financing of long term care within the life care community guarantees access to long term care and insurance services for the residents. Another attraction is that the contracts in these communities are often "all inclusive." These contracts stipulate that monthly fees do not increase if the resident moves into the community's nursing facility. The nursing bed cost is shared by the whole community is not solely the individual's financial risk (Friedland, p. 92).

Home health care programs help bridge the gap between elderly independent living and nursing home living. These programs include medical diagnosis and functional assessment, health care treatments, health education, training of family caregivers, homemaking and chore services and personal and terminal care, to name a few. The implementation of these programs requires professional and paraprofessional staff. Physicians, housekeepers, registered nurses, therapists and social workers are only several of the many staff persons.

As the elderly population increases, there will be an even greater need for long term care institutions and the programs which help fund them.

CONTEXTUAL

ENVIRONMENT

The proposed continuing care retirement facility will be located on a 25 acre site in the city of Lakeway, Texas. Lakeway is located only 20 miles northwest of downtown Austin. This location will offer the facility's residents both the atmosphere of the Texas Hill Country and the proximity to a major urban center.

Austin is a dynamic city which offers large number of social, recreational and cultural activities. All residents of the facility, especially those with their own transportation, may frequently make the short trip to Austin to use and enjoy the city's services and activities.

Lakeway, being a recreation-oriented community, provides an ideal environment for encouraging physical and social activity and involvement. The retirement facility's elderly residents will be able to utilize the city's many public golf courses, tennis courts, swimming pools and park areas.

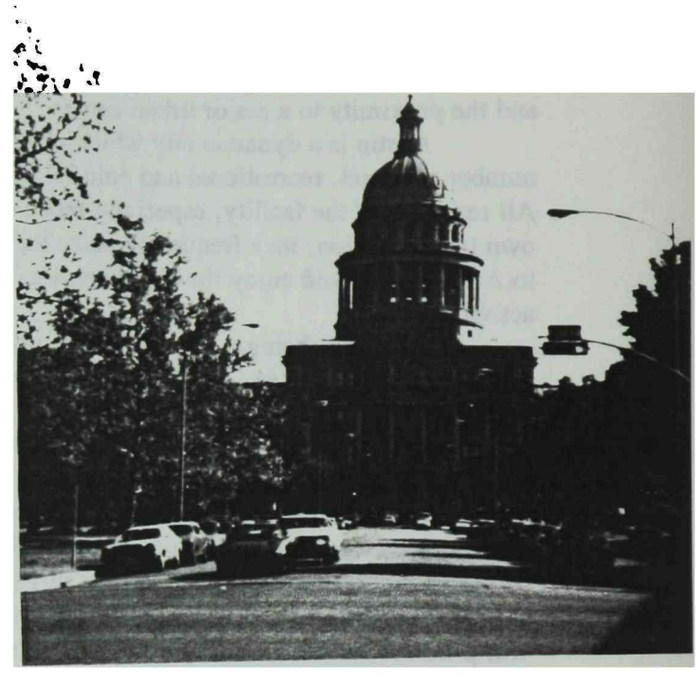
Lakeway contains a number of medical services, including emergency clinics and minor surgery facilities. These, along with the nearby major hospitals in Austin, will preclude the need for major medical services in the proposed retirement facility.

The site chosen for the retirement community is adjacent to a major Lakeway roadway and is in close proximity to grocery stores, shopping centers and restaurants.

The site's more heavily-wooded areas provide natural visual beauty and possibly exciting walking and exploring areas. The majority of the site has a relatively flat terrain. This will facilitate easier movement for those residents who are physically impaired.

The Combination of the site's features and location, along with the amenities provided in Lakeway and Austin, should encourage resident interaction with the physical environment, and involvement in the facility and surrounding community.

THE CITY OF AUSTIN, TEXAS



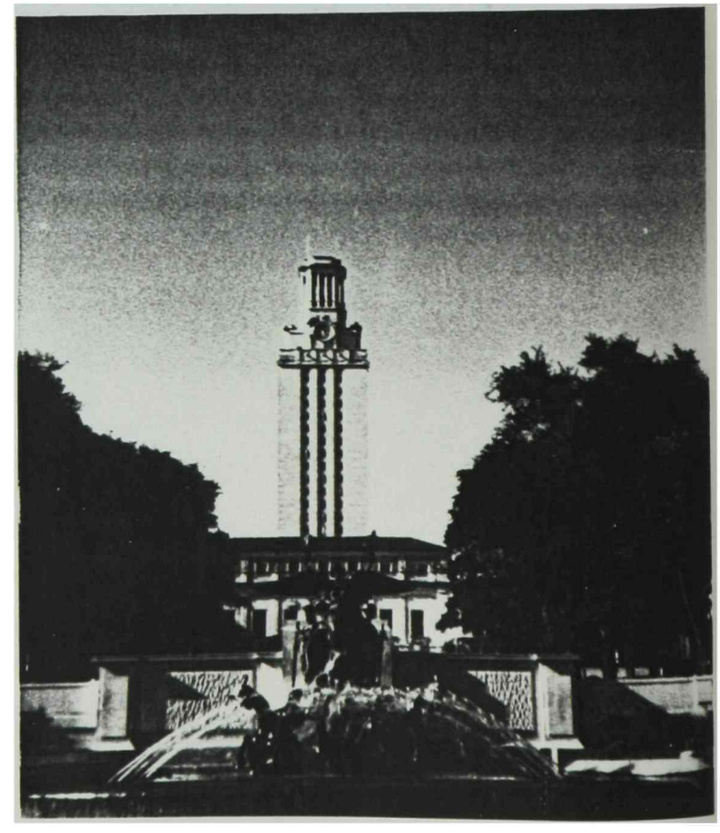
DESCRIPTION

The city of Austin is located in central to south-central Texas about 75 miles northeast of San Antonio. Austin is situated on the Colorado River at a point known as the Balcones escarpment, which separates the Texas Hill Country from the Blackland Prairie to the east. West Austin has a hilly terrain and elevations within the city range from 400 feet to 1000 feet above sea level. Austin, one of the country's fastest growing areas during the 1980's, is a vibrant city with a metropolitan population of over 550,000 people.

Austin is the Texas State Capitol and the seat of Travis county. The capitol building and the many other government agencies and institutions make the city the center of the state's political activity. These local state, and federal governments employ over a third of Austin's work force. The University of Texas at Austin, a state institution, is the largest single employer in the area.

In addition to being the seat of state and local government, Austin is the home of a rapidly expanding electronics and high tech industry which concentrates on computers and the aerospace field. The city is an important center for electronic equipment production and has around 500 manufacturing plants.

Additionally, Austin provides a market center for the beef, cattle and farm product industries of the surrounding region and is headquarters for over 200 trade organizations and associations.



The University of Texas is an outstanding educational institution and features several fine libraries. One of these is the well-known Lyndon B. Johnson Library and Archives, which is a major tourist attraction. Other institutions of higher learning in Austin are St. Edwards University and Austin Community College.

The city has a large number and wide variety of cultural and social activities. The Austin Ballet Society and Austin Symphony Orchestra perform throughout the year. Numerous art galleries such as the well-known Laguna Gloria feature outstanding art exhibitions. Local theater companies, such as the Austin Civic Theater, present a large number of plays and musicals. The city has a wide array of shopping facilities including Barton Creek Mall in Southwest Austin. The city also offers a thriving night life with many gourmet restaurants and night clubs, especially on downtown's Sixth Street.

The University of Texas provides quality spectator sports to Austin's residents and the school's

Frank Erwin Special Events Center hosts concerts in addition to sporting events.

In addition to the social and cultural activities, Austin has many recreational facilities. The most popular of these are the city's lakes. Lake Austin, formed by a dam on the Colorado River, and Town Lake are within the city limits and provide places for camping, swimming, canoeing and sun bathing. Zilker Park's Barton Springs, which produces millions of gallons of cold water daily, is the most popular sun bathing area in the city.

Austin is a city of exceptional beauty. On many evenings, a beautiful purplish mist settles around the city's surrounding hills. A street lighting system built in the 1890's features 27-150 foot high towers with Mercury Vapor lamps. These lights cast a blue glow, over the city, creating an artificial "moonlight." Despite the growing population, industries and businesses, Austin has maintained its beautiful natural and built environment. Historical preservation is a priority and is highlighted by the renovations on Congress Avenue, including a current renovation of the capitol building itself. The city is also careful to preserve and maintain its many parks, lakes and trails.

CLIMATE

Austin has a humid-subtropical climate. Daytime temperatures in the summer are hot; however, summer nights are usually pleasant. Winters are mild as cold spells rarely last longer than two days and freezing temperatures occur, only 25 days of the year on the average.

Precipitation is fairly evenly spread out over the year. Heaviest amounts of rain occur in the spring and September, due to tropical storms which move up from the Gulf of Mexico. Precipitation is provided mainly by thunderstorms from April to September and by light rains during the winter. Snowfall is virtually non-existent.

Prevailing winds are southerly but northern winds are frequent in the winter. Extremely strong winds and hailstorms seldom occur.

The vegetation in Austin is a combination of that found in the Blackland Prairie and the Texas Hill Country. Tree life includes the Oak, Elm, Pecan, Mesquite and Juniper. Other vegetation are shrubs such as the acacia, mesquite and mimosa and both bunch and short grasses.

Soil conditions are, as vegetation is, a combination of both the Blackland Prairie and the Hill Country. Soils include dark gray to reddish brown

calcareous clay loams and clays and dark, deep to shallow and stony calcareous clays over limestone.

The city of Austin blends scenic man-made and natural beauty with a very active social, cultural and recreational life. The combination of these, along with the favorable climate, enables Austin to project a special ambiance which all residents in the city and the surrounding areas can enjoy.

THE CITY OF LAKEWAY

DESCRIPTION

Lakeway is a 5,500 acre planned recreation-oriented development located approximately 20 miles northwest of Austin. Lakeway's property stretches across hills, meadows and limestone cliffs to the shores of Lake Travis. The terrain rises and falls with its hills, valleys and wooded areas and offers many panoramic views of the Texas Hill Country and the lake. Elevations range from the average Lake Travis elevation of 681 feet to the maximum land elevation of 1174 feet above sea level.

Lakeway is easily accessible from Austin. Ranch Road 620 leads to Lakeway's main entrance from two directions. From Austin, one can take Interstate Highway 35, Highway 183 or Ranch Road 2222 north to R.R. 620 then drive west. Another route from Austin is to take R.R. 2244, Loop One or IH 35 south to HWY 290. Then drive west on HWY 290 and take HWY 71 northwest until it intersects R.R. 620, which leads north to Lakeway. Additionally, Austin's Robert Mueller Airport is only 30 minutes away and Lakeway has its own 4000-foot runway airpark.

Lakeway was established in 1963 as a community which could offer both country leisure and suburban conveniences to its residents. Originally, the majority of Lakeway's residents were retirees. Since then, the City of Lakeway and its newest residential community, the Hills of Lakeway, has grown to over 5000 property owners. These owners consist of a balanced mix of working Austin families, second home weekenders and retirees.

A major goal of Lakeway's developer was to protect and enhance the community's beautiful environmental heritage. The planners created a Concept Development Plan with the objective being to control development and to have the least environmental impact. It is because of the developer's devotion to the community and to its land that, nearly 30 years later, a variety of wildlife, including herds of whitetail deer, still thrive in Lakeway.

Homes in Lakeway and the Hills of Lakeway are a combination of permanent, vacation and weekend residences. Architectural styles are varied and the home sites range from secluded sites within small groups of trees to hillside views of the lake and golf course fairways to water frontage sites. Residents are encouraged to have their home designs harmonize with the landscape. So far, most residents have done this, thus showing an appreciation for the area's natural

beauty. Architectural controls and restrictions encourage quality construction which will enhance the community's image and which will help assure that Lakeway's aesthetic beauty is maintained.

City of Lakeway property owners are subject to taxes, from the city, the Lakeway Municipal Utility District and Fire Protection District, the Lake Travis Independent School District and Travis County. Taxes on Hills of Lakeway property owners are from the Hurst Creek Municipal Utility District and Fire Protection District, Lake Travis I.S.D. and Travis County. Additionally, Hills property owners must pay a monthly fee to belong to the Hill's Property Owners Association which pays for street maintenance and security.

Lakeway provides full utility service to its residents. Sixty-five mile long Lake Travis is the water supply source. Water is distributed to the community by the two utility districts after being pumped and treated.

The City of Austin and Pedernales Electric Cooperative provide electric service to Lakeway. Southwestern Bell provides phone service to the area. Cable T.V. is provided by Cablevision of Lake Travis.

The City of Lakeway Police Department and Travis County sheriff's office provide patrol service. Fire protection is by the Hudson Bend Volunteer Fire Department, which has a station in Lakeway.

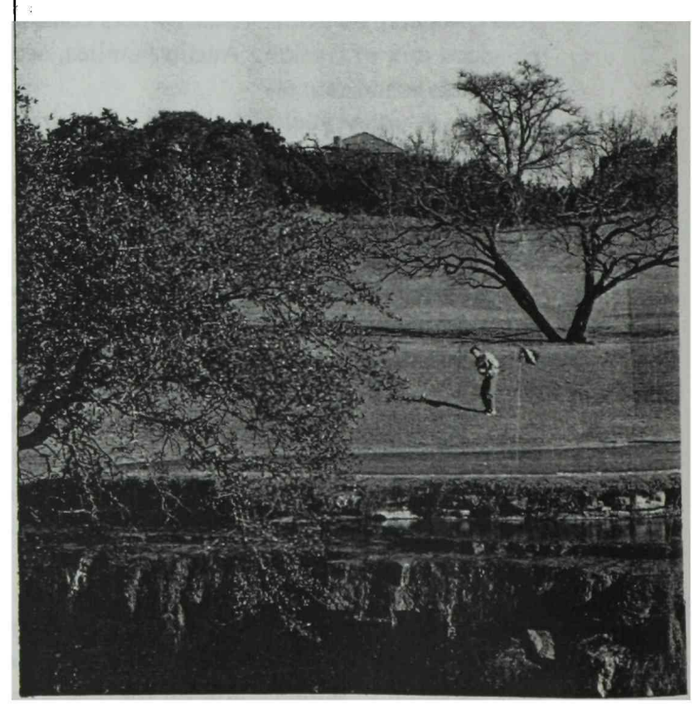
Lakeway is located in the Lake Travis Independent School District. The district was established in 1981 to accommodate the rapidly growing community. At 16 to 1, the district's student to teacher ratio is lower than the state average. Students from Lakeway make up a third of the school district's enrollment.

Lakeway offers many recreational facilities, including golf, tennis and boating. There are three 18-hole golf courses for residents to choose from: Yaupon and Live Oak are public courses, which offer picturesque lake and Hill Country views, and are located in the City of Lakeway. The Jack Nicklaus-designed Hills course is private and is located in the Hills of Lakeway. All three offer golfing instruction.

Residents enjoy a variety of tennis facilities. The highly-rated World of Tennis in Lakeway has 26 courts including two indoor climate-controlled courts. The Lakeway Tennis Center Offers six courts. Both facilities offer excellent tennis instruction courses.

The Lakeway Marina offers over 350 covered boat slips, making it the largest full-service marina on Lake Travis. The marina has daily boat rentals, expert fishing guides and a convenience store on the dock.

Property owners in the City of Lakeway are not required to belong to any membership in order to use the Lakeway amenities, except those in the Hills of Lakeway. Membership in the Lakeway Recreational



Association entitles' members to lower rates. All property owners in the Hills are required to maintain a membership in the Hills Club and have access to all Hills Club and have access to all Hills and Lakeway amenities.

Residents have a number of dining establishments to choose from. The Travis room at the Lakeway Resort and Conference Center serves breakfast, lunch and dinner. All golf courses have club grills which offer sandwiches and salads. Courtview at the World of Tennis, open to all residents and visitors, serves lunch. Rosie's Tamale House, located outside Lakeway where RR 620 and HWY 71 meet, is very popular with all residents.

In addition to the already mentioned amenities, Lakeway residents can join a variety of clubs such as bridge, books, tennis, golf and photography. Social events like sports tournaments, cookouts and holiday parades always have large resident participation. In addition, there are many civic associations and committees.

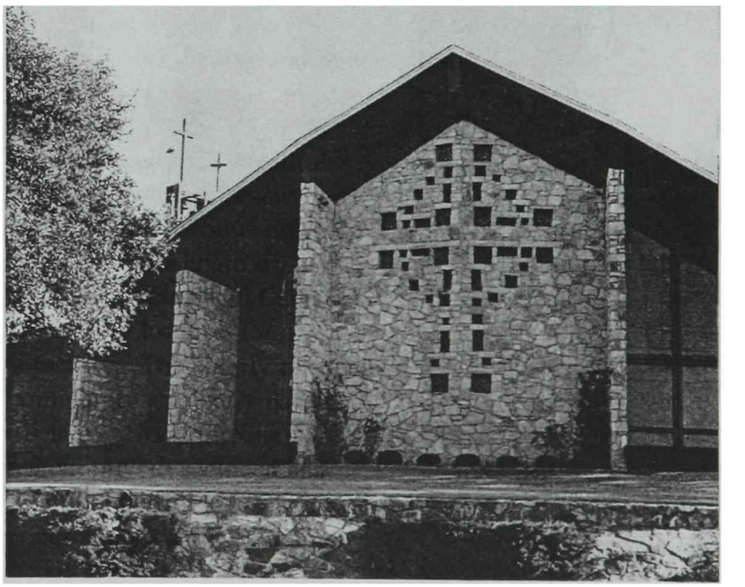
Accommodations for guests of and visitors to residents are furnished by the 138 rooms and suites of the Lakeway Resort and Conference Center and the rental units at the World of Tennis Condominiums.

There are several shopping centers located in and around Lakeway which feature grocery stores, dry cleaners additional restaurants and other facilities. Lohman's Crossing, contains the Apple Tree supermarket and is located at the intersection of Lohman's Crossing Road and R.R. 620. Lakeway Plaza is situated on R.R. 620 just south of Lakeway's main entrance, and the Village Square is located in the center of Lakeway on Lakeway Drive.

Health care is readily accessible to the people of Lakeway. Various medical clinics, doctors and dentists are located in the area. Services include minor emergency clinics and X-ray, physical therapy and minor surgery facilities. Health programs and classes are also offered.

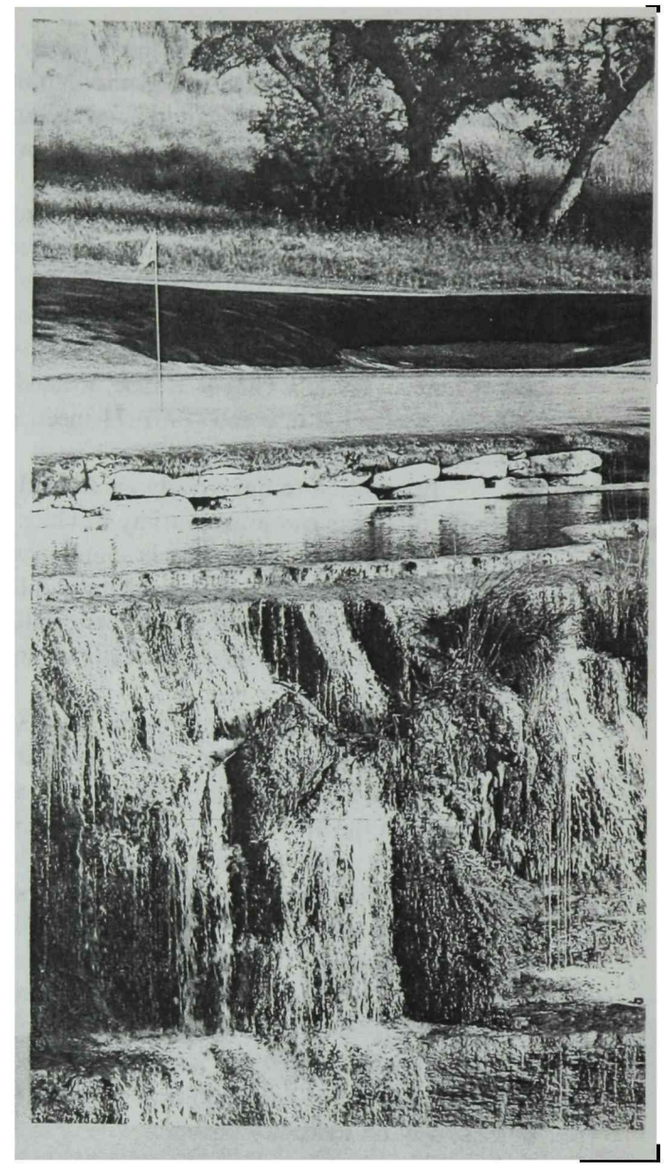
Church services are provided by a beautiful non-denominational church located within Lakeway. The church offers weekend services at various times for differing denominations. The church's board of directors is comprised of both Protestants and Catholics.

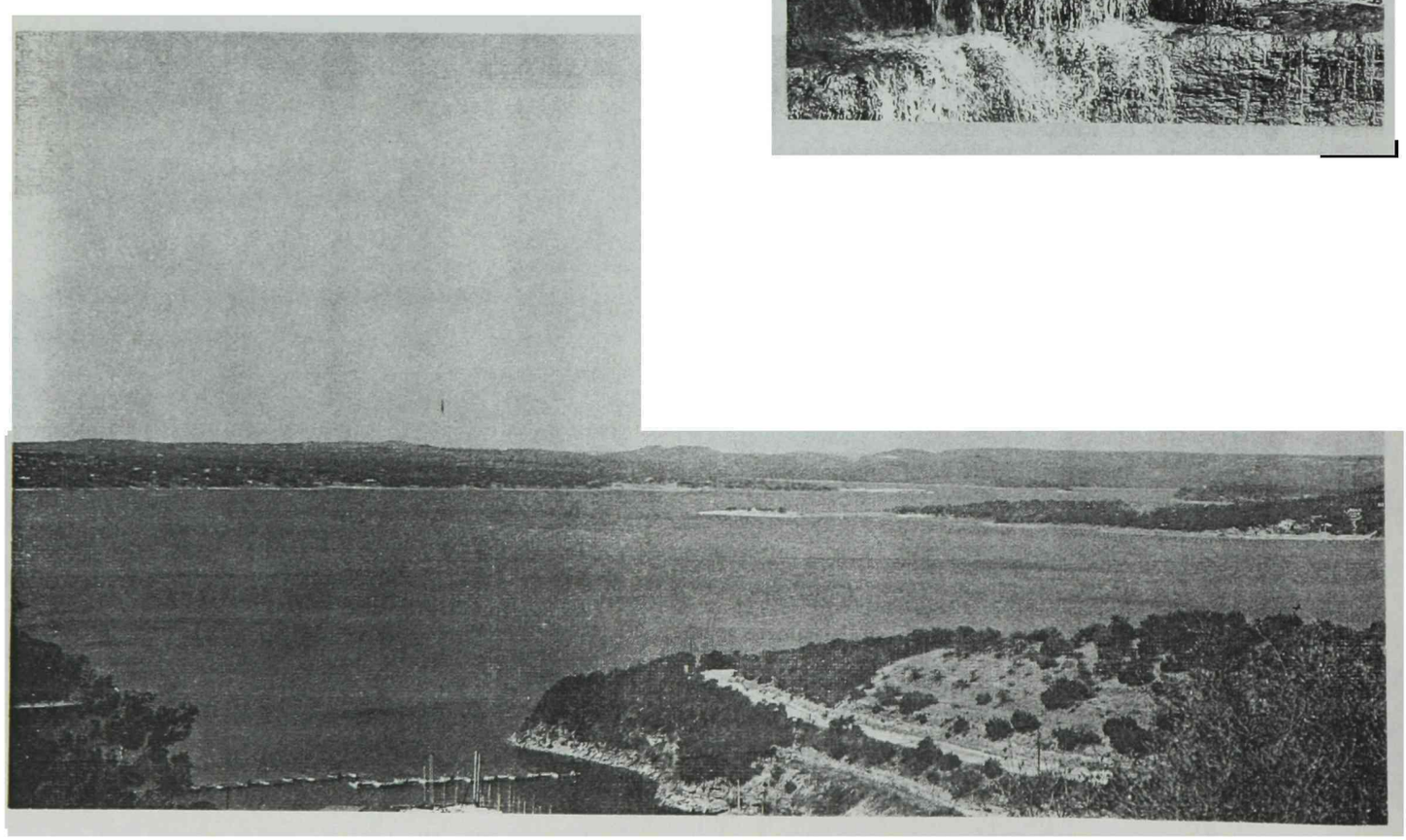
Lakeway provides an ideal location for a continuing care retirement facility. The elderly residents will be able to enjoy the community's friendly pace and the environment's natural beauty. However, the residents can choose to be anything but secluded and sedentary as Lakeway is a self-contained city which offers many facilities, services and activities which they can get involved with.



CLIMATE

The climate of Lakeway is mild and slightly less humid than Austin's. Temperatures in Lakeway range from an average of 74 to 94 degrees in the summer and from 40 to 60 degrees in the winter. The average yearly temperature is 78 with the sun shining more than 300 days annually.





THE SITE

PHYSICAL DESCRIPTION

The new continuing care facility will be located on a 25 acre site within the Lakeway city limits. The site is generally rectangular in shape with the maximum being over 600 feet and the maximum length about 2000 feet.

ADJACENCIES

The site's east side fronts Lohman's Crossing Road approximately 700 feet away from the intersection of Lakeway Boulevard and Lohman's Crossing. This intersection features a convenient Exxon full service station on the northwest corner, a Lakeway real estate office on the southeast corner and the Retama Gardens condos on the southwest corner.

The north/northwest side of the site is adjacent to the Retama Gardens and the Lakeway Church property while the Hills of Lakeway development, Hills golf course and an undeveloped 15 acre tract of land form the site's southern and western boundaries.

TOPOGRAPHY

Most of the site is generally level and slopes down gently towards the west. However, there is a steep dropoff in the western-northwestern portion which is where Hurst Creek crosses the site.

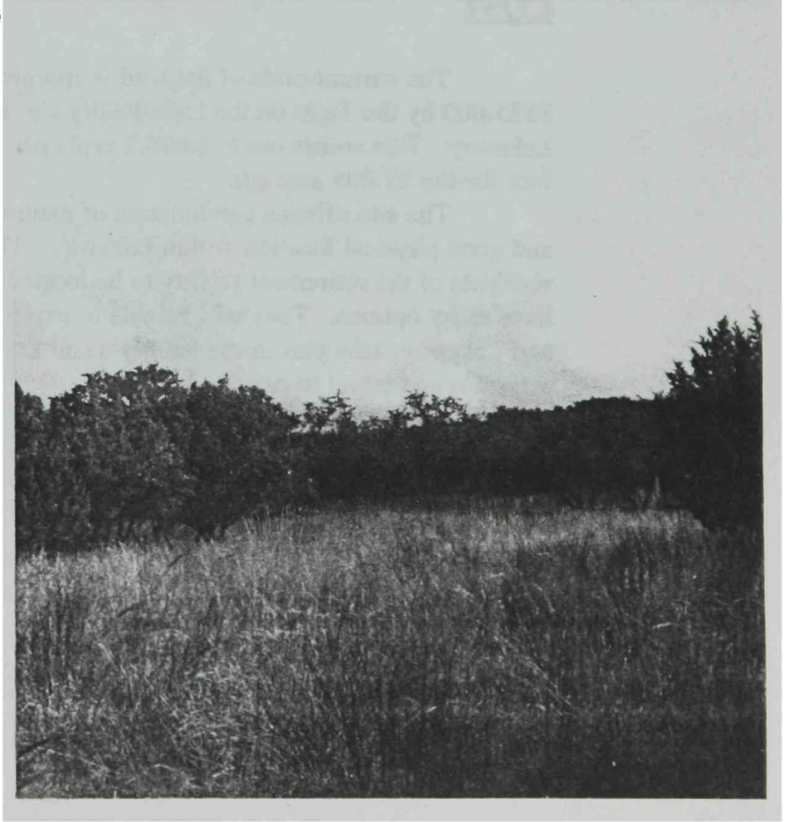
VEGETATION AND SOILS

Vegetation and soils are typical of the Texas Hill Country. The site has an assortment of trees of varying height including Oaks, Pecans and Mesquites. Grasses are both tall and short and brushy. Some areas of the site are open with clumps of trees while other areas are more heavily wooded.

Soils are mainly dark-colored or reddish-brown clays and stony calcareous clays over limestone.

UTILITIES

Utilities are not currently connected to the site but are fully supplied to the adjacent Hills of Lakeway, Lakeway Church and Retama Gardens. Future utilities could be supplied by the Lakeway Municipal Utility District which has an office only half a mile to the north on Lohman's Crossing Road.



PROXIMITY TO SERVICES

Shopping facilities are within close proximity to the site. The Lohman's Crossing Center is just one mile to the south where Lohman's Crossing meets R.R. 620. The Lakeway Plaza is a mile and a half (by road) to the east on R.R. 620 and the Village Square is about half a mile away in the center of Lakeway. The Lakeway City Hall and Police Station is only a third of a mile north of the site on Lohman's Crossing.

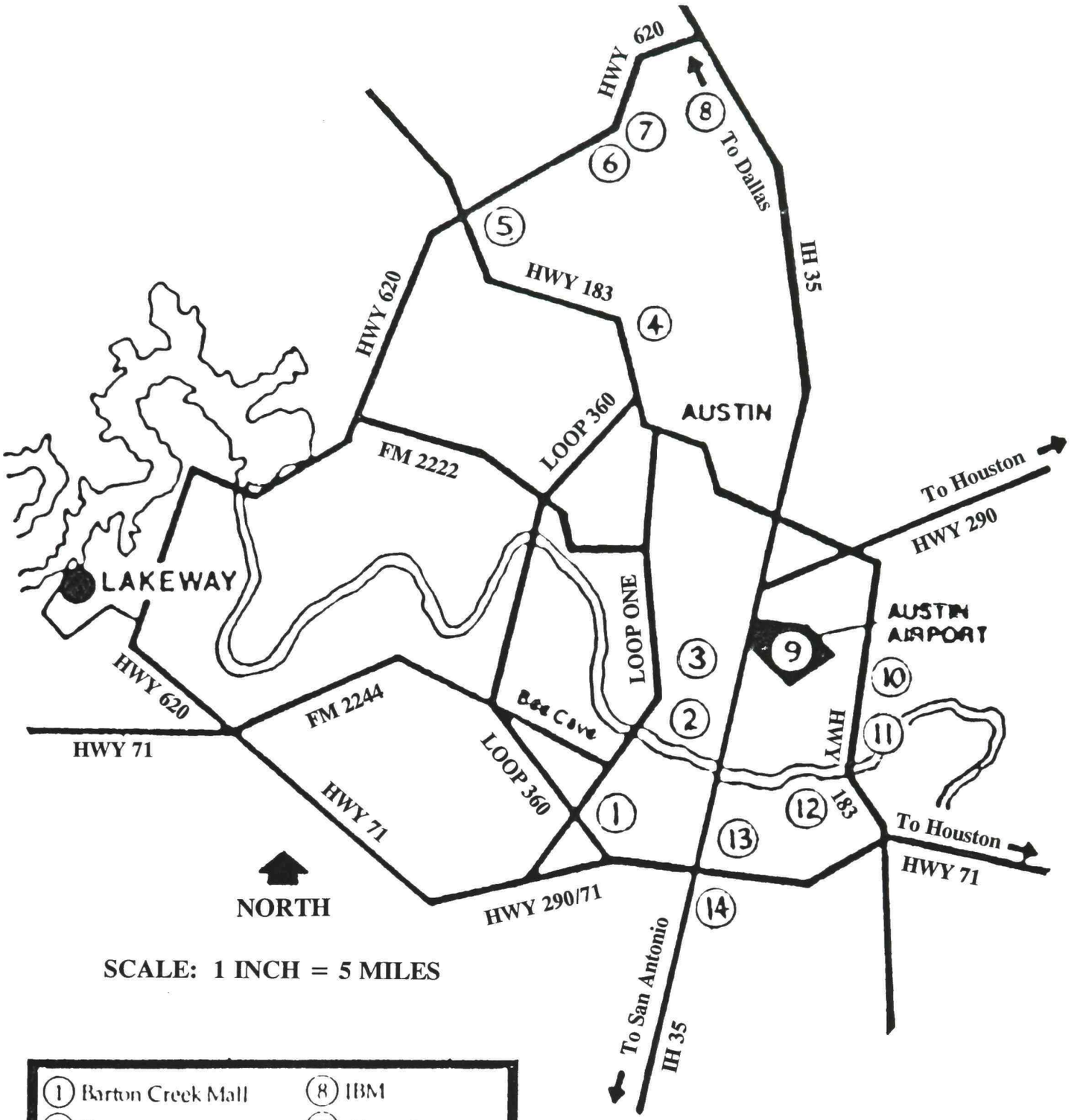
ENVIRONMENT/IMAGE

The site has a fence on the east side along Lohman's Crossing Road but is open along the north-northeast side adjacent to the Retama Garden Condos. As one walks around the site, one gets the wide-open, fresh air feel which is embodied in the nature of the Texas Hill Country. The sound of cars moving along the road and occasional glimpses of the tops of the adjacent condos are practically the only indications that the site is situated in a developed area. High grasses, brush and thicker groups of trees prevents comfortable walking in some areas especially in the steep sloping western edge. Many types of birds find refuge in the site and small herds of deer are often seen on the property.

COST

The current price of the land is appraised at $525,000 by the Tejas on the Lake Realty Co. in Lakeway. This comes out to be 48.2 cents per square foot for the 25.006 acre site.

The site offers a combination of natural beauty and good physical location within Lakeway. The residents of the retirement facility to be located here will have many options. They will be able to explore the site and Lakeway, take part in the facility's and Lakeway's activities and travel to nearby Austin.



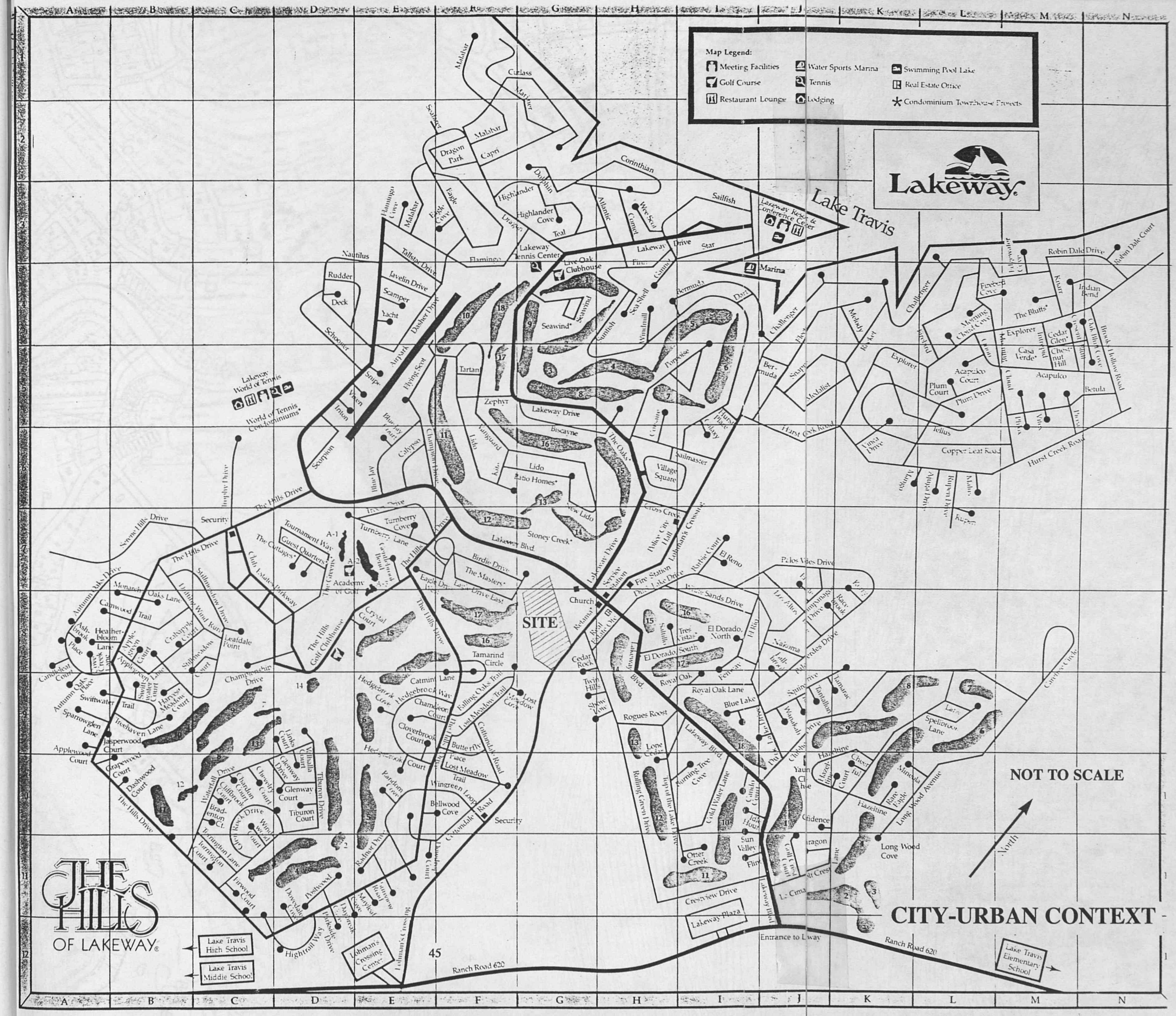
SCALE: 1 INCH = 5 MILES

(1) Barton Creek Mall	(8) IBM
(2) Downtown	(9) Airport
(3) University of Texas	(10) Tracor
(4) Arboretum	(11) Motorola
(5) 3M	(12) Sematech
(6) Texas Instruments	(13) Advanced Micro
(7) MCC	(14) Lockheed

Mileage & Distance Lakeway to:

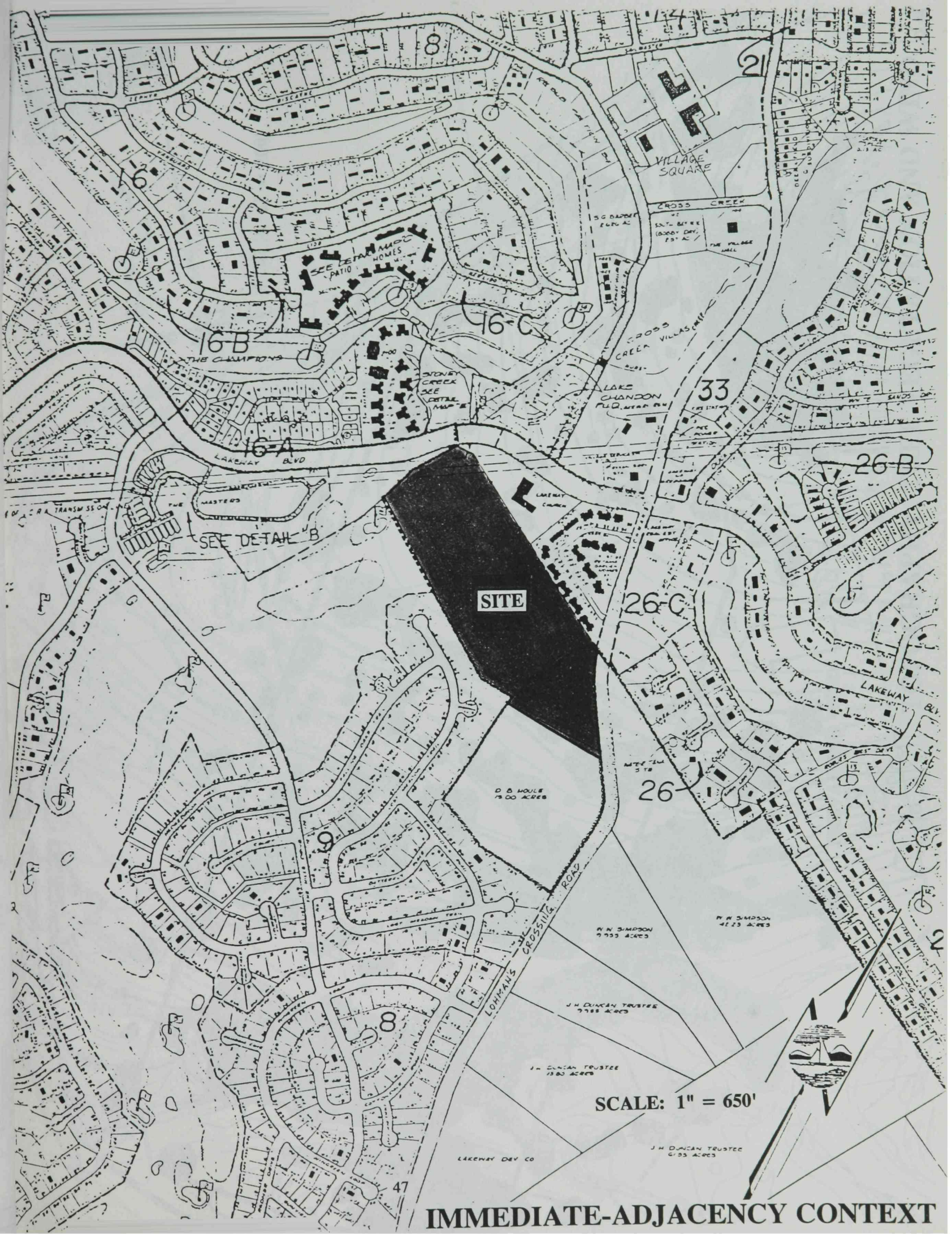
	Miles	Time
• 6th St./Downtown	19.7	25 minutes
• Airport	23.7	30 minutes
• Barton Creek Mall	16.1	20 minutes
• Arboretum	19.1	22 minutes
• University of Texas	21.1	25 minutes
• Lake Travis	0	0 minutes

REGIONAL CONTEXT



NOT TO SCALE

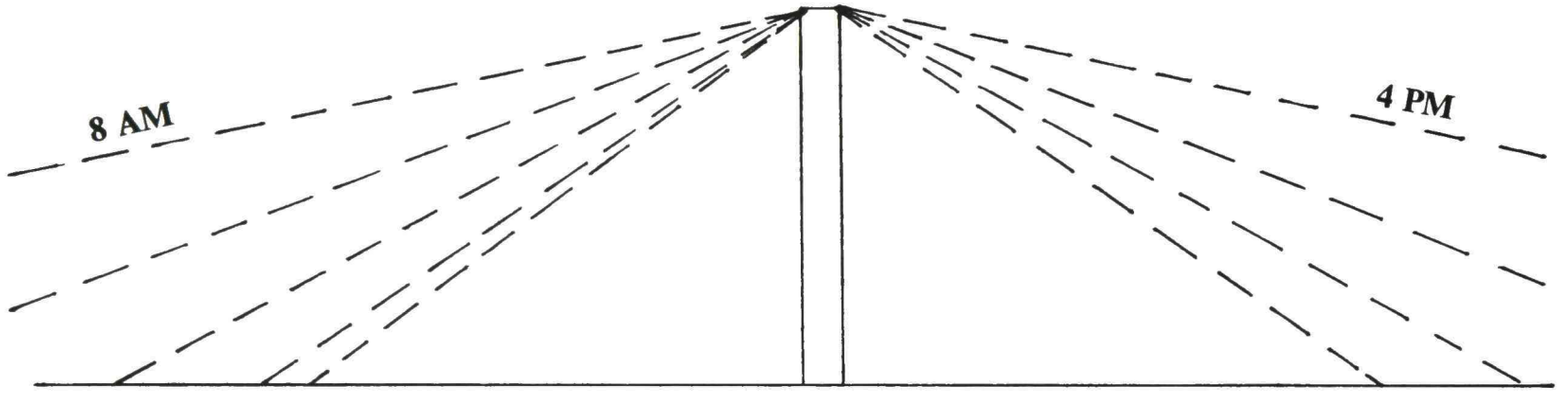
CITY-URBAN CONTEXT



IMMEDIATE-ADJACENCY CONTEXT

TOPOGRAPHY, TREE VEGETATION AND WIND

SOLAR ANGLES



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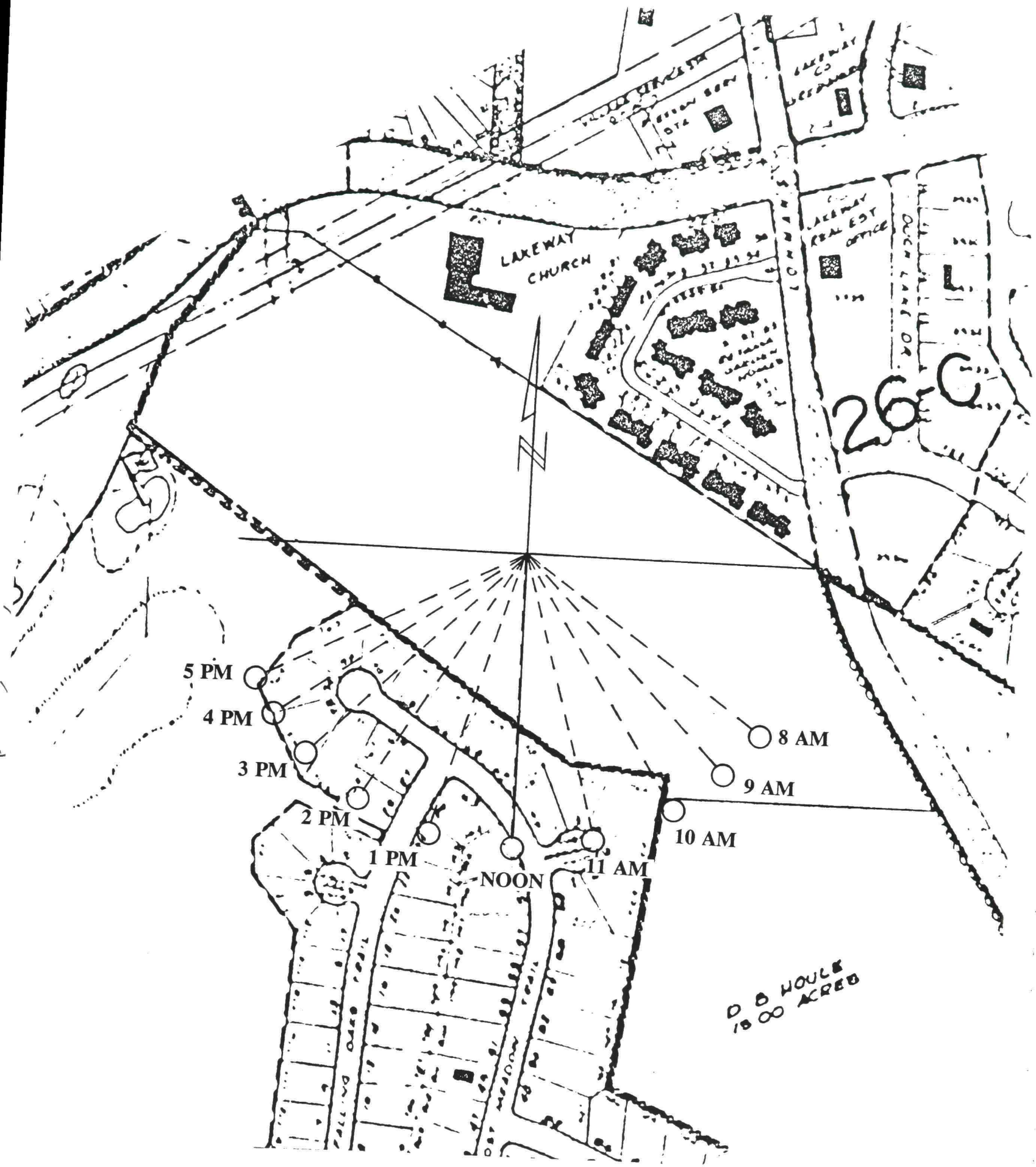

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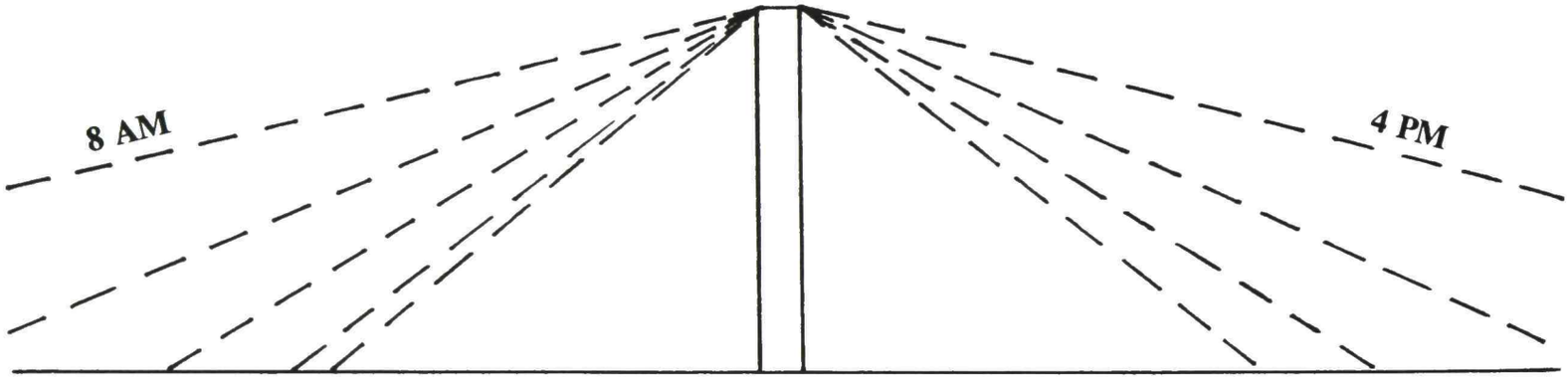

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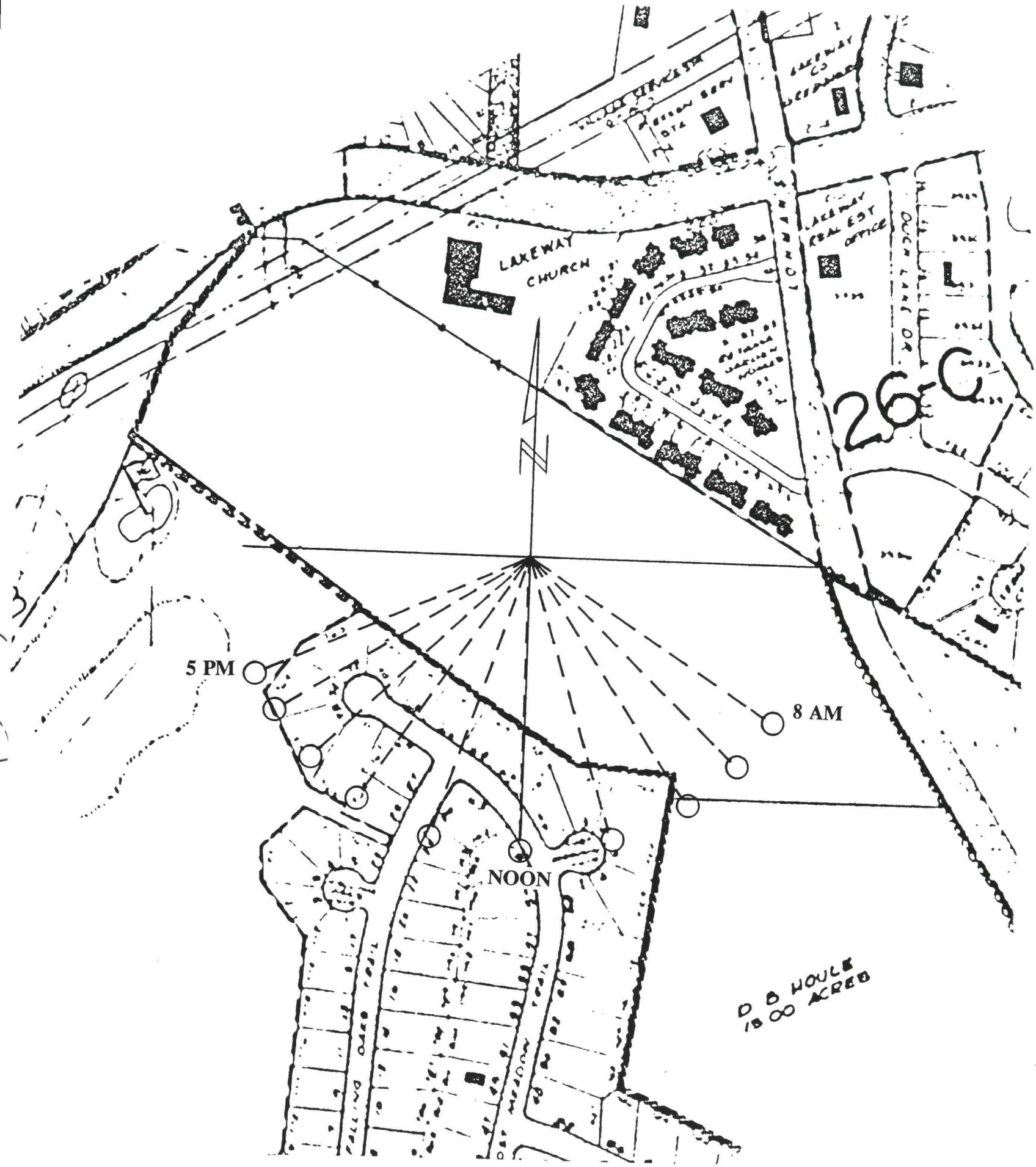
JAN 22/NOV 22



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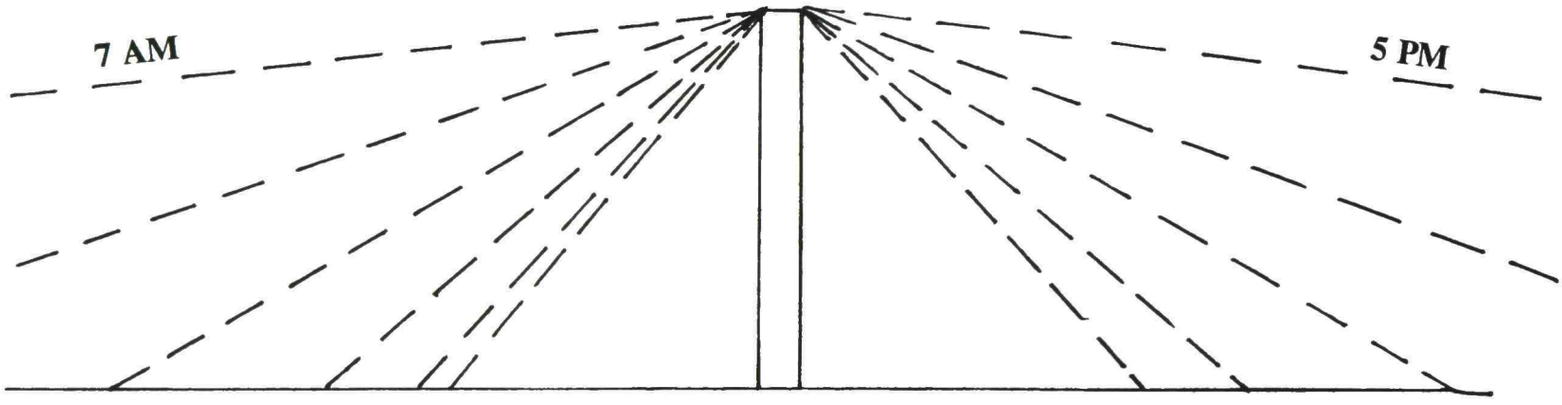

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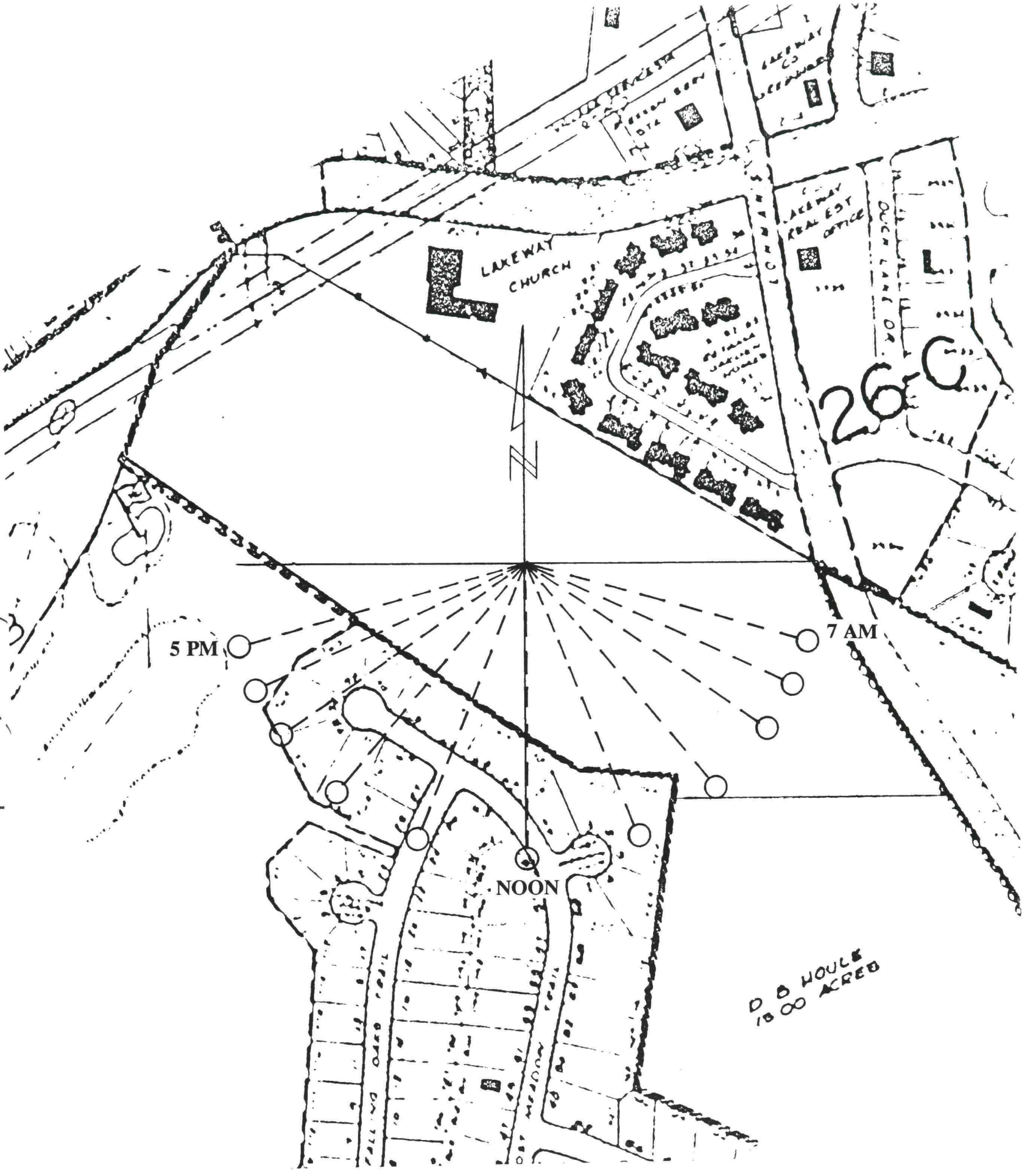

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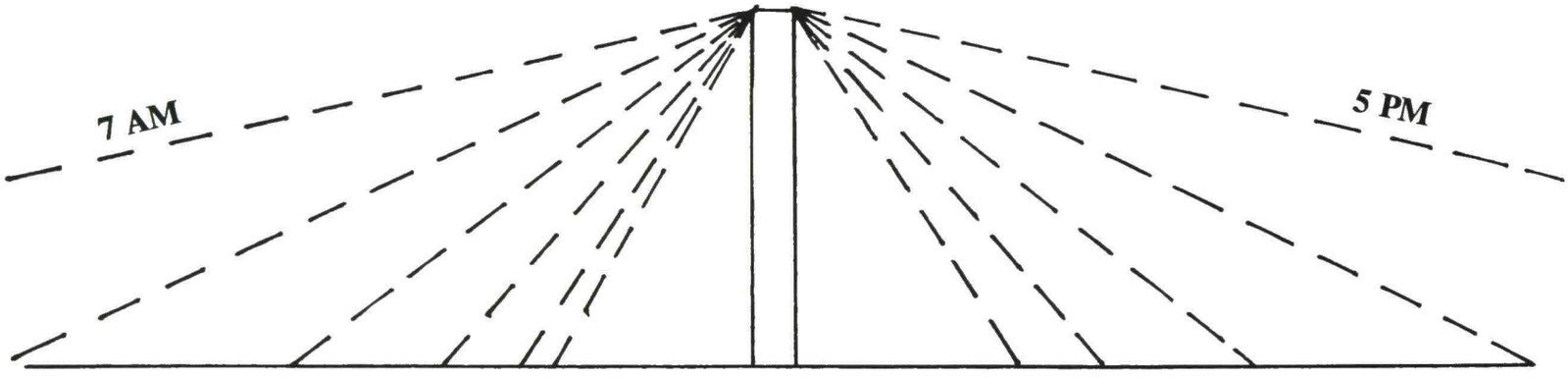

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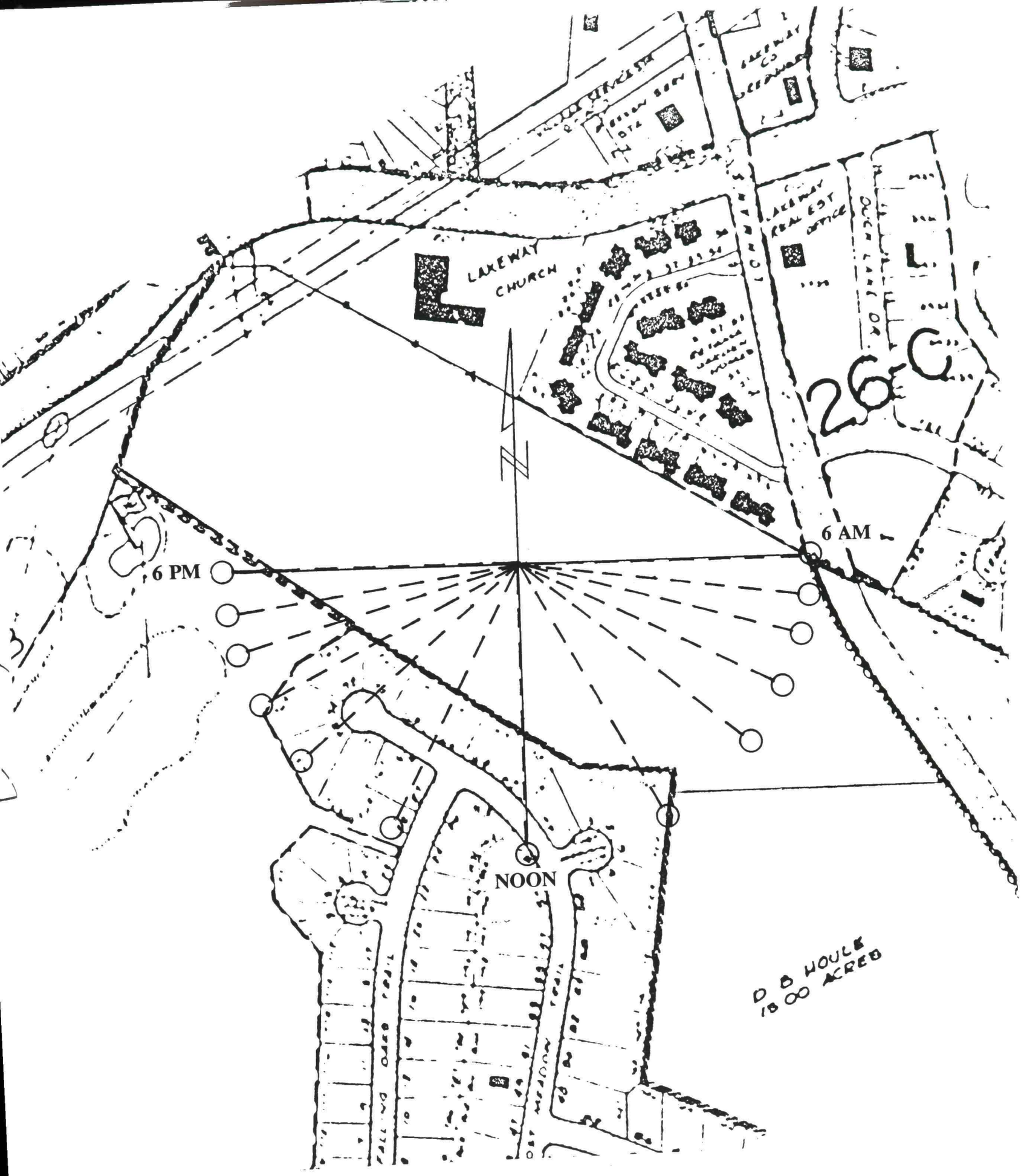

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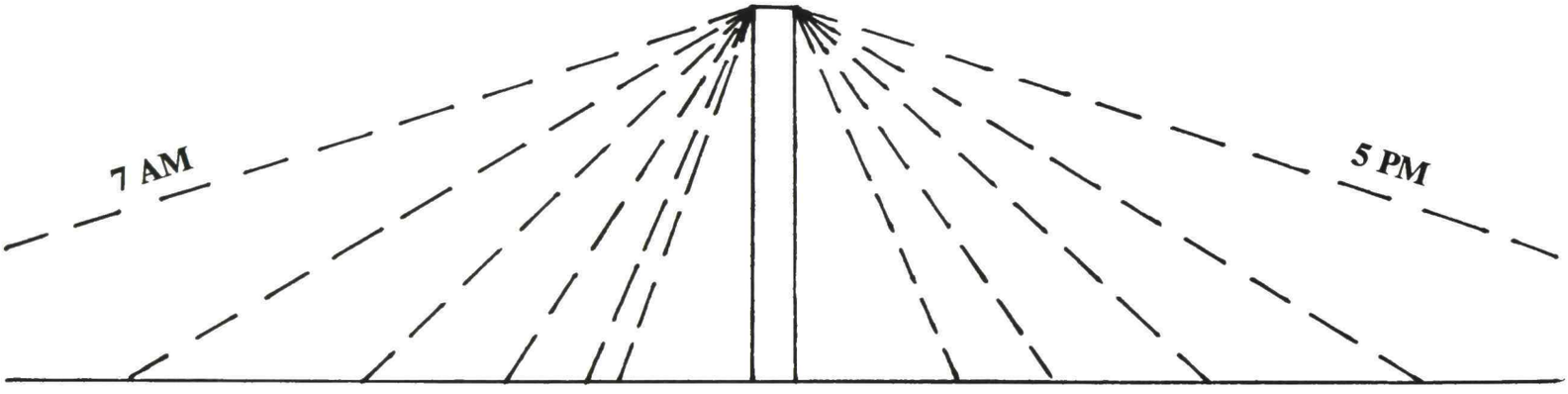

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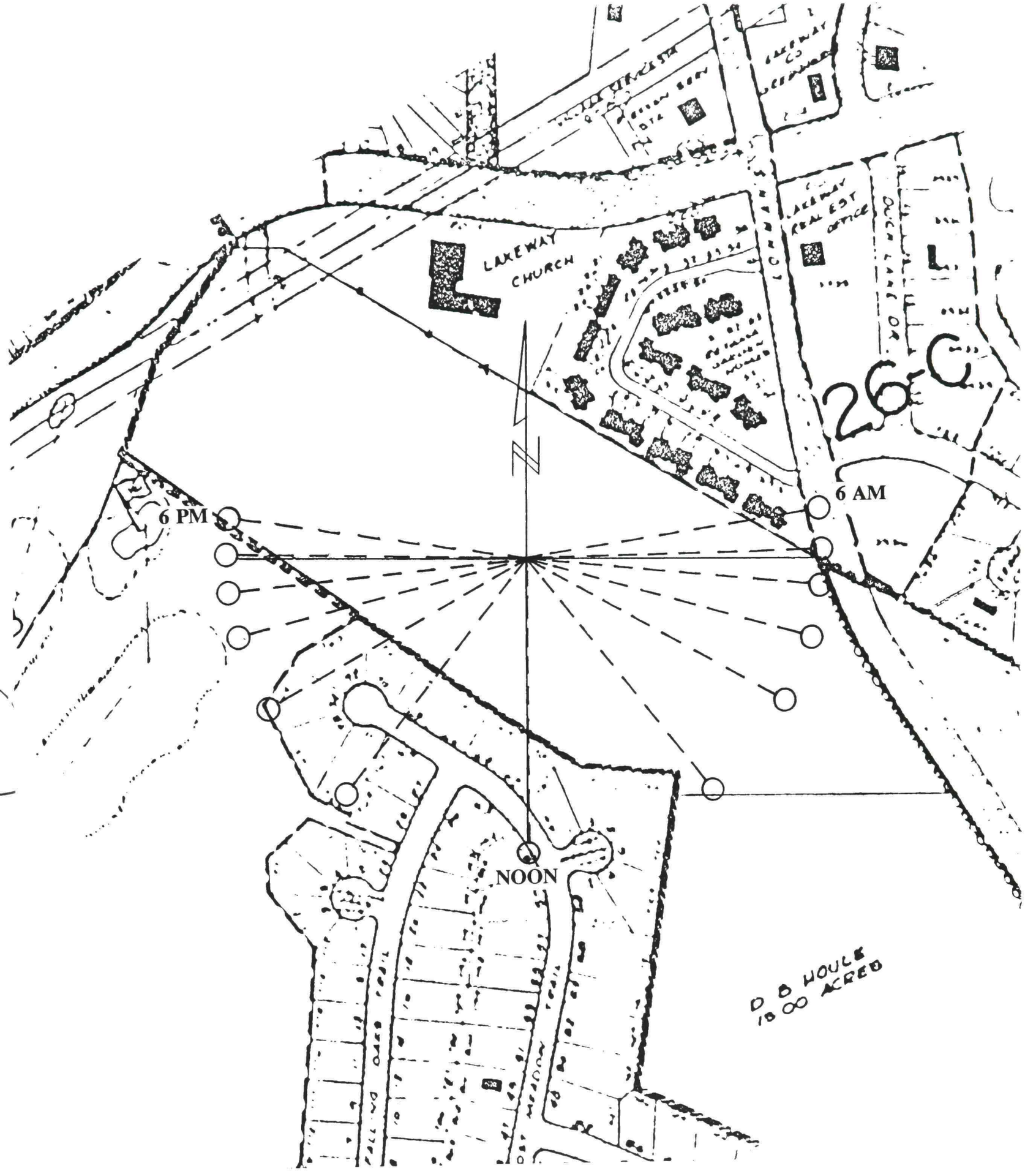

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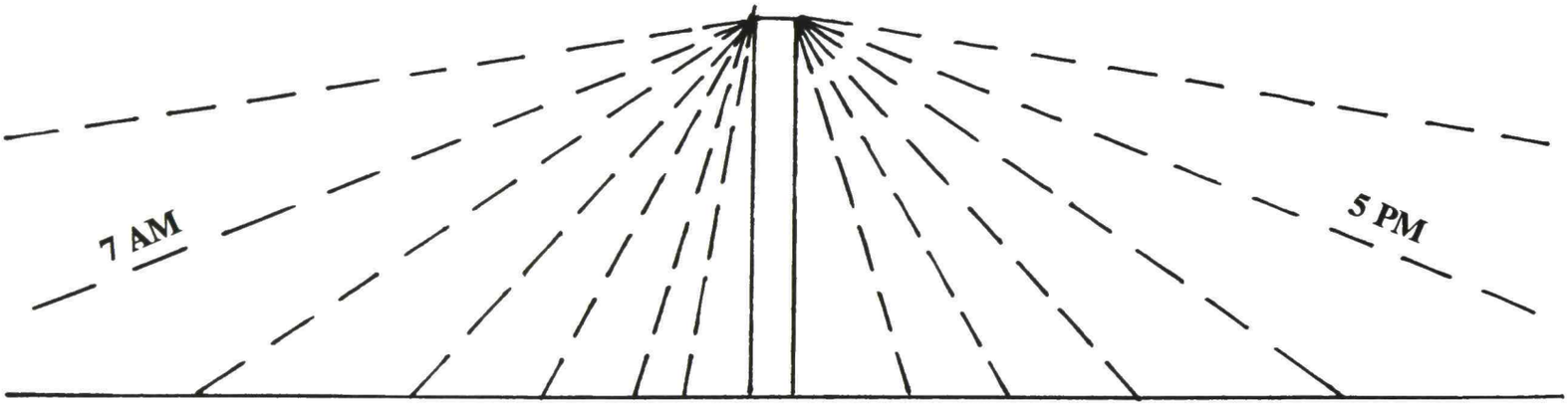

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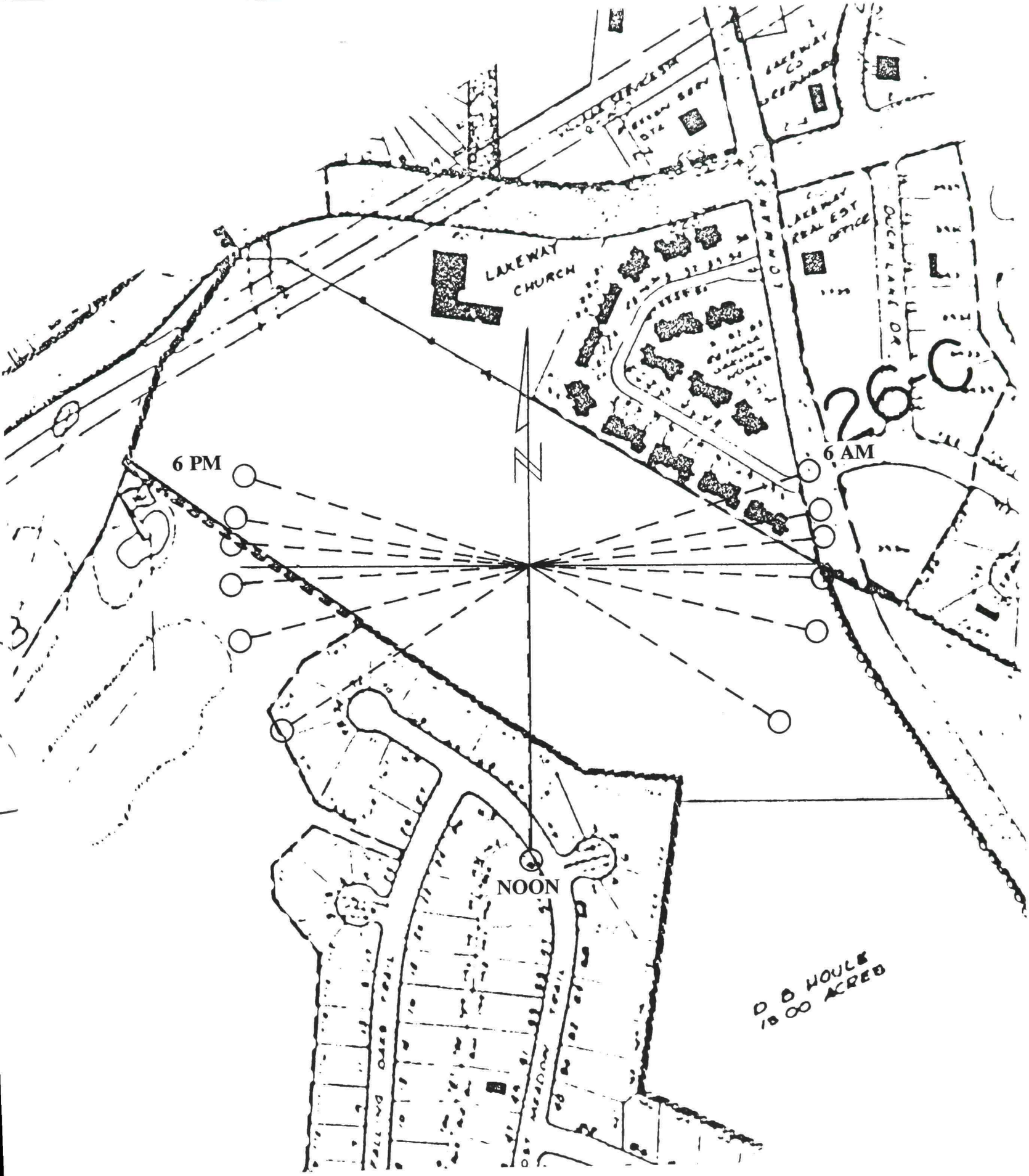

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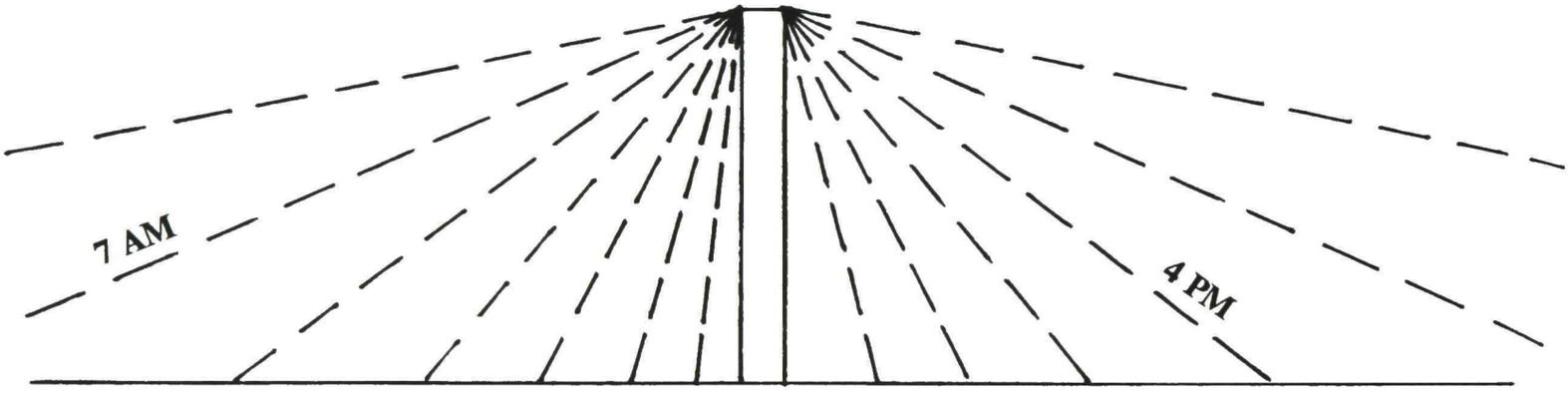

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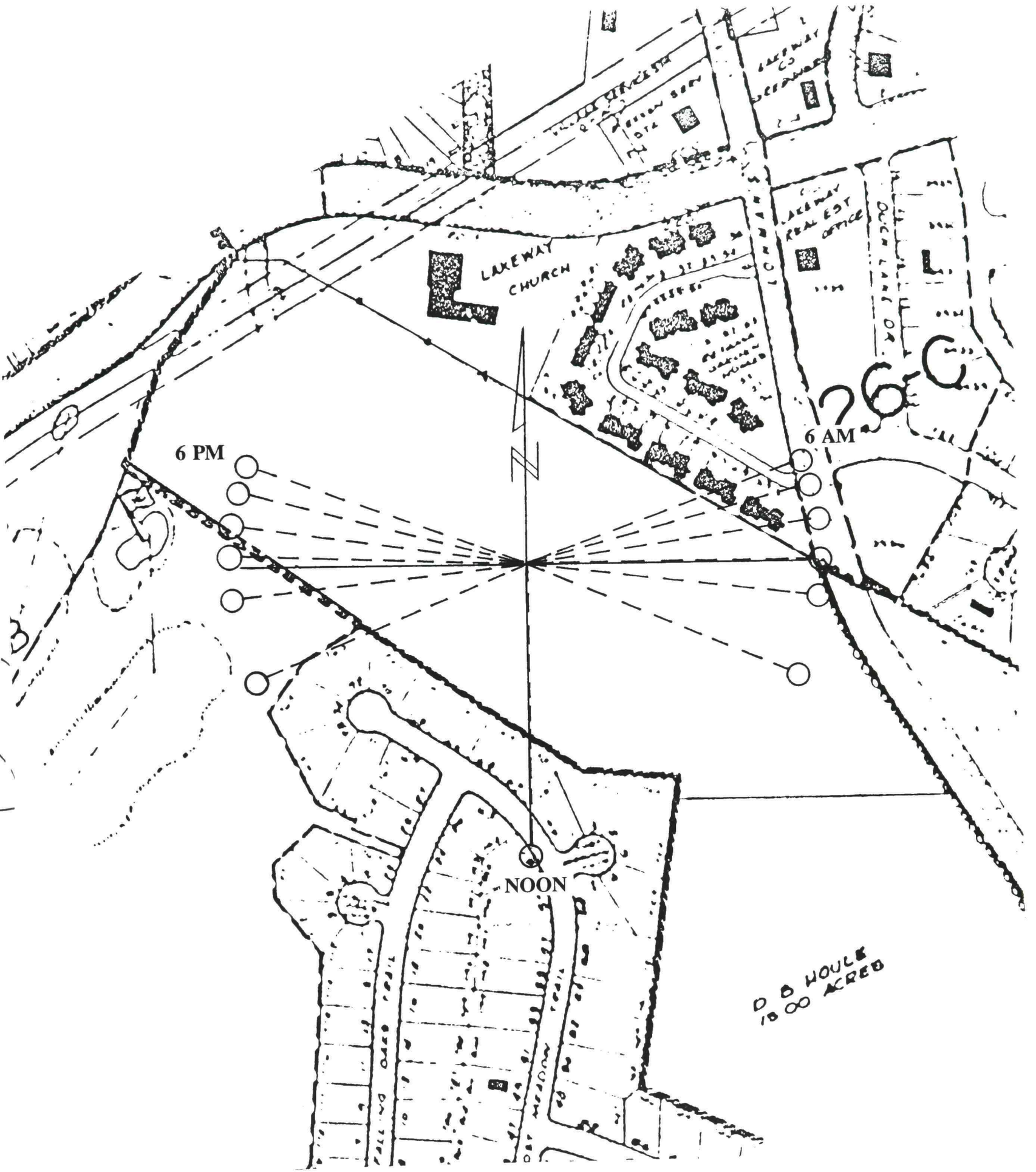

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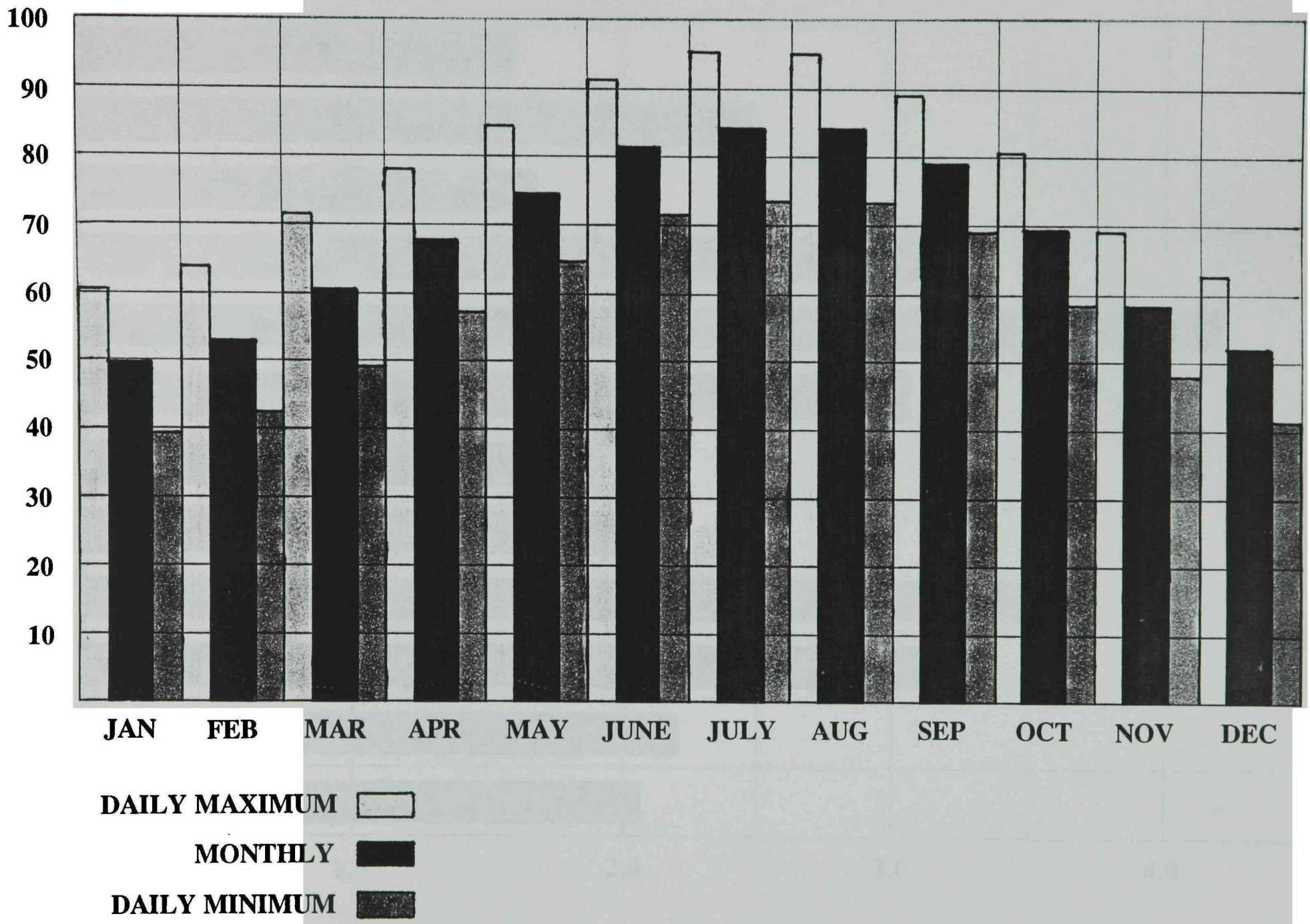
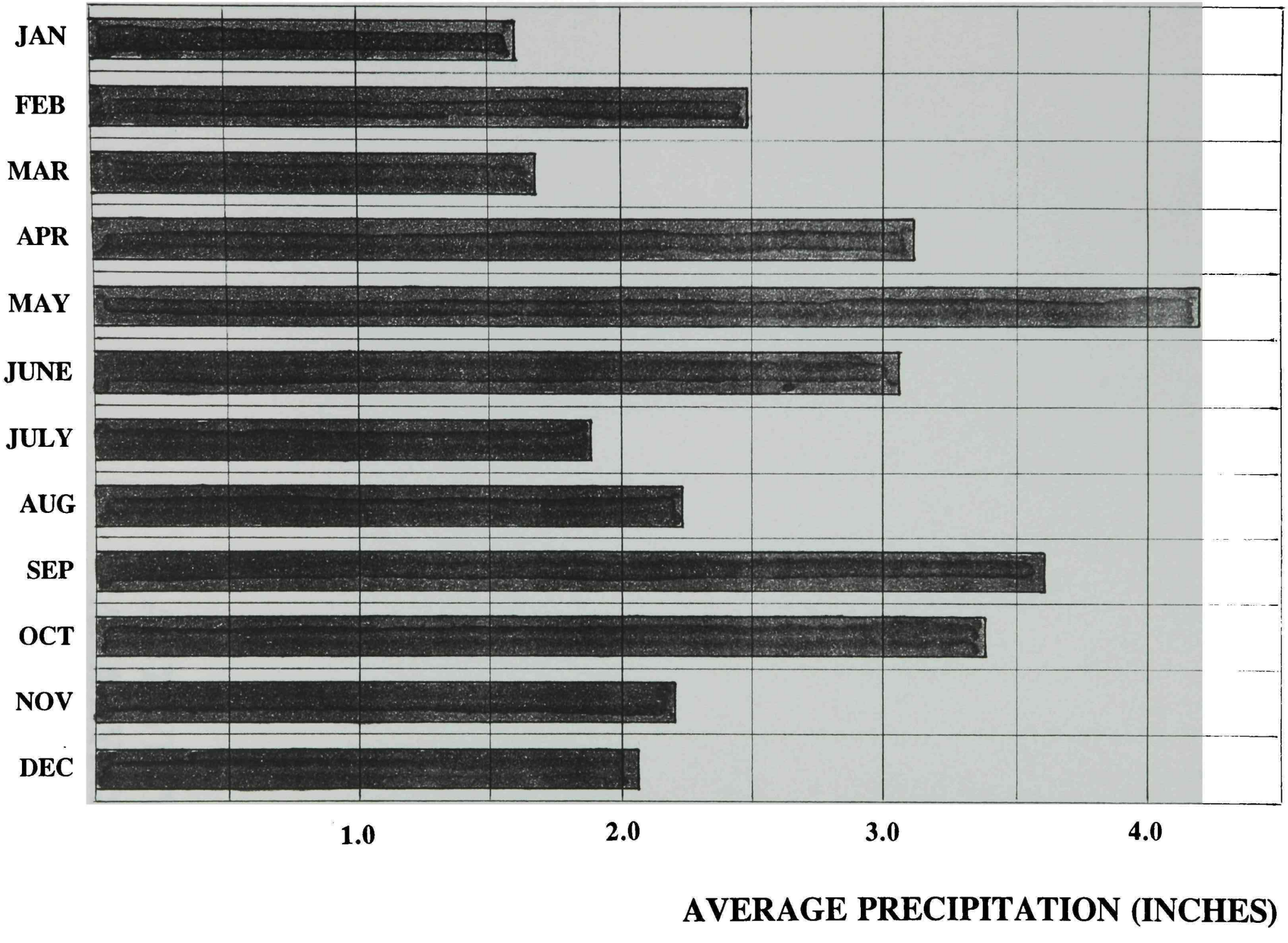
JUNE 22



AVERAGE TEMPERATURE (°F)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AVERAGE PRECIPITATION (INCHES)

ACTIVITY ANALYSIS

A continuing care retirement facility should offer its residents a wide diversity of activity options, both public and private and indoor and outdoor. Elderly persons, more than any others, need to engage in life activities. These activities enable the aged to feel involved, important and independent, and thus facilitate a continuing happy, healthy existence. The following list comprises the activity areas which may be encompassed in a resident-responsive continuing care retirement facility:

*basic private living
*recreational and social
*educational
*religious
*employment
*administrative
*staff
*public
*dietary
*nursing unit
*medical/treatment
*rehabilitative
*circulation
*work/maintenance/storage

BASIC PRIVATE LIVING ACTIVITIES

The majority of a person's normal daily activities revolve around the basic living routines. These activities are for the most part private. Every resident in continuing care facility should be entitled to private spaces which can facilitate, as much as possible, the basic daily living routines. The following list contains basic, private living activities:

*general living/leisure
*cooking
*dining
*sleeping
*dressing
*personal hygiene
*private outdoor
*private entry/exit
*laundry

GENERAL LIVING / LEISURE

A comfortable, private, pleasant living area is important to the retired elderly person. Spaces should be well organized and designed to make everything convenient for the resident. This area should be flexible and allow for entertaining, lounging, conversing, television viewing, music listening and reading. Such areas in independent living units should be a minimum of 90 ft^2 for single persons and 150 ft^2 for a two person unit and space in nursing unit rooms should be large enough for carrying out these functions.

User number:	60 - 80 independent elderly, 30 - 40 nursing elderly.
User frequency:	many differing hours during the day.
Accessibility: (independent living units)	The space should have direct physical accessibility to the dining area, the entry/exit, and the private outdoor area. The living area should have indirect accessibility to the kitchen, personal hygiene, storage/ utility and sleeping/ dressing areas.
Considerations:	* Visual/audio contact with the entry and private outdoor areas * limited visual/audio contact with the kitchen * limited audio and no direct visual contact with the sleeping/dressing area * entry of sunlight

COOKING AND BAKING

Active residents will spend a good deal of time in the kitchen, especially female residents who have

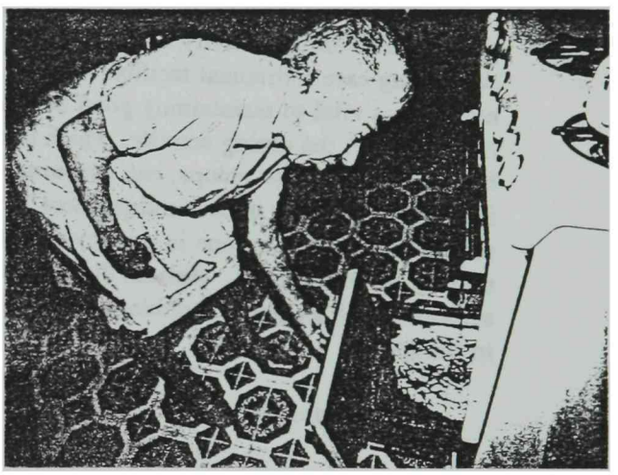
spent a good part of their lives cooking for themselves and others. Food preparation is very important to elderly persons as it helps them to maintain their health and continued independence. However, if the food preparation space is not properly designed, cooking activities might become tedious, unpleasant or even dangerous.

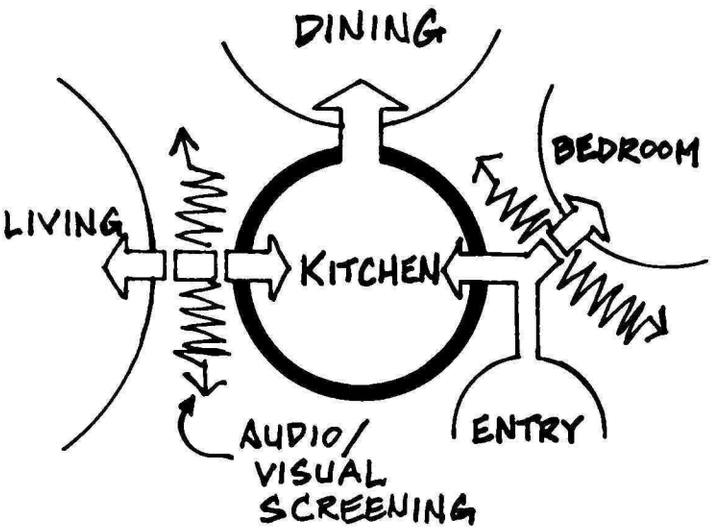
User number: 80 independent-living residents

User frequency: Independent persons will engage in these activities three times a day on the average.

Considerations:

* provide private cooking areas for each independent elderly unit of 50 ft^2 minimum
* provide mechanical ventilation for interior kitchens
* provide ample work space
* limit storage areas requiring reaches over 63"
* top shelves above counter should not be more than 4'-8" above floor
* shelves should be lower than 12" above floor
* Use electric equipment instead of gas
* provide a minumum of 3' clearance between facing equipment and counters
* provide supplementary lighting





Accessibility:

* direct access to the main entry/exit and dining area
* indirect access, to

the living, sleeping, personal hygiene and private outdoor areas
* maintain visual/ audio contact to entry/exit area
* minimize audio/ visual contact to living, sleeping, and personal hygiene areas
* kitchen should be located on an outside wall with exposure to morning sunlight

DINING

The dining activity is an important part of a continuing care retirement facility. Proper and regular nutrition is vital to maintaining good health. Additionally, the dining activity, which is often done in both small and large groups, can encourage social interaction. Spaces in each independent living unit enable the resident to dine in privacy or with a small number of companions. Besides dining, secondary activities such as games, hobbies and writing may occur in the space.

User number: 1-4 at once in individual dining areas

User frequency: 3 times daily on the average or optional in independent unit dining and in nursing unit rooms

Considerations:

* provide dining spaces in each independent living unit (50 sq. feet, min.)
* residents choose their own eating times
* dining should accommodate wheelchairs (2'-6"

	between wall and table) * tables should be comfortable for all to use * 30-31" high table max. * chairs should offer back support * tops of seats should not be more than 17" above floor
Accessibility (Private independent-living unit dining):	* provide direct access to food preparation area and living area * provide indirect access to the entry/exit and private outdoor space * block direct access from the dining activity to the sleeping/dressing and personal hygiene activities * provide direct visual/audio access between dining and kitchen areas * avoid visual/audio contact between the dining area and the sleeping/dressing and personal hygiene areas

SLEEPING / DRESSING

Sleeping or resting can take up a large amount of time in an elderly person's day. As people grow older, they may become more susceptible to illnesses than young people and require more rest times. Activities such as napping, reading, eating, dressing or resting can take place in or around a bed during the waking hours. Socialization with friends and conjugal relations can also take place in this area. Because of these reasons, the sleeping space should be designed to

be efficient and of adequate size and above all, provide privacy.

User number: 80-100

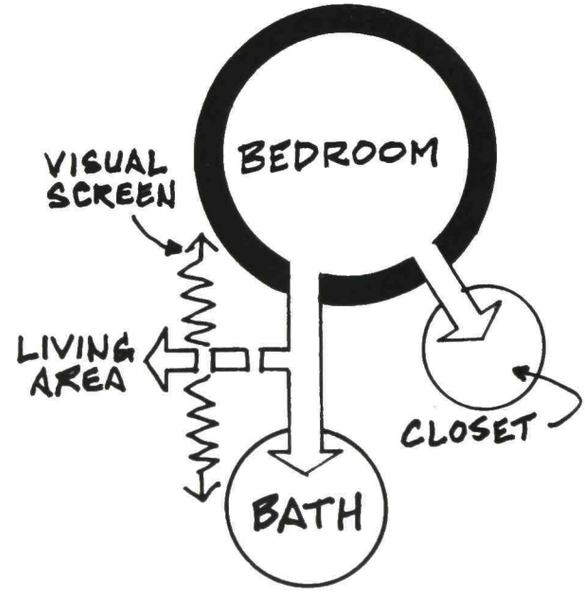
User frequency: Many differing times throughout the day and night for both independent active elderly and nursing care elderly.

Considerations:

* beds tops should not be more than 20" above the floor to better facilitate entrance, eggress and dressing
* nursing beds should be no more than 20" but should be able to raise to accommodate staff functions such as assisted feeding
* avoid the bed having the high "institutional " look
* safety: avoid bed rails left exposed which can cause residents to trip
* provide an area of 120 ft^2 (max) which has visual and acoustic separation from other areas
* single bed
* nursing rooms should be a minimum of 125 sq. ft.
* multi-bed nursing rooms need 100 sq. ft. per bed
* bedrooms in independent living units can range from 100-120 sq. ft. each

Accessibility:

* provide direct physical access between the sleeping/ dressing area and the personal hygiene and personal clothes storage areas.
* provide indirect access to food preparation and storage/utility

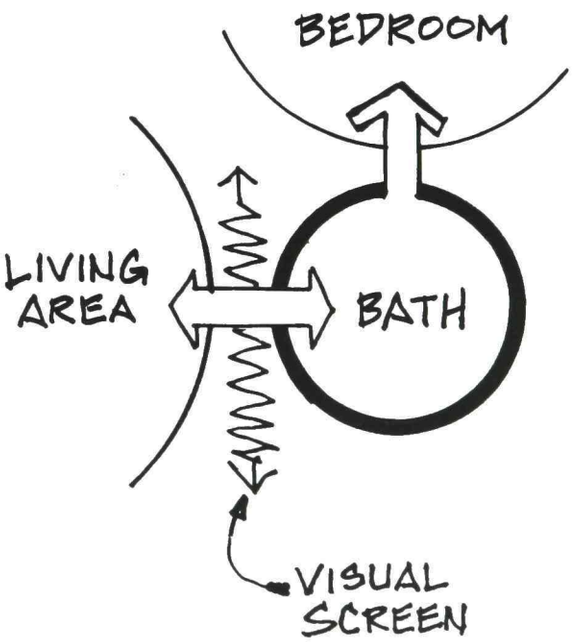


* because of privacy needs, eliminate direct access between the sleeping/dressing area and the entry/exit, living and dining areas
* minimize visual/audio contact between sleeping/dressing area and all other areas
* provide circulation spaces as buffers

PERSONAL HYGIENE

Personal hygiene is a crucial part of life for both independent and nursing elderly. The ability to take care of one's own cleanliness is very important to both good health and to having a feeling of independence. Hygiene activities include bathing, using toilet facilities, washing hands, teeth brushing and others. A well designed bathroom will facilitate these functions and reduce health hazards.

User number:	60-80 independent elderly 30-40 assisted living and nursing care elderly
User frequency:	Many times daily, especially after meals
Considerations:	* provide 40-50 ft. sq. space for private bathrooms, depending on wheelchair accessibility * provide 48" wide toilet stalls for handicapped in communal bathrooms (each stall 22 sq. ft.); and 9-15 ft. sq. area for each shower stall
Accessibility:	* provide direct access from bedroom to bathroom * provide indirect access between the bathroom and the unit's general living areas so that guests may use the bathroom * minimize visual/audio contact between the bathroom and other areas * block visual access from living, dining and kitchen



areas to the bathroom

ENTRY / EGGRESS

Entering and exiting a building or apartment is a vital part of elderly pedestrian circulation. These areas can be difficult for the elderly to negotiate due to physical limitations. Entryways must be accessible and readily identifiable in order to act as a successful interface between public outdoors and private indoors. A properly designed entry/exit will insure privacy and convey a sense of home.

User numbers: 100-120

User frequency: Steady during daytime hours in nursing/assisted living building(s) and used at residents' options in in - dependent-living building(s)

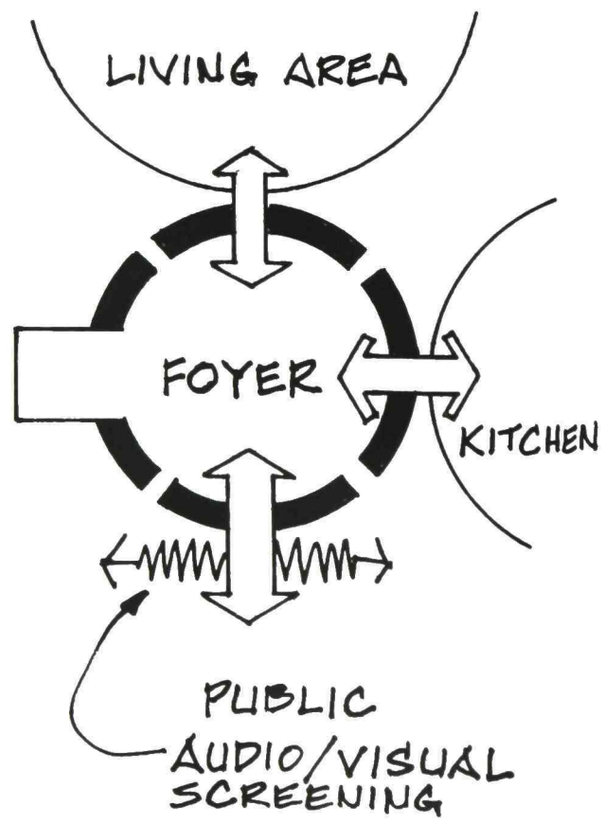
Considerations: (nursing building(s))

* need for identifiable entries
* differentiate entries to help orientation
* provide adequate light-ing
* main entrance placed to be visible from reception desk
* accessible entrance to the site from the street
* safety considerations at entrances
* single doorways within buildings should be at least 32" wide to accommodate wheelchairs

Considerations: (independent living units)

* provide adequate lighting
* front door should open into a foyer space and not directly into the living room
* provide closet/storage in foyer
* entryway should be 32" wide for wheelchairs
* at least a 4' by 4' area for greeting visitors and putting on coats

Accessibility: * direct access from entry/

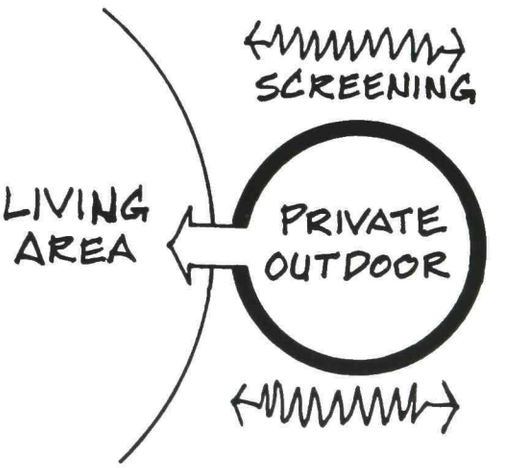


exit area to the kitchen, living and storage areas
* indirect access to dining, private outdoor, sleeping/ dressing and personal hygiene areas
* visual/audio contact with visitors outside the entry door
* visitors should have limited audio contact no visual contact into the entry

PRIVATE OUTDOOR

Many elderly people stay in their dwelling units for large amounts of time due to the preference to do so and because of physical limitations. A private, controllable outdoor space can offer the elderly person a change of atmosphere, a place for gardening and flower growing, a place to relax and enjoy the sun and a place for activities such as cooking out. Balconies and patios could be provided to both independent and nursing care elderly. These natrue-oriented spaces can be of much therapeutic value to the elderly person.

User number:	80 independent elderly 30-40 assisted living/nursing unit elderly
User frequency:	these spaces are most likely to be used daily during morning and evening hours during hot months and during the afternoon in winter months
Considerations:	* sunlight should fill the space around 30 percent of each day * balconies should have a clear dimension of 5 feet and should be 50 sq. ft. in area * provide artificial lighting * provide on-grade private space measuring 12 feet in clear dimension and a paved patio of at least 100 sq. ft.
Accessibility:	* provide direct access to



the outdoor space from the living area
* indirect access from outdoor space to kitchen or direct access if possible
* indirect access to all other areas
* no direct access to private outdoor area from public outdoor area
* maximize visual access from private outdoor area to views on and off the site
* minimize loss of privacy from visual access outside the outdoor area

LAUNDRY

Washing clothes is an important weekly activity as it contributes to good personal hygiene and promotes physical activity and independence. An adequate sized public laundry room(s) and optional laundry spaces in each independent living unit should be provided.

User number:	80 independent active elderly 30-40 assisted living elderly
User frequency:	once a week, 2-3 differing wash loads
Considerations:	* adequate number of washers and dryers in public laundry * large sink for handwashing * provision of tables for clothes folding and ironing boards * adequate optional space for washers/dryers in independent living units
Accessibility:	* laundry room should be on ground level * eliminate visual access to laundry room from site entry, main building entry and busy public areas * indirect access from

community room (s); residents should not be forced to move through public rooms to get to laundry rooms
* provide double sinks in independent living unit kitchens which can accommodate hand-washing

RECREATIONAL AND SOCIAL ACTIVITIES

Recreational can be of great therapeutic value to residents of a retirement home. It offers the aged opportunities to grow physically, mentally and socially. Recreational activities can help promote health, self-awareness, social interaction and dignity and thus are more than just "time-fillers" (Incani, p. 100). They enable the elderly to make good use of their spare time which leads to the attaining of a more purposeful existence. Recreational and social activities can include the following:

hobbies
game-playing
arts/crafts
audio visual
music
drama
dance
exercising
lounging/leisure
dining
nature and outdoor

HOBBIES

People can spend much time engaging in their hobbies. Collecting, doing and learning things are aspects inherent to hobbies. Elderly people frequently return to a hobby as they recall the pleasures received from it in early life or may take up a new hobby to fill a void (Incani, p. 113). Nearly all the recreational and social activities described in this section can be viewed as hobbies. Hobbies can also come in the form of very individualistic activities such as stamp collecting, photography, reading and writing. Spaces which can accommodate these activities are individual patient rooms, public lounge areas or perhaps a smaller public room in which hobby clubs can meet.

Optional hobby/discussion room(s):

User number:	5-10 maximum at one time
User frequency:	several times daily
Accessibility:	direct access to major circulation indirect access to public spaces
Considerations:	This room could be the public resident meeting room also 5 sq. ft. per person

GAME PLAYING

Many people enjoy playing a wide variety of games such as cards, checkers, chess, popular board games and billiards.

Games-playing can promote visual/audio stimulation and both physical and mental activity. Elderly residents can participate in games by themselves or with a few friends in their own rooms or in lounge areas. Games involving small and large groups can take place in a recreation area.

A dayroom(s) for recreation can be provided and should be at least 300 sq. ft. in area or allow 30 sq. ft./person minimum.

User number:	100-120 residents total, probably 10-20 at any one time
User frequency:	all times daily but more frequently after lunch
Accessibility:	* indirect access to nurse's station * direct access to major circulation * audio/visual access to central public area of facility

ARTS AND CRAFTS

Arts and crafts activities should provide the opportunity for skilled persons to display their talent or for the instruction of those who are unskilled but interested. In either

case, the participating resident can make good use of spare time and feel worthwhile in creating something. Projects can include all kinds of painting, sketching and sculpting as well as such crafts as decoupage, copper tooling, mosaics and creating household items such as wastebaskets. Depending on the individual, projects can be simple or complex and short or long term. A successful arts and crafts program can fulfill elderly needs for creativity, intellectual and visual stimulation, physical movement and self-expression.

User number:	30-40 residents-both independent and impaired
User frequency:	some residents once a week; others as much as everyday
considerations:	* Provide an arts and crafts area * Consider supply costs-include in general rates or charge directly to residents using them * Option for residents to keep their projects or sell them * Area should be well lighted and well ventilated * Consider capabilities of each resident * Arrange for any aids which residents may require * Encourage residents to work in the public area instead of their rooms or apartments

AUDIOVISUAL

Residents, both independent and impaired, can derive pleasure from watching television, motion picture movies and slide shows. A general area can be provided within the facility to show movies, which can be rented from local video stores, additionally, slide show presentations can be given by individual residents or guests. Such activities can offer the residents visual and audio stimulation and promote social interaction between the residents.

User number:	30-40 maximum at one time

User frequency: 2-3 times per day

ACTIVITY ROOM TO USE FOR THIS ACTIVITY

Considerations:

* should be in a more central location accessible off major circulation
* audiovisual room of large enough size to accommodate 30-50 residents
* the space should have flexible seating to allow for the residents' various disabilities
* space should be in the facility's public area and away from residents who want a quiet environment
* provide window shades for daytime presentations
* source of electricity should be from a circuit which is separate from the facility's light circuits.
* place for projector should not hinder resident movements
* consider appropriate sound levels for the rooms size
* tape any electric cords down to avoid falls

DANCING

Dancing is a form of recreation and socialization that many people enjoy. The residents of a retirement facility should be given the opportunity and encouragement to participate in simple ballroom dancing and square dancing. The retirement facility can offer dance instruction classes and have periodic planned dances featuring live bands. The handicapped elderly can also participate as special "wheelchair" square dancing can be offered.

The dancing activity is both physically and socially benefitting. It requires physical movement and interaction between people. A large space to accommodate dances can be provided in the facility. This space could also serve the surrounding community.

User number: 100 max. at any one time

User frequency:	2-3 times a week for dance classes and other activities and periodically for large organized dances
Considerations:	provide adequate size for the space (3000 sq. ft.)
Accessibility:	* direct access to major circulation

DRAMA

Plays, skits and music productions are several of the drama programs possible in a retirement community. Residents can get involved by filling acting roles or work on costumes, props, sound and lighting. Residents could also form a drama group and give presentations to the retirement and/or surrounding communities. Such an activity provides an outlet for creativity and involves interaction with others. A space for engaging in drama activities could be provided in the retirement facility and should be around 1000 sq. ft. in area.

User number:	20-30
User frequency:	several times per week for practice and periodically for productions
Accessibility:	* the space should have direct access to major circulation * minimize audio contact with individual patient rooms * direct access to storage

MUSIC

Many people enjoy singing or playing musical instruments. Talented and interested residents of a retirement facility should be encouraged to participate in music programs. If there are enough participating residents, bands or orchestras can be formed and singers can form their own glee clubs or choir. These groups can perform at various events such as parties, dances or church services. As with drama, music activities allow residents to display their talents and get

involved with the community. The music activities could take place in the same space provided for the drama activities.

User number:	20-30
User frequency:	2-3 times per week for practice; periodically for organized programs
Accessibility:	* the space should have direct access to a storeroom and the major circulation * the space should have no acoustic contact with the private nursing rooms

EXERCISE

Regularly scheduled physical conditioning programs for elderly residents should be provided by the facility. These programs can be sponsored by the physical therapy department and/or activity department. Exercise increases efficiency, balance, flexibility, endurance and coordination and allows the aged to function better in all the other activity areas. Walking is an exercise which is excellent for an elderly person's physical and mental well being. Wheelchair bound and other handicapped residents can be taken on supervised walks. Other types of exercise which dependent elderly can take part in are supervised sit or stand-in-place exercises and aerobics.

Physiotherapy is an exercise form which is designed to help elderly patients to better deal with physical handicaps and conditions brought on by the aging process. This includes exercising, treatment and training in ambulation, stair climbing and activities of daily living. These exercises are always supervised by medical staff.

Occupational therapy is a both physical and behavioral therapy and requires recreation space. Participation in a social community's activities such as religious services, lectures, and group games is considered the best type of occupational therapy (Breger, p. 558). Appropriate spaces to accommodate these physical activities should be provided within the retirement facility.

Physiotherapy requires a room with a minimum area of 300 sq. ft. and occupational therapy can take place in the dayroom or the other arts and crafts room. Supervised and non-supervised exercising can take place in the dayroom, the dance room, individual rooms or outdoor.

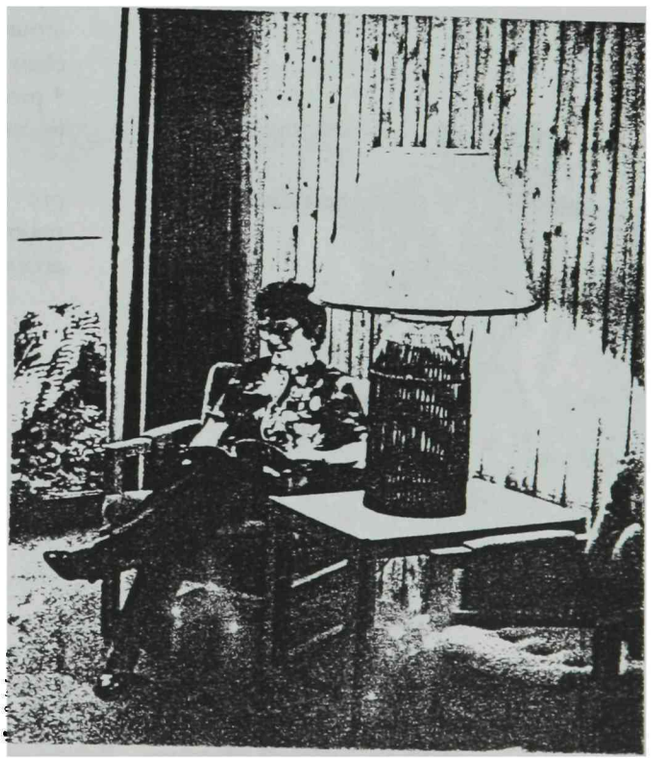
User number:	20-40 residents for physiotherapy

User frequency:	Most likely once a day in the late morning hours
Considerations:	* day room should be 300 sq. ft. minimum * physiotherapy room needs an exercise area with parallel bars, ambulation track, exercise steps and other equipment; also examination/massage space(s) with padded treatment tables (3x6 ft.)
Accessibility:	* physiotherapy should be central to the main circulation from the nursing units * dayroom to be near the nurses station

LOUNGING / LEISURE

Some recreational activities such as television watching, certain hobbies and relaxing and conversing with friends are more passive rather than active. While these activities can take place in private rooms or the facility's dayroom, specific lounge areas might also be provided to accommodate recreational and leisure activities. These spaces could allow for a larger group of people than individual rooms but a smaller, more intimate number than the dayroom.

User number:	30-50, mainly assisted living and nursing residents
User frequency:	most likely intermittently during afternoon and evening
Considerations:	* provide 2-3 chairs, a couch, a table and television set * size should be 150-200 sq. ft.
Accessibility:	these lounge areas should have direct access to the major circulation



DINING

The public dining activity has a two-fold purpose. Not only does it provide crucial nourishment but also it encourages socialization, which is important therapeutically (Breger, p. 557). Although patients may take meals in their own rooms, the most common methods of dining will be with trays in a controlled recreation room or family-style in a dayroom/dining room. These methods represent a more efficient way of providing patient dining and allow the social dynamics of group situations to develop (Breger, p. 557). These dining areas should also be available to the elderly in the independent units.

User number:	30-40 assisted living and full nursing elderly 30-40 independent living elderly (assuming half of of these will want to use the public dining areas)
User frequency:	3 times daily, but not all residents at the same times
Considerations:	* dayroom/dining room should be at least 300 sq. ft. or 15 sq. ft./ person * provide 2'-6" clearance around tables for wheel-chair * provide storage for chairs, tables
Accessibility:	provide direct access to major circulation and easy access to nurses' station

NATURE / OUTDOOR

Proper landscaping and site location for a continuing care retirement facility can facilitate diverse recreational activities. Additionally, the natural elements and wildlife found inherent to a site or provided by landscaping can be of great therapeutic value (as discussed in the background section of the program) to the elderly. Some nature activities are appropriate for both indoors and outdoors and some for outdoors only. These activities include gardening, flower arrangement, bird-watching, fishing, cookouts, exploring the site and caring for birds and other animals. Outdoor hobbies

may include collecting leaves and rocks. Because of the unique natural conditions of the chosen site for this facility, deer watching is also possible.

User number:	optional for each resident
User frequency:	several hours each day for some residents
Considerations:	* provide outdoor seating areas * provide outdoor water areas (optional) * provide outdoor area for cookouts * provide private possible garden areas for each resident * provide a continuous, free-flowing pathway for walking outdoors; it should be wide enough for wheelchairs and shouldn't be located too close to individual residences

EDUCATIONAL ACTIVITIES

Residents in a retirement home may be more motivated to participate in educational activities than younger people. This is because older people know that learning is an optional activity which can provide enjoyment and satisfaction whereas young people often view learning as something that has to be done.

Educational activities for the elderly can be either formal or informal and can help improve knowledge and skills. The following list contains some elderly educational activities, many of which are also recreational in nature:

*reading
*classes
*discussion groups
*audio/video presentations

READING

Many people enjoy reading books and magazines. Such an activity is recreational but is also of great educational

benefit. Through reading, people can gain more knowledge of the past and current events and gain exposure to new ideas and attitudes. Magazines and books should be made available to the elderly residents. They can choose to read in their own rooms or the lounge areas. In addition, a library space should be provided which could store all books and magazines. Residents should be encouraged to use the library as this would increase socialization.

User number:	15-20 at any one time
User frequency:	most frequently in the afternoon
Accessibility:	* the library space should have direct access to major circulation * the space should have limited audio contact with the more noisy public spaces

CLASSES / DISCUSSION

Educational classes and discussion groups could be organized for elderly resident wishing to take part. However, these classes and discussion groups should deal with subjects which the residents are interested in and should not be for academic purposes. These classes could also use audio/visual equipment for showing educational films.

Spaces for these activities could be in the multi-use room, meeting room, club/hobby room or outdoors.

User number:	depending on each resident's interest

WORKING ACTIVITIES

Most elderly people have engaged in some type of work activity during their lives and should be afforded the opportunity to continue working. While it is true that many elderly just want to relax and enjoy their retirement, some might want to work. These activities can involve both working for pay and working on a volunteer basis. Older persons can derive considerable benefit from working for pay, even when the amount is small (Incani, p. 99). Such a process can enable

the elderly to maintain feelings of self-importance and that their talents are still desired. Additionally, volunteer activities can give the elderly the satisfaction of knowing that they have helped out and are still useful. The following are just some facility and community activities, both profitable and/or charitable, which the elderly can engage in:

*sell arts/crafts items
*sell gardening products
*deliver mail to residents
*serve as a receptionist
*mend clothes
*work as the librarian
*housekeeping
*serve as substitute grandparents for children
*contribute to community organizations
*teach Sunday school at the local church
*activity preparation and cleanup
(list from "Coordinated Activity Programs for the Aged)

RELIGIOUS ACTIVITIES

Every elderly person in a retirement community should be able to continue the religious activities which they have engaged in all their lives. Worshipping helps people feel closer to God and helps give a clearer understanding of life. As a form of fellowship, worshipping services enable the individual to share this experience with others. Thus, religious activities can be both spiritually and socially therapeutic for people. In addition to worship services, other religious activities include Sunday School and bible study classes and prayer meetings.

Worshipping can take place in a nearby church or arrangements could be made for services to be conducted in the retirement facility's dayroom or auditorium.

Religious classes can be held in the lounges, activity rooms or dayroom.

User number:	60-80 total for worship services; probably 30-40 at any one service 10-20 for other religious activities
User frequency:	services will usually take place on Sunday (at varying times for different faiths)

LONG TERM CARE FACILITY OPERATION ACTIVITIES

A continuing care retirement facility must be able to successfully accommodate the needs of its residents. In order for the facility to do this, it must contain certain common facilities that are required for operation by codes and public agencies. These facilities each, in turn, have particular activities inherent to them. The following is a list of such required areas:

*administrative
*staff
*public
*work/maintenance
*ancillary nursing facilities

ADMINISTRATIVE

LTC (long term care) and nursing home administration facilities usually require a significantly less number of employees and square foot area than do general hospitals. One reason for this is that administrative work in LTC's is reduced by the lower patient turnover (which means less billing and record keeping). Another reason is that there are fewer visitors per patients per day in nursing facilities. Most significantly, however, LTC's provide fewer medical and laboratory services and in most cases, no surgical services. The administrative activities which occur in LTC's are those inherent to administrative and bookkeeping. The following administration areas should be provided:

*business office
*lobby/information center
*administrator's office
*admissions/records
*administration toilet room
*staff conference room
*social service/activity directors room

User number:	2-3 for administration (not including staff)
User frequency:	normal working hours during the week
Considerations:	*provide 150 sq. ft. per employee minimum

Accessibility:	*provide direct access to major circulation and lobby area from administration areas *lobby should have direct access and visual/audio contact with main entrance

STAFF

Staffing in an LTC is determined by two main factors: patient population and administrative codes. The staff activities include nursing, kitchen work, activity directing, maintenance and reception/secretarial. Staff spaces to be provided are:

*locker rooms
*toilet/shower rooms
*staff dining
*kitchen
*staff lounge

User number:	2 registered nurses 2-3 licensed practical nurses 5 nurses aides 1 dietician/kitchen manager 5-6 cooks and dishwashers 3-4 waiters/porters 1 janitor-maintenance 1 activity director
User frequency:	everyday
Accessibility:	*staff areas should have indirect access to major public and nursing areas *staff lounge should have direct access to staff dining

PUBLIC

The types and sizes of an LTC's parking and internal visiting areas are mainly determined by the fact, mentioned earlier, that the number of visitors in an LTC facility is much smaller per patient than in an acute general hospital. The LTC requires one visitor parking space for between 3 and 20 beds while the hospital may require one visitor parking space per bed. (Breger p. 557)

Internal spaces which might be included are a visitor's lavatory, a lobby and a snack/gift shop.

User number:	15-20 visitors a day (estimate)
User frequency:	most visitation would probably occur in the afternoon
Considerations:	provide stretcher and wheel-chair parking spaces (8x15 ft.)
Accessibility:	provide parking which is directly accessible from hall, near exit/entrance of nursing unit

NURSING AND ANCILLARY FACILITIES

The nursing activities are critical to the elderly residents who require assistance and full nursing care. The types of services given to these elderly can include intravenous infusions, naso-gastric tube feeding, gastrostomy feeding, assistance in personal hygiene and physiotherapy. Other needed functions are the preparation of medicines, the cleaning and supplying of all necessary supplies to patients, the circulation control of the full nursing units from the nurses' station and the changing of bandages and surgical dressings. The following spaces are needed to carry out these activities:

*nurses' station
*nurses' toilet room
*clean workroom
*soiled workroom
*medicine room
*enclosed storage
*equipment storage
*nourishment station

User number:	2 registered nurses 2-3 licensed practical nurses
User frequency:	24 hours a day
Accessibility:	* convenient access to nurses' toilet room from nurses' station * clean and soiled work-rooms to be no more

than 120 ft. from patints' rooms
* medicine room to be adjacent to nurses' station
* visual control of patient corridors and entry/exit from nurses' station.

WORK / MAINTENANCE

Since a nursing facility uses medical equipment to sometimes help treat its residents, there is a need for an area in which to service and repair such equipment. These areas will generally be similar to those in hospitals. However, the size of this area will be less because there will be less equipment used in the LTC.

User number:	1-2
User frequency:	periodic, as maintenance requires
Accessibility:	* the maintenance room should have direct access to rear area parking and receiving * eliminate audio/visual contact with patient areas

SPACE ANALYSIS

ACRE

INDEPENDENT ELDERLY HOUSING

ACTIVITY/SPACE NAME	NUMBER	TOTAL SQ. FT. AREA	PERFORMANCE CRITERIA
Living/Leisure --Living Room	1	140	
(1) 1-person unit	25	3500	*Smoke detector
(2) 2-person unit	40	8000	*Higher Heating Needed
	2	200	
Sleeping/Dressing --Bedroom		120	*Partition Enclosed
(3) 1-person	65	7800	
(4) 2-person	20	3400	*Non-Slip Surfaces
	1	170	
Cooking/Washing --(5) Kitchen	65	3900	*Provide Supplementary Lighting/Ventilation
		60	
Dining --(6)Dining Area	65	3250	*Good Lighting
		50	
Personal Hygiene --(7)Bathroom	65	3250	*Non-Slip Surfaces *Enclosed By *Limit Water Temp. to 120 degrees
	1	50	
4200 ÷ 10		20 = 10,600	
TOTAL SQ. FT.	1P ↓ 420	2P ↓ 20	**33,100**

C AREAS → 13,835

total 28,635 SF

×1.3 37,225.5 sq ft

↓

3,458.2 m2

ASSISTED LIVING / FULL NURSING HOUSING

ACTIVITY/SPACE NAME	NUMBER	TOTAL SQ. FT. AREA	PERFORMANCE CRITERIA
Living/Leisure/Sleeping --Bedroom			*Provide Room For Wheelchair Turning
(8) 1-person Unit	30	4500	
(9) 2-person Unit	10	2500	
Personal Hygiene/Bathroom			*Limit Water Temp. To 120 degrees F *Non-Slip Surfaces
(8) 1-person unit	30	1500	*Grab Bars
(9) 2-person unit	10	550	*Enclosed by Floor-To Ceiling Partitions

*Good Ventilation

TOTAL SQ. FT. **9050**

PUBLIC / COMMONS SPACES

ACTIVITY/SPACE NAME	NUMBER	TOTAL SQ. Ft. AREA	PERFORMANCE CRITERIA
Nurses Station --(12) Nurses Station	1	200	
Nurses' Hygiene (13) Nurses Toilet	1	25	Ventilation (Mechanical)
Supply Storage --(14) Clean Workroom Assembly	1	50	
Supply/Equipment --(15)Soiled Cleaning Workroom	1	50	
Medicine Preparation/ --(16) Medicine Storage Room	1	10	
Clean Linen --(17) Enclosed Storage Storage	1	16	
Equipment --(18) Equipment Storage Storage Room	1	24	
Supplemental Food --(19) Nourishment For Patients Station	1	20	
Greeting/ Information --(20) Lobby/ Giving Info. Center	1	500	*Automatic Door openers for Entrance/Exits
Administration --(21) Administrator's Office	1	100	
" --(22) Business Office	1	80	
" --(23) Admitting/Medical Records Area	1	120	
" --(24) Social Service Office	1	100	
" --(25) Staff Conference Room	1	150	

Personal Hygiene --(26) Administration	1	40	
Staff --(27) Staff Offices	4	400	
Dining --(28) Staff Dining Room	1	300	
Hygiene --(29) Staff Bathrooms/ Locker Rooms	2	500	
Leisure --(30) Staff Lounge	1	150	
Exercise/ --(31) Physiotherapy Rehabilitation Room	1	400	*Non-Slip Surfaces
Exercise/ --(32) Dayroom Recreation/ Dining	1	500	
Dining --(33) Dining Room	1	1000	
Meal preparation --(34) Kitchen	1	1000	*Fireproof Materials
Leisure/ --(35) Lounge(s) Recreation	2	500	
Exercise/ --(36) Multi-Use Activity Recreation/ Room Activities	1	600	
Reading --(37) Library	1	300	
Recreation/ --(38) Hobby/ Clubroom Leisure	1	150	
Painting/Drawing --(39) Arts & Crafts Craft-Making Room	1	2000	*Good Ventilation/ Fireproofing
Dancing/Drama/ --(40) Auditorium Music	1	2500	*No Intervening Columns *Provide Fire Exit *Non-Slip Flooring
Therapeutic Recreation --(41) Jacuzzi Room	1	200	*Regulate Water Heat
Discussion --(42) Meeting Room	1	250	*Limit Surrounding Acoustic Contact
Mail Sending/ --(43) Mail Room Receiving	1	100	
Clothes Washing --(44) Public Laundry Room	1	500	

" --(45) Nursing Laundry Room	1	100
Hygiene --(46) Public Restroom	1	150
Maintenance --(47) Janitor's Closet	1	50
Repairing/ --(48) Work/Repair Room Maintenance	1	300
Receiving --(49) Receiving Area	1	400
TOTAL SQ. FT.		**13,835**
OVERALL TOTAL SQ. FT.		**55,985**
GROSS TOTAL SQ. FT. (OVERALL TOTAL X 1.3)		**72,780**

SYSTEMS PERFORMANCE

The selection of equipment, materials and construction techniques is very important when designing housing for the elderly. Because of the unique physical conditions of the aged, special consideration must be given to the following areas:

*ramps/access points
*lighting
*flooring
*windows
*doors
*vertical circulation
*heating/cooling
*ventilation
*sound control
*communications/alarms

RAMPS

Mobility is important to the elderly as it helps them maintain independence. However, a large number of the aged need ramps in order to negotiate level changes.

*ramp slopes should be 5% (1 in 20) or less (higher slopes limit independent wheelchair use)
*surfaces of ramps should be non-slip and fireproof
*for vertical heights which require 2 or more ramps, each ramp must be no longer than 20 feet and level platforms separating the ramps should be at least 5 ft.- 6 in. long
*two-run ramps having a 90 degree or 180 degree turn at the platform are safer than straight line two-run ramps
*the recommended width for a one-way ramp is 3 ft. between handrails and at least 6 ft. for a two-way ramp
*handrails should extend at least 12 in. beyond the beginning and end of the ramp and should return to a wall or upright post
*pedestrian walks at street corners should be ramped and that ramp should be indented into the curb
*the curb ramp should have a non-slip surface colored red or orange or curb jambs should be colored
*curb ramp slope should not exceed a slope of 2 in 12

ACCESS POINTS

*paved walks with nonskid surfaces should be used at all building entrances
*these walks should be sloped for drainage but should not exceed a 5% slope
*landing platforms at building entrance doors should be level and sloped only for drainage
*platforms should be at least 3 ft. deep for inward-swinging doors and 5 ft. deep for outward-swinging

doors and never less than 3 ft. beyond the edge of a fully open door

LIGHTING

The lighting used in a facility or housing for the elderly should take into account the level of illumination necessary to compensate for the diminishing visual acuity of the residents. Lighting systems should also take into consideration the necessary safety and convenience factors.

*illumination levels should be about twice those used in regular residential design
*to reduce glare, light sources should be shielded or recessed
*changing bulbs on and cleaning ceiling-mounted fixtures can be dangerous for some elderly
*wall switches should control all light fixtures and should be located near doors
*convenience outlets should be at least 18 in. above the floor
*entrances should be well-lit so that residents can see steps and door keyholes
*outdoor areas should be illuminated for safe circulation

LIGHTING RECOMMENDATIONS IN FOOTCANDLES (Regnier, p. 362)

Corridors:	20
Overall dining:	30
Signs:	60
Library:	150
Bedside:	200-300
Average:	100

FLOORING

Many elderly persons, due to handicapped physical conditions and a reduction of overall awareness, are prone to accidents caused by slipping or tripping. The flooring materials and finishes, both indoor and outdoor, should be chosen with these considerations in mind:

*all floor surfaces should be nonslip
*the psychological danger of apparently slippery surfaces
*large lobby areas should have nonslip surfaces such as unglazed tile, vinyl tile, wall to wall carpeting or unwaxed wood
*throw rugs and deep pile rugs can cause tripping
*floors should be smooth and level
*large paved outdoor areas should be nonslip and drain well

*paved outdoor areas should be of varied textures and colors for visual diversity and orientation
*jointed materials such as brick and ceramic tile should be carefully installed

WINDOWS

Windows can be an important feature in elderly housing. Many aged persons enjoy sitting and looking out of the window. Additionally windows allow natural light and fresh air to come into the interior spaces.

*windows should be easily operated (double-hung windows are satisfactory)
*southerly orientation desirable for sunlight
*bottom of living room windows should be no higher than 3 ft. 2 in. from the floor
*windows should extend to a minimum height of 6 ft. 8 in.
*include guard rails for window walls (but not at a height which will block viewing)
*sill height can be 2 ft. 6 in. from the floor for dining areas
*window sills in bedrooms should be low enough to allow a person in bed to see outside
*window sill heights in kitchens and bathrooms should be set by standing heights

DOORS

Wheelchair-bound persons or those with other physical handicaps can have a difficult time entering buildings or individual rooms. Doorways and doors should be designed with these considerations:

*entrance doorways to public areas should provide a clear width passage of 3 ft. minimum
*entrance doorways to individual dwellings should be at least 2 ft.-10 in. clear width passage
*revolving doors should never be used
*use automatic door openers (with floor mat activation) for entrance doors to public buildings to accommodate wheelchair users
*use large doorknobs and lever handles
*exterior doorways should be covered by a roof structure or canopy
*doors should not swing into public corridors

VERTICAL CIRCULATION

The use of stairs as a main circulation element should be avoided in a facility for the elderly. Though there are many elderly who can negotiate stairs without much difficulty, a large number of aged persons cannot safely use them. If stairs must be used, these considerations must be met:

*risers should not exceed 7 in. in height
*avoid using less than two risers
*never use winders or curved treads
*use nonslip nosings of contrasting color
*provide continuous handrails on both sides of the stairs
*provide a minimum stair width of 3 ft. 3 in.
*stairs should be well lighted

Elevators should be given these requirements:

*continuous handrails
*lower-mounted control panels for wheelchair users
*assistance-summoning signaling devices
*automatic doors for self-operated elevators
*well lighted

HEATING AND COOLING

Heating and cooling systems are very important in facilities and housing for the aged. Since the elderly are much more likely to complain of being too cold than of being too warm, the provision of adequate heat without provisions for cooling is satisfactory in terms of the patient population (Breger, p. 558). The aged generally require a higher temperature level than the standard: about 80 degrees F (Parker, p. 129). These heating considerations should be observed:

*the heating system should be fast-acting
*it should provide a uniform heat distribution
*for steam or hot water systems, avoid exposed radiators (especially under windows)
*provide flexible systems with individual controls to meet each residents' heating needs

Cooling is important in helping elderly residents to deal with extremely hot and humid times. Air conditioning systems should be flexible and have individual controls to meet varying residents needs.

SOUND CONTROL

Acoustical privacy is perhaps more important in elderly housing than in most other buildings. The aged have a strong desire to protect their privacy. Additionally, the elderly need to be assured of having a quiet environment during resting hours. The following acoustic factors should be observed:

*provide natural sound barriers such as trees and shrubs
*provide proper acoustic insulation in walls
*locate bedroom areas away from adjoining neighborhood areas where children may be playing

COMMUNICATIONS / ALARMS

There are many safety problems which must be taken into account in nursing homes and elderly housing. The threat of fire is especially dangerous for nursing homes whose residents can be both mentally and physically impaired. Another problem can be the control of circulation for behaviorally difficult patients. Additionally, a large number of elderly have difficulties in the bathroom and bedroom. A facility for the aged should:

*have fire sprinkler systems / fire alarm systems
*be constructed of materials which meet high standards of fire resistance
*provide smoke detectors
*provide signally devices in patient and resident rooms which can summon help
*provide sound alarms for fire exits in nursing care buildings

COST ANALYSIS

Material	High Cost ($/sq. ft.)	% TOT
Foundation	3.53	5.5
Floors on Grade	3.99	6.2
Superstructure	11.07	17.2
Roofing	2.18	3.4
Exterior Walls	7.08	11.0
Partitions	7.20	11.2
Wall Finishes	1.99	3.1
Floor	2.70	4.2
Ceiling	1.93	3.0
Conveying Systems	0.00	0.0
Specialists	1.29	2.0
Fixed Equipment	1.55	2.4
HVAC	6.05	9.4
Plumbing	6.70	10.4
Electric	7.08	11.0
Gross Building Cost ($/sq. ft.)	**$64.34**	**100%**

Preliminary Building Cost:	$4,052,069
Fixed Equipment (P.B.C.x 8%)	$324,165
Site Development (P.B.C.x 15%)	607,810
Total Construction Cost: (P.B.C. + F.E. + S.D.)	**$4,984,044**

Site Acquisition	$525,000
Movable Equipment (S.A.x 8%)	$42,000
Fees (T.C.C. x 6%)	$299,043
Contingency (T.C.C. x 10%)	$498,404
Administration (T.C.C x 1%)	$49,840
Total Budget: (T.C.C +S.A +M.E. +F. +C. +A.)	**$6,398,331**

CASE STUDIES

This section contains case studies which analyze several different elderly housing types. These facilities encompass independent living, assisted living and full nursing care units within single, large building or spread out within campus or community plans.

The large, high-rise facilities can be conducive to "aging in place" because they contain all three unit types under one roof. Additionally, they provide a large number of services and public activity rooms. However, because they are more self-contained, these facilities offer their residents little exposure to the outside world and thus hinder contact with the important natural environment. Furthermore, such buildings often have long corridors with doors opposite from one another which causes the perception of an "institutional" atmosphere.

The small, neighborhood sponsored projects provide places for the elderly which have intimate atmospheres and a quality of meshing in with the surrounding community. This promotes a feeling of caring and closeness between friendly of caring and closeness between friendly neighbors and thus enables elderly residents to feel needed and involved. However, such facilities often make no formal provisions for assistance for daily living activities and giving medical help for those residents who need it.

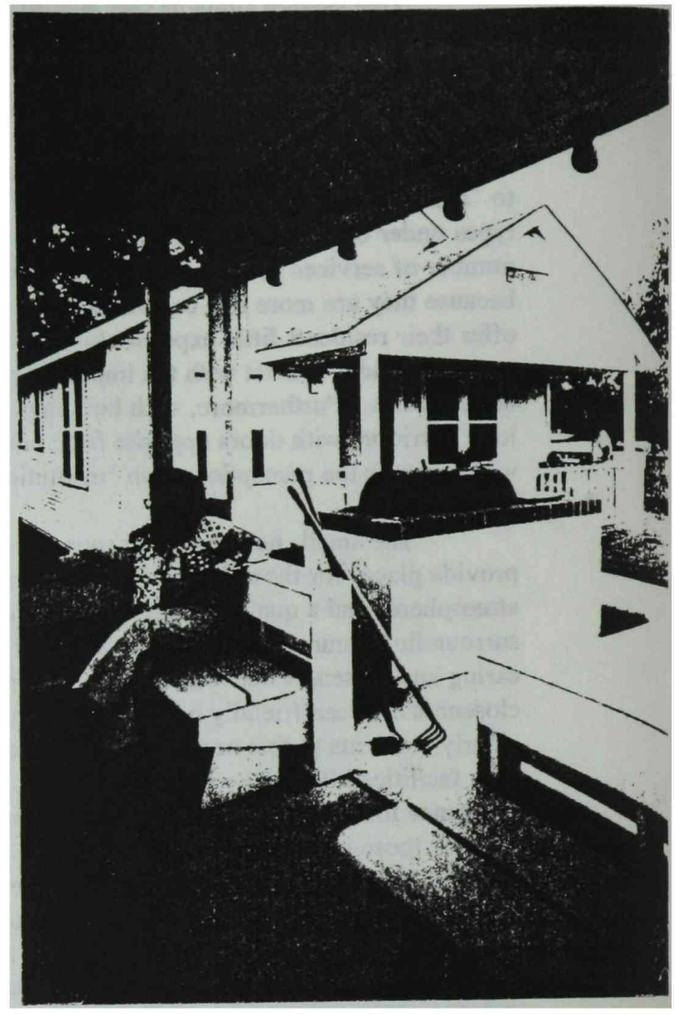
In the spread out, multi-building retirement communities, the independent elderly are housed in separate apartment buildings or cottages. These are detached from the assisted living and full nursing units and the public activity rooms. This arrangement permits freedom of movement and encourages the able, active elderly to maintain their independent lifestyles. These communities normally have a commons building or area which contains a variety of public activity spaces and services for all the residents. The assisted living and full nursing care units are usually located close to the commons areas due to the limited mobility of those persons living in these units.

The outdoor environment, both natural and man-made, is an integral part of most retirement communities. Courtyards and plazas are varied in size and appearance and give the residents exposure to the outside environment. These landscaped areas become places for interaction and socialization as well as being aesthetically pleasing. Additionally, these areas are usually designed to minimize conflicts between pedestrian and vehicular traffic, which is restricted as much as possible to the community's perimeter.

Although the facilities presented in these case studies vary from one another in plan, appearance and scale, most of them share the same philosophy of providing continuing long term care for their residents and to engender resident involvement in activities and their surrounding environments.

Case Study # 1:
Robert Shaw Village
Austin, Texas

Building Type and User: The village is a compact group of energy-efficient residences for elderly independent living.
Architect: Tom Hatch
Owner: Blackland Neighborhood Development Corporation
Site Context: The project is located in a low income, mostly minority, inner city neighborhood. The site itself is a corner lot bounded by East 21st Street on the north and by Salina Street on the west.
Buildings: The village contains five one-bedroom cottages, each 440 square feet and one 550 square foot two-bedroom house for the resident manager.
Source: Architectural Record, Nov. 88, p. 120-122.



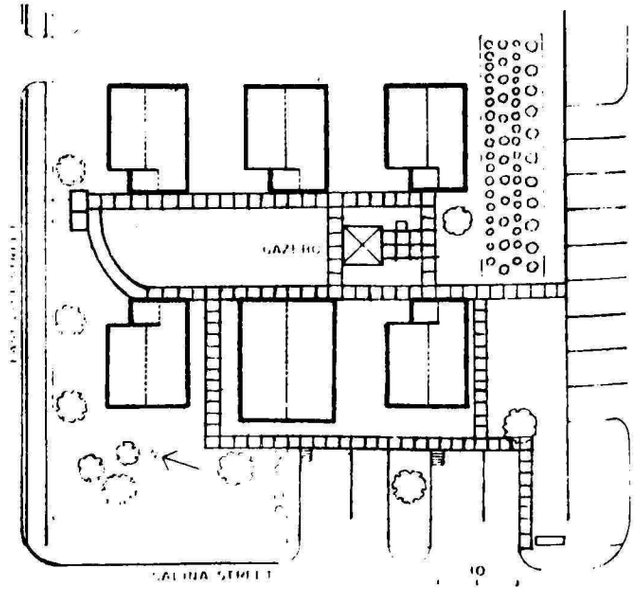
CONTEXT/IMAGE

In his design, Hatch had to respond to the client's and users' wish that the residences look compatible with the surrounding neighborhood context and to avoid the "slave-quarter" or barracks image. Hatch responded with a simple, "friendly and easy" 1930's bungalow style, which enables this new development to fit in with the older residences around it. Materials such as white siding, green gabled roofs and pier-cornered front porches help the residences to further echo the existing neighborhood houses.

SOCIAL/PSYCHOLOGICAL

Hatch grouped the six residences together, the front of each cottage facing another cottage across a common courtyard. This grouping offers a social and psychological balance for the residents. They get the independence and privacy of living in their own homes and at the same time, companionship and a sense of security in having friendly and caring neighbors nearby.

The central courtyard acts as a social center for the village. It contains a gazebo, barbeque pit and a shared vegetable garden.



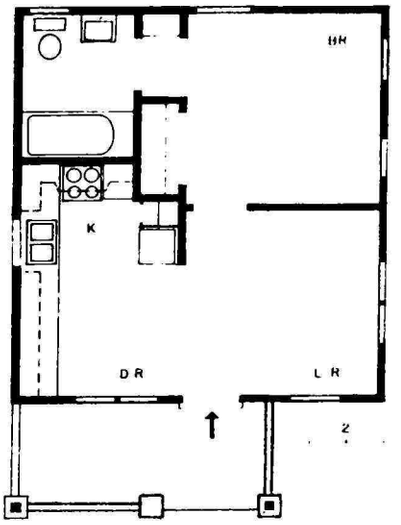
ACTIVITIES

The small village offers both private and public activity areas. The cottage front porches serve as either a private place to sit, observe or read and as a social place to talk with neighbors. Many activities also go on in the courtyard. The gazebo offers a place to socialize and eat, the barbeque pit, a place to cook, and the vegetable garden a place to work and socialize. Residents can always withdraw into their own cottage for private activities. Each cottage

offers its own living area, bedroom, kitchen with eating area and private bathroom.

ORIENTATION

The front of the manager's residence is oriented to the street to give it identity. The resident cottages are oriented inward to the courtyard. This orientation promotes interaction between the residents and gives a small "neighborhood" atmosphere.



CIRCULATION/LINKAGE

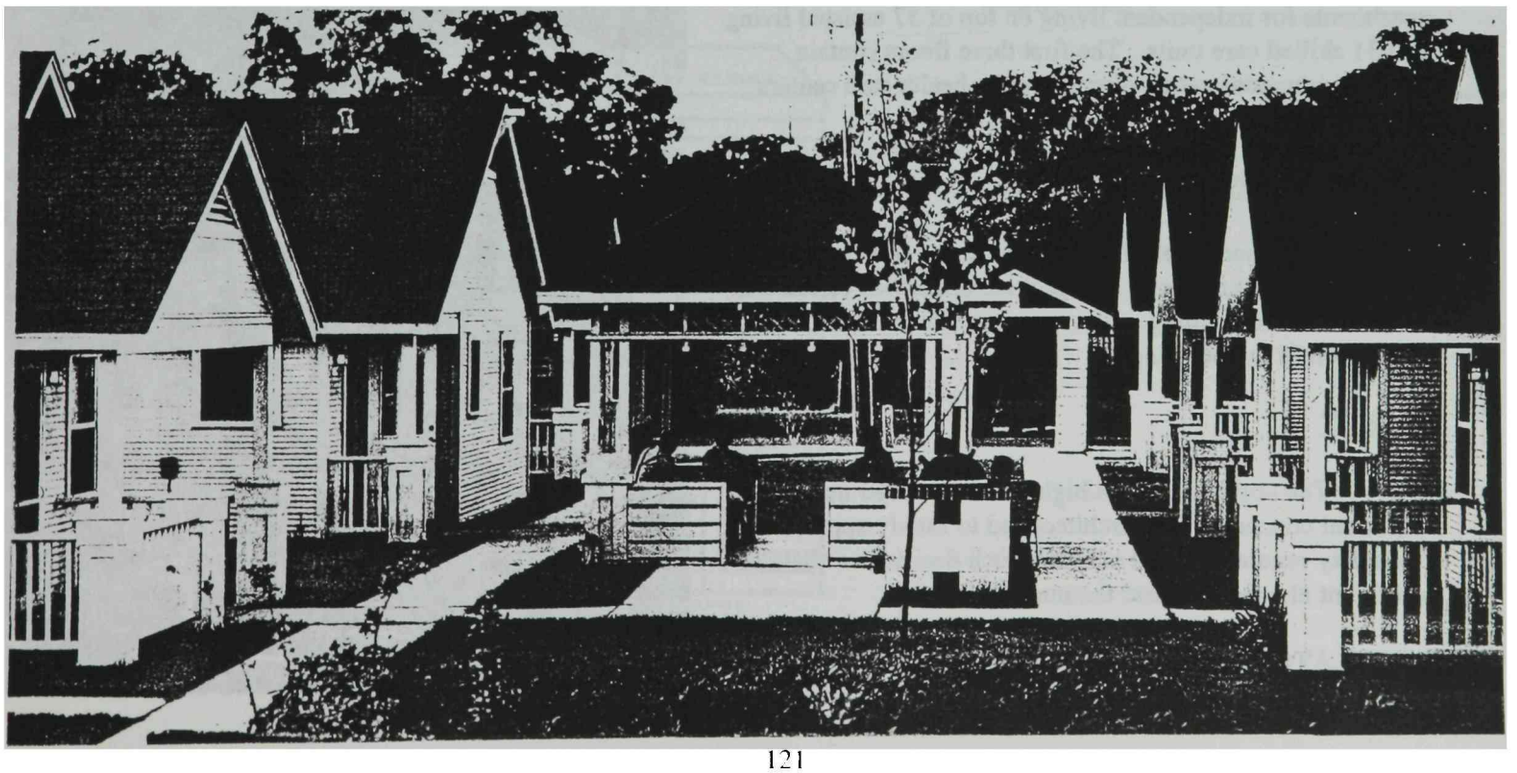
Pathways connect each residence to the courtyard, the peripheral parking areas and a free-standing mailbox shelter. The mailbox shelter serves as a gateway, linking the central courtyard to 21st Street. The manager's residence is linked with the village green by a back porch and laundry room which is shared by all residents.

ACCESS

Short distances between off-street parking and the cottages allow quick, easy access to and from vehicles. The residences were constructed on-grade for easier handicapped access and baths were made wheelchair-accessible.

COSTS

Hatch designed each residence to be compact, simple and efficient in order to meet a small budget. Even though amenities such as air cooling are present, the cost of the project was low enough to allow rents of only $100 a month as of 1988.



Case Study #2:
Marriot Jefferson
Arlington, Virginia

Building Type and Users: Urban "high rise" life care facility for elderly independent and assisted living and skilled nursing care.
Architect: Glen Tipton, partner for Cochran, Stephenson & Donkervoet, Baltimore
Source: Progressive Architecture, Nov. '89, p. 86

ECONOMIC

The Marriott corporation is marketing a hotel environment with services such as maids, laundry, dining, retail, etc. In doing this, the company is shifting the emphasis from health care to hospitality. This shift not only impacts the services offered, but also the architectural envelope. The buying power of the middle class elderly has begun to attract large for-profit corporations such as Marriott to the field of life-care, which is traditionally non-profit.

SITE CONTEXT

The building is set on a 1.5 acre site between new office buildings to the south and north. The architect responded to the urban site with twin twenty-story high rises, which makes them large enough to announce their presence, yet not so tall as to overwhelm the surrounding structures.

DESIGN

The architect stacked 325 one and two bedroom apartments for independent living on top of 57 assisted living and 31 skilled care units. The first three floors contain lobbies, commons areas, dining rooms, health care centers (skilled nursing) and assisted living.

CIRCULATION

A ground level pedestrian walk and courtyard on the Marriott Jefferson's south side provide pedestrian circulation to and from the building. Elevators provide the main vertical circulation in the building.

SAFETY

The complexity of a high rise introduced many important concerns. The architect had to satisfy appropriate fire safety regulations and consider such decisions as having apartment elevators bypass the nursing floors.

REGULATORY/ CODES

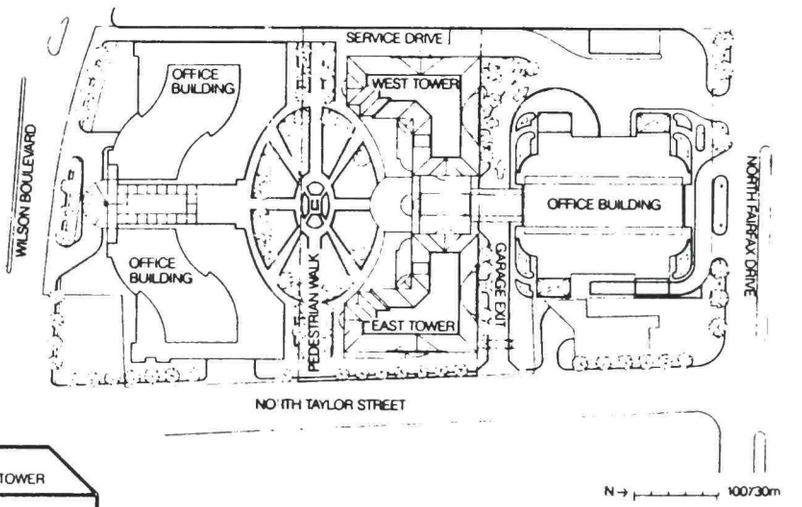
Zoning and building codes make it difficult to achieve the total life care concept, which has its strength in the ability to mix life care models. The assisted living units, for example, must meet standard nursing home regulations if they are attached to a nursing facility on site. The architect escaped these regulations by having the assisted living units conceived as part of the overall residential development, occupying two floors of the apartment portion.

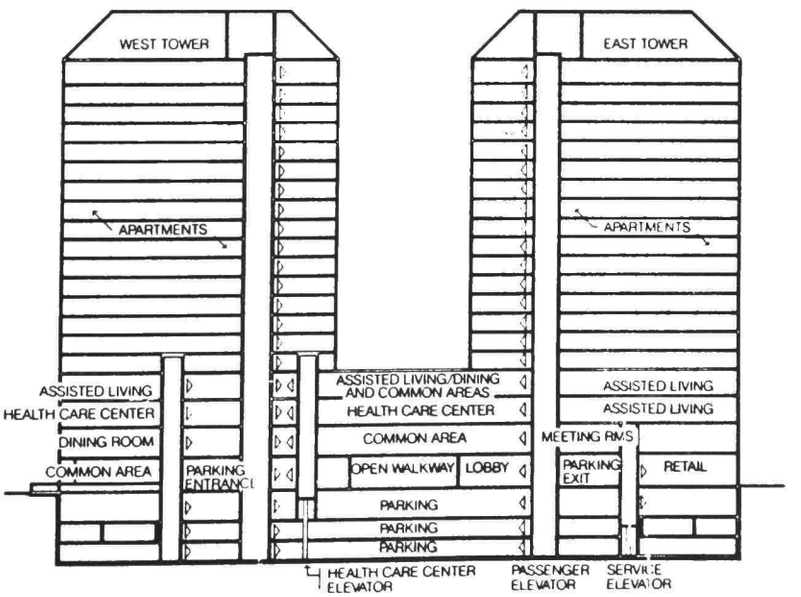
TIME

The architect designed the high rise to offer the continuing care cycle from independent living, through assisted living to skilled nursing. According to the American Association of Homes for the Aging (AAHA), the high rise type promotes the notion of "aging in place" more than the campus type, in which residents move at least once.

VEHICULAR ACCOMMODATION

The architect provided ample parking space with three levels of underground parking.





WEST-EAST SECTION

Case Study #3
Sisters of Charity of the Incarnate Word Long Term Care Facility San Antonio, Texas

Project Type and User: Elderly continuing care facility
Architect: Jones & Kell, Inc., San Antonio
Client: Sisters of Charity of the Incarnate Word, San Antonio
Site Context: The project is located on a 15 acre site in San Antonio. The site already contained the historic Brackenridge Villa, which was sold to the Sisters of Charity in the late 1800's. Also on the site was the original mother house, built for the Catholic sisters in 1899, and a 19th century chapel.
Source: Texas Architect, Jan.-Feb. 91, pp. 32-33

DESIGN

The sisters wanted to have a complex that would be more residential in nature than the earlier mother house. In response, the architects created a residential village organized around a series of courtyards. They restored a barn, which became an arts and crafts center. The facade of the existing mother house was rebuilt to enclose the main plaza in the front.

The architects added a series of new buildings which extend outward from the center of the complex. They responded to the rolling site by making the buildings lower and less formal as the grade decreases. These new buildings include a dining hall wing, a four-wing extended-care facility and housing for the independent elderly. The whole complex comprises a total of 230,000 square feet.

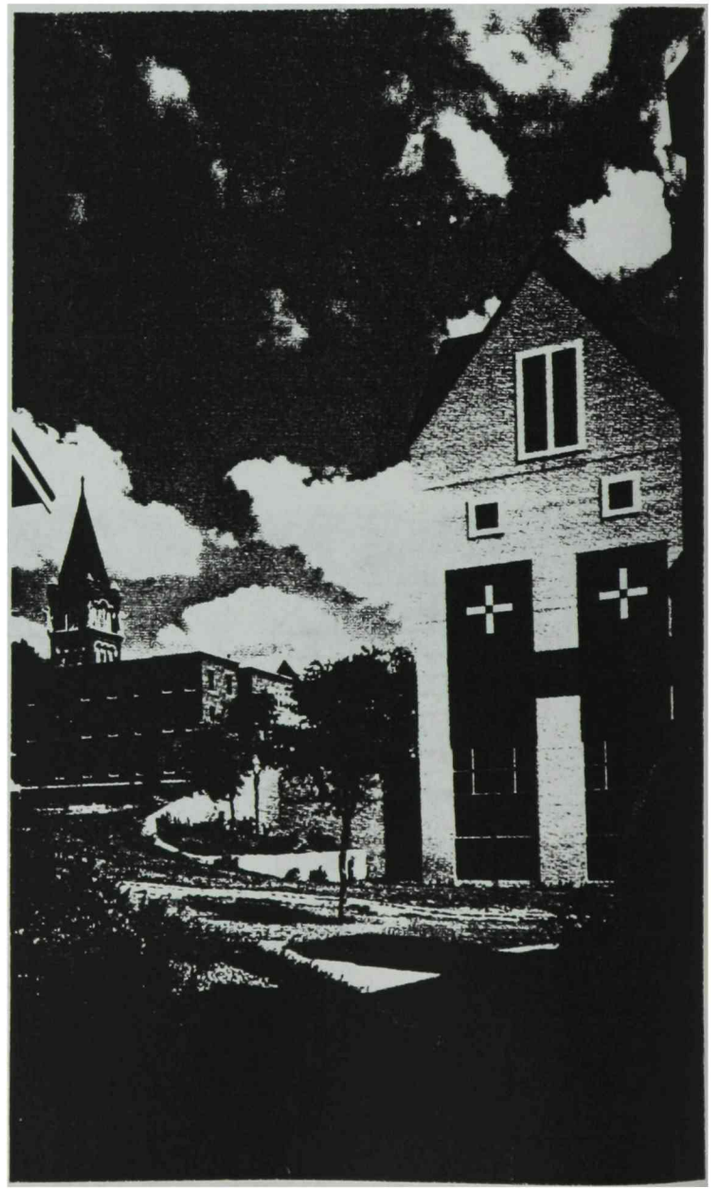


IMAGE / FIT

A major aim of the architects design was to mesh the new with the old throughout the project. The forms, materials and colors used in the new structures reflect the beige walls and red roof of the Brackenridge Villa and the beige and red brick of the original mother house. Outdoors, the architect designed an acequia (a narrow, shallow canal) to run through the residential village. This acequia evokes thoughts of the nearby San Antonio River.

The architect emphasized indirect, natural light throughout the building interiors. The light beaming into these interiors from above was meant to symbolize God's presence.

CIRCULATION / LINKAGE

The acequia creates a contemplative pedestrian path and serves to link the village with a spring (from the San Antonio River) on the site's western edge.

Exterior pedestrian pathways are rigid and formal, as in the courtyards, and loose and free-flowing. Both provide ample circulation from building to building.

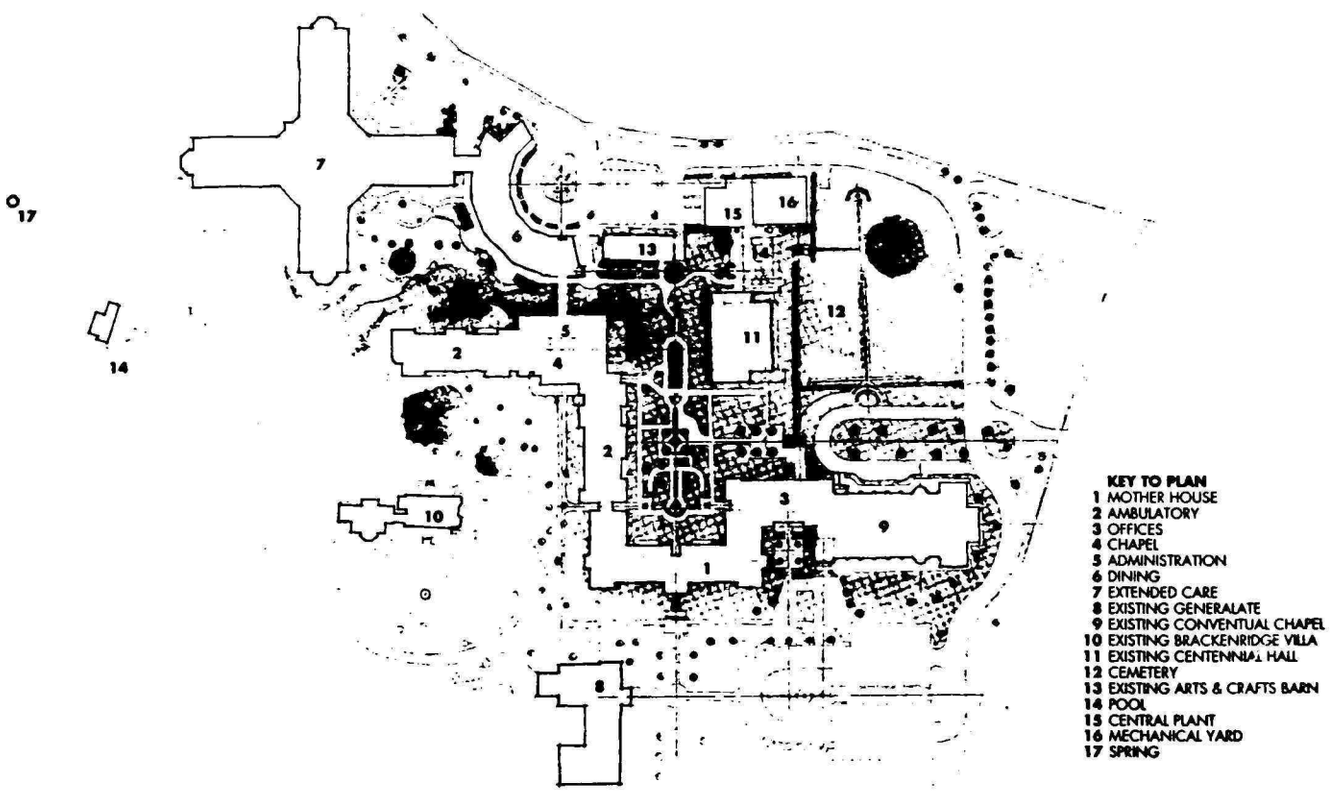
On the interior, the architect treated the building corridors as streets. These corridors are marked by changes in trim, color and custom artwork and serve to link different spaces to one another.

ACTIVITIES

The facility provides many activities for its elderly residents. They can create things in the arts and crafts barn, take a dip in the swimming pool, explore the site, worship in the chapel or sit and socialize in the courtyards. The interior corridors also offers a good place for social interaction.

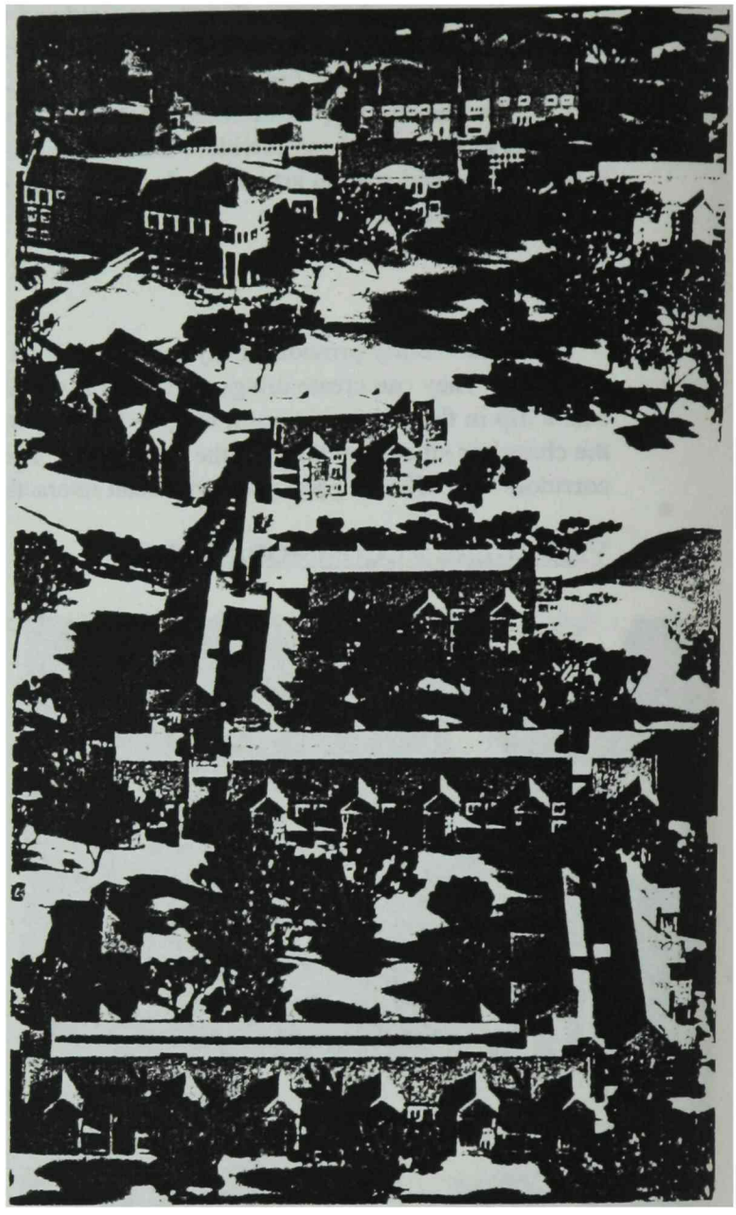
VEHICULAR ACCOMMODATION

The site plan allows for separation of vehicular and pedestrian traffic. The roads and parking spaces are mainly located along the edges of the site.



Case Study #4
The Quadrangle Haverford, Pennsylvania

Building Type and User: A "campus plan" multi-building life care complex for assisted and skilled care living and independent elderly living.
Architect: Wallace Roberts & Todd, Philadelphia
Client: Marriott Corporation
Site Context: The project occupies a 67 acre site in a rural area near Haverford. The site grounds are heavily wooded and, in some areas, steeply terrained.
Source: Boles, p. 85



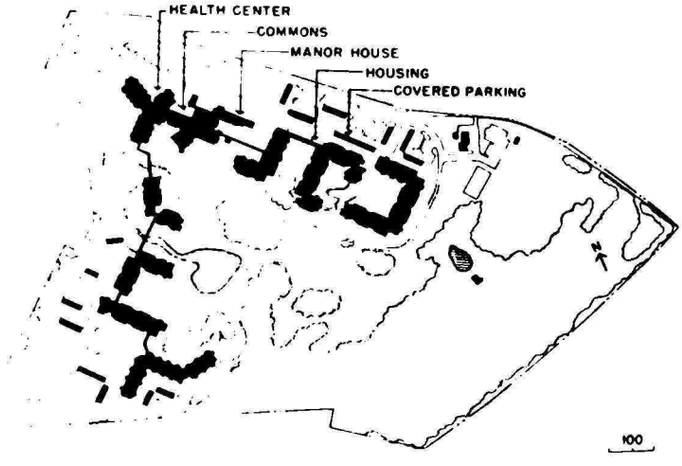
DESIGN HISTORY

The Quadrangle was a project started in the late 1970's by a Quaker group which wanted a low key, traditional campus plan. This group wanted the buildings totally separated from each other. They felt this would promote a "fresh air" approach to life care. The Quakers wanted to mix in the assisted living residents with the independent, active residents; they felt this would make the assisted living residents feel more a part of things.

DESIGN

The project incorporates 309 apartment units, 36 assisted living units and a 43 bed skilled care facility within its buildings. When the Marriott Corporation took over the project in the mid-1980's, the architect was asked to make several changes. One was to require enclosed corridors to connect the apartment buildings to each other and to the commons building. This went against the original Quaker "fresh air" approach and tended to institutionalize the project a little more. However, it does offer the residents protection from harsh outdoor environments. Again differing from the Quaker plan, Marriott tied the assisted living units to the skilled care facility. By doing this, Marriott could save money and staff time by grouping all medically-needy residents together. However, this tends to take more independence away from the assisted living residents.

The architect designed the health units to be tied to the commons building at the campus center. Each independent living apartment was provided with a large living / dining area, bedroom, private bathroom and a balcony or porch overlooking the site.



IMAGE

The Quadrangle's architecture echoes the architecture of nearby Haverford College, whose alumni are a target market. It also reflects the architecture of the existing manor house located at the center of the campus.

The way the architect organized the units into loose quadrangles also reflects Haverford College.

CIRCULATION

The covered walkways provide pedestrian circulation, linking the buildings together. These walkways help to minimize level changes as residents must cross over the sometimes steep terrain.

A corridor which moves through the commons building provides access to all activity rooms and links the functions to one another.

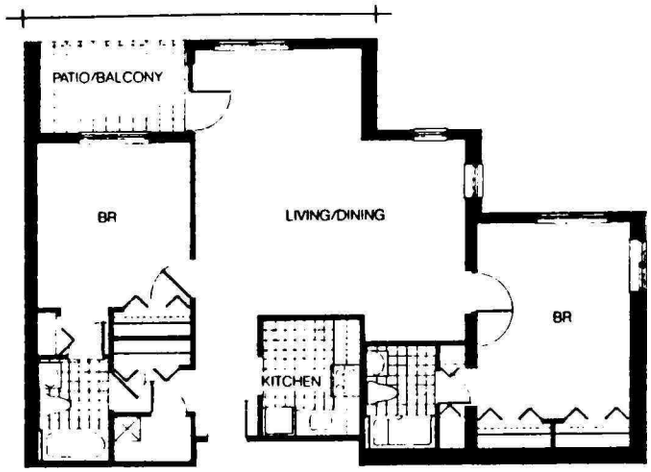
ACTIVITIES

The commons building has many public activity spaces. These include a swimming pool, recreation room, beauty shop and crafts studios and shops on the lower level. The ground level contains a lounge, library, coffee shop, gift shop, dining room, painting studios and a bank.

VEHICULAR ACCOMMODATION

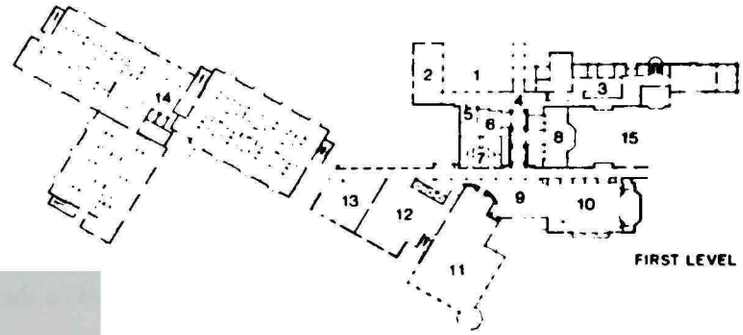
Vehicle traffic is confined to the campus perimeter. Nearby covered parking is offered for each apartment building.

TYPICAL 1-BR UNIT

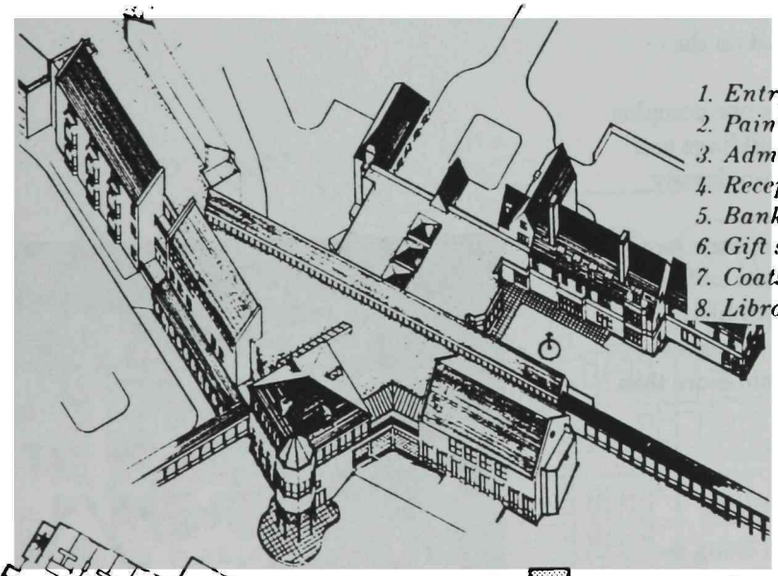


TYPICAL TWO-BEDROOM UNIT

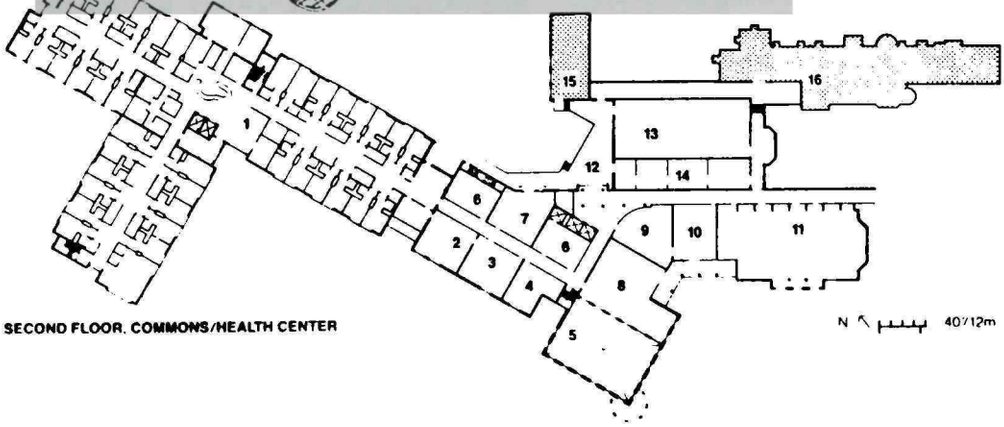
10'/3m



FIRST LEVEL



1. *Entry quadrangle*
2. *Painting studios*
3. *Administration*
4. *Reception*
5. *Bank*
6. *Gift shop*
7. *Coats/bathrooms*
8. *Library*
9. *Lounge*
10. *Auditorium*
11. *Dining*
12. *Kitchen*
13. *Coffee shop*
14. *Personal care (skilled care below)*
15. *Library quadrangle*



1 SKILLED CARE FACILITY
2 SKILLED CARE DINING
3 OFFICES
4 STAFF LOUNGE
5 SWIMMING POOL
6 STORAGE
7 SHIPPING/RECEIVING
8 RECREATION
9 BEAUTY SHOP
10 DAY CARE
11 CRAFT STUDIOS
12 LOADING DOCKS
13 MECHANICAL
14 CRAFT SHOPS
15 REPAIR SHOPS
16 BASEMENT SERVICES

SECOND FLOOR, COMMONS/HEALTH CENTER

N 40'/12m

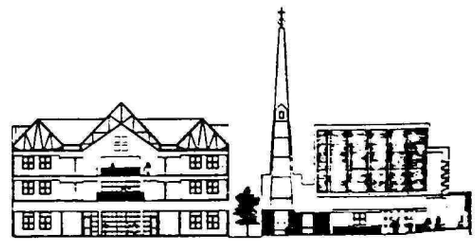
Case Study # 5

St. Catherine's Village near Jackson, Mississippi

Building Type and User: Life care facility for the elderly offering independent and assisted living and skilled nursing care.
Architect: Cook Douglass Farr, Jackson
Client: Community Health Services of St. Dominic's, Inc.
Site Context: The project is located on a 180-acre site outside of Jackson. The site contains pastureland, a 15 acre lake and a large stand of pine trees on its western side.
Source: Ivy, pp. 60-63.

HISTORY

St. Catherine's Village is named for the patron of the Roman Catholic Dominican order. St. Catherine was born in the town of Siena, Italy. The towers, steeples, red tiled roofs and stucco walls of Siena provided inspiration for the architect's design. The sisters of St. Dominic's wanted to offer elderly residents a full range of services from independent living to full nursing care.

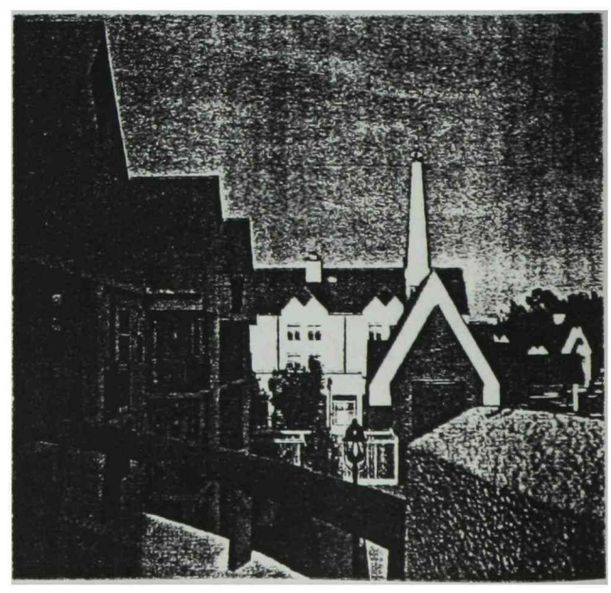


DESIGN

The architect put the village next to the lake's south side. The stand of pines on the western side of the site provides a barrier to the interstate highway about a mile away. The village's site opens off a minor road on the property's northern edge.

The architect clustered the plan within one complex of connected buildings. By grouping all the buildings and services together, the architect achieved an urban density which counteracts the rural setting.

There are 120 independent living units, each ranging from 400-900 square feet, 31 assisted living units and 60 nursing care beds, 31 ALU's and 90 independent living units. The architect provided many public activity rooms and also a chapel. The entire project will contain more than 300,00 square feet of living and service space.

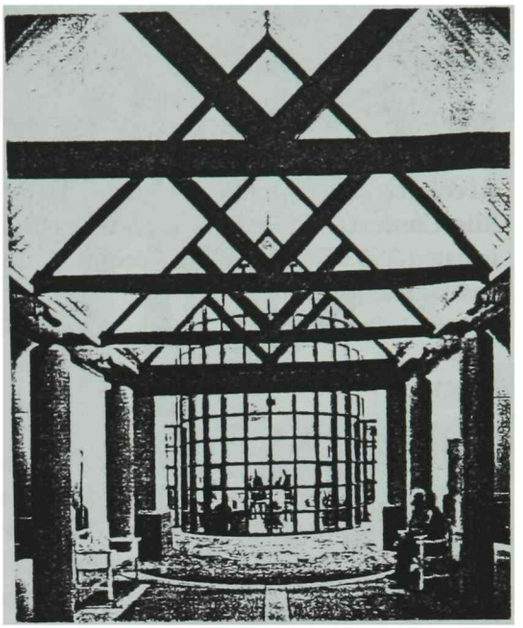


CIRCULATION / LINKAGE

The enclosed corridor system stretches along the entire village and links all the community's spaces together. At the western end, the corridor branches off and forms arms of independent living wings. From there, the corridor leads to the public activity spaces and lobby at the plan's center. The corridor then turns, goes past the assisted living wing and ends in the skilled nursing wings.

IMAGE

The urban density of the village allows it to appear as a city set apart. As people drive toward the site, they see a small city rising up across the lake. The chapel tower, peaked and folded red roofs, large building masses, stucco and brick walls and cantilevered terraces are all elements which the architect used. These elements recall the image of Siena, Italy, in addition to contributing to the "urban density" look.

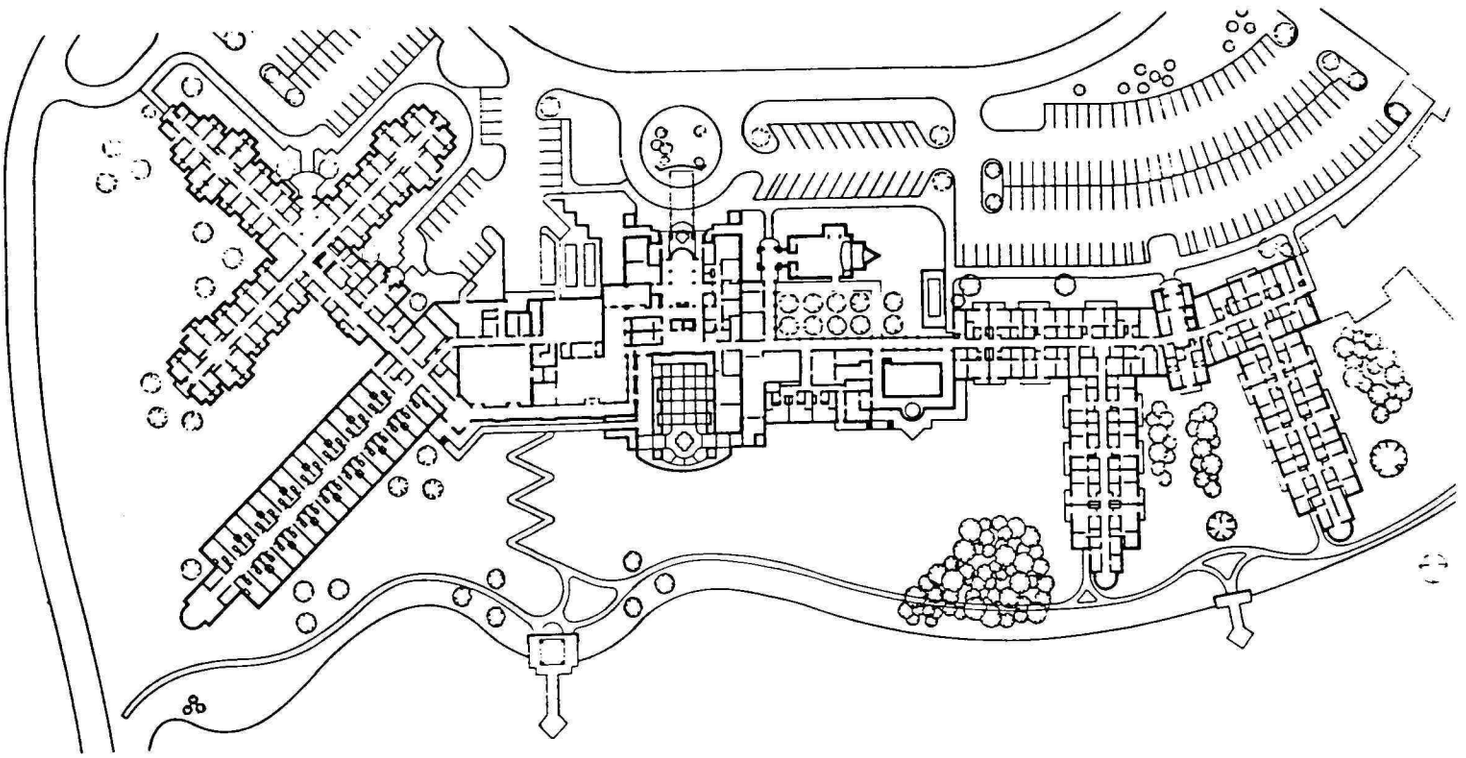


ACTIVITIES

The semicircular apses at the ends of the living wings provide a place to sit and socialize or play cards with neighbors. The corridors have built in benches to encourage social activity and provide places to sit and rest. The chapel offers a place for residents to worship. Other public activity spaces are a natatorium, craftsroom, social room, a deli and dining rooms.

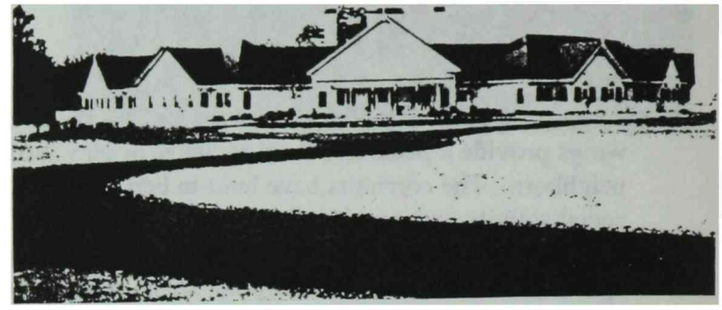
VEHICULAR ACCOMMODATION

The project provides ample on site parking. The over 200 parking spaces were located on the village's south side so vehicular traffic would not interfere with the lake side on the north.



Case Study # 6
Annie Maxim House Rochester, Massachusetts

Building Type and User: Housing for the needy, independent elderly.
Architect: KJA Architects, Somerville, Mass.
Site Context: The project is located near Rochester on an isolated 250 acre site, surrounded by woods and a large lawn and lake on the south side.
Source: Campbell, pp. 76-78



DESIGN

The architect responded to the site by designing the house in a horseshoe form which opens to the lawn and lake. To its residents, the building becomes a haven within the isolated, wooded environment. It protects them from the elements, offers a sense of security and generates activities within.

The architect designed each half of the horseshoe to contain six apartments, which can function as either singles or doubles. In the middle, linking the two halves are the larger public rooms.

CIRCULATION

The large corridor provides the main circulation for the house. Located on the south side of the building, the gently curved, glass-lined corridor allows circulation flow to and from each apartment and the public rooms.

SOCIAL

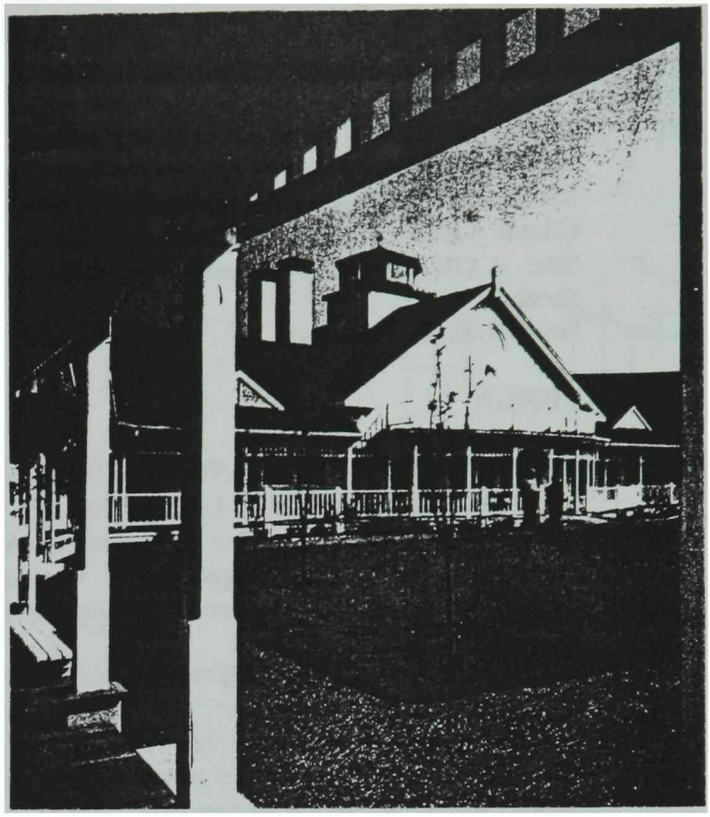
The corridor also acts as an intermediate social zone between the private apartments and the public spaces. The corridor becomes a front porch for each apartment. The residents can put out plants, flowers and chairs. They can sit and socialize with passers by or look through the glass across the lawn at neighbors on the house's other side. The corridor has large sliding glass panels which open it up to a continuous outdoor wood deck. This deck then becomes another social space during nice weather.

ACTIVITIES

The house contains several public rooms which promote interaction and offer choices. One can sit in the dining room or kitchen for drinks or meals, read in the library, socialize by the living room fireplace or at the interior skylighted gazebo. However, the architect's plan doesn't force participation in activities, as the corridor can be used to bypass these public areas.

The apartments themselves have large kitchens for cooking and ample storage and wall space. Residents can

also engage in gardening. A small, fenced garden is provided behind each apartment. The residents can raise birds in an incubator shed and restock the nearby woods with them.

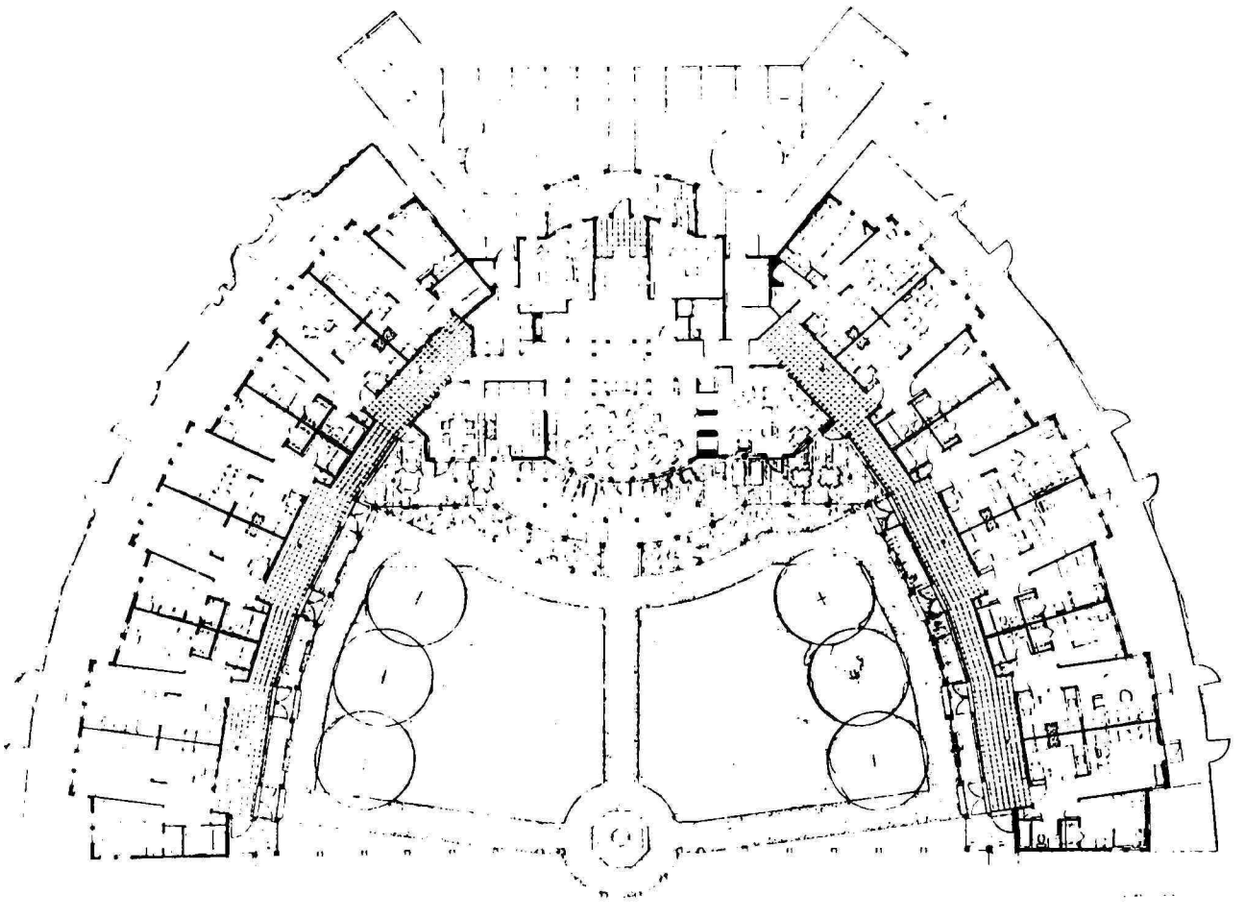


IMAGE

The architect designed the building's exterior to have a "stable" look which evokes images of the rural, agrarian New England past.

COSTS

As the building was donated by the Annie Maxim estate, the residents pay no rent. However, some residents make voluntary contributions and help out with maintenance and management.



Case Study # 7
Crab Creek near Annapolis, Maryland

Building Type and User: A combination life care complex and active adult community based on the "small town" model
Architect: Cochran, Stephenson & Donkervoet, Baltimore.
Client: Leimbach Development Corporation
Site: A 110-acre site near Annapolis on Maryland's Eastern Shore.
Source: Boles, p. 91

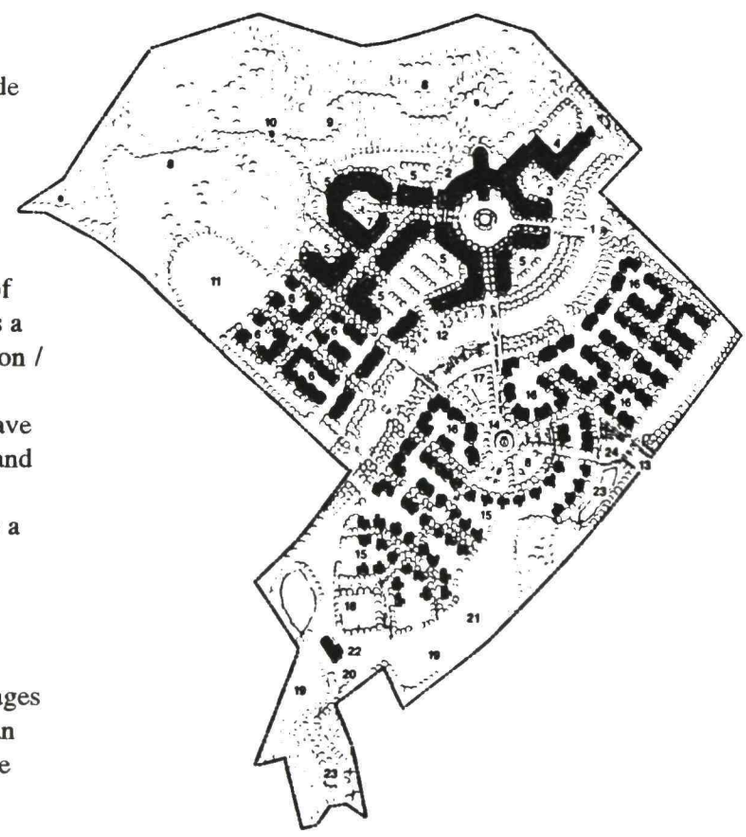
DESIGN

The architects and client wanted the community to reflect not only the increasing density of life care developments but also their new role model, the American small town. The life care complex and active elderly community were treated as separate but equal elements on the site.

Although it is a part of the site, the 120-bed skilled nursing health center is set apart. This arrangement reflects marketing realities. The principle architect on the project noted that "people want to know nursing care is available, but they don't want to see it every day." (Boles, p. 91)

However, residents of both the life care complex and the active adult area can mingle in the town center. The architects planned this center to have common facilities treated as store fronts along a main square with apartments above. The architects and client hope to open the town center to the surrounding community and integrate many different functions within it.

Residential buildings designed for the site include skilled nursing and assisted living units, and apartments townhomes and cottages for the active elderly.



ACTIVITIES

The architects' design includes a large number of activity spaces for its residents. The life care portion has a community / activity center, an indoor pool, and a pavilion / picnic area. The active adult portion has a recreation clubhouse, outdoor pool and tennis courts. Both areas have nature / exercise trails, garden plots and formal gardens and resource / conservation areas.

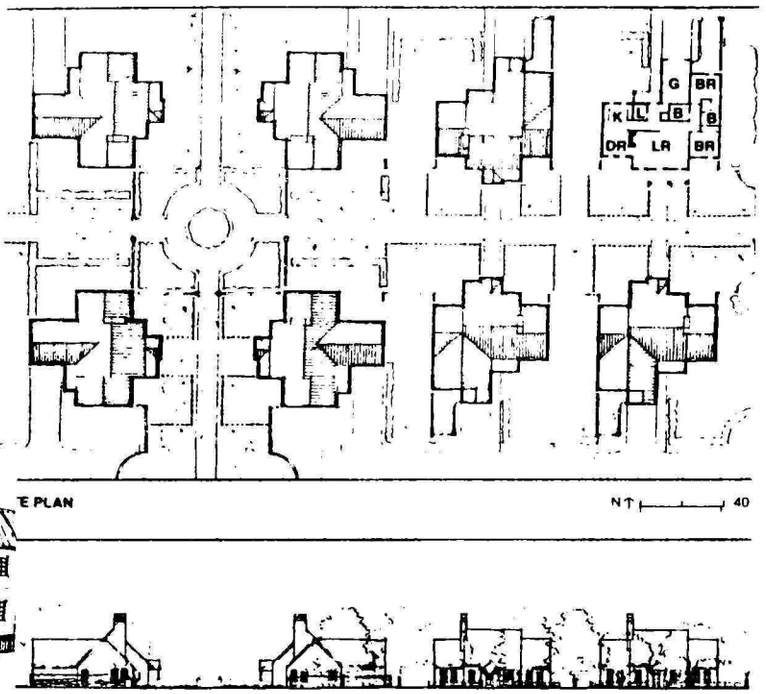
The town center accommodates such facilities as a beauty salon, doctors' offices, a cafe and a post office.

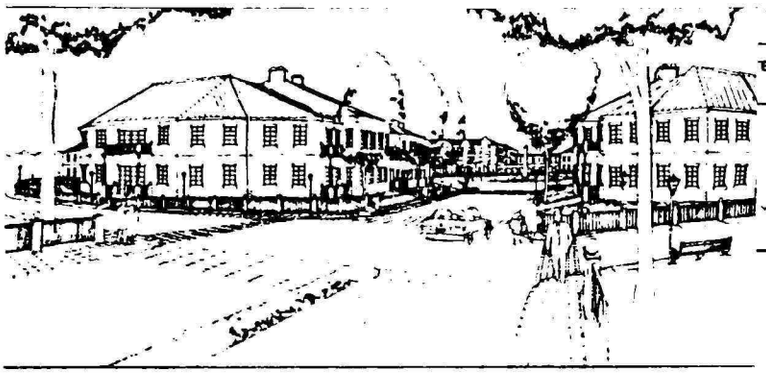
ENVIRONMENTAL

The architects arranged the townhomes and cottages to be separated from each other by vehicle-free, pedestrian greenways. The whole site is sensitive to nature. A large portion of the site space was designated for green areas containing courtyards, trees and gardens.

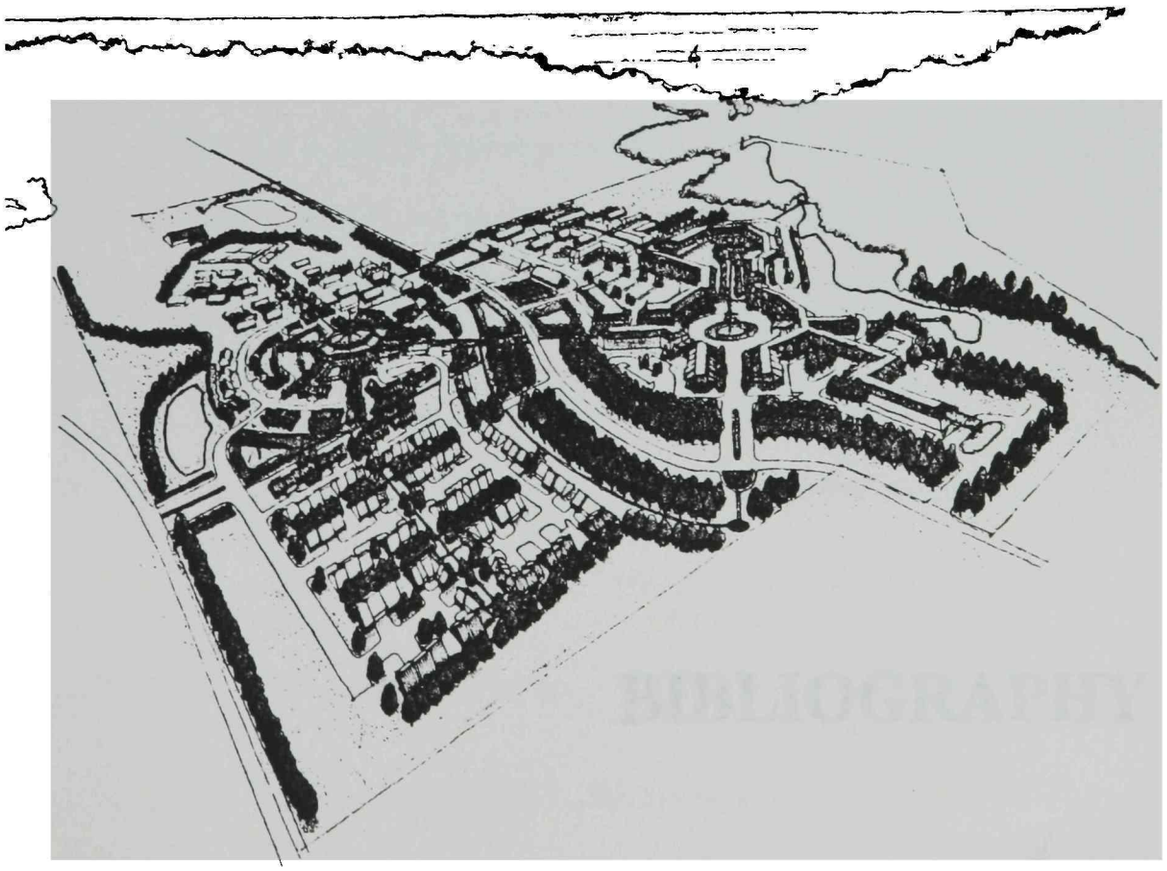
REGULATORY / CODES

The architects wanted an integrated community containing many mixed use areas. However, zoning codes, which typically enforce the segregation of uses, might not permit these mixed uses.





IAIN STREET ENTRANCE TO TOWN CENTER



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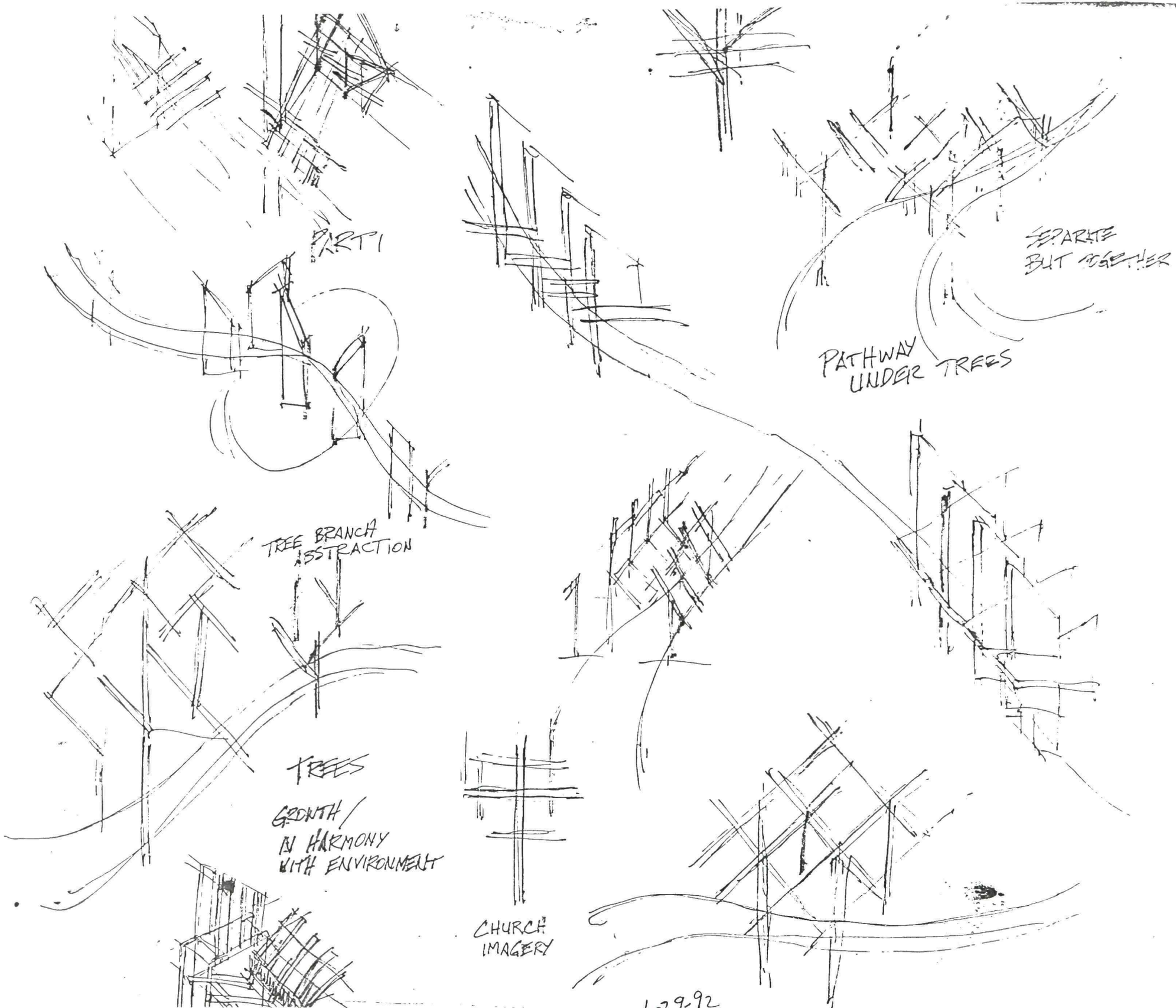
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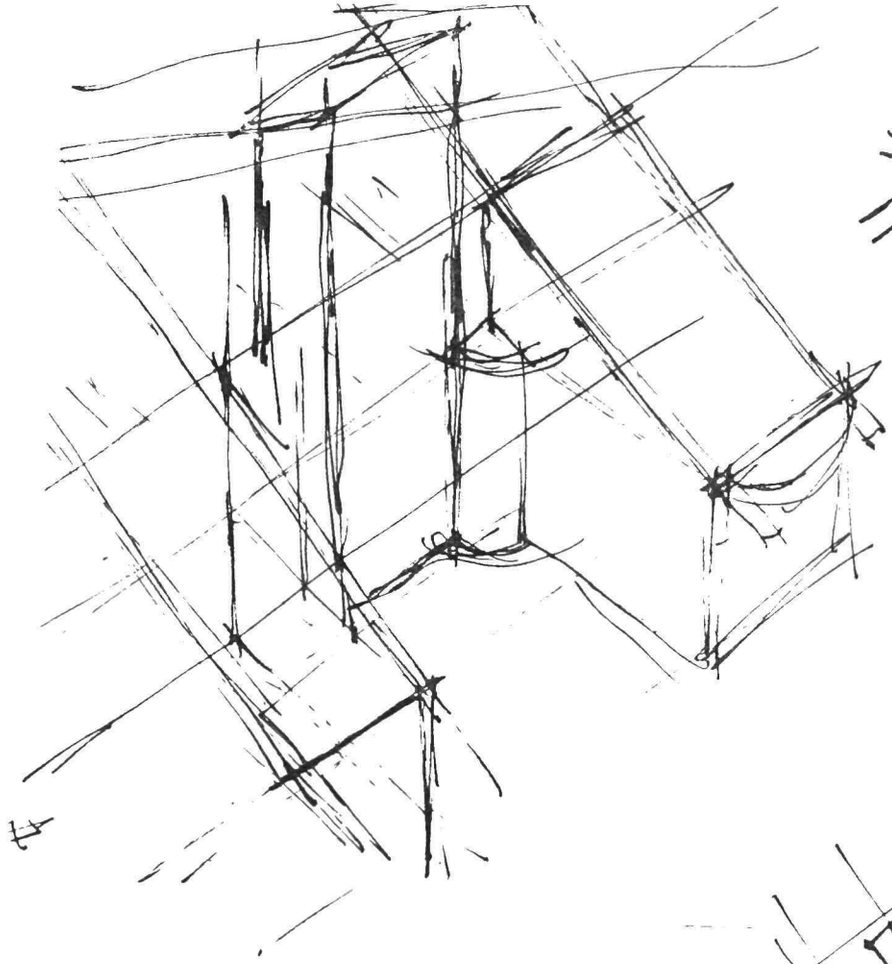


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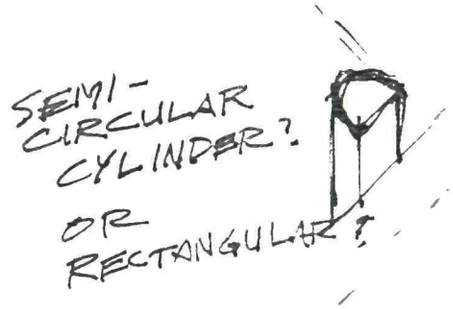
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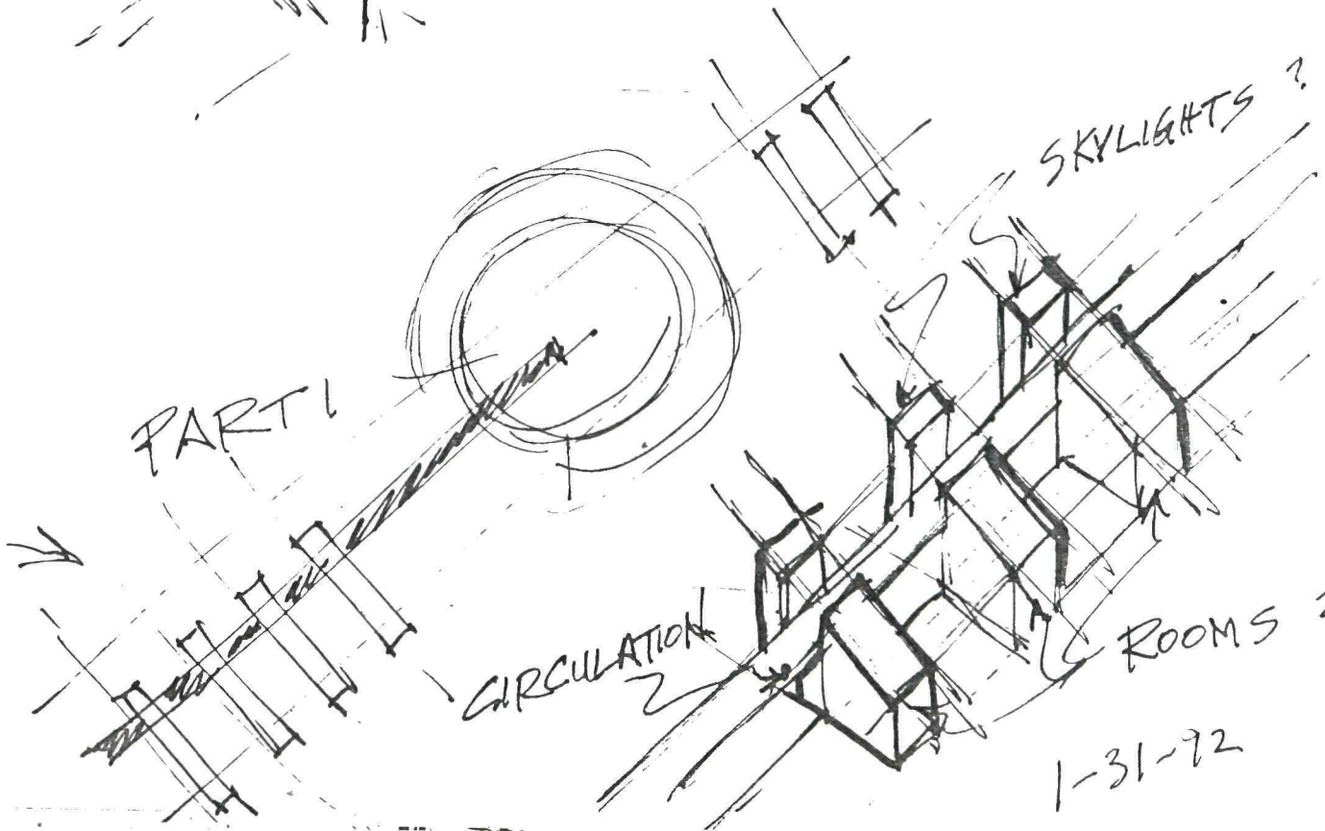
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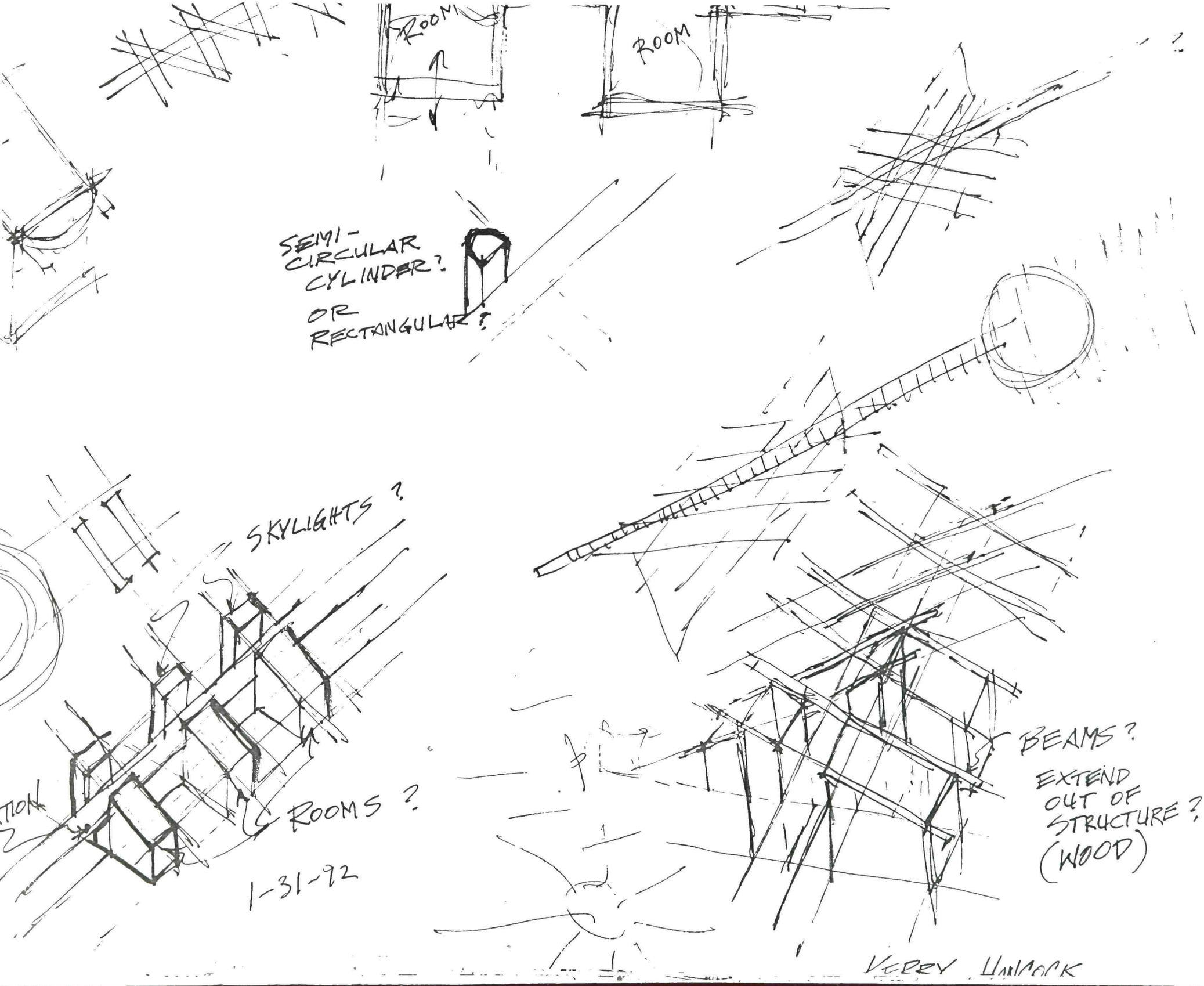
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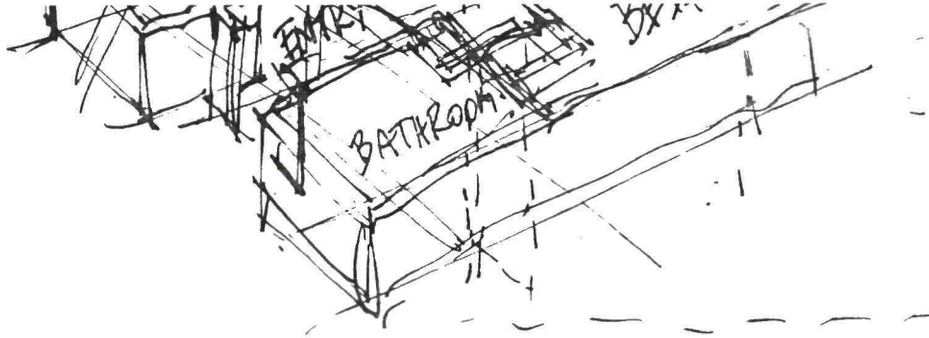

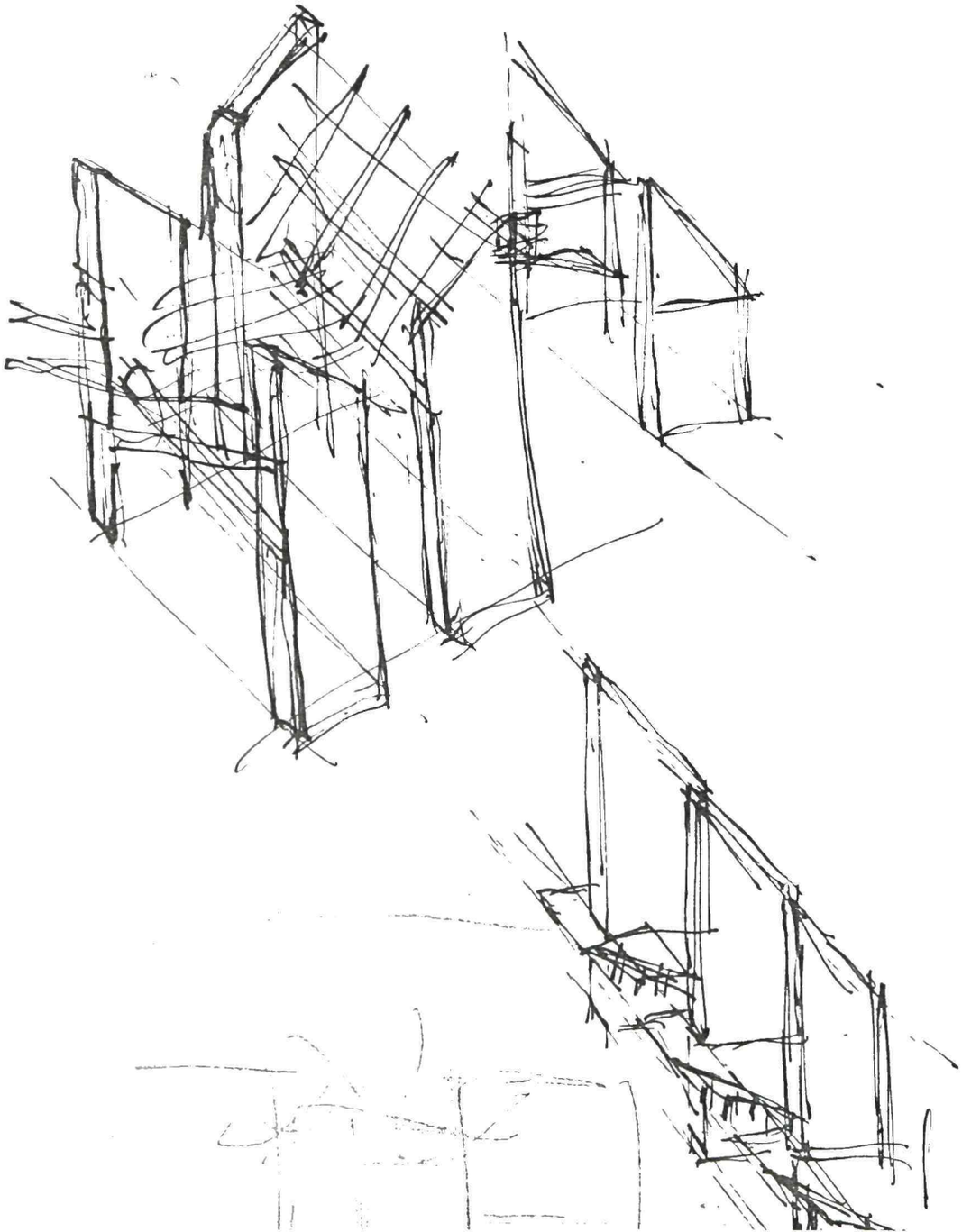

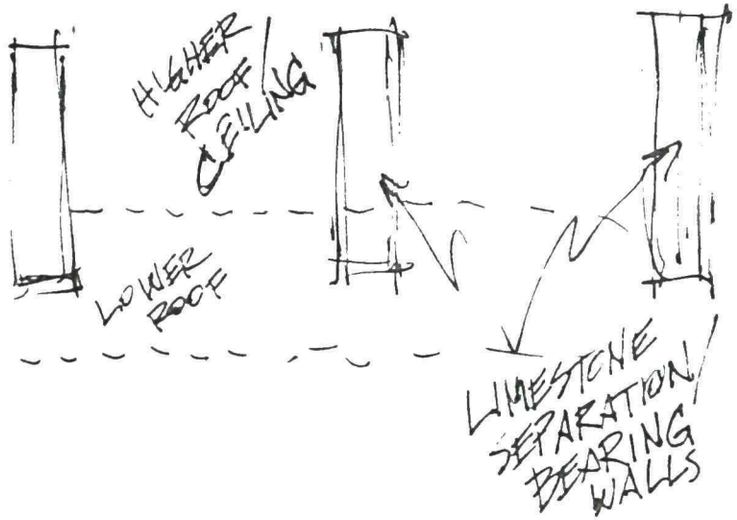

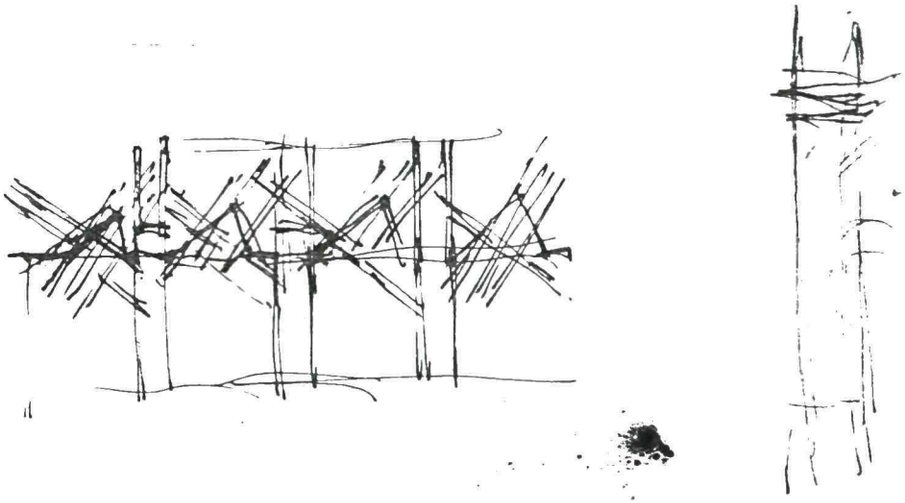

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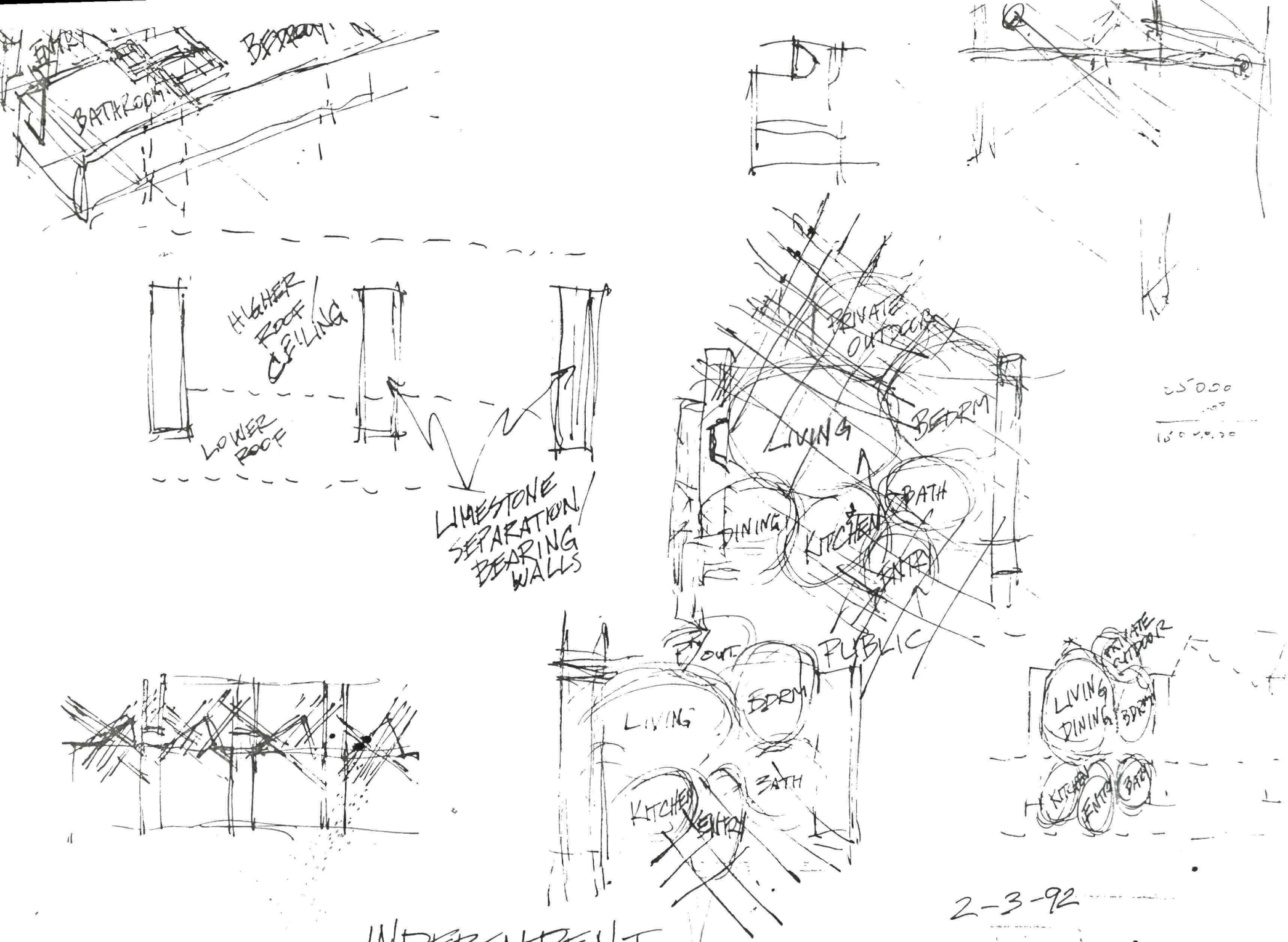

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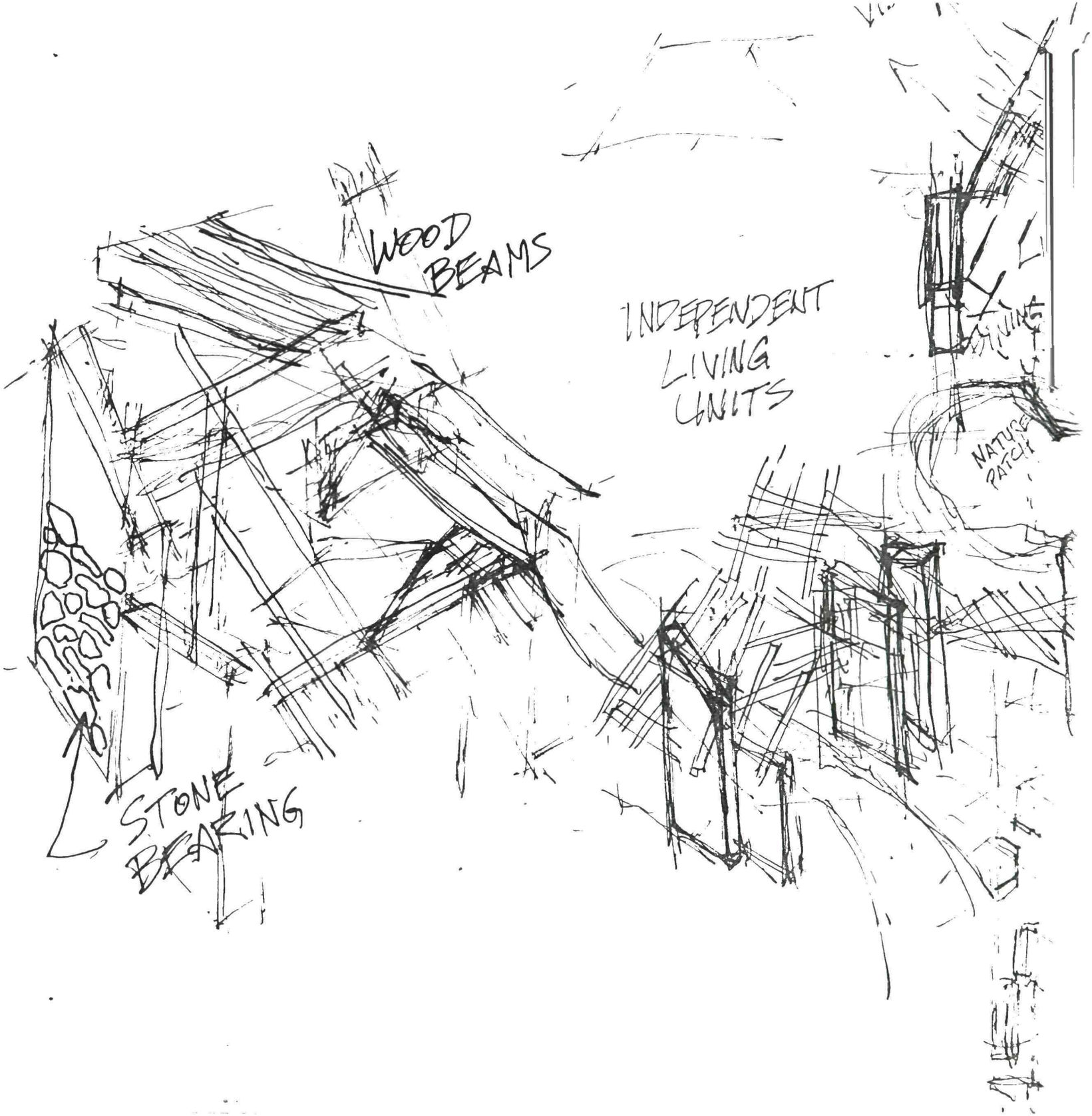
WOOD BEAMS
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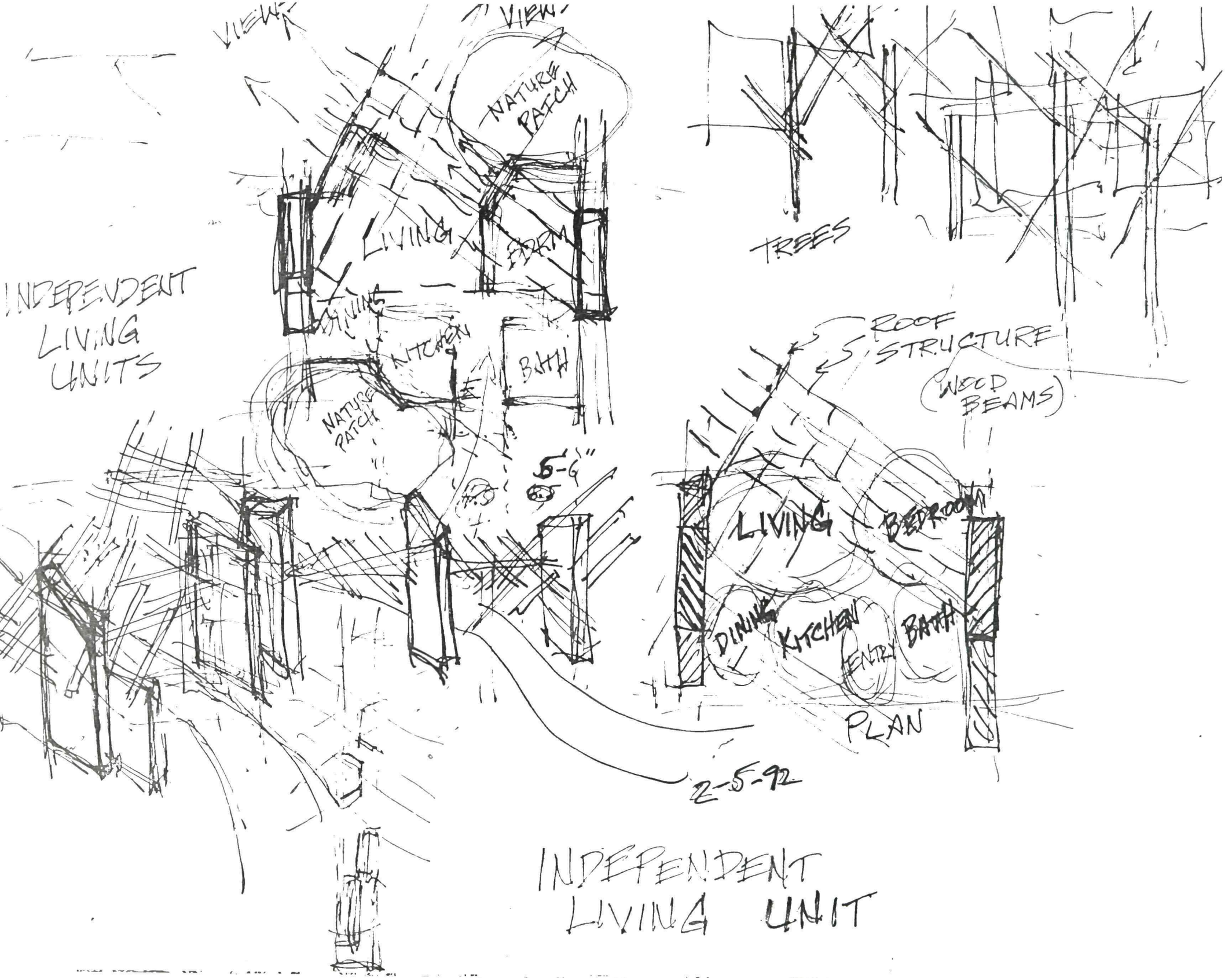
NATURE PATCH
STONE BEARING


VIEW
VIEW
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TREES
ROOF STRUCTURE (WOOD BEAMS)
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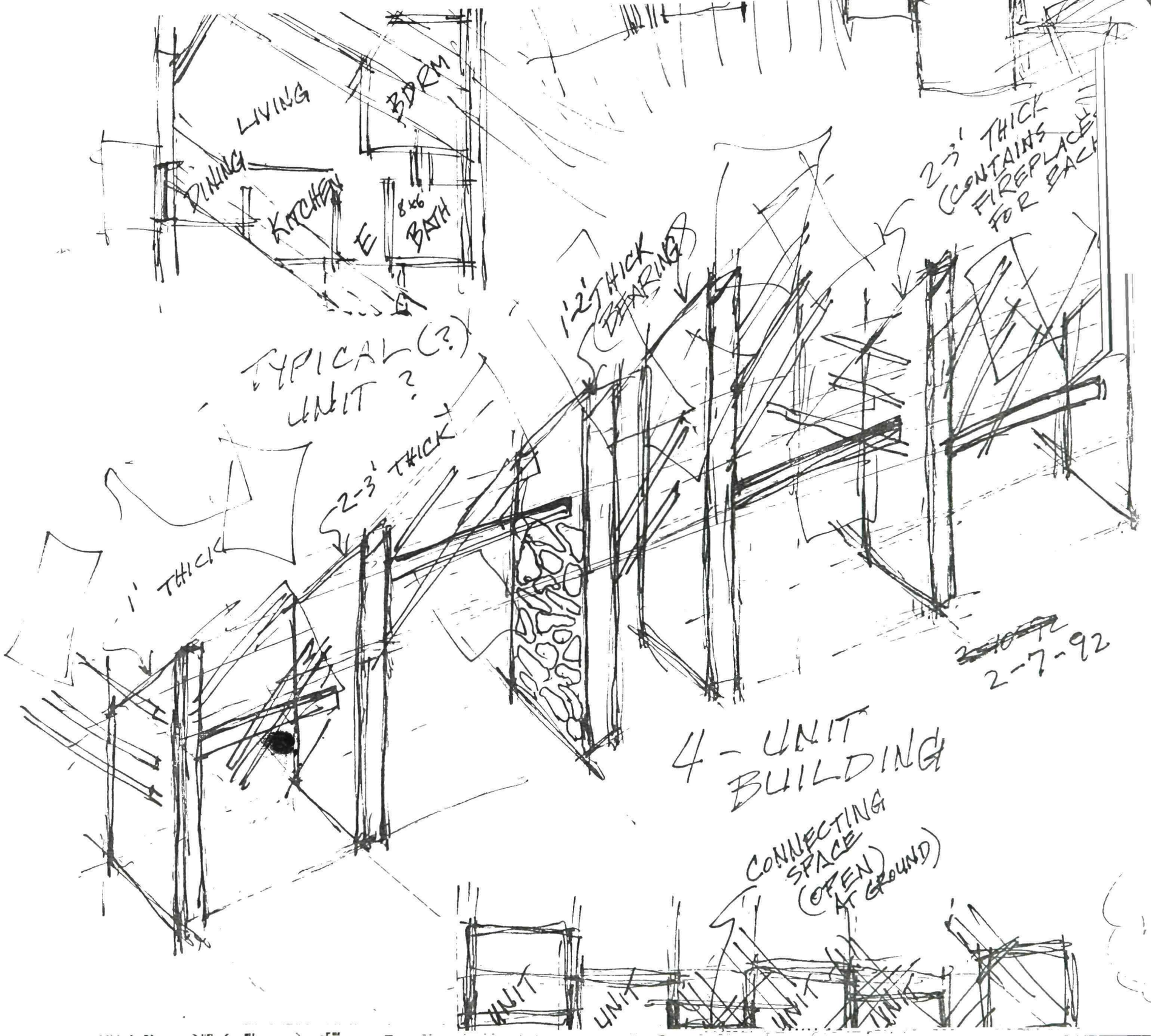
2-5-92
INDEPENDENT LIVING UNIT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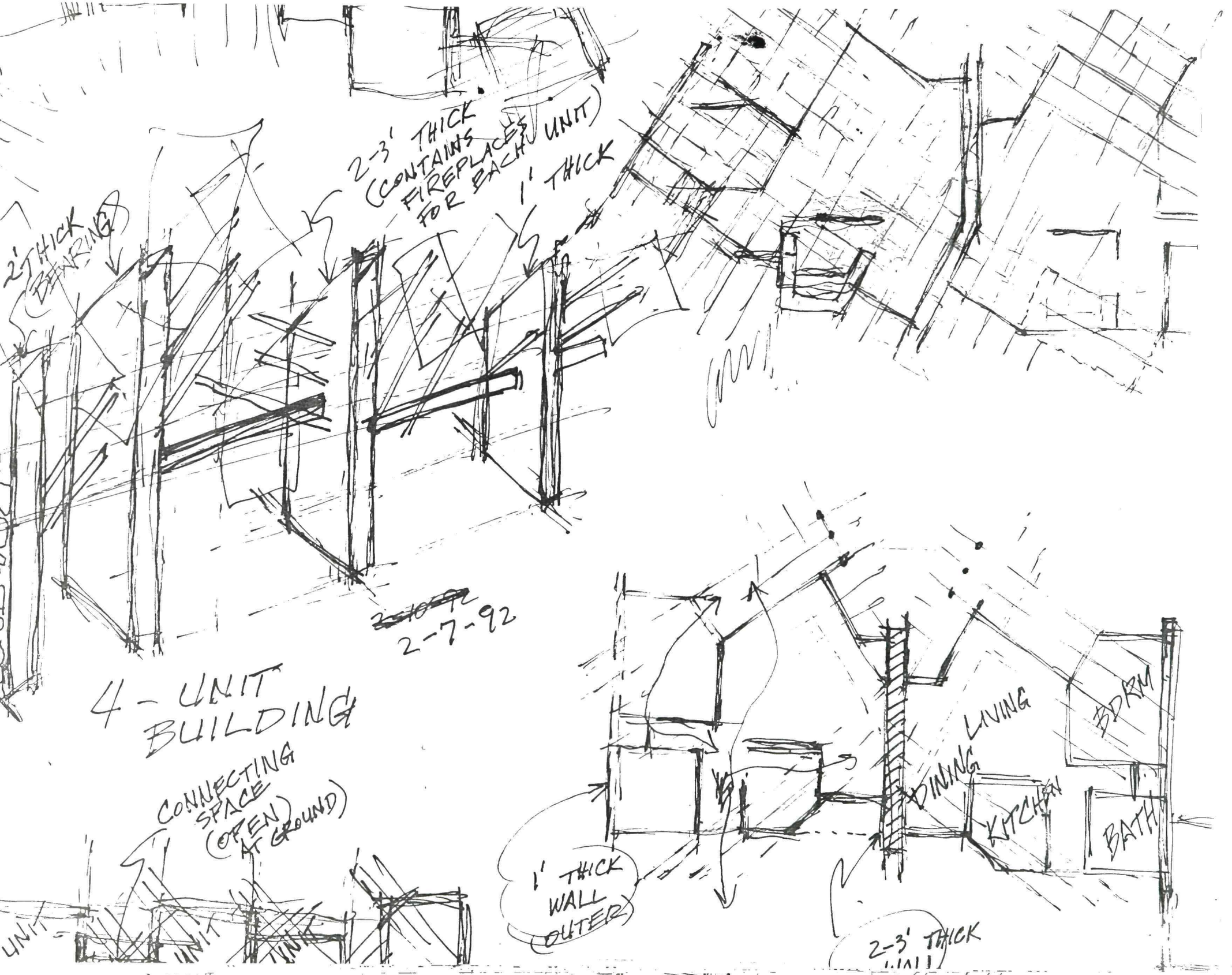
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4 - UNIT BUILDING
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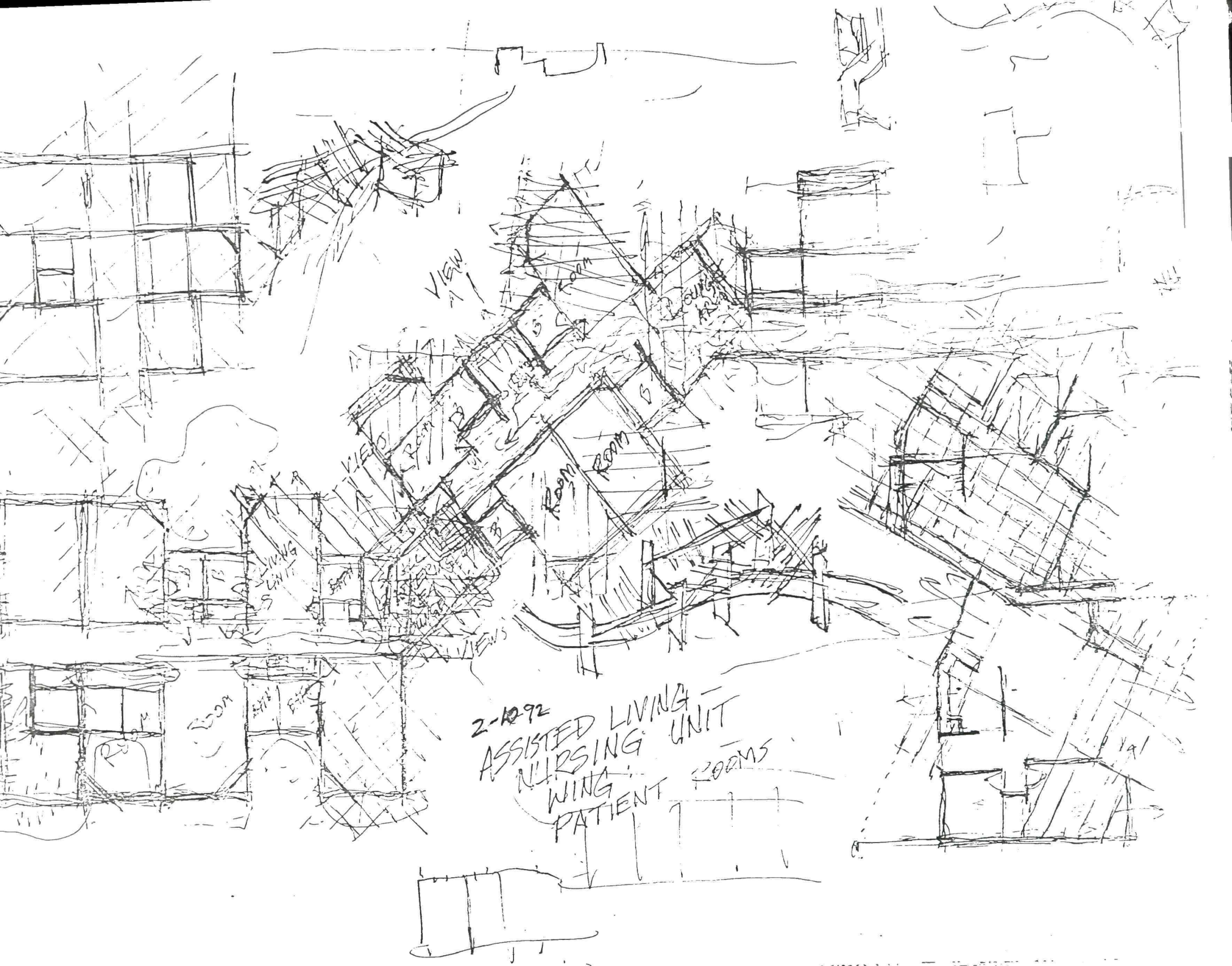
1' THICK WALL (OUTER)
2-3' THICK WALL
LIVING
DINING
KITCHEN
BDRM
BATH


VIEW
ROOM
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VIEWS
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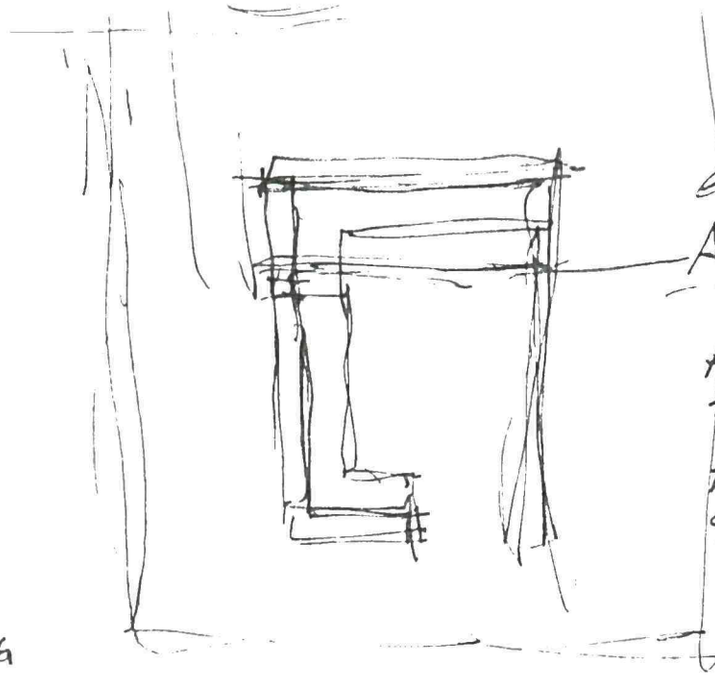
ASSISTED LIVING
NURSING UNIT
WING
PATIENT ROOMS

FACILITIES

- 150-200 ft²
OM - 25 ft²
RKROOM - 50 ft²
ORKROOM - 50 ft²
E ROOM - 10-15 ft²
STORAGE 16-20 ft²
T STORAGE 24 ft²
IENT STATION 20 ft²

SING
WING



GREETING &
ADMINISTRATION

ADMINISTRATOR'S OFF
BUSINESS OFFICE -
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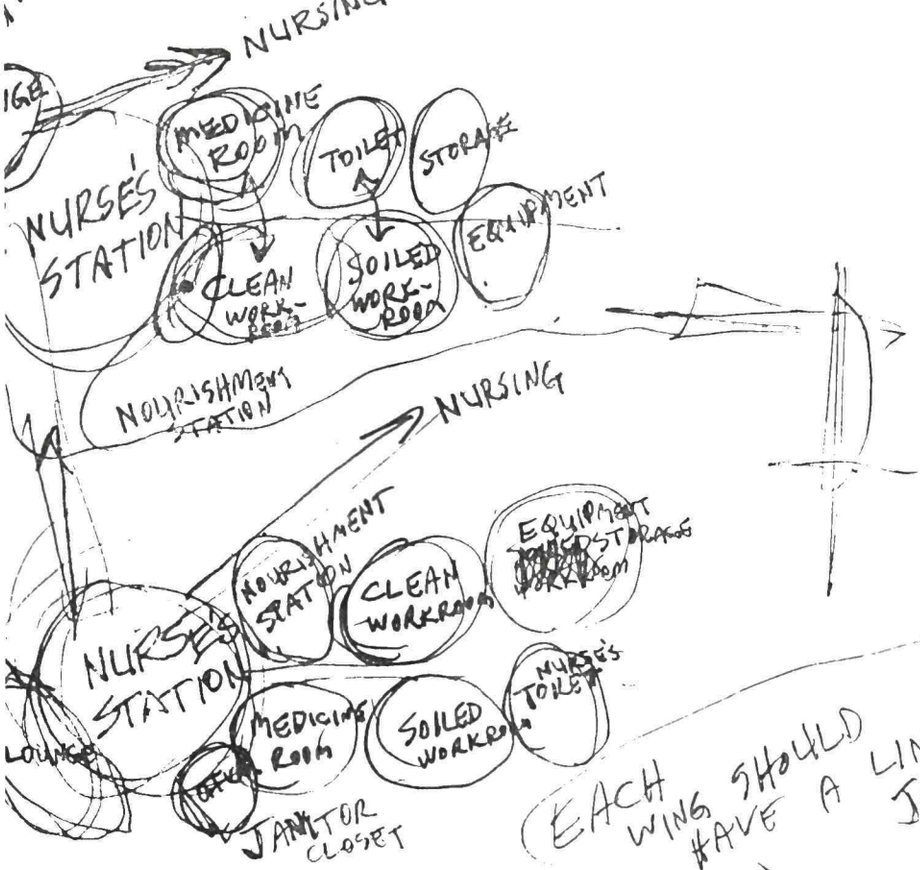
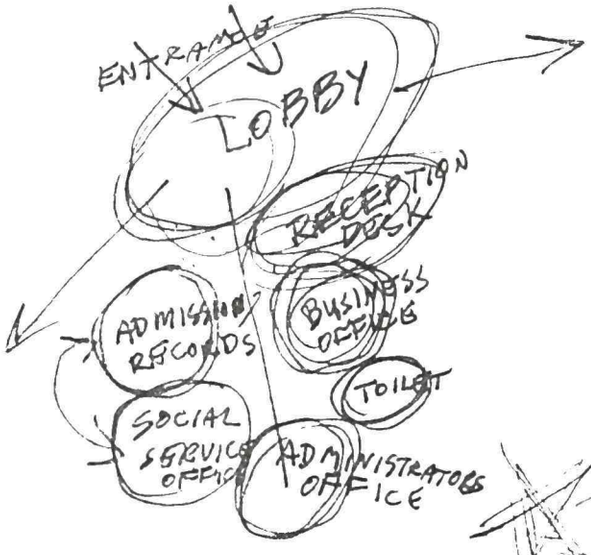
ADMINISTRATION TO
LOBBY (ENTRANCE)
RECEPTION DESK





(EACH WING SHOULD HAVE A LINEN/JANITOR'S CLOSET

SPECIAL BATHROOM IN BEDRIDDE WING

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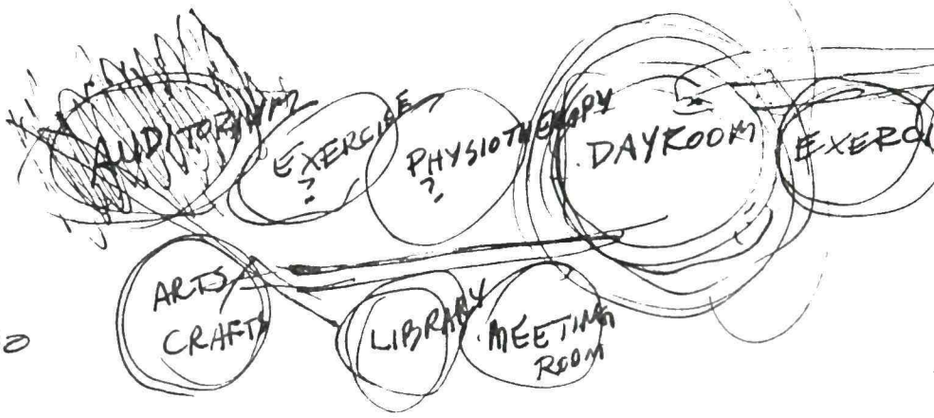
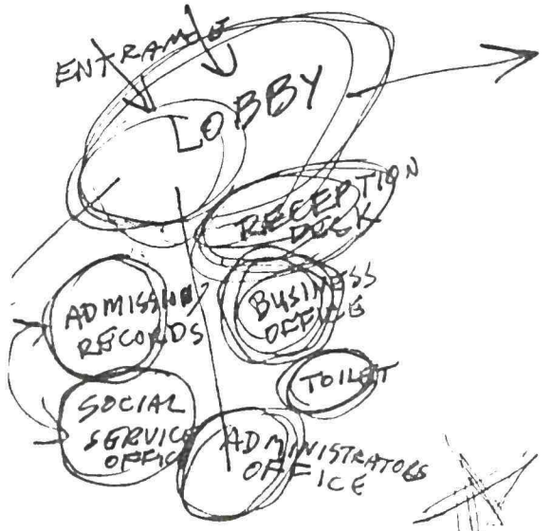
PHYSIOTHERAPY ROOM - 40
EXERCISE / MULTI-USE ACTIVITY
DAYROOM -
LIBRARY -
ARTS & CRAFTS ROOM -
~~AUDITORIUM~~
MEETING RM. -



GREETING & ADMINISTRATION

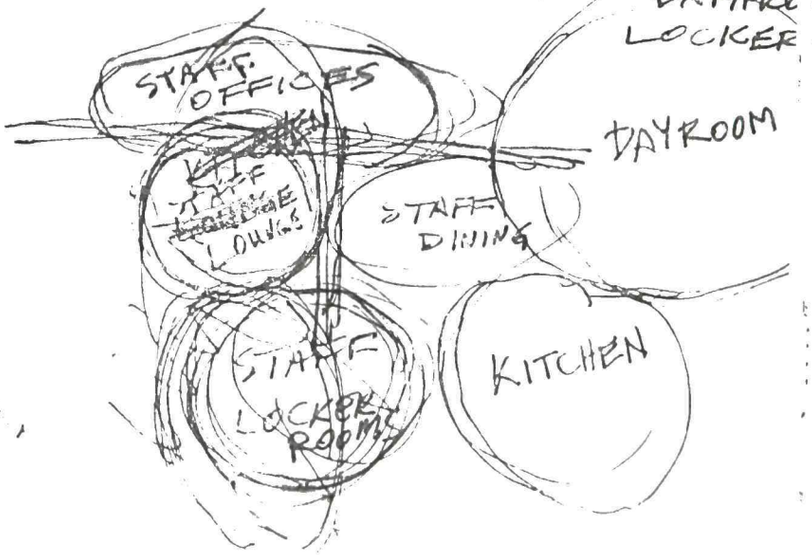
ADMINISTRATOR'S OFFICE - 100
BUSINESS OFFICE - 80
ADMITTING / RECORDS OFFICE - 120
SOCIAL SERVICE OFFICE - 100
ADMINISTRATION TOILET ROOM - 30
LOBBY (ENTRANCE)
RECEPTION DESK

2-12-92



STAFF SPA

CONFERENCE
STAFF OFFIC
4
STAFF DINI
STAFF LOUNG
STAFF BATHRO
LOCKER



EACH BEDRIDDEN PATIENTS ROOM SHOULD HAVE A BATHROOM WITH ONLY A SINK AND TOILET

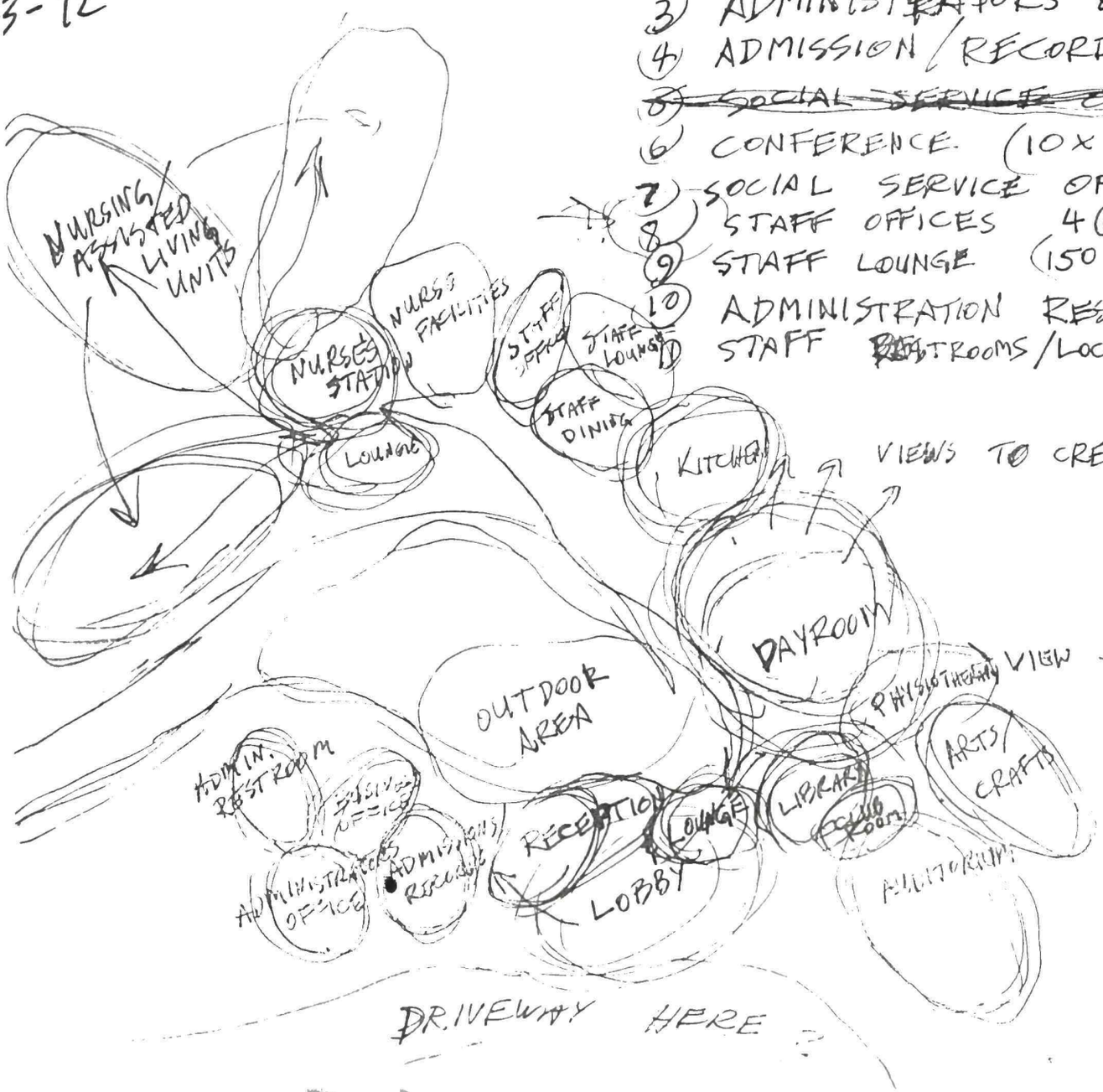
NO TUB

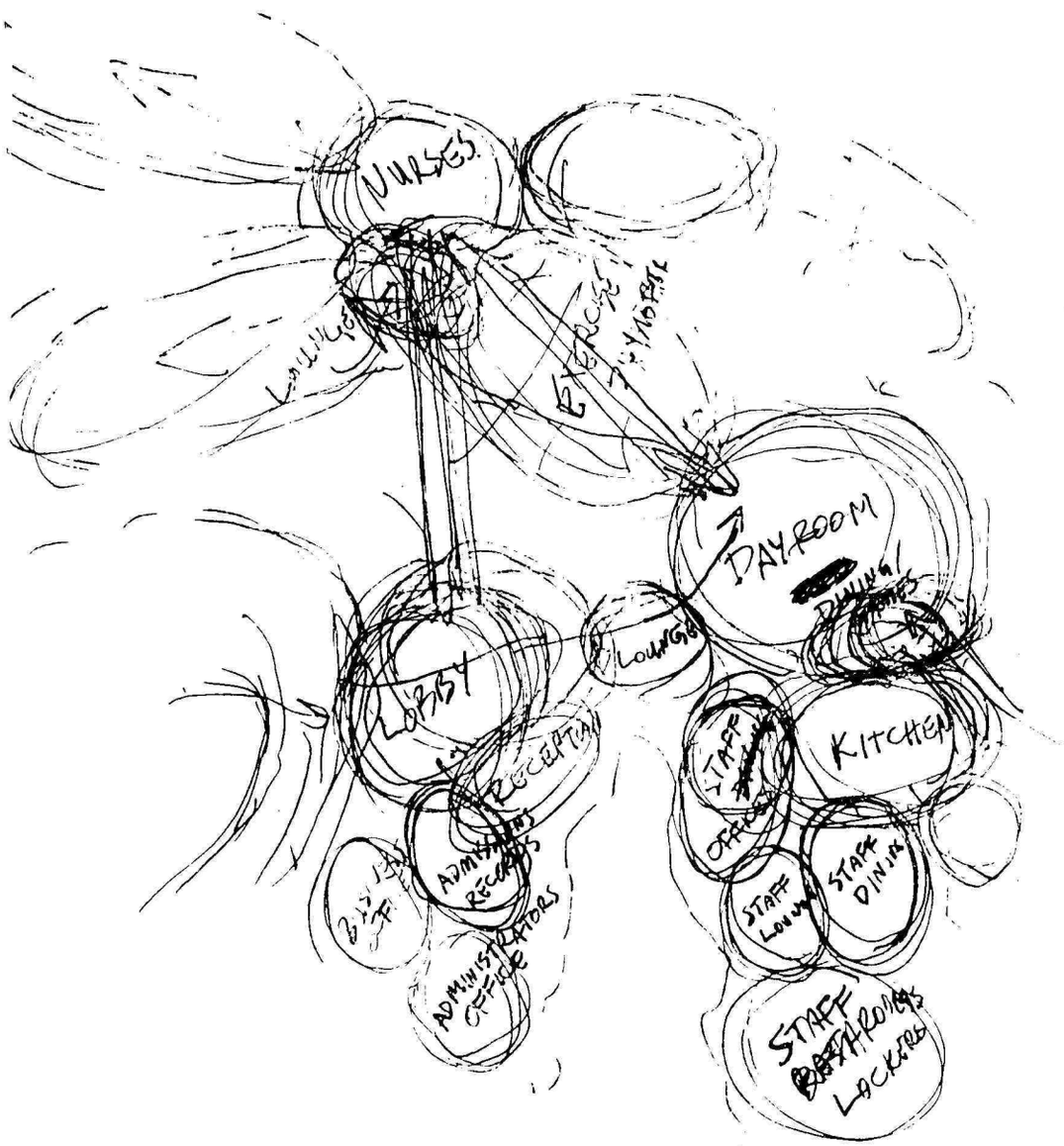
SPECIAL BATHROOM IN BEDRIDDEN WING

1) REPAIRSHOP - 120 ft²
2) RECEIVING/SHIPPING
3) MECHANICAL
4) JANITOR CLOSET - 40 ft²

3-92

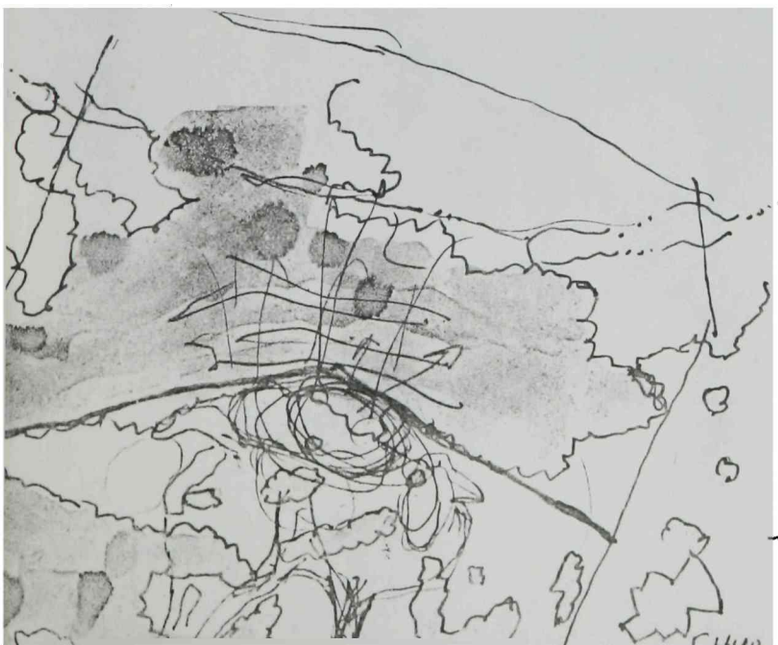
1) GREETING/INFORMATION/RECEPT DESK - AREA
2) BUSINESS OFFICE
3) ADMINISTRATOR'S OFFICE
4) ADMISSION/RECORDS AREA
~~5) SOCIAL SERVICE OFFICE~~
6) CONFERENCE (10 x 14)?
7) SOCIAL SERVICE OFFICE (10x10)?
8) STAFF OFFICES 4 @ 80 ft² each ?
9) STAFF LOUNGE (150 ft²)?
10) ADMINISTRATION RESTROOM 5 x 7 ?
11) STAFF RESTROOMS/LOCKER ROOMS 2 @ 250

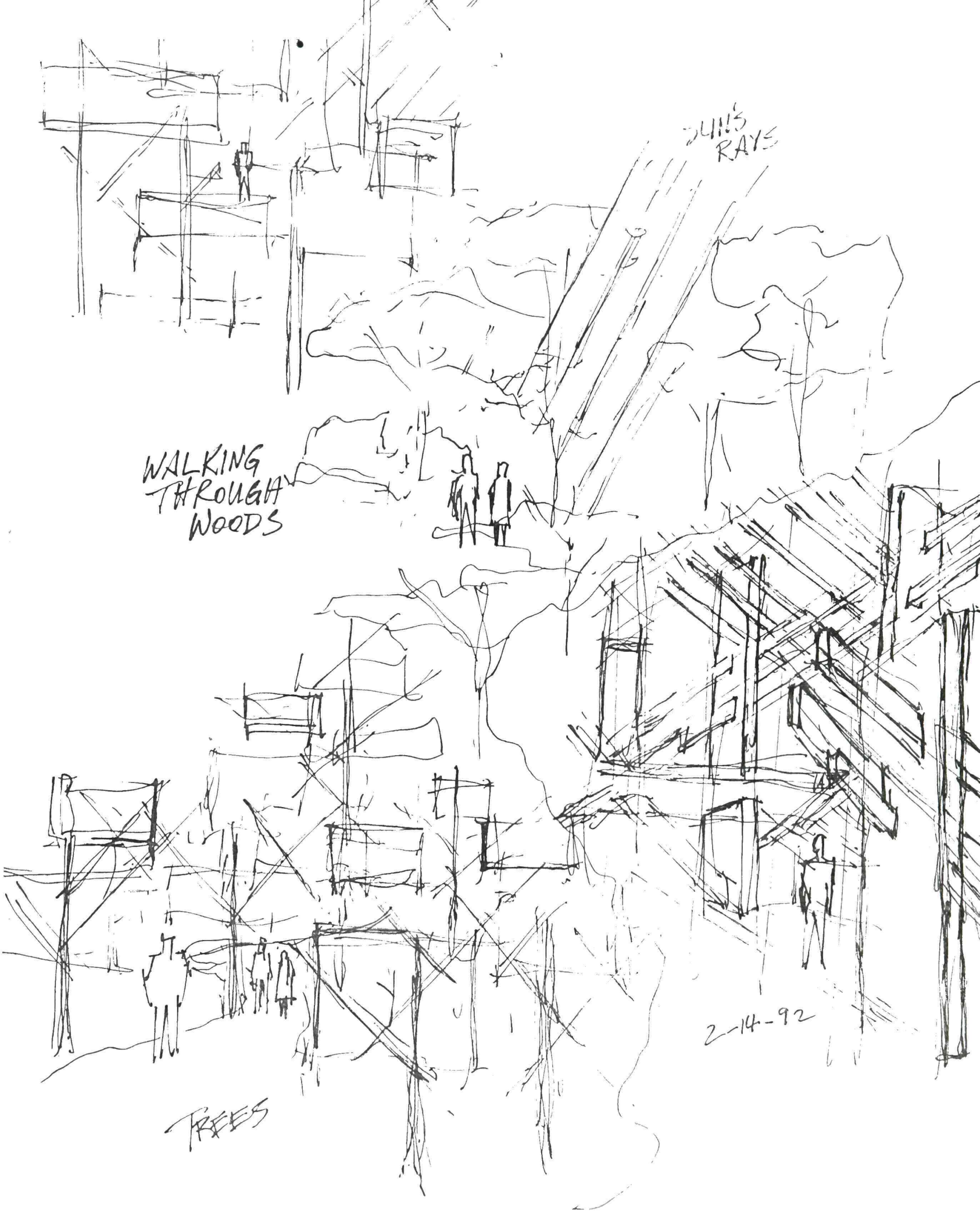


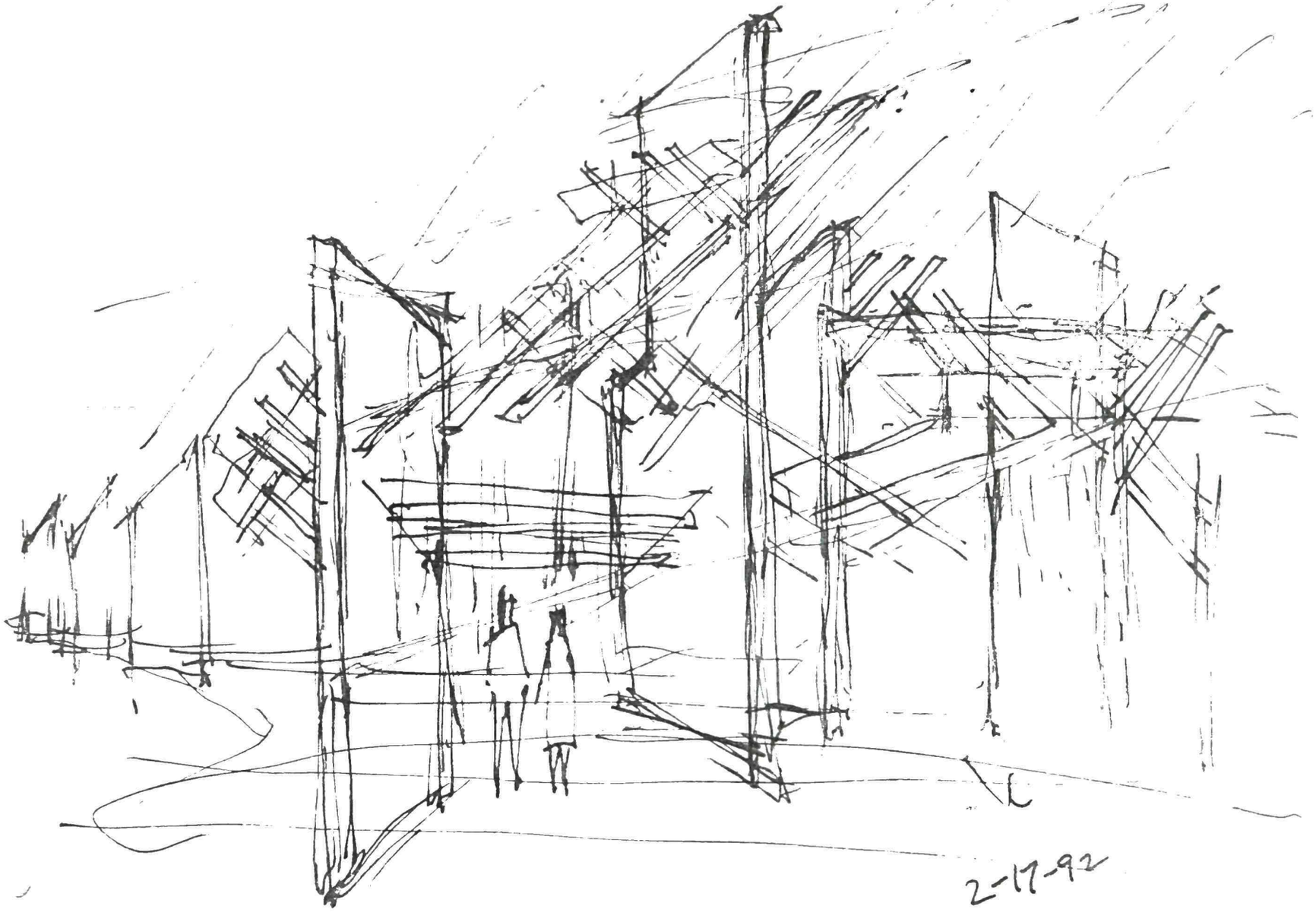

NURSES
DAYROOM
LOBBY
LOUNGE
KITCHEN
RECEPTION
ADMINISTRATORS OFFICE
STAFF DINING
STAFF LOUNGE
STAFF LOCKERS

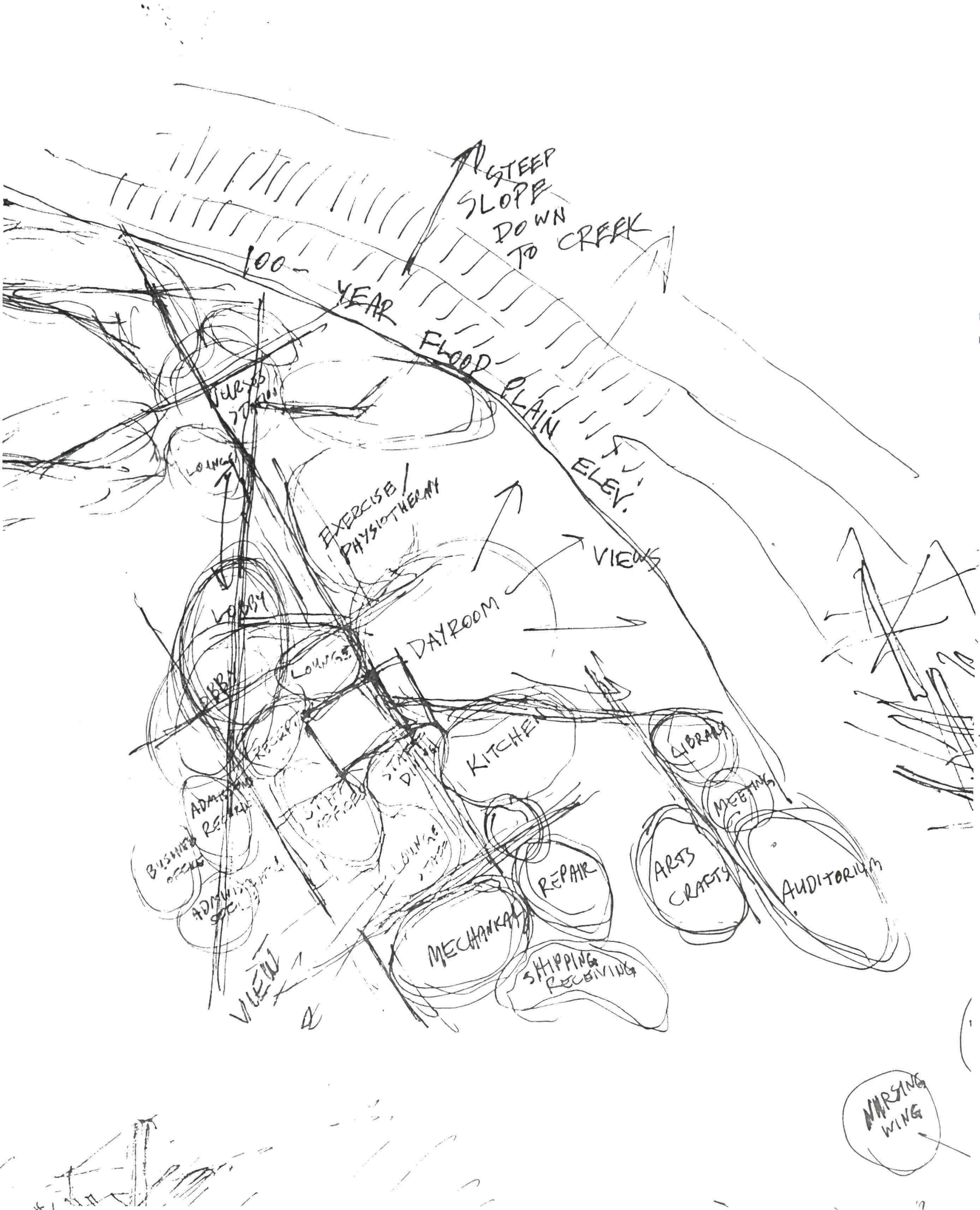
2-13-92

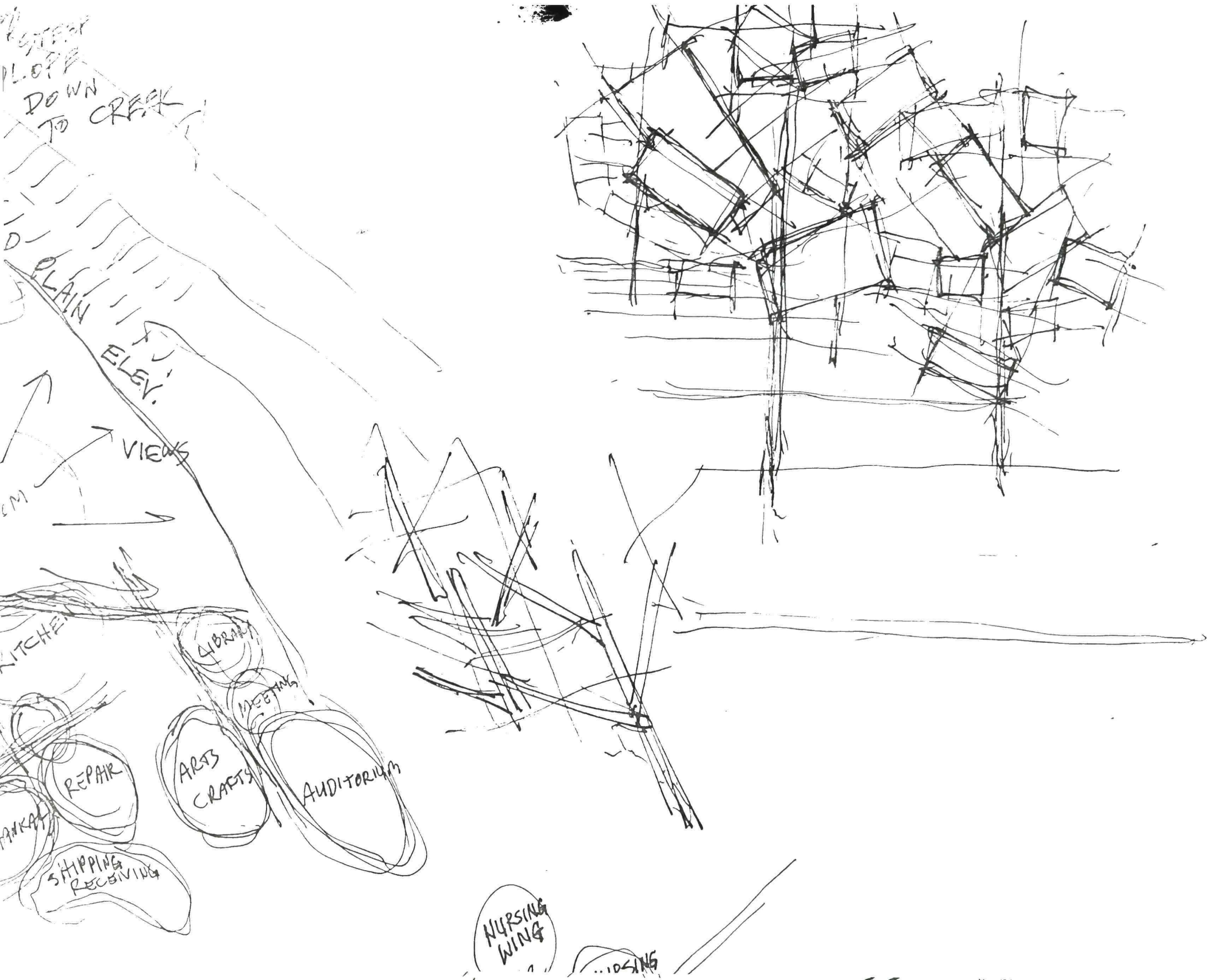

NURSING/ ASSISTED LIVING UNITS
NURSES STATION
NURSE FACILITIES
LOUNGE

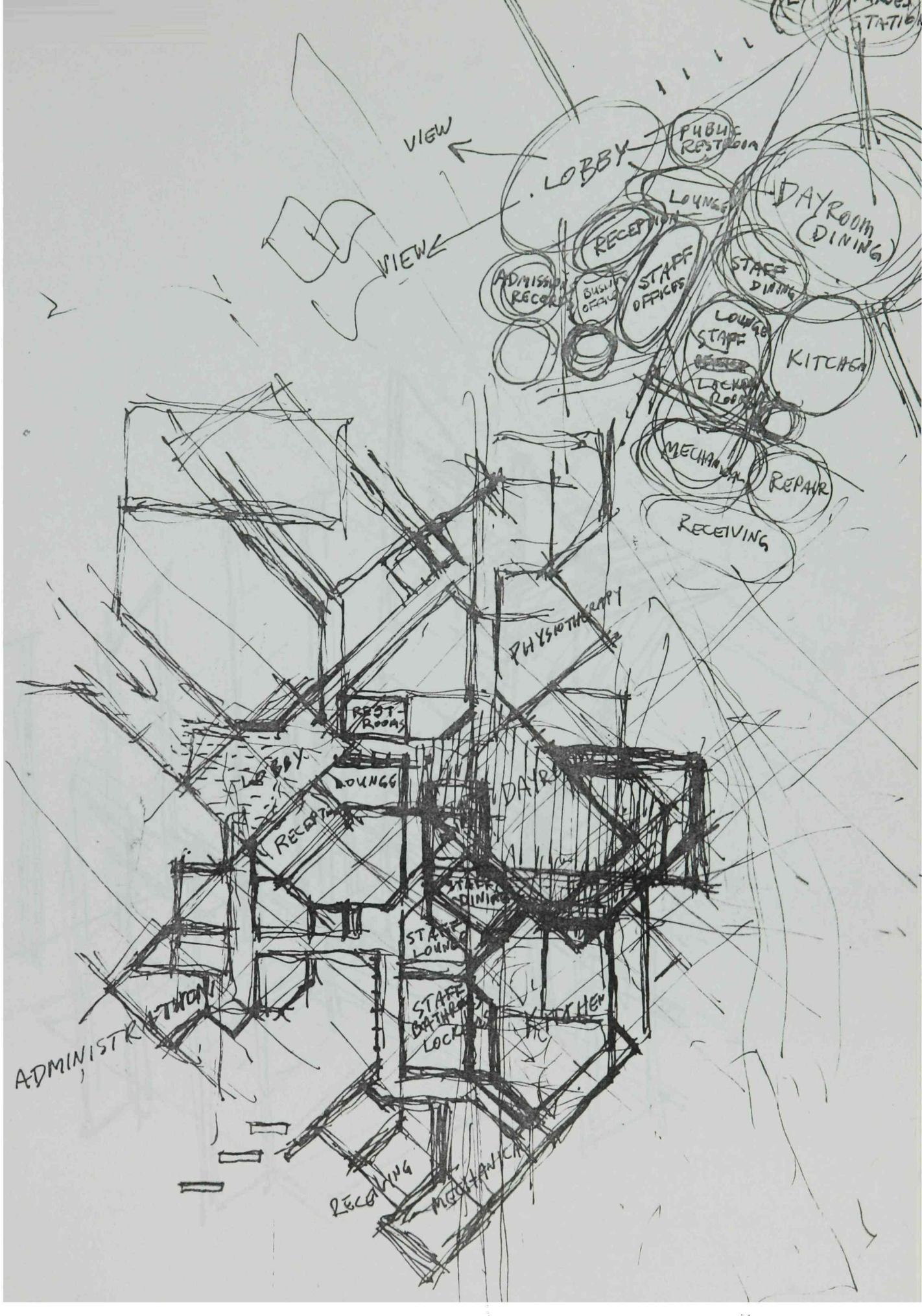



SUN'S RAYS
WALKING THROUGH WOODS
2-14-92
TREES

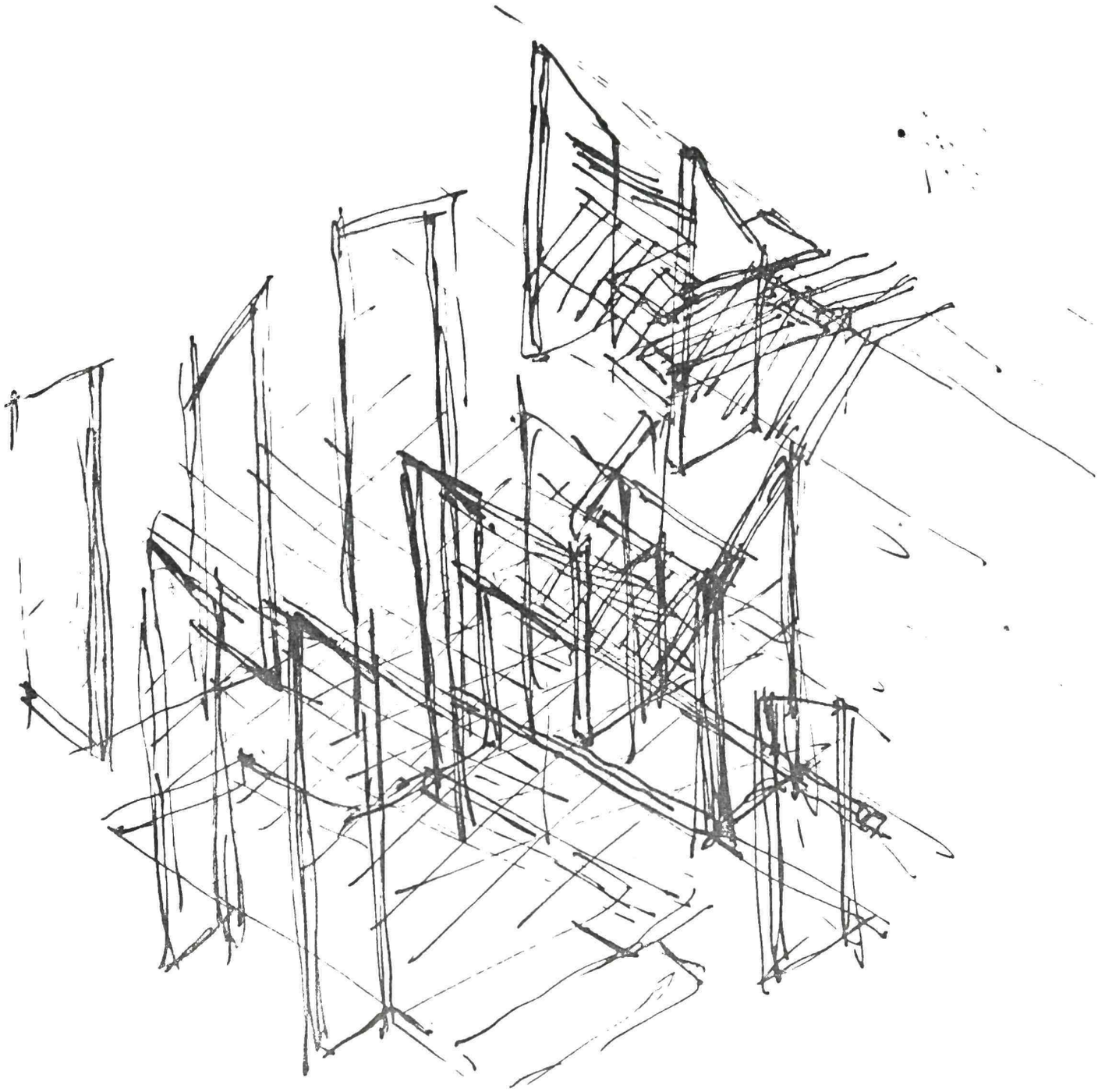

2-17-92

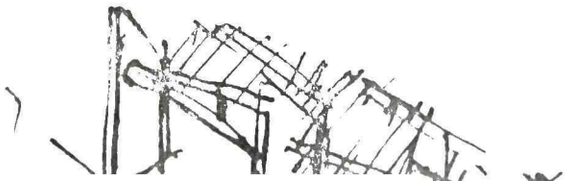

STEEP SLOPE DOWN TO CREEK
100-YEAR FLOOD PLAIN ELEV.
LOUNGE
EXERCISE / PHYSIOTHERAPY
VIEWS
LOBBY
DAYROOM
LOUNGE
DBB
KITCHEN
LIBRARY
MEETING
ADMINISTRATIVE
BUSINESS OFFICE
ADMINISTRATIVE
REPAIR
ARTS CRAFTS
AUDITORIUM
MECHANICAL
SHIPPING RECEIVING
VIEW
NURSING WING


DOWN
TO CREEK
PLAIN
ELEV.
VIEWS
LIBRARY
MEETING
REPAIR
ARTS
CRAFTS
AUDITORIUM
SHIPPING
RECEIVING
NURSING
WING


VIEW
VIEW
LOBBY
PUBLIC REST ROOM
LOUNGE
DAYROOM (DINING)
RECEPTION
STAFF OFFICES
STAFF DINING
ADMISSION & RECORDS
BUSINESS OFFICE
LOUNGE STAFF
KITCHEN
LOCKER ROOMS
MECHANICAL
REPAIR
RECEIVING
PHYSIOTHERAPY
REST-ROOMS
LOBBY
LOUNGE
RECEPTION
DAIRY
STAFF DINING
STAFF LOUNGE
STAFF BATHROOM & LOCKERS
KITCHEN
ADMINISTRATION
RECEIVING
MECHANICAL

2-17-92

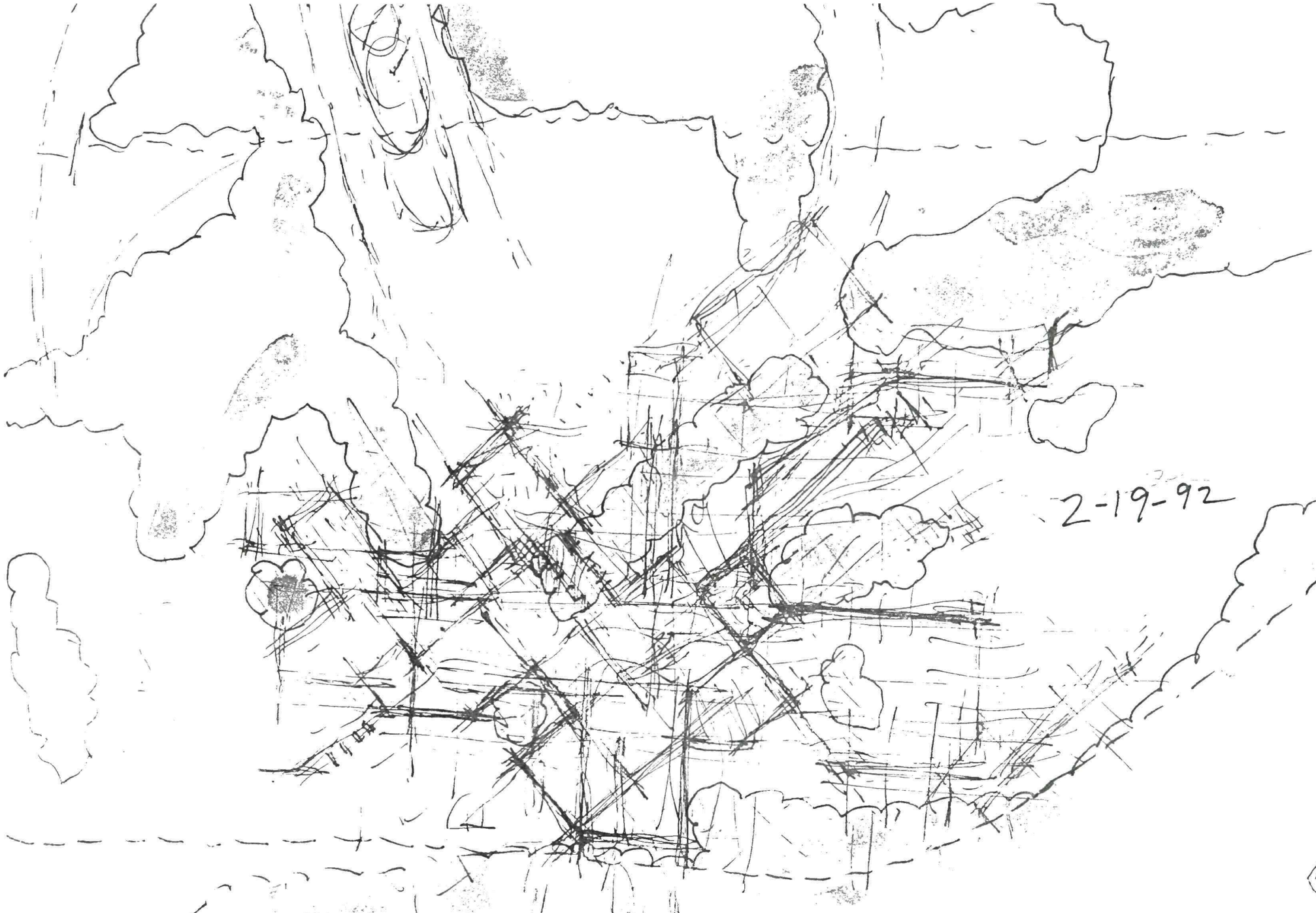




2-17-92

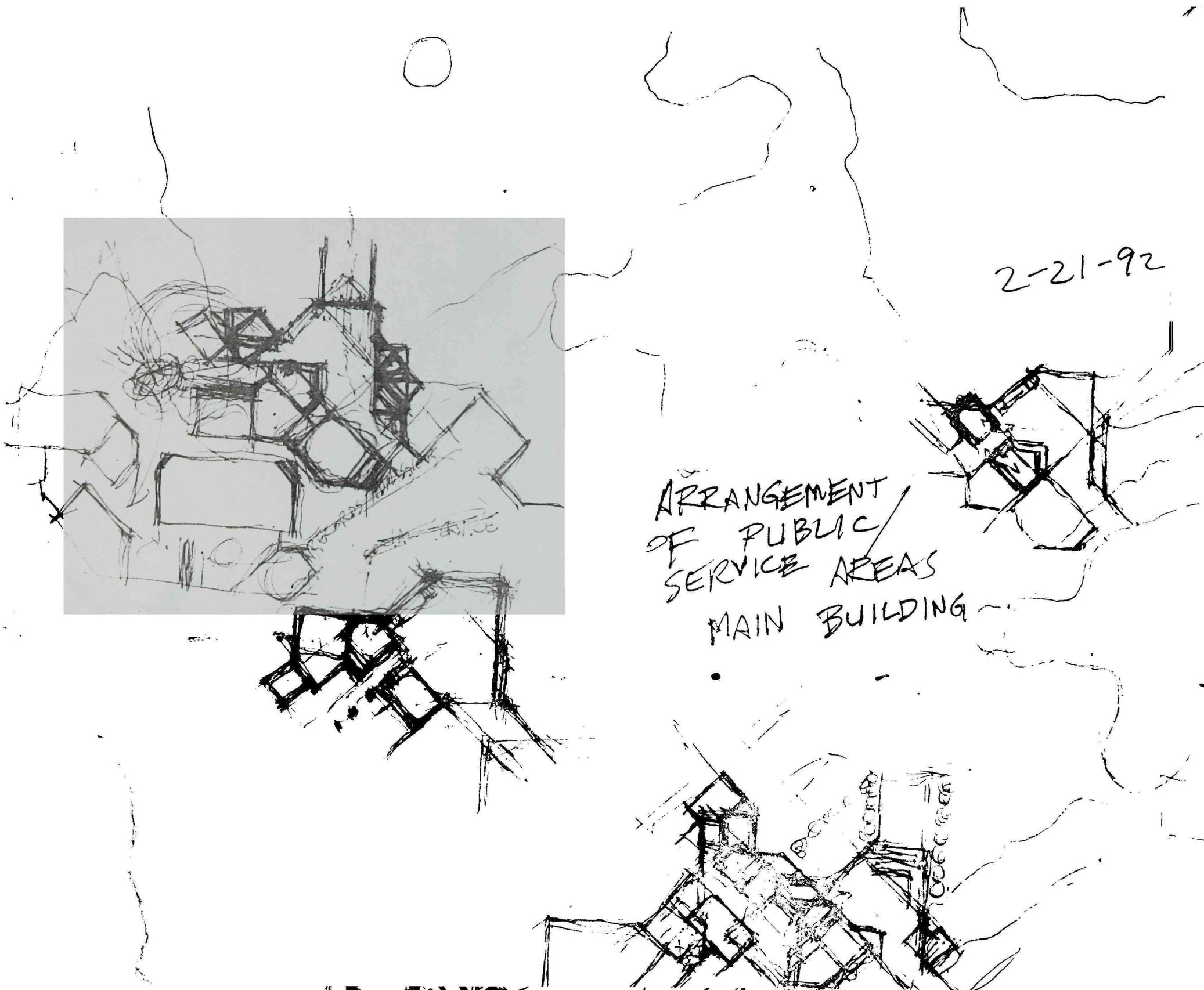
2-19-92

DAYROOM
(DINING / RECREATION)
STAFF DINING
STAFF LOUNGE
STAFF LOCKER ROOMS
KITCHEN
STAFF OFFICES
WORK
DISHWASH
RECEIVING
MECHANICAL
WINGS



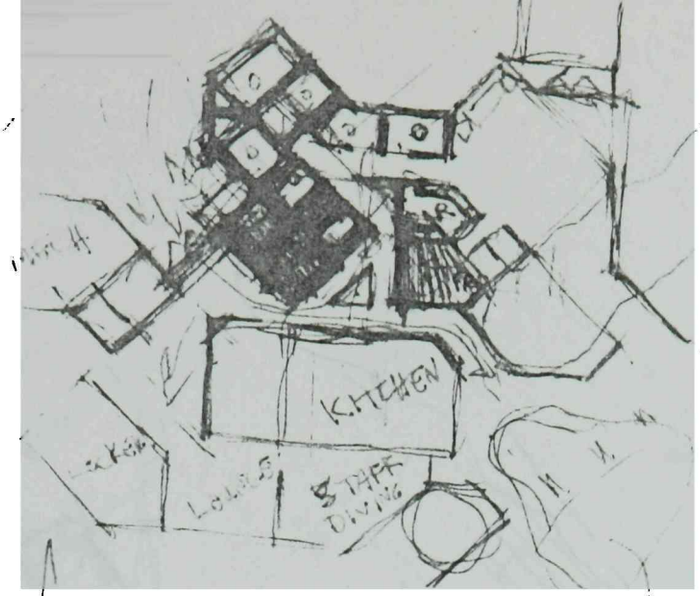
- AVOID TREES ON SITE IF POSSIBLE
- PLAN INTEGRATED INTO SITE / WITHIN

2-21-92



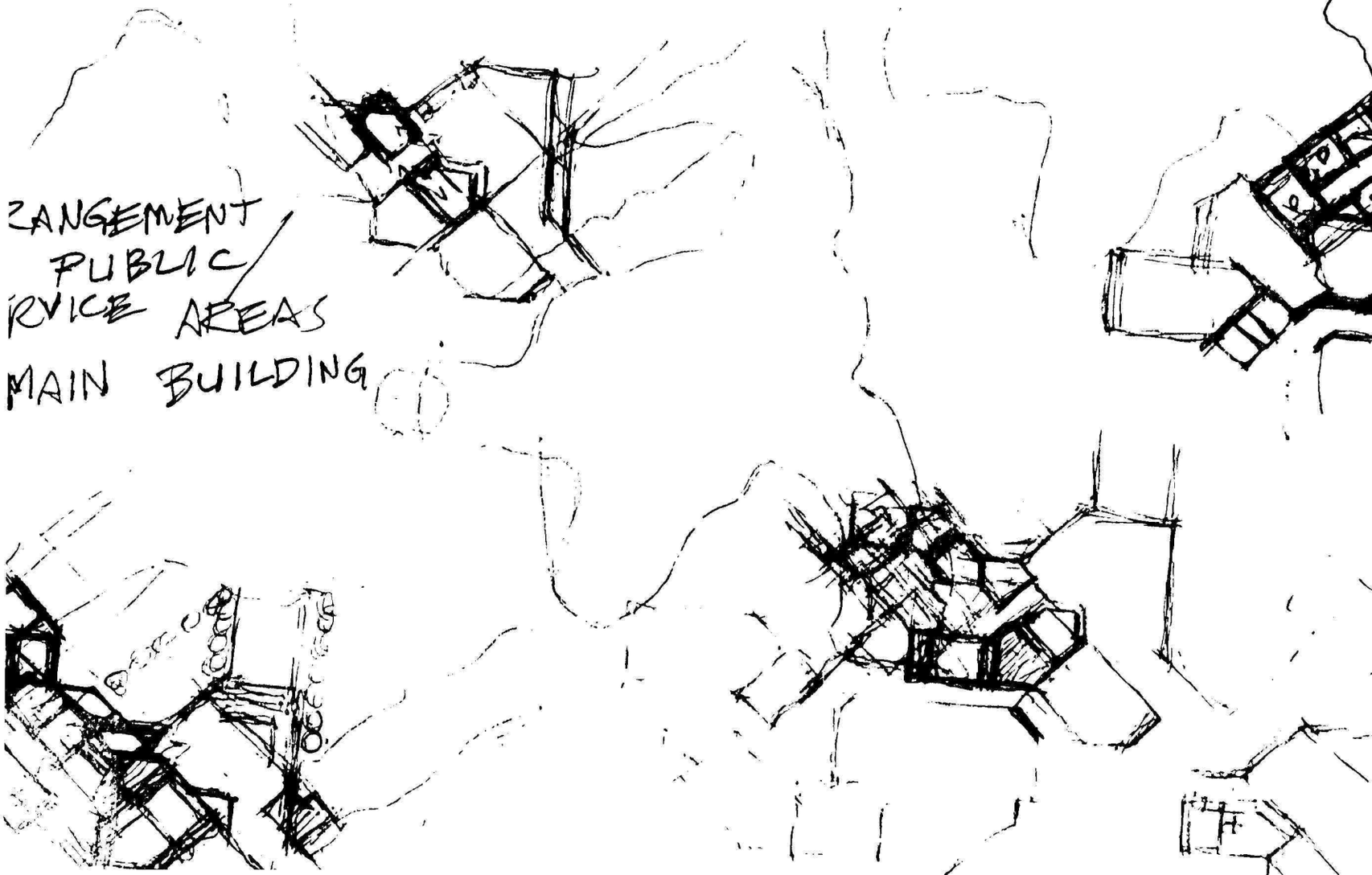
ARRANGEMENT OF PUBLIC SERVICE AREAS

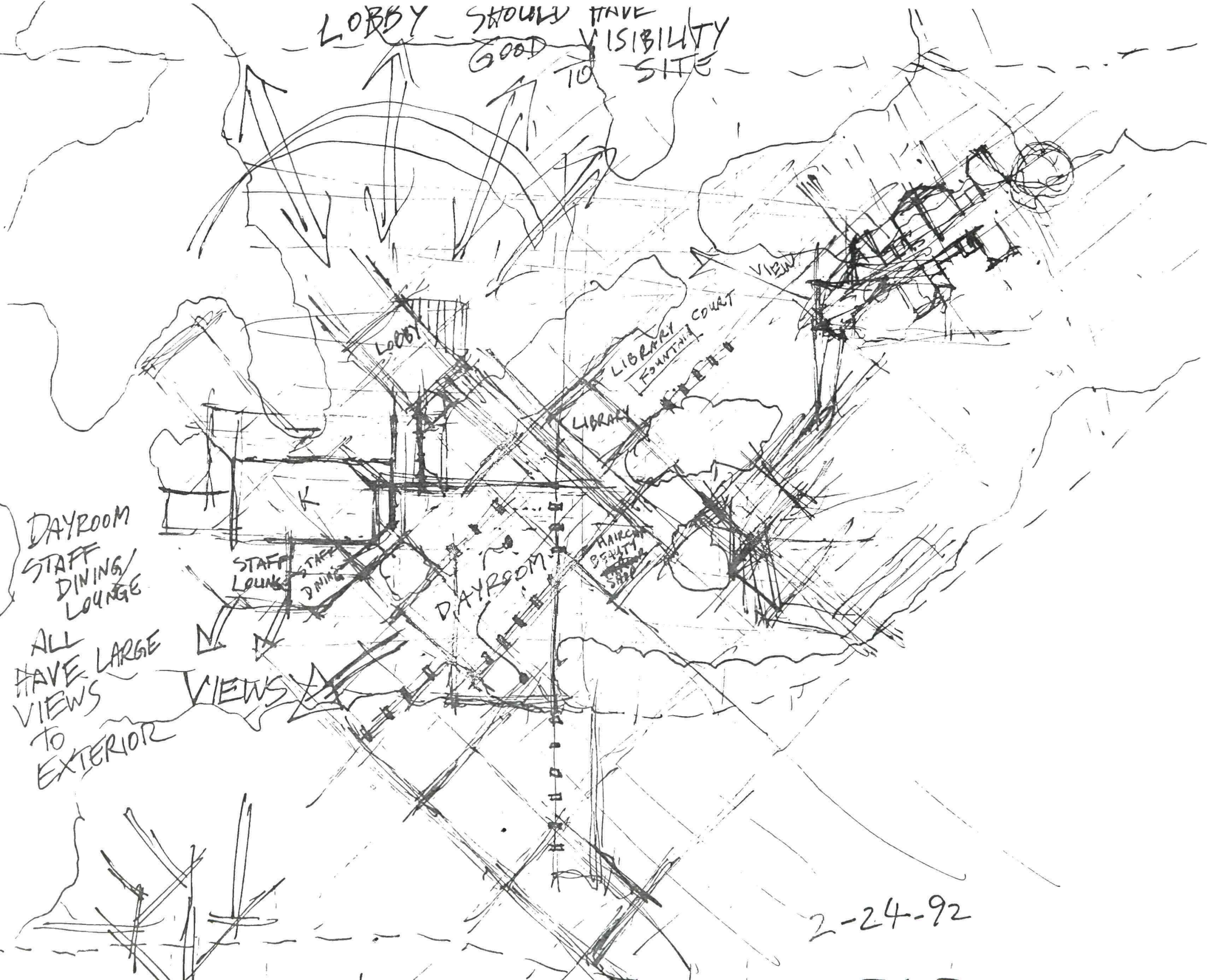
MAIN BUILDING

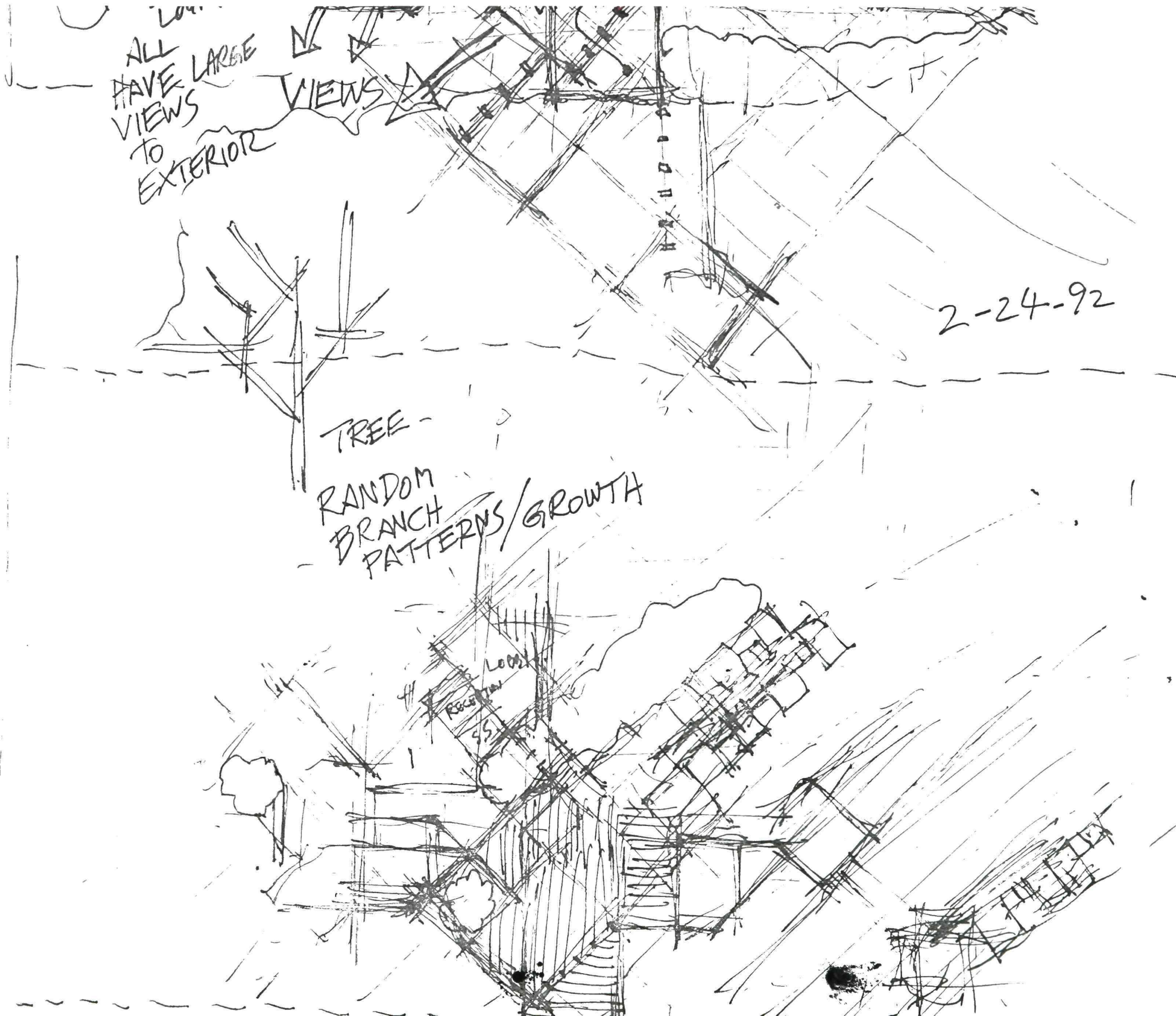


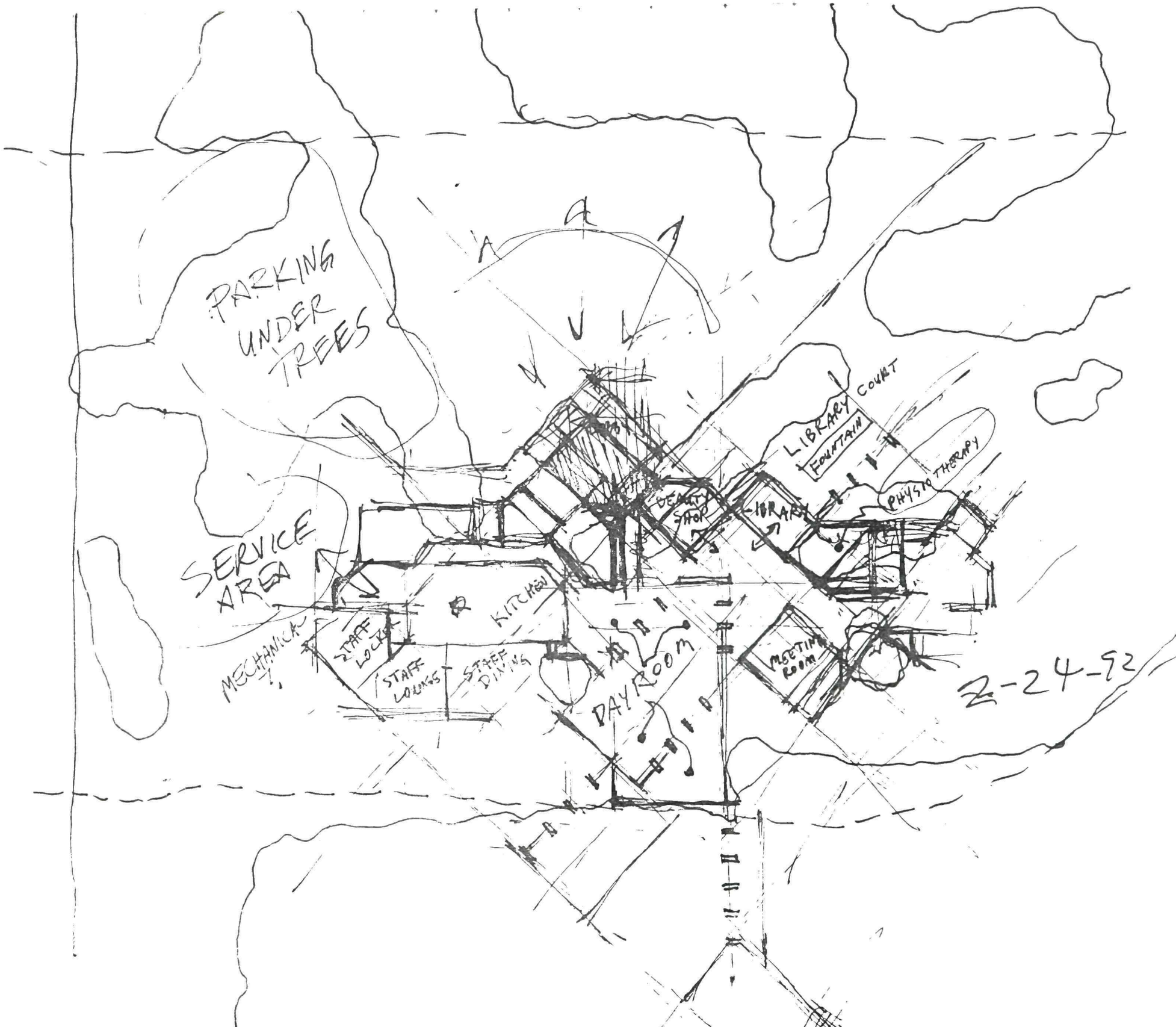
2-21-92

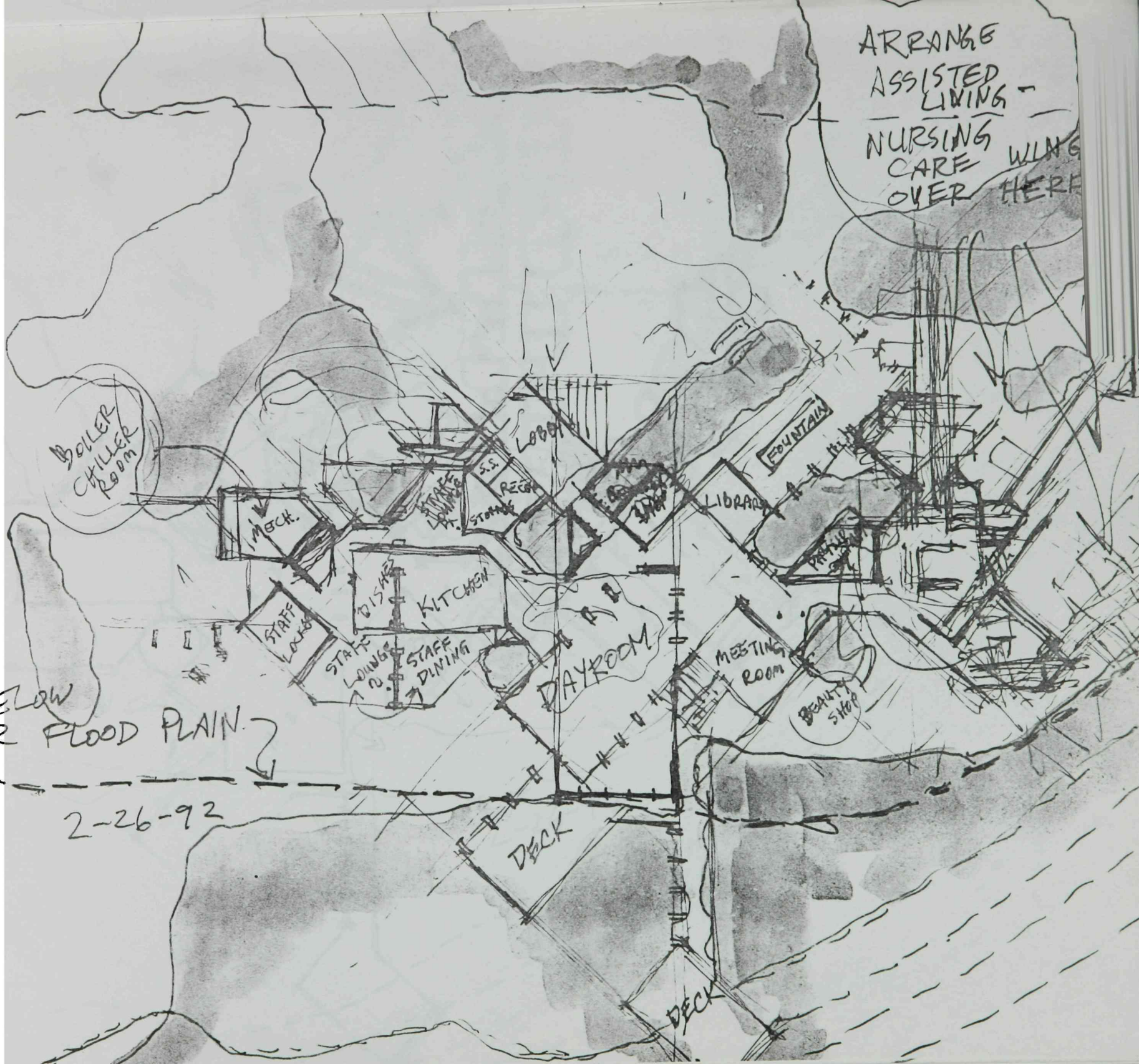
ZANGEMENT
PUBLIC
RVICE AREAS
MAIN BUILDING

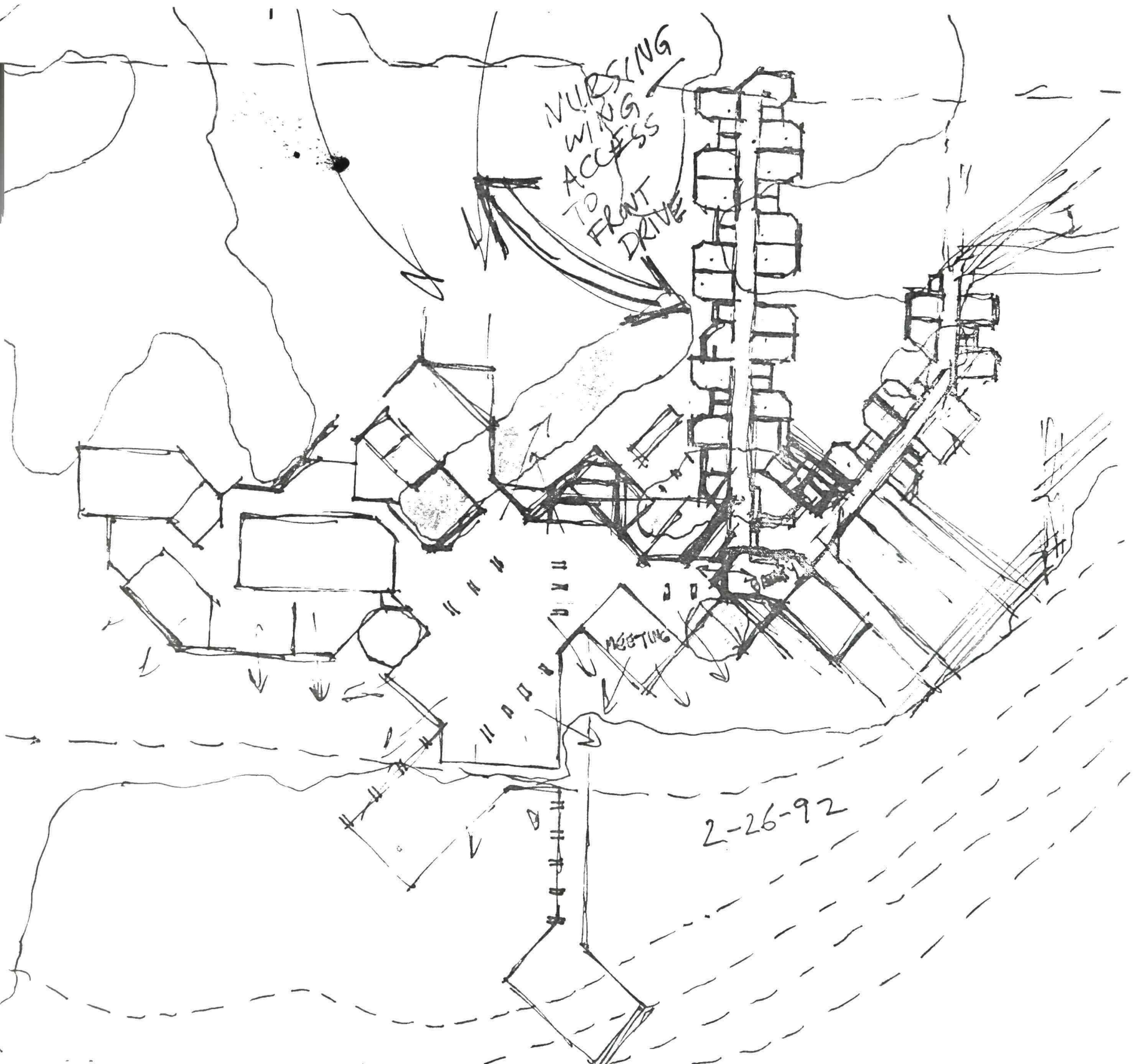


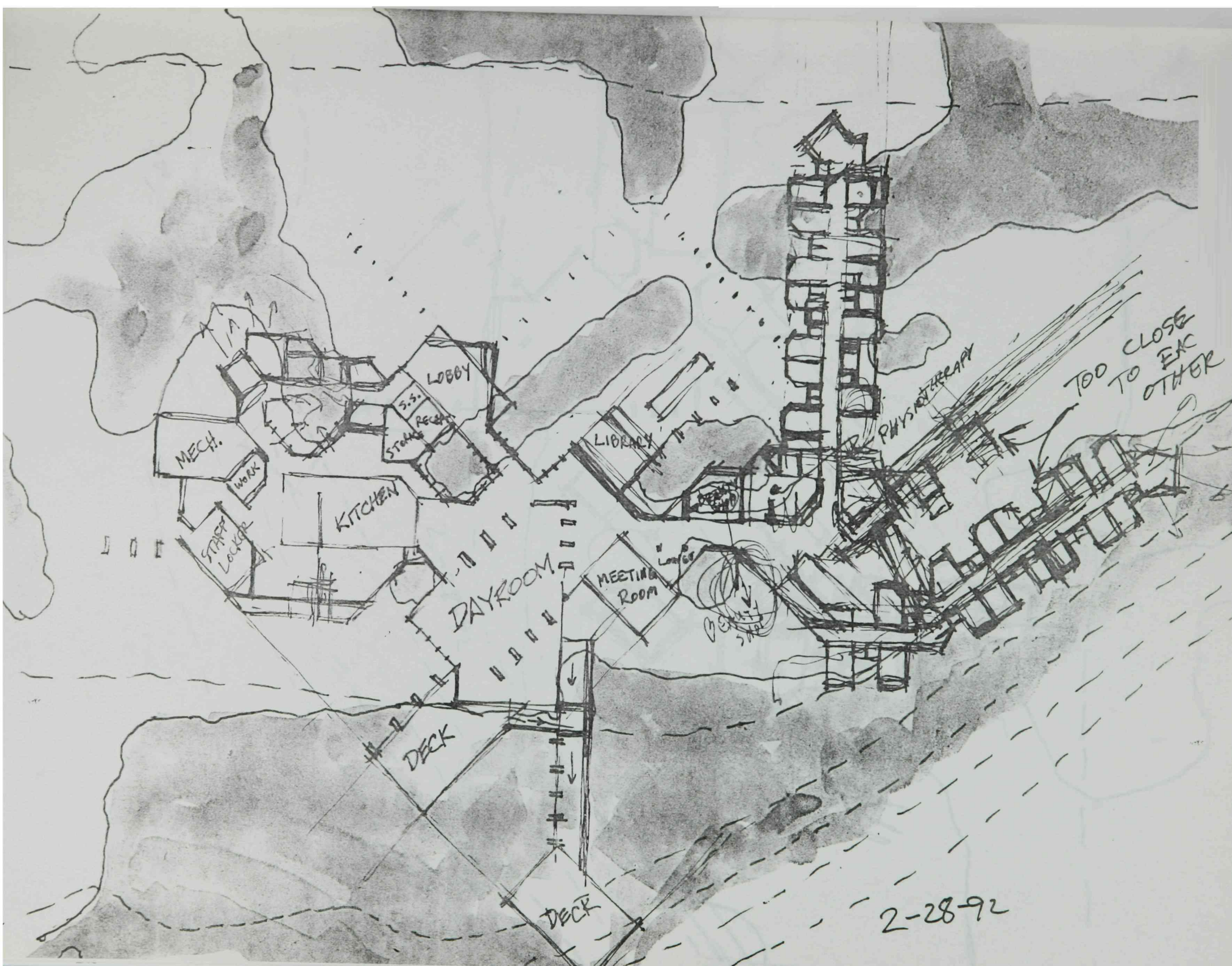

LOBBY SHOULD HAVE GOOD VISIBILITY TO SITE
VIEW
LOBBY
LIBRARY COURT FOUNTAIN
LIBRARY
K
DAYROOM STAFF DINING/ LOUNGE
STAFF LOUNGE
STAFF DINING
DAYROOM
HAIRCUT BEAUTY SHOP
ALL HAVE LARGE VIEWS TO EXTERIOR
VIEWS
2-24-92

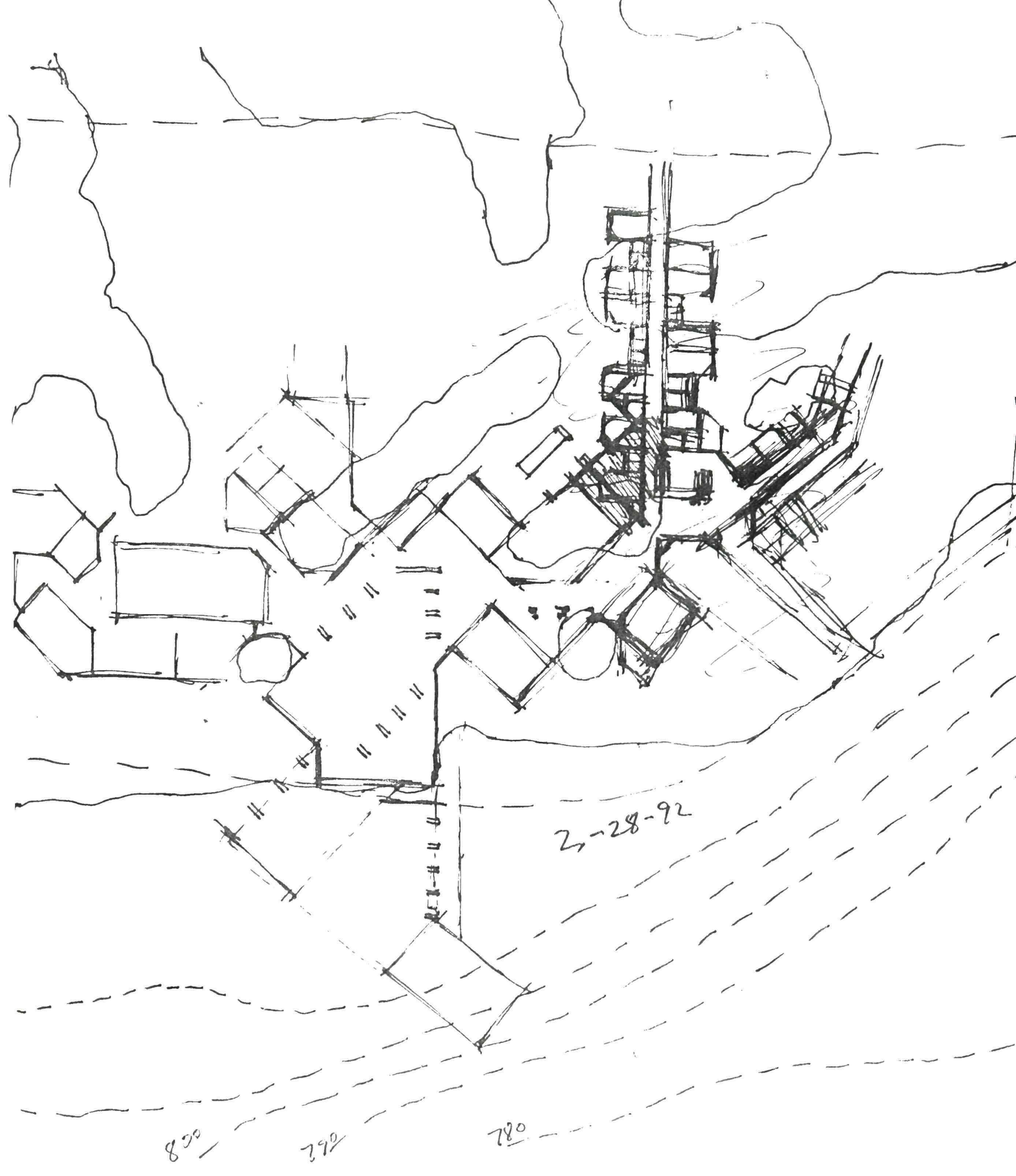

ALL HAVE LARGE VIEWS TO EXTERIOR
VIEWS
2-24-92
TREE
RANDOM BRANCH PATTERNS/GROWTH

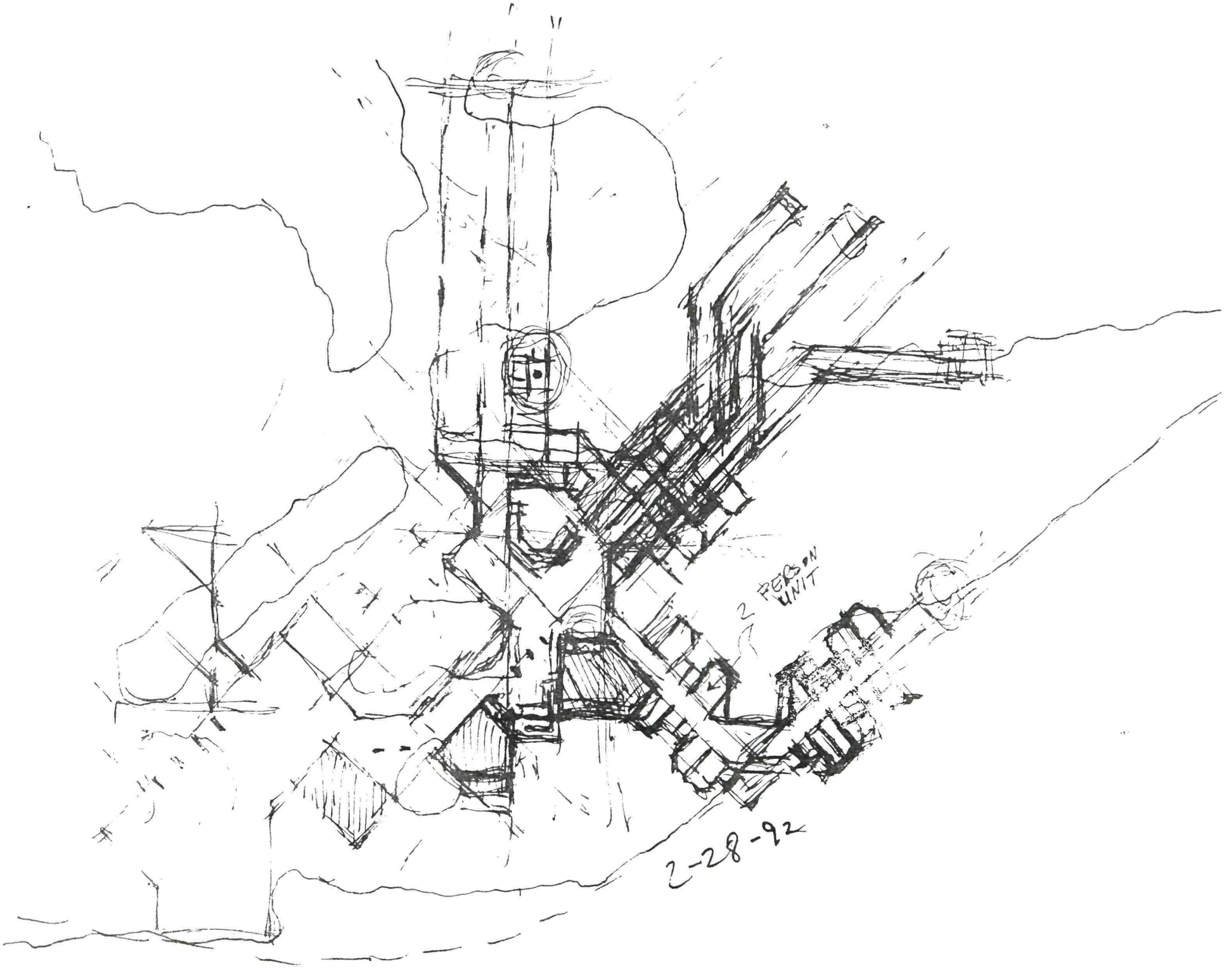

PARKING UNDER TREES
SERVICE AREA
MECHANICAL
STAFF LOCKER
STAFF LOUNGE
STAFF DINING
KITCHEN
DAYROOM
BEAUTY SHOP
LIBRARY
LIBRARY COURT
FOUNTAIN
PHYSIO THERAPY
MEETING ROOM
2-24-92

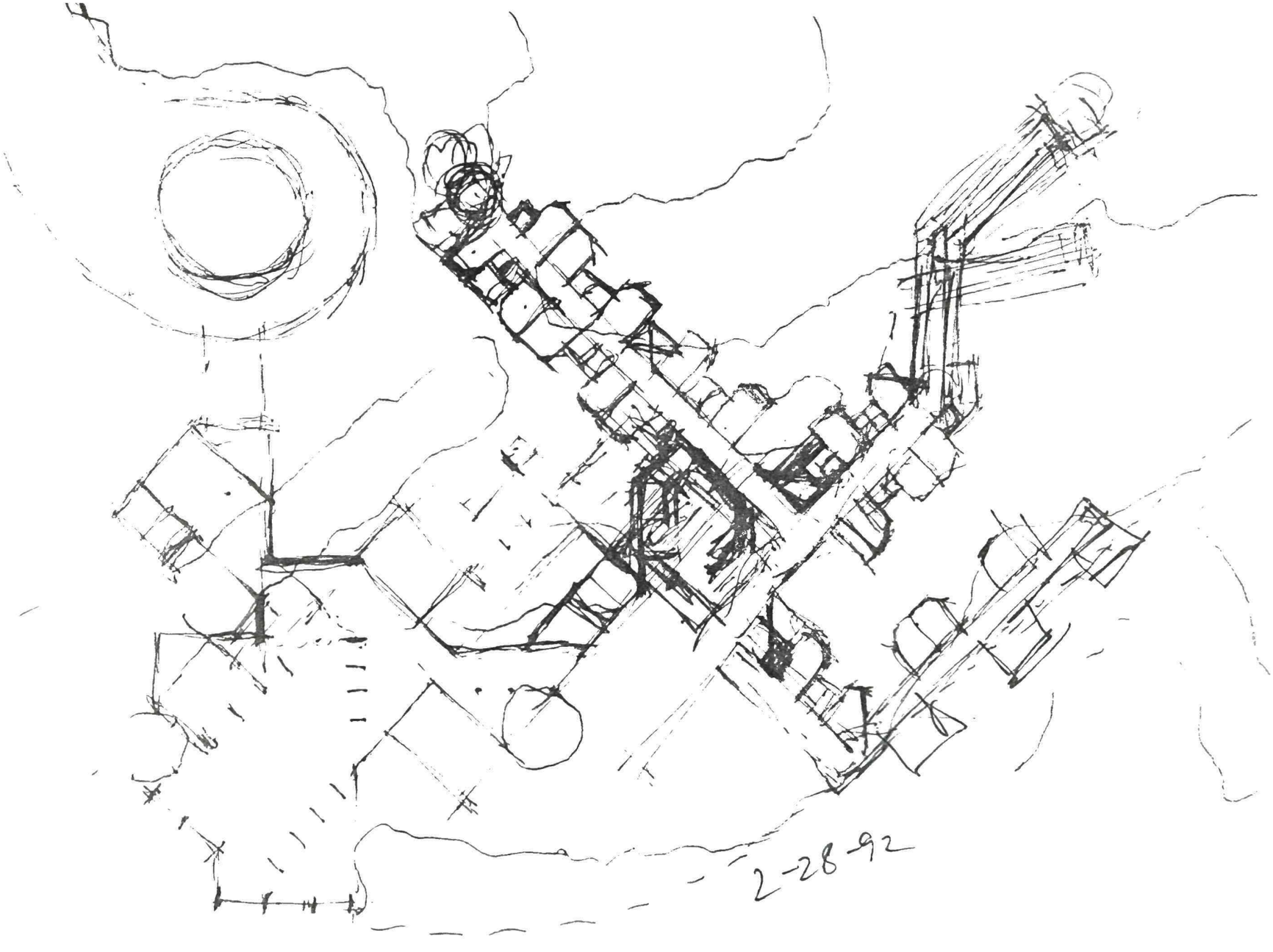

840
ARRANGE ASSISTED LIVING - NURSING CARE WING OVER HERE
BOILER CHILLER ROOM
MECH.
STAFF LOCKS
STAFF LOUNGE
DISHES
KITCHEN
STAFF DINING
STAFF DRAWING
S.S. RECR.
STORAGE
LOBBY
LIBRARY
FOUNTAIN
DAYROOM
MEETING ROOM
BEAUTY SHOP
DECK
DECK
CAN'T BUILD BELOW 100-YEAR FLOOD PLAIN ?
830
2-26-92

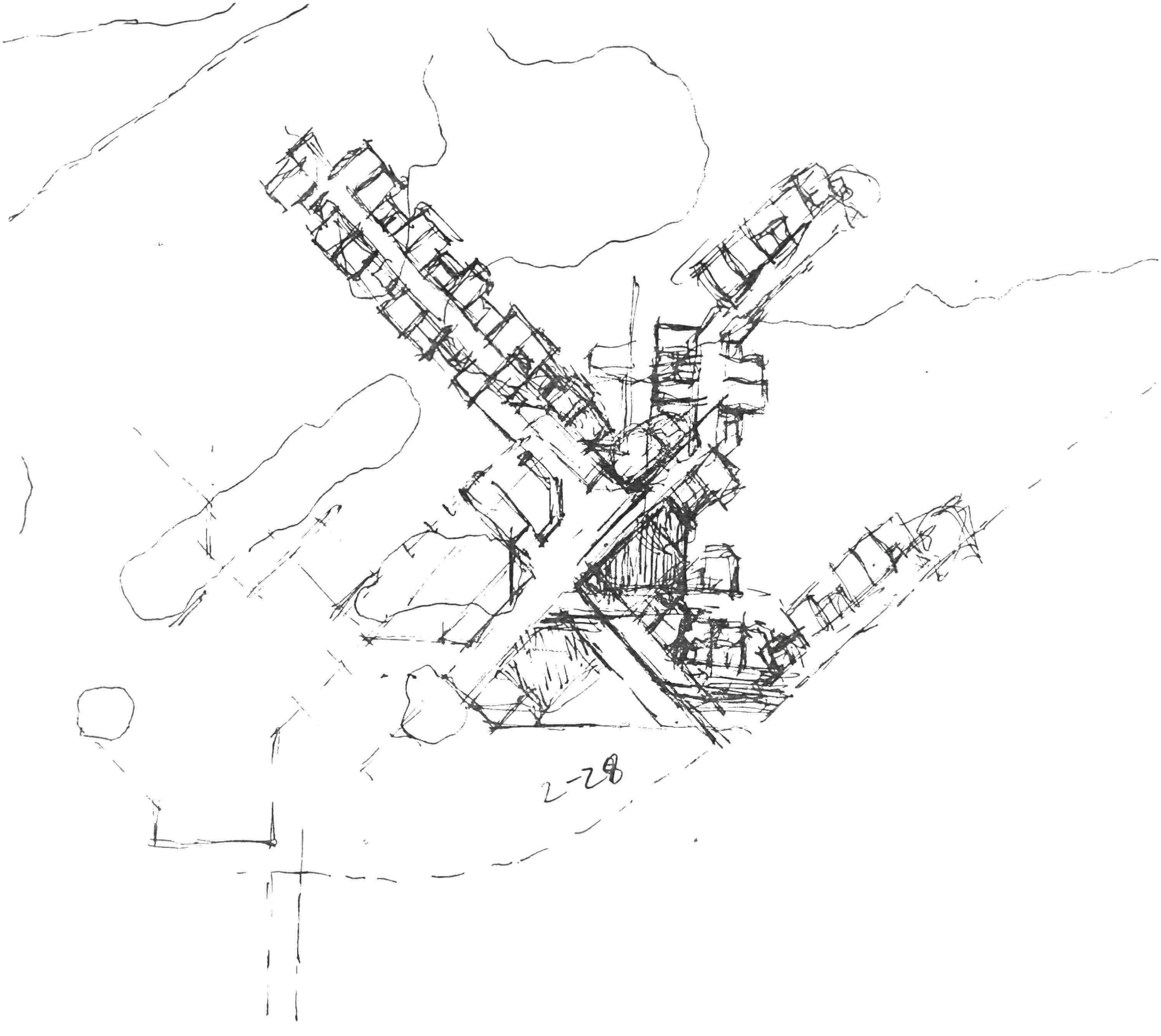

NURSING WING ACCESS TO FRONT DRIVE
MEETING
2-26-92

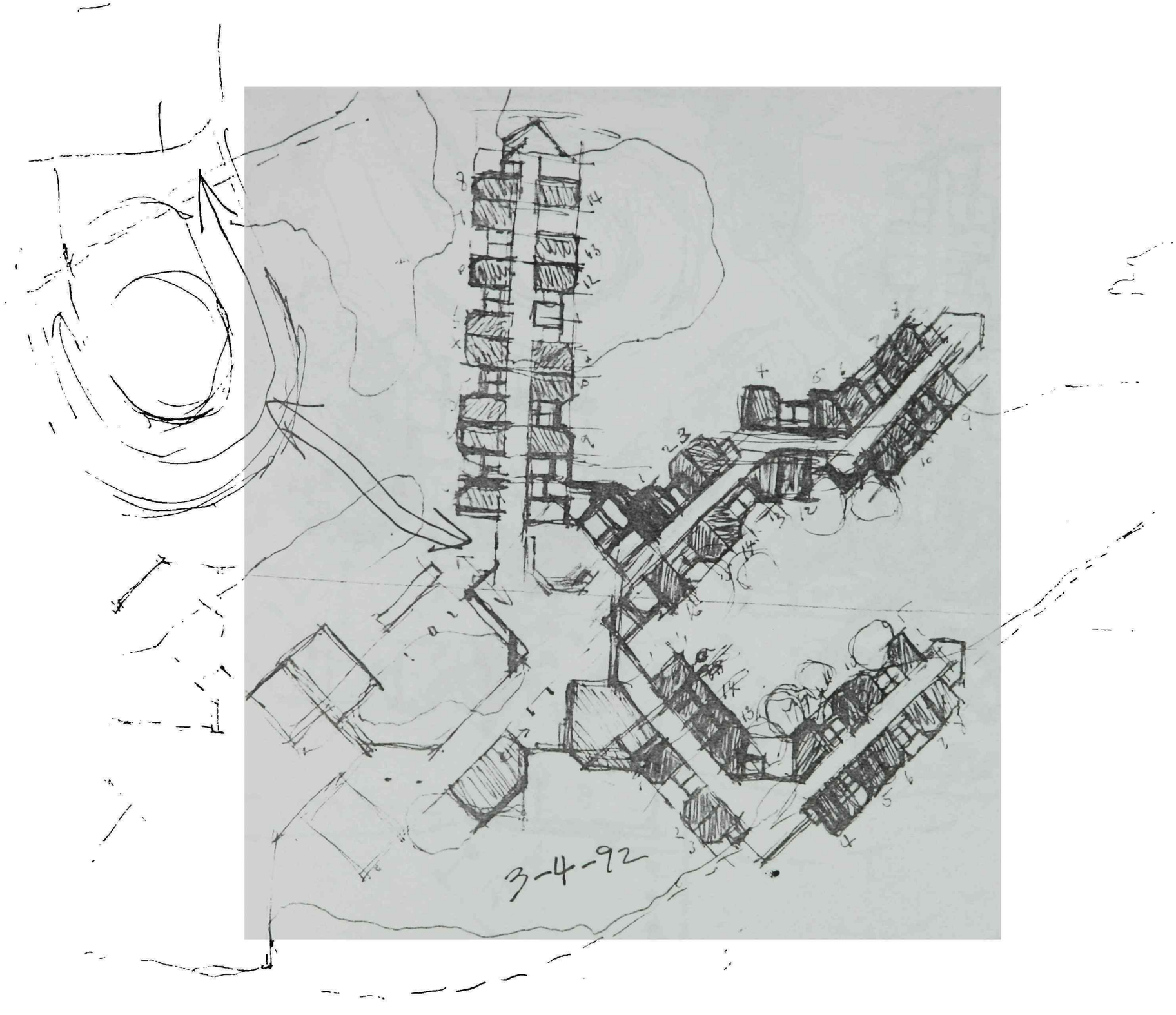

MECH.
WORK
STAFF LOCKER
KITCHEN
LOBBY
S.S.
STORAGE
RECEPT.
LIBRARY
DAYROOM
MEETING ROOM
LOUNGE
DECK
DECK
PHYSIOTHERAPY
TOO CLOSE TO EAC OTHER
2-28-92

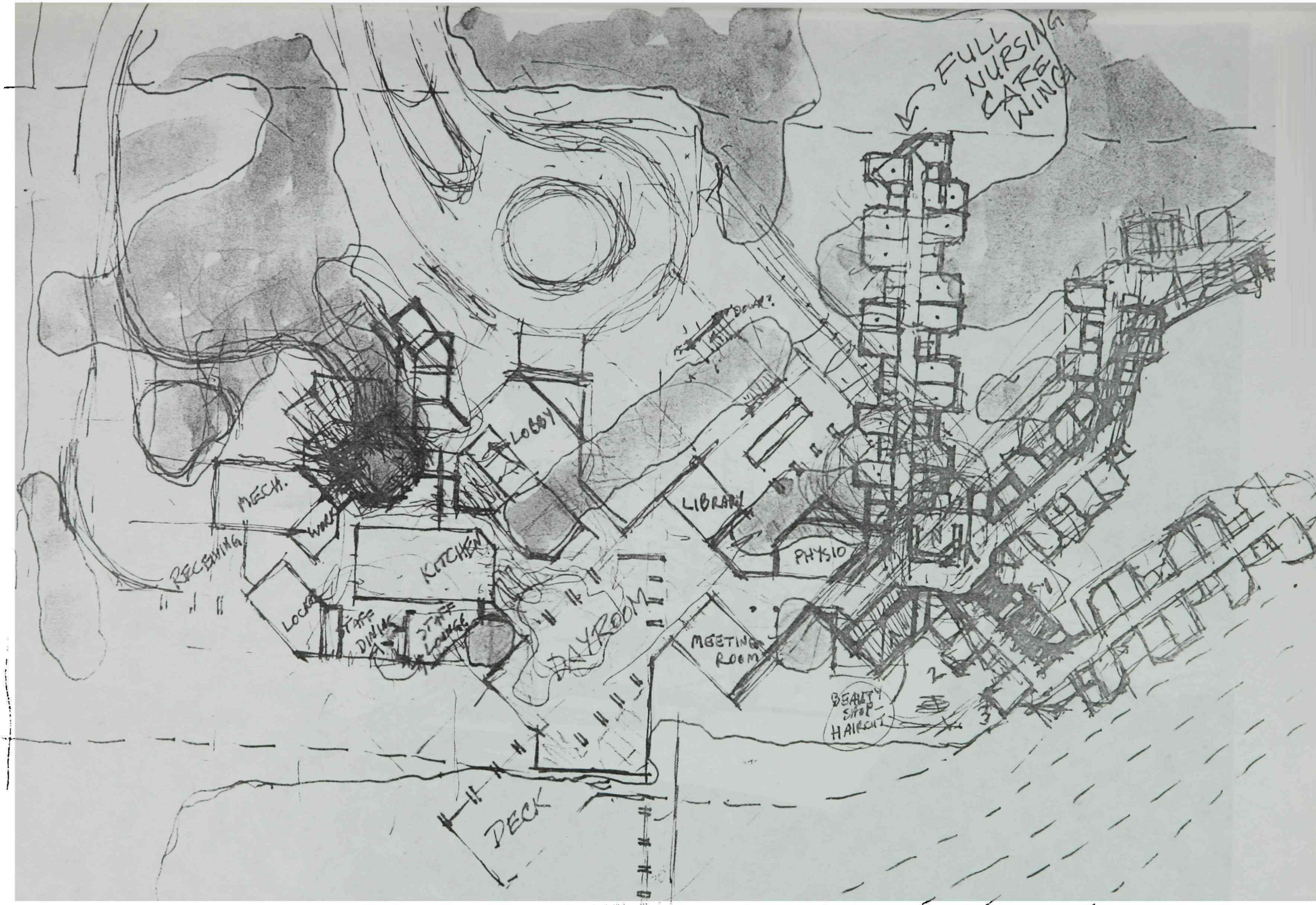

2-28-92
800
790
780

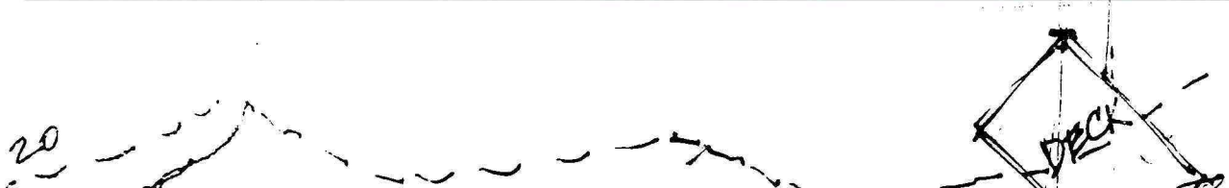

2 PERSON UNIT
2-28-92


2-28-92


2-28

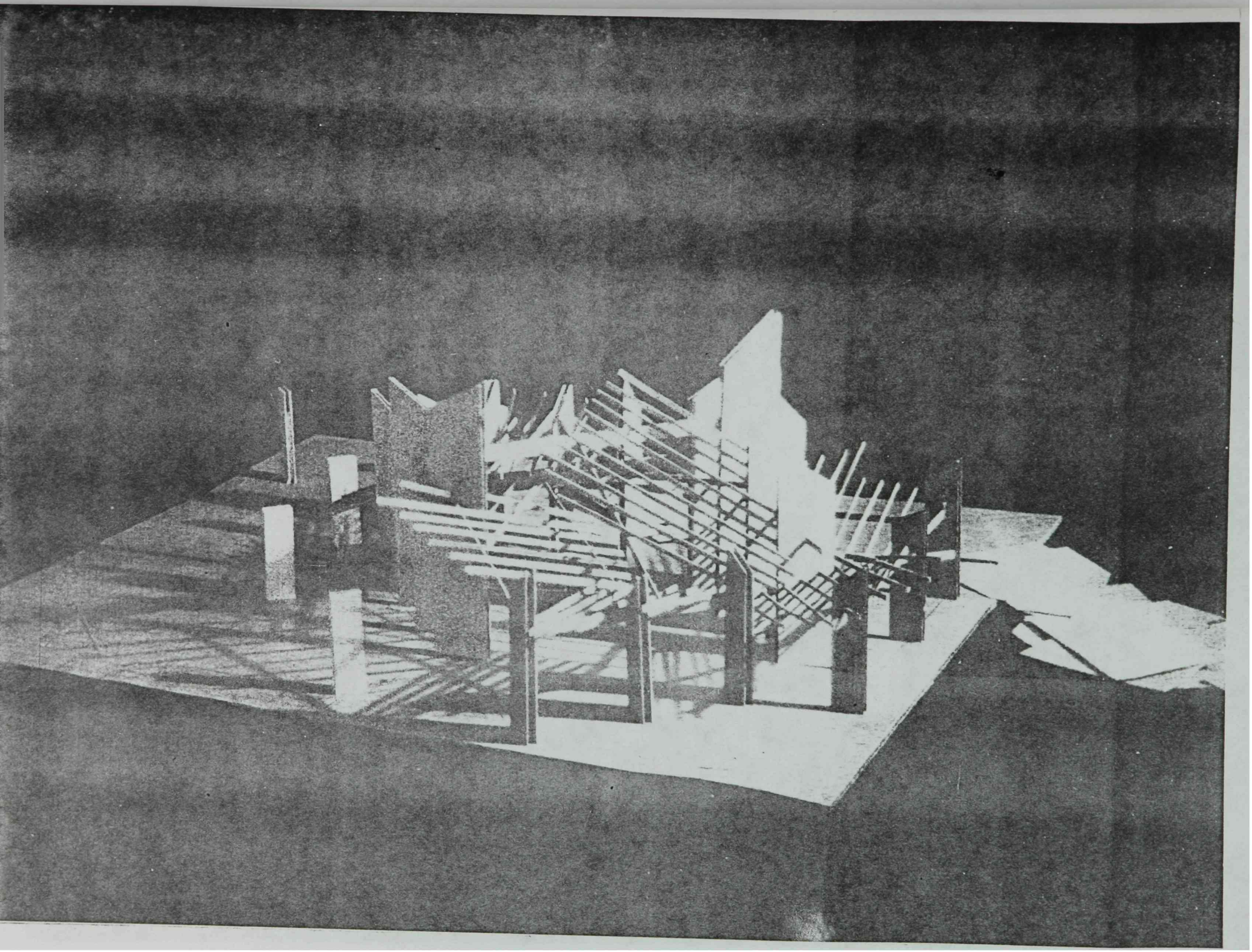

3-4-92

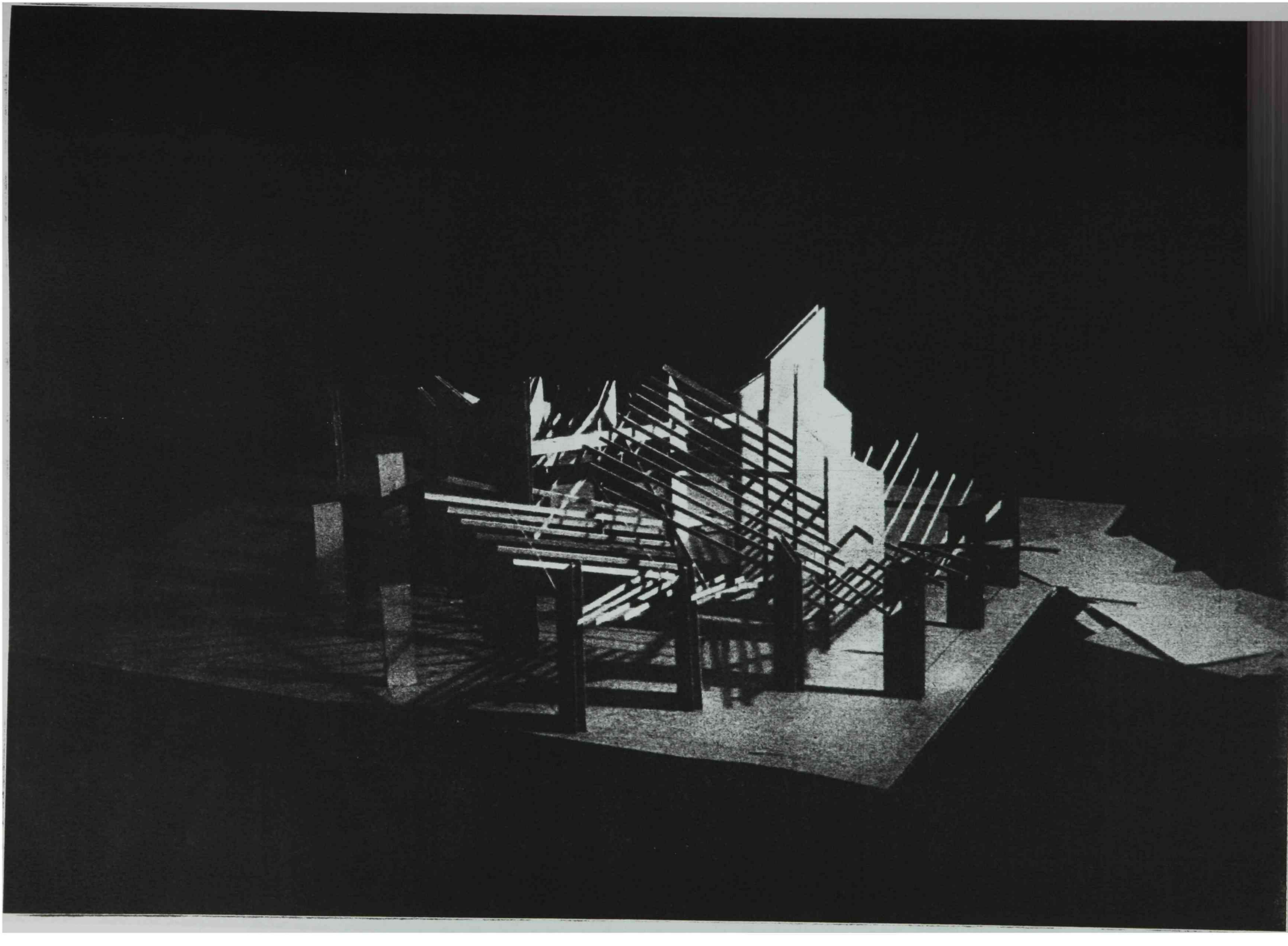

FULL NURSING CARE WING
LOBBY
MECH.
RECEIVING
WALK
KITCHEN
LOCKER
STAFF DINING
STAFF LOUNGE
DAYROOM
LIBRARY
PHYSIO
MEETING ROOM
BEAUTY SHOP - HAIRCUT
DECK

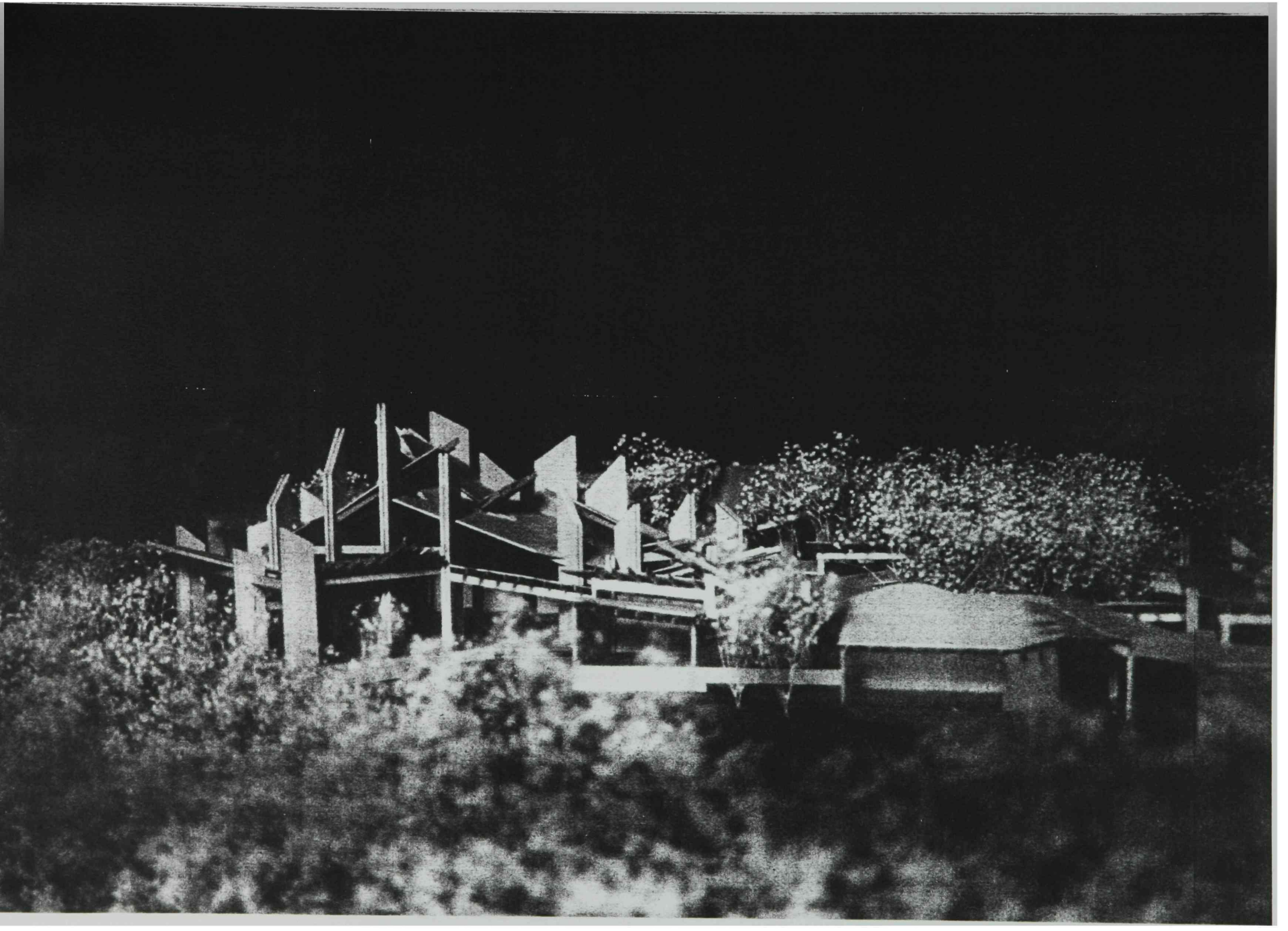

DECK

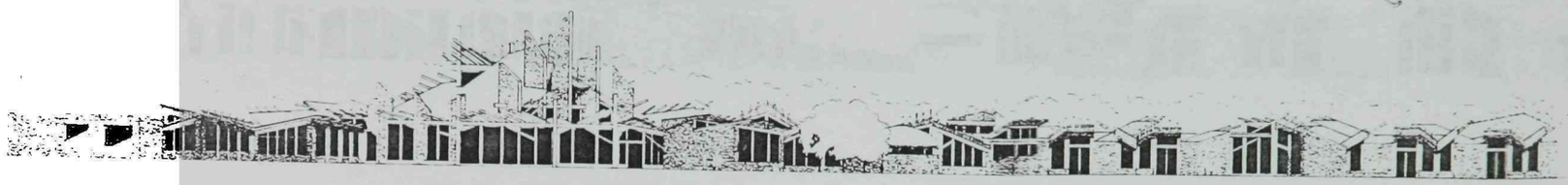
3-4-92

20

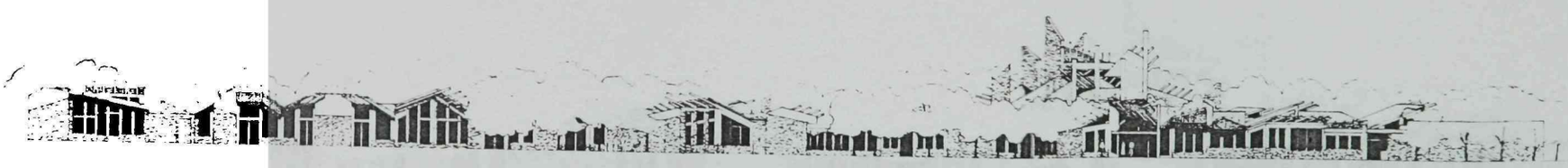






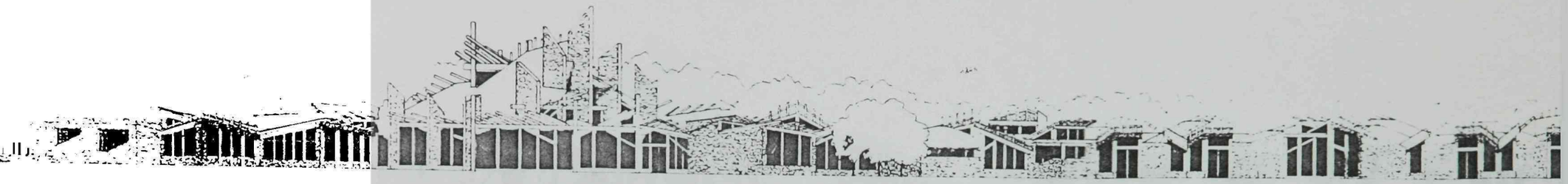


northwest elevation



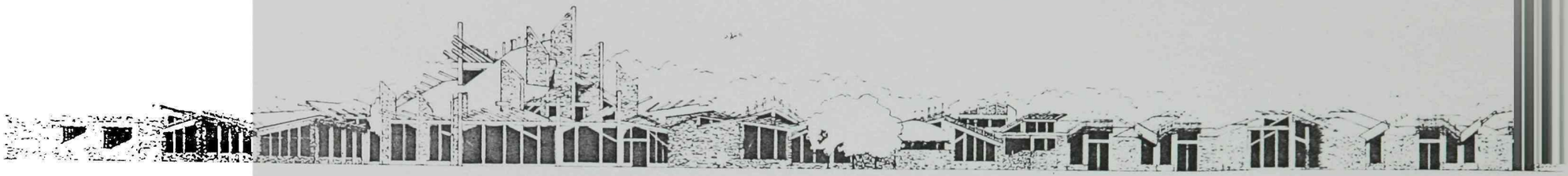
southeast elevation

0 4 8 16 32 64



elevation

elevation



rthwest elevation

utheast elevation

6 32 64