LIBRARY
Montana State University
BOZEMAN

# AN INTERNATIONAL CENTER FOR BOZEMAN, MONTANA

Part I

Undergraduate Thesis
in
Architectural Design

By

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Submitted to the School of Architecture
as partial fulfilment
of the requirements for the degree
of
Bachelor of Architecture

at

Montana State University

Bozeman, Montana
August, 1968

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# PROPOSAL

My thesis tomeet the requirements for the degree of Bachelor of Architecture shall be a design of an International Center for the foreign students of Montana State University and other related International functions. The work, divided into two quarters, shall be: summer quarter, 1968--collection of research material, selection of a site, analysis of conditions, and a building program of the new building; fall quarter, 1968--design presentation of the proposed center including drawings and a model.

TABLE OF CONTENTS


| Chapter | | Page |
|---|---|---|
| I | Conditions Creating a Need..... | 1 |
| II | Local Conditions..... | 7 |
| | Geography..... | 8 |
| | History..... | 9 |
| | Climate..... | 11 |
| | Social and Economic..... | 13 |
| III | Site Conditions..... | 19 |
| | Location..... | 20 |
| | Orientation..... | 20 |
| | Adjacent Environment..... | 20 |
| | Zoning Regulations..... | 21 |
| | Utilities..... | 21 |
| | Prevailing Wind..... | 21 |
| | Traffic Pattern..... | 22 |
| | Topography..... | 22 |
| IV | Function of Building..... | 28 |
| | Administration Office..... | 29 |
| | Lobby and Reception..... | 30 |
| | Lounge and Exhibit Areas..... | 30 |
| | Multipurpose Hall..... | 31 |
| | Library..... | 31 |
| | Living Accommodations..... | 32 |
| | Meal Facilities..... | 33 |
| | Kitchen..... | 33 |
| | Dining Area and Snack Counter..... | 33 |
| | Recreation Area..... | 34 |
| | Miscellaneous Areas..... | 34 |
| | Functions..... | 35 |
| | Administration..... | 35 |
| | Lobby | |
| | Offices | |
| | Meeting Areas..... | 35 |
| | Exhibition | |
| | Lounge | |
| | Multipurpose Room | |
| | Library | |

Chapter Page


Living Accommodations..... 35
Sleep and Study Space
Toilet and Bath Areas
Kitchen..... 36
Preparation Area
Storage Area
Dishwashing Area
Garbage Disposal Area
Employees' Locker Room
Dining Area..... 36
Residential
Guest
To Serve as Auditorium
Storage..... 36
Residential
General
Requirements of Functions..... 36
Administration..... 36
Lobby
Restrooms
Offices
Meeting Areas..... 37
General Area
Multipurpose Room
Library
Living Areas..... 37
Men's
Women's
Toilet and Bath Areas
Kitchen..... 38
Kitchen Equipment
Employees' Locker Room
General Storage
Dining Area..... 38
Tables and Chairs
Cafeteria Counter
Storage..... 38
Residential
General
Mechanical Rooms..... 38
Furnace
Water Heater

V Aesthetic..... 41

Introduction..... 42
Foreign Student Background..... 42
Aesthetics of the Locale..... 43
Aesthetics of the Building..... 43

Chapter Page

VI Economic..... 45

Income Budget..... 46
Financing..... 46
Construction Costs..... 47
Building Cost..... 48
Building Type..... 48
Total Cost..... 49

VII Summary..... 51

ILLUSTRATIONS

Photograph: Bridger Hall..... 18

1. North View
2. ICC Entrance
3. West View

Map: Bozeman, Montana..... 18

Map: Site Topography..... 23

Map: Site Location..... 24

Photograph: Panoramic View from the Site..... 25

1. Looking from North to East
2. Looking from Southeast to Southwest
3. Looking from West to Northwest

Photograph: View toward the Site..... 26

1. View Looking North
2. View Looking East
3. View Looking South
4. View Looking West

Flow Diagram..... 40

TABLES & GRAPHS


Table: Foreign Student Housing..... 3

Graph: Foreign Student Distribution..... 6

Table: Mean Monthly Temperatures and Precipitation.... 11

Table: Sun Angles..... 12

Table: Educational Distribution of Gallatin County..... 14

Table: Employment Status
Male..... 15
Female..... 15

Table: Family Incomes..... 16

# Conditions Creating a Need

CONDITIONS CREATING A NEED

In this era of fast transportation and wide international communication, contacts between universities and other peoples of the world are essential. Students come to Montana State University from many countries and other students go from the campus to other countries. In addition to students; educators, journalists, government officials, and technicians arrive on campus to lecture or to participate in educational programs. For example, on February 4 and 5, 1968, the International Exchange Program held the First Annual Student Workshop on the MSU campus. The program was sponsored by the International Committee, School of Education.

Another educational and cultural exchange program was presented February 8 and dealt with two main topics: 1) "India Today," concerning social and political change, by Dr. K. Bhaskara Rao of Philadelphia; 2) "The Student Abroad" by Dr. Willard Warwock, Regional Director, Institute of International Education in Denver. From May 13 to May 17, 1968, a delegation of six law-student leaders from Central University, Catholic University, University

of Guayaguil, and University of Cuenca were visiting Montana State University under the International Exchange Program. The guests were accompanied by an escort and interpreters from the U. S. Department of State.

Montana State University needed a centralized office through which to channel these widely spread contacts. For this reason, the International Cooperation Center (ICC) was established at Montana State University in May, 1956, one of the first of its kind in the nation.

The Center has assumed responsibility for seven programs:

1. Foreign Student Advising Program

   1.1 This program advises foreign students regarding social and academic fields.

   1.2 It informs foreign students about Montana State University.

   1.3 It works to achieve better international understanding.

TABLE 1

FOREIGN STUDENT HOUSING[1]

| Country | Campus | Off-Campus |
|---|---|---|
| 1. Canada | 31 | 49 |
| 2. China | 7 | 8 |
| 3. Hong Kong | 2 | 3 |
| 4. India | 2 | 15 |
| 5. Norway | 0 | 4 |
| 6. Philippines | 0 | 4 |
| 7. Others | 6 | 26 |

2. American Indian Advisory Program

   2.1 This program advises American Indian students in regard to academic and social affairs.

3. International Technical Training Program

   3.1 This consists of sponsoring study which leads to a Master's or Doctorate degree in technical fields for service overseas.

4. Short-term Visitor Program

   4.1 The center acts as a host for visitors who come to Montana State University for short terms during the summer or during the year.

5. Peace Corps Training Program for Ecuador

   5.1 The program consists of training volunteers for Peace Corps service. This consists of Spanish, technical studies, Ecuadorian studies, American culture, World affairs and Communish, Cross-cultural communication, Health training, Physical fitness, and Outdoor living. Montana State University trained 200 volunteers between 1962 and 1966; this summer there are 126 volunteers.

6. Latin American Studies Program.

   6.1 This is a vocational program to train undergraduates in study abroad.

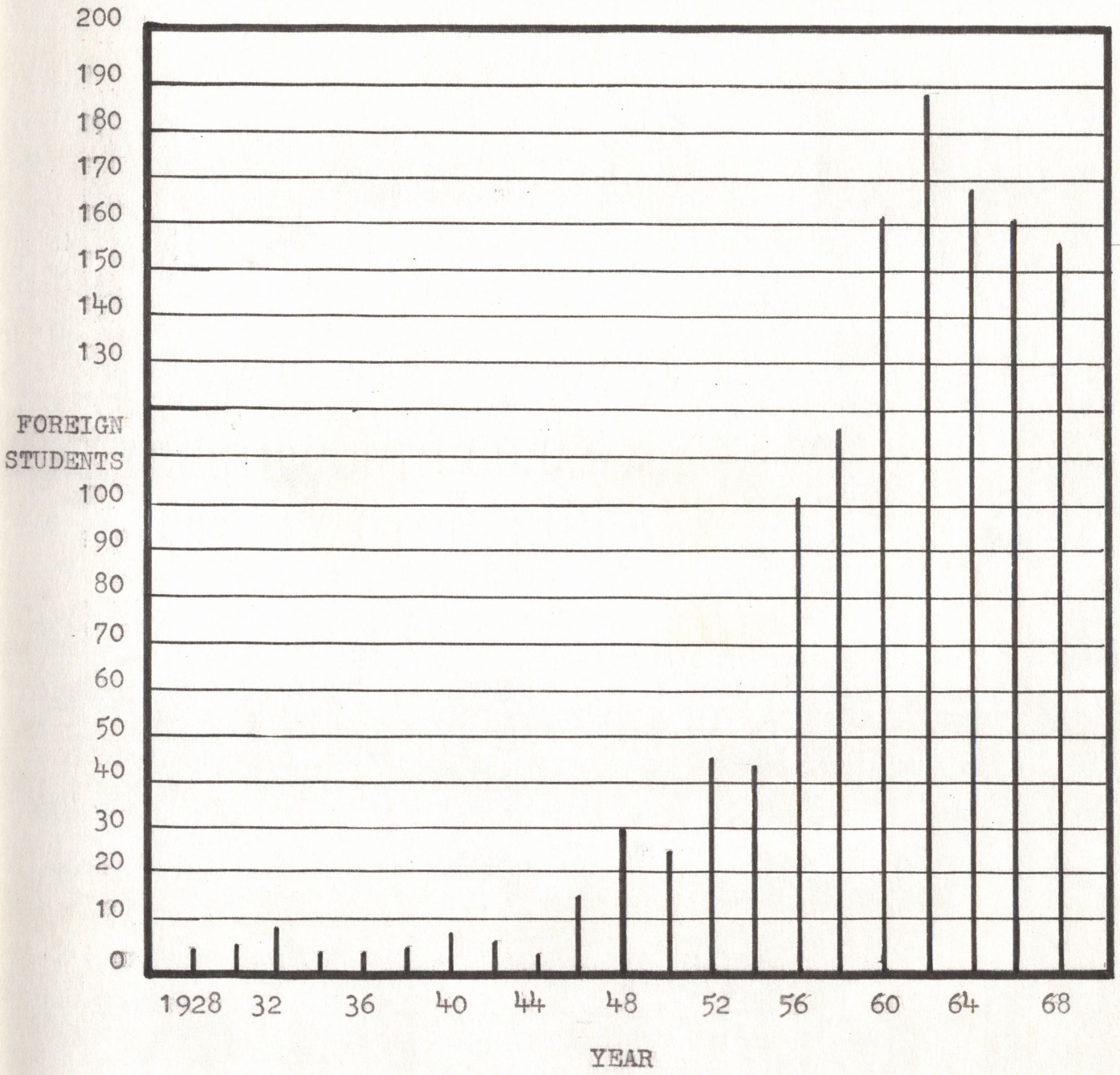
7. Educational Exchange Program

   7.1 The Exchange Program Committee is composed of five students and five faculty members and gives information and guidance to students considering study abroad.

At present the ICC has one office at Bridger Hall consisting of an assistant coordinator and Foreign Student Advisor, Miss Helen Simpson; and one secretary. There is another office in Reid Hall which Dr. Robert G. Dunbar, head of ICC occupies. ICC, Coffee Hours (educational presentations) take place each Friday in a nearby classroom which is inadequate for the number of people who attend.

The International Club, which is part of the International Understanding Program, has no office anywhere. It holds its meetings in Wesley House or in the Student Union Lounge. Moreover, newly-arrived students have no place to stay before the dormitories open and during vacations.

The building presently occupied by the International Center is too small to accommodate the programs, and the building's exits and materials constitute a fire hazard.




STUDENTS DISTRIBUTION FROM SEPTEMBER TO JUNE, 1928 TO 1968 2

# Local onditions

GEOGRAPHY

The city of Bozeman, in south central Montana, USA, has a population of 15,700. It is located on the plain of the Gallatin Valley, surrounded by high mountains in three different directions. Bozeman's latitude is 45°, 42', and the longitude is 111°, 3' at an elevation of 4,950 ft. The mountain peaks are over 9,000 ft above sea level. The area of Bozeman is 4,835 acres or 7.55 sq mi.

Bozeman is connected with other points of interest by two major highways: U. S. 10 or Interstate 90 for major traffic east and west, and U. S. 191 for north-south traffic.

The following are the distances of the various cities and other places of interest from Bozeman by car, according to the Montana State Highway Commission:[3]

| | |
|---|---|
| 98 miles | southeast of Helena |
| 142 miles | west of Billings |
| 194 miles | south of Great Falls |
| 95 miles | east of Butte |
| 7 miles | east of Gallatin River |

| | |
|---|---|
| 89 miles | north of Yellowstone Park |
| 29 miles | east of the starting point of the Missouri River |
| 15 miles | east of the Bridger Mountains |
| 25 miles | southwest of the Gallatin Mountains |
| 1,022 miles | west of Minneapolis |
| 1,451 miles | west of Chicago |
| 1,065 miles | northeast of San Francisco |

HISTORY

The Gallatin Valley was once called "The Valley of Flowers" by the neighboring Indians of this area. This valley was considered a neutral hunting ground by the Crow, Cheyenne, Blackfoot, and Piegan; therefore, none of them used it as home.

Probably the first white men to enter this area came with the Lewis and Clark Expedition in 1805 and 1806. However, it is possible that French-Canadian fur trappers ventured into this region prior to the Lewis and Clark Expedition and remain unrecorded. Following the reports of Lewis and Clark, fur trappers, traders, and mountain men came to south central Montana. In the 1850's and 60's, precious metals were discovered in Montana. Frontier towns settled around mining areas such as Bannack, Alder, and Last Chance Gulch. Some of the pioneers traveling West by wagon train turned off from the Oregon Trail and traveled through the Gallatin Valley to the west to search for gold.

However, the actual settlement in the Gallatin Valley differed from other early settlements in that it was founded around an agricultural economy. Settlers came here with their wives, seeking to establish homes and farms. In 1864, John Bozeman lead such a group of settlers. He, along with D. E. Rouse and W. J. Beall, staked out the present site of Bozeman. Settlers followed, and in 1865 the county was named "Gallatin" to honor Albert Gallatin, U. S. Secretary of the Treasury. The cattle industry is an important contributor to the historical development of Montana. Nelson Story, a Bozeman pioneer, brought the first trail herd from Texas to Montana in 1864. Today Gallatin Valley is the most populous purebred cattle area in the world. Lumbering also contributes to the region's area development.

The railroad played an important role in the development of Gallatin Valley. In 1882, the Northern Pacific was extended to Livingston, Montana. Towns began to grow up along the railroad track. The railroad also contributed to the development of industries since it provided convenient transportation, especially for the cattle industry.

On February 16, 1893, the Montana Legislative Assembly passed an act creating Montana State Agricultural College at Bozeman. Since July 1, 1965, it has been called Montana State University. In 1893, only 46 students enrolled in degree courses; in the autumn of 1967, there were 6,819. Since the University's creation

in 1893, almost 60,000 students have enrolled in degree courses, and 17,711 have received degrees. Montana State University has provided a cultural and educational center for this area; it has not only aided the economy, but has helped to mold the future of this area.

## CLIMATE

The climate in Bozeman is variable from season to season. The summer temperatures are warm and pleasant with occasional high temperatures. The average mean temperature is 43° F. The temperatures range from 13.8° F to 33.8° F in February and 51.3° F to 81.5° F in July. The average mean temperature for July is 66.4° F.

There areno damaging floods, no serious hailstorms, and the area is not subject to tornados. The snow falls from the early part of November to March with an average of 30 to 50 inches a year. The average rainfall is 17.38 inches for the Bozeman area. The mean temperatures and average rainfalls in Bozeman are recorded as follows:[4]

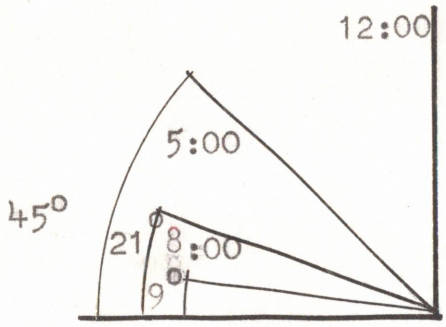
| Month | Mean Temperatures | Precipitation |
|---|---|---|
| January | 20.2 | .92 in |
| February | 25.2 | .76 in |
| March | 27.8 | 1.55 in |
| April | 42.5 | 2.34 in |
| May | 51.1 | 3.06 in |
| June | 57.3 | 1.08 in |
| July | 66.4 | 1.12 in |

SUN ANGLES 5

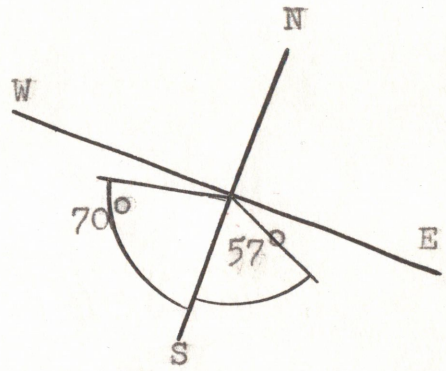
MOUNTAIN STANDARD TIME

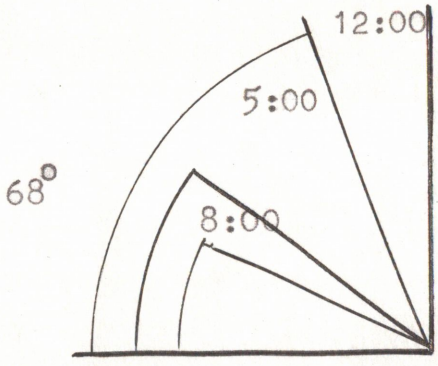
VERTICAL

HORIZONTAL

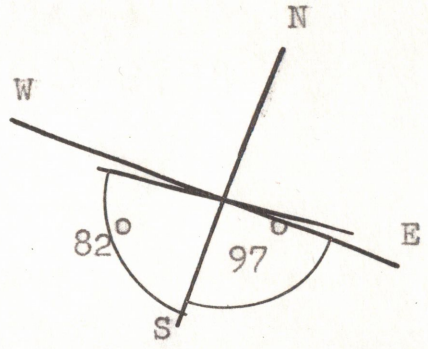


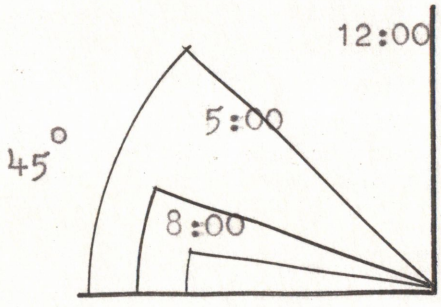

MARCH



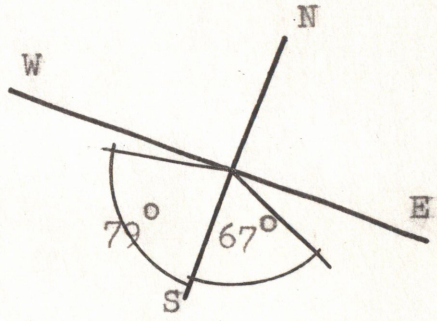



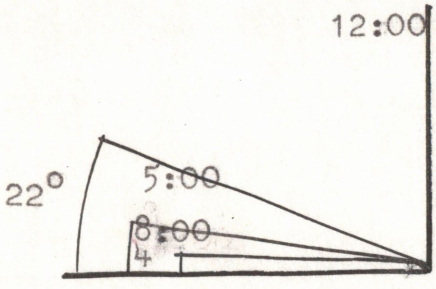

JUNE



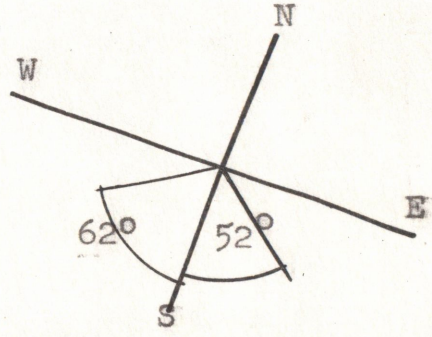




SEPTEMBER




DECEMBER



| | | |
|---|---|---|
| August | 64.9 | 1.65 in |
| September | 55.8 | 1.45 in |
| October | 46.0 | 1.07 in |
| November | 32.1 | 1.30 in |
| December | 24.8 | .91 in |

Architects in this area design their buildings to resist wind loads of 15 pounds per sq ft.

SOCIAL AND ECONOMIC

Within the city limits of Bozeman, Montana, the population is 15,700; Greater Bozeman (see map) has a population of 18,000 which includes married students of Montana State University. Each academic year (9 months of the year) there are an additional 5,000 single students which brings the total population to 23,000. The population growth is 27% each 10 years. The median age for Bozeman residents is 24.3 years. People over 65 years of age constitute 9.8% of the population and 0.5% of the population is non-white. The latter percentage is composed primarily of American Indians. Bozeman has the highest level of education of any city in Montana; the average Bozeman adult has completed 12.4 years of schooling.

According to the 1960 census of Montana, the following figures represent the educational distribution of Gallatin County:

Years of school completed
(persons 25 years and older).....6359

No school years completed.....14

Elementary (1 - 4).....99

(5 - 6).....212

(7).....240

(8).....1337

High school (1 - 3).....1043

(4).....1796

College (1 - 3).....945

(4 or more).....673

Median school years completed at that time (1960) was 12.4 years. A 5-2-3-3 educational plan is used for the Bozeman school system. This includes: kindergarten through grade 4 in 5 elementary schools; grades 5 and 6 are held in a city-wide school. Also, there is a city-wide junior high (grades 7-9) and a city-wide high school. In addition, there are 2 parochial high schools: one is Catholic and the other is Seventh-Day Adventist. The University sponsors adult education in the evenings in addition to accommodating its regular enrollment of approximately 7,000.

The form of city government is commission-manager. There are approximately 3,200 homes in Bozeman (1966 estimate). There are 27 churches in Bozeman.

The main industries of Bozeman are agriculture, education, and a large trade area. Montana State officials estimate the total annual contribution of the University

to the community to be $30,000,000. Agricultural operations consist of grain production, livestock, and dairying. There also is some lumbering, cement manufacturing, food processing, grain milling, etc. Tourism is increasing in importance to Montana's economy.

According to the 1960 Census of Montana, the employment status and annual incomes are as follows:

Employment Status (Male)

Males 14 years and older.....4391
Labor Force.....3400
Civilian Labor Force.....3400
Employed.....3285
Agriculture.....1184
Manufacturing.....470
Other industries.....1631
Unemployed.....115
Not in Labor Force.....991

Employment Status (Female)

Females 14 years and older.....3973
Labor Force.....1175
Civilian Labor Force.....1175
Employed.....1112
Agriculture.....103
Manufacturing.....21
Other industries.....988
Unemployed.....63
Not in Labor Force.....2798

Family Incomes in 1959 for Gallatin County

| | |
|---|---|
| All families in 1959 | 3,272 |
| Under $1,000 | 122 |
| $1,000 - $1,999 | 291 |
| $2,000 - $2,999 | 380 |
| $3,000 - $3,999 | 542 |
| $4,000 - $4,999 | 353 |
| $5,000 - $5,999 | 441 |
| $6,000 - $6,999 | 364 |
| $7,000 - $7,999 | 218 |
| $8,000 - $8,999 | 211 |
| $9,000 - $9,999 | 92 |
| $10,000 or more | 258 |
| Median income | $4,853 |
| Family and unrelated individuals | $4,313 |

Due to Bozeman's geographic location, hunting and fishing are common hobbies of the local people, and are special attractions to tourists. The Madison and Gallatin Rivers are nationally famous for their trout fishing.

Many social activities are provided by Montana State University; these include plays, concerts, art exhibits, special speakers, athletics, and other special events.



1



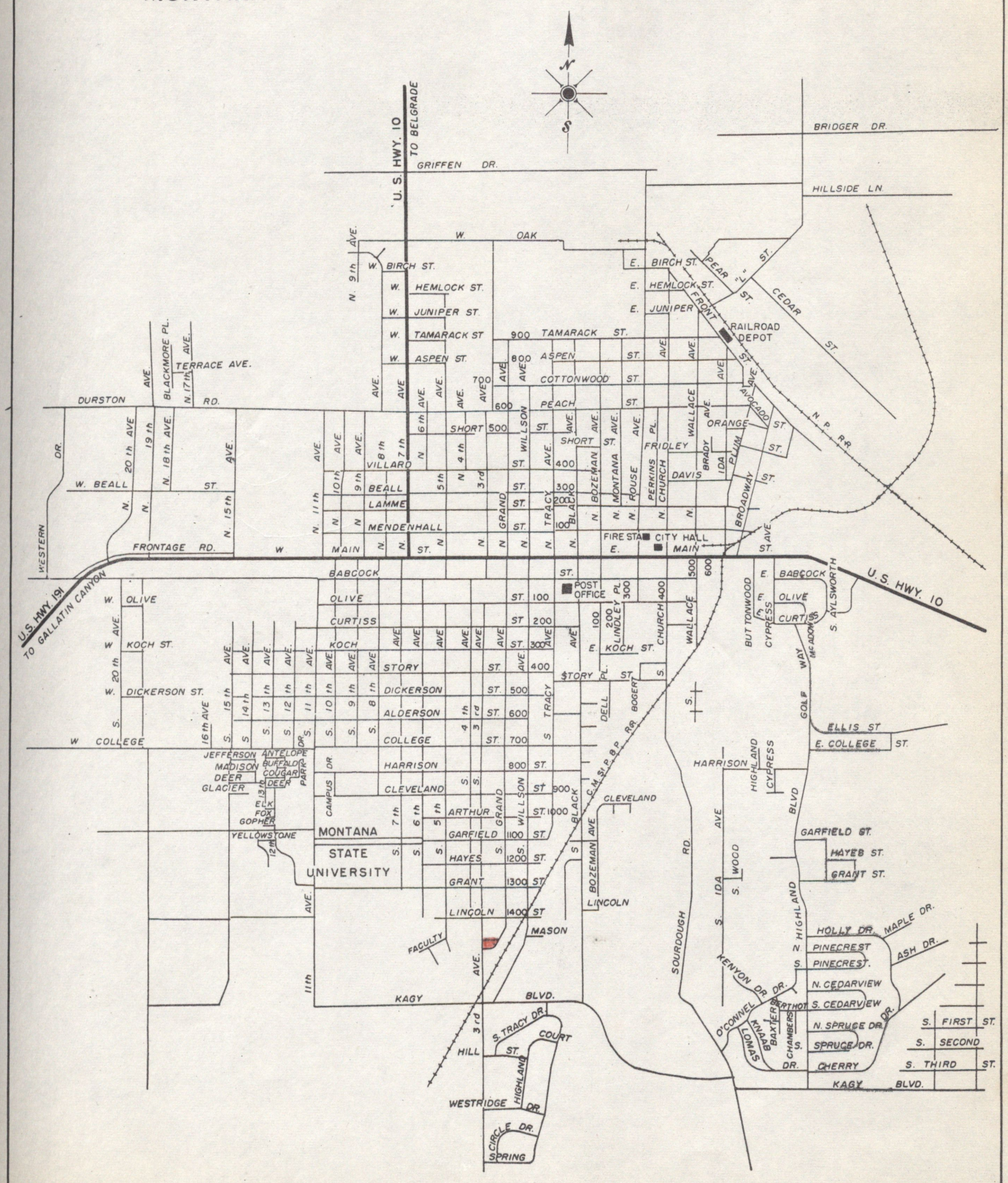
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3

M. S. U. BOOKSTORE, INC.

# MAP OF BOZEMAN MONTANA



# Site Conditions

## LOCATION

The proposed building for the International Center will be located on the Montana State University campus. The site is located in a dignified residential section of Bozeman, not far from the center of the MSU campus. In selecting the site, I considered everyday contact with other students who were living in fraternities and sororities and easy accessibility for foreign and American students and for townspeople wishing to attend activities at the Center.

## ORIENTATION

The site is located on Greek Way Subdivision, lot four, near the corner of the intersection of Kagy Boulevard, one of Bozeman's major east-west traffic arteries, and Greek Way. The site has a total area of 71,330 sq ft. The length of the south side of the lot is 237.3 ft; the east is 137.0 ft; the north is 231.9 ft; the west is 297.6 ft; and the northwest is 123.4 ft.

## ADJACENT ENVIRONMENT

Directly north of the site is the Kappa Delta Sorority House. To the east is Greek Way, Thompson's

subdivision, and a mountain range in the distance. Adjacent to the site on the south is lot number five and Kagy Boulevard; across the Boulevard is vacant property with some farming. To the west are the railroad tracks (use limited to the MSU heating plant), the Forest Research Laboratory, and in the distance the Fieldhouse of Montana State University. On the northern horizon are the Bridger Mountains; the Spanish Peaks lie to the south with low rolling farmlands stretching out to the west.

## ZONING REGULATIONS

The use of Greek Way Subdivision lots and this use thereof shall forever hereafter be subject to the following restrictions:

1. The lot herein described shall not be subdivided.
2. No building having less than 6,000 sq ft of floor area may be constructed on any lot.

## UTILITIES

Utilities are conveniently located near the site. The sewers and drains are located on Greek Way, as are the electricity, telephone, and water supplies. On the southeast corner of the site, there is a fire hydrant.

## PREVAILING WIND

Bozeman is surrounded on three sides by high mountains, and the wind direction tends to change in accordance with these mountains. During normal climatic

conditions, the wind blows from the west and northwest. The storm winds, however, generally come from the east and southeast at velocities up to thirty miles per hour. The U. S. Weather Bureau map for 1953 indicates that the mean wind velocity for January is 4 to 7 miles per hour and for June it is 8 to 12 miles per hour.

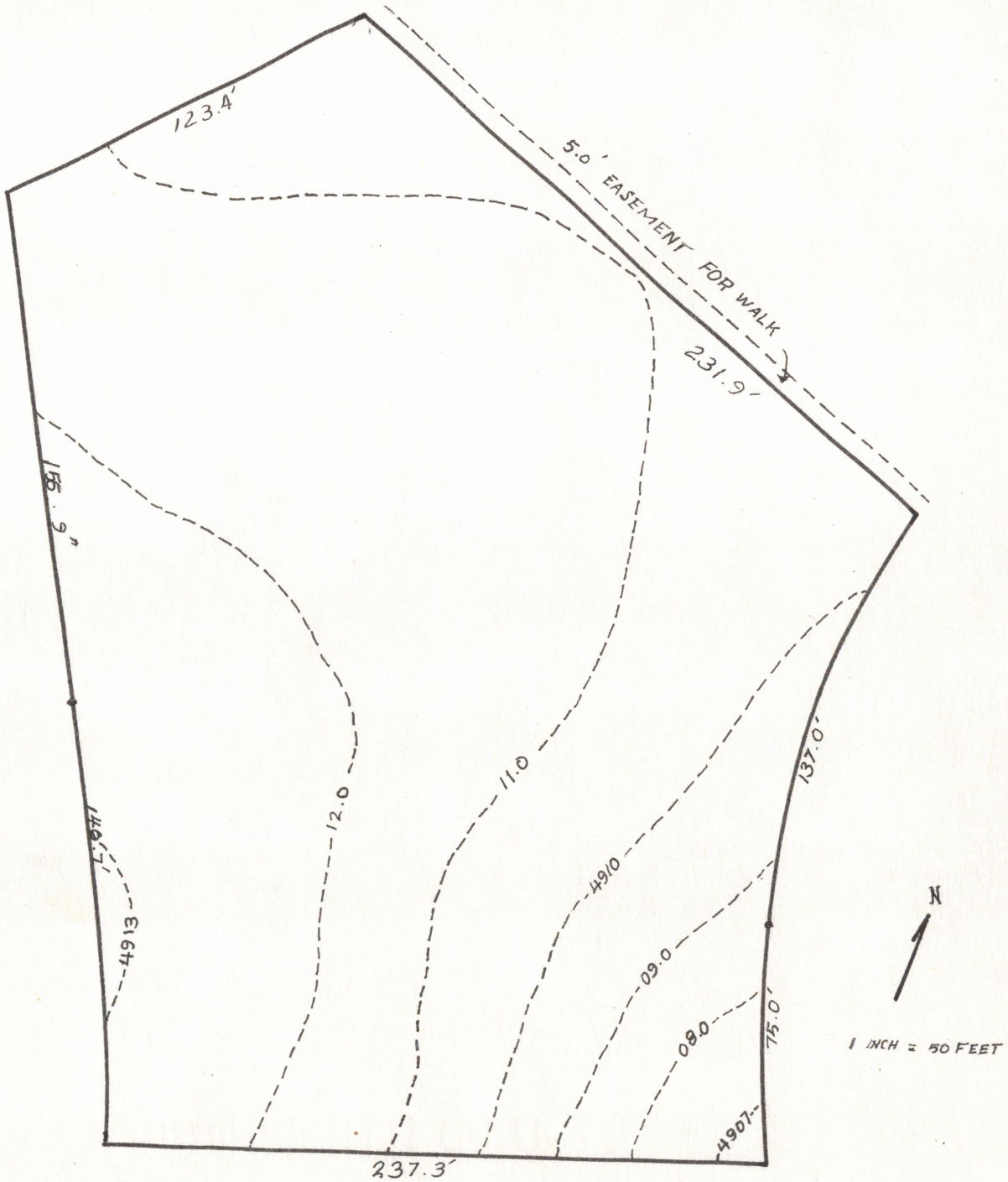
TRAFFIC PATTERN

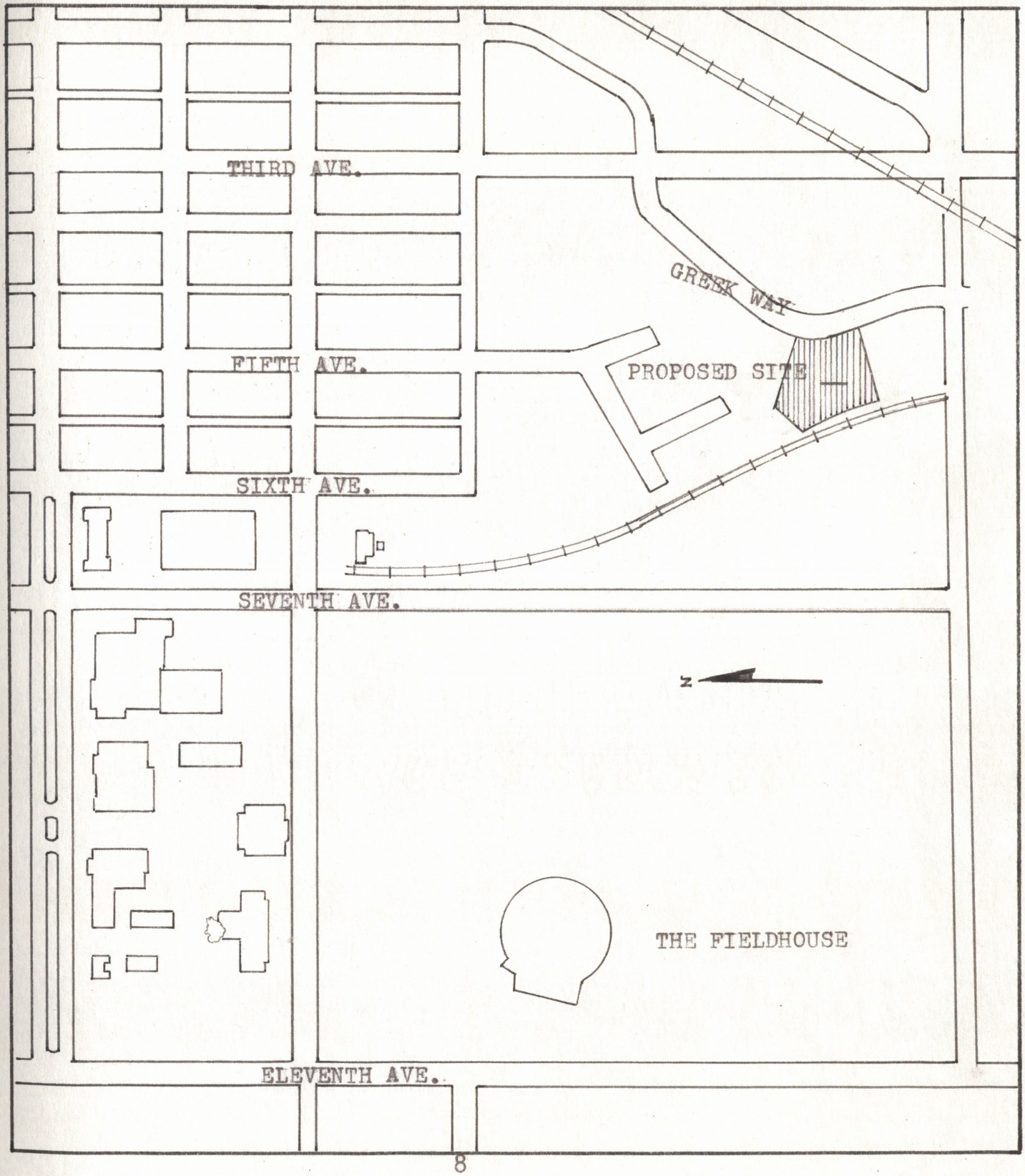
The east of the lot faces Greek Way which connects with Third Avenue, serving north-south traffic to down-town, and with Kagy Boulevard, serving the east and west portions of Bozeman. In the future, most of the students will live on the south side of town in the Thompson Addition to be close to the campus which is within walking distance from the Center. At the present time, students walking from the campus will get to the International Center via Seventh Avenue and Grant Street.

TOPOGRAPHY

The site is gently sloping, the ground drops six feet in about 300 ft; from northwest to southeast.

## SITE TOPOGRAPHY







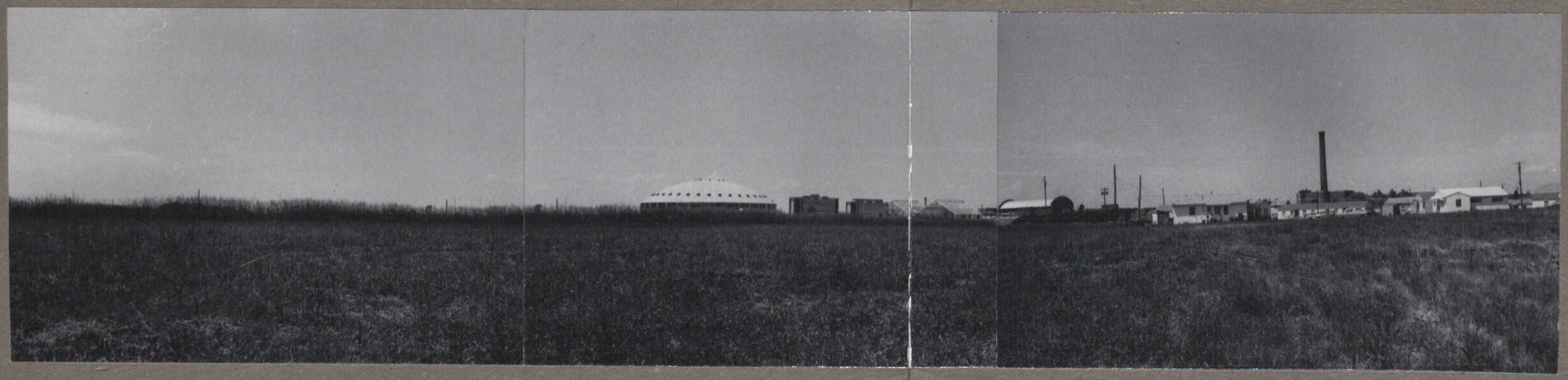

SITE LOCATION



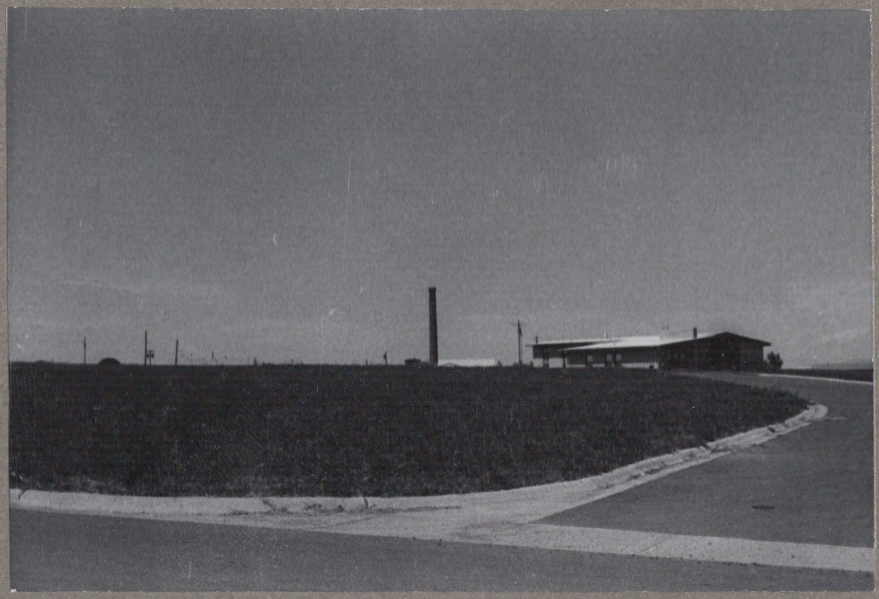
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2



3



1



2

# Function of Building

The International Center building will be grouped into three parts. The first part will include offices to take care of the Foreign Student Program, the International Study Program, the Short-term Visitor Program, and the Peace Corps Training Program.

The second part has facilities for social and educational programs such as the International Ball, social meetings, lectures, and movies, etc. These are for the foreign and American students of Montana State University and the public.

The third part of the building is a housing unit for the foreign students of Montana State University and short-term visitors. This part of the building will accommodate approximately sixty students and guests. The quarters have a capacity for forty men and twenty women; this number can be comprised of foreign and American students. For economy of space, it is necessary to combine activities wherever this is reasonably possible.

ADMINISTRATION OFFICE

The administration area consists of two general offices. The first handles the Foreign Student Program

and includes two separate offices, one for the director and one for his assistant. The second general office will deal with the housing for the Short-term Visitor's Program, International Study Program, and Peace Corps Training Program. These two offices will share one secretarial pool.

LOBBY AND RECEPTION

The lobby is part of the main entrance to the building and extends to the reception desk. From the lobby visitors can easily find the way to such areas as the offices, lecture room, library, exhibit hall, residential quarters, and the dining area.

The reception desk is in the lobby and functions as an information center and switchboard for about fifteen extension telephones. Adjacent to the desk is the office of the director of housing accommodation.

LOUNGE AND EXHIBIT AREAS

The lounge and exhibit areas will be located near the entrance to the lobby. The exhibit area will be a transition between the lobby and the lounge area. However, it will be designed to give it a "special" feeling. The idea behind the scheme is to exhibit some of the international products and photographs and to attract the attention of the people visiting or circulating in the building.

The lounge will be used as a living area for the residential quarters, as a foyer-wating room for the multipurpose room during programs, and as a gathering area for small groups.

MULTIPURPOSE HALL

The multipurpose hall should be located in such a way that it is easily accessible from the lobby, the lounge, and from the outside of the building to assure easy circulation and for fire protection.

The hall will be used as a multipurpose room, functioning as a lecture hall, a movie house for movies and slide presentations, a dancing hall for such events as the International Ball, and for weekly international entertainment programs. (It would be desirable to have a sloping floor in this room except the fact that it will be used as a dance hall eliminates this possibility.) The public is invited to all these functions. The acoustical treatment of the multipurpose hall will be one of the main concerns, so as to create a pleasant sound effect throughout the entire hall.

LIBRARY

The library will be located so it is easily accessible to the lobby, the lounge, and the living quarters. It will include the books and articles related to the center

to serve as an information source. Magazines and newspapers from other countries will be circulated in the library to serve as a study source of information for students studying foreign languages and to keep the foreign students in close contact with their countries. At the same time, the library will serve as a study area for the students living in the Center or participating in any of the programs it sponsors.

LIVING ACCOMMODATIONS

The living quarters for the International Center are divided into two sections. Since the female ratio among foreign students is more than two men to every one woman, I decided to have twice as many men's units as women's. The men's section will have a capacity of 40 men, to be housed in fifteen double rooms and ten single rooms. The women's section has living accomodations for twenty women living in eight double rooms and four single rooms.

There will be a dormitory type of room to be used as a sleeping area during quarter breaks and as an area to house groups of visitors from out-of-state. In the men's section, the large room will have space for twelve beds and the women's section will have room for eight beds.

Toilet facilities will be available in each section of the living quarters. The women's quarters will each have a sink.

## MEAL FACILITIES

The meal facilities for the International Center will serve meals for the students living there and for banquet guests and the audiences of any of the international programs. The meal facilities are divided into two basic areas: the kitchen and the dining area.

Kitchen: The kitchen will be located in the residential section in such a way that there is easy service access for trucks. It will be large enough to serve 150 banquet-style meals. During the International Ball, for example, it will serve 150 guests banquet style and 110 cafeteria style. The kitchen will have areas for food preparation, cooking, delivery, and storage; an employees' locker room; dishwashing and storage; and general storage.

Dining Area and Snack Counter: The dining area will serve the living units each day and guests during special occasions. The dining area capacity is 110 guests served restaurant style and 150 guests served banquet style.

This area is an extension of the multipurpose room. It should be designed as a part of the multipurpose room and be separated by movable partitions or other means.

The snack counter is part of the kitchen and is located near the lecture hall to serve refreshments to the guests from the multipurpose room during meetings.

RECREATION AREA

There will be a pleasant outdoor space which will separate the International Center Building from the Kappa Delta Sorority. This area may be used for picnics, gatherings, ball games such as volleyball,etc.

The indoor recreation area, which is part of the lounge, is limited to television, piano, and simple games such as cards.

MISCELLANEOUS AREAS

A laundry area for washing, drying, and ironing clothes would be used by the living units (one for men and one for women), and a mechanical room would be necessary for heating and ventilation equipment.

Parking facilities would be provided for a minimum of 20 cars.

## FUNCTIONS

### Administration

Lobby

1. Reception area
2. Waiting room
3. Restrooms--located just off lobby

Offices

1. Administrator's offices
2. General office

### Meeting Areas

Exhibition: to be used for international cultural exhibition

Lounge: to provide space and facilities for individuals or groups to relax or get together.

Multipurpose room: to provide space for lecturing, dancing, and banquets

Library: to provide space for study, news sources and information

### Living Accommodations

To provide space for studying and sleeping:

Men's single rooms

Men's double rooms

Women's single rooms

Women's double rooms

Toilet and bath areas: located near sleeping quarters

Kitchen

Kitchen area capable of preparing three meels daily plus snacks for residents of the Center

To serve food cafeteria style to 110 persons and banquet style to 150 persons

Food storage areas and receiving area

Dishwashing area

Garbage disposal area

Employees' locker room

Dining Area

Dining area for residents

Dining area for 110-150 guests

Also serves as an auditorium

Storage

Residential storage

General storage

REQUIREMENTS OF FUNCTIONS

Administration

Lobby contains: 500 sq ft

information

switchboard

seats

Restrooms (men's and women's) contains: 350 sq ft

lavatory

urinals

women's watercloset

Offices (administration and general) contain:

Offices: 3 @ 150 sq ft 450 sq ft

General office: 400 sq ft

chairs

desks

filing cabinets

Meeting Areas

General area contains: 2800 sq ft

exhibition: to provide space for exhibits

lounge: to provide space for relaxation and waiting

tables

chairs

sofas

Multipurpose room contains: 3000 sq ft

stage

chairs

tables

Library contains: 1200 sq ft

book shelves

chairs

tables

book racks

Living Areas

Men's contains:

single rooms: 10 @ 150 sq ft 1500 sq ft

double rooms: 15 @ 250 sq ft 3750 sq ft

large sleeping room 720 sq ft

Women's contains:

| | | |
|---|---|---|
| single rooms: | 4 @ 160 sq ft | 640 sq ft |
| double rooms: | 8 @ 275 sq ft | 2200 sq ft |
| large sleeping room | | 480 sq ft |
| Toilet and bath areas contain: | | 400 sq ft |

men's water closet

urinal

women's water closet

lavatory

bathtub

Kitchen contains: 1500 sq ft

All necessary kitchen equipment for food preparation and food storage

Employees' locker room

General storage

Dining contains: 500 sq ft

Folding tables and chairs for 110-150

Cafeteria counter

Is part of the multipurpose room

Storage contains: 500 sq ft

Residential storage

General storage

Mechanical rooms contain: 200 sq ft

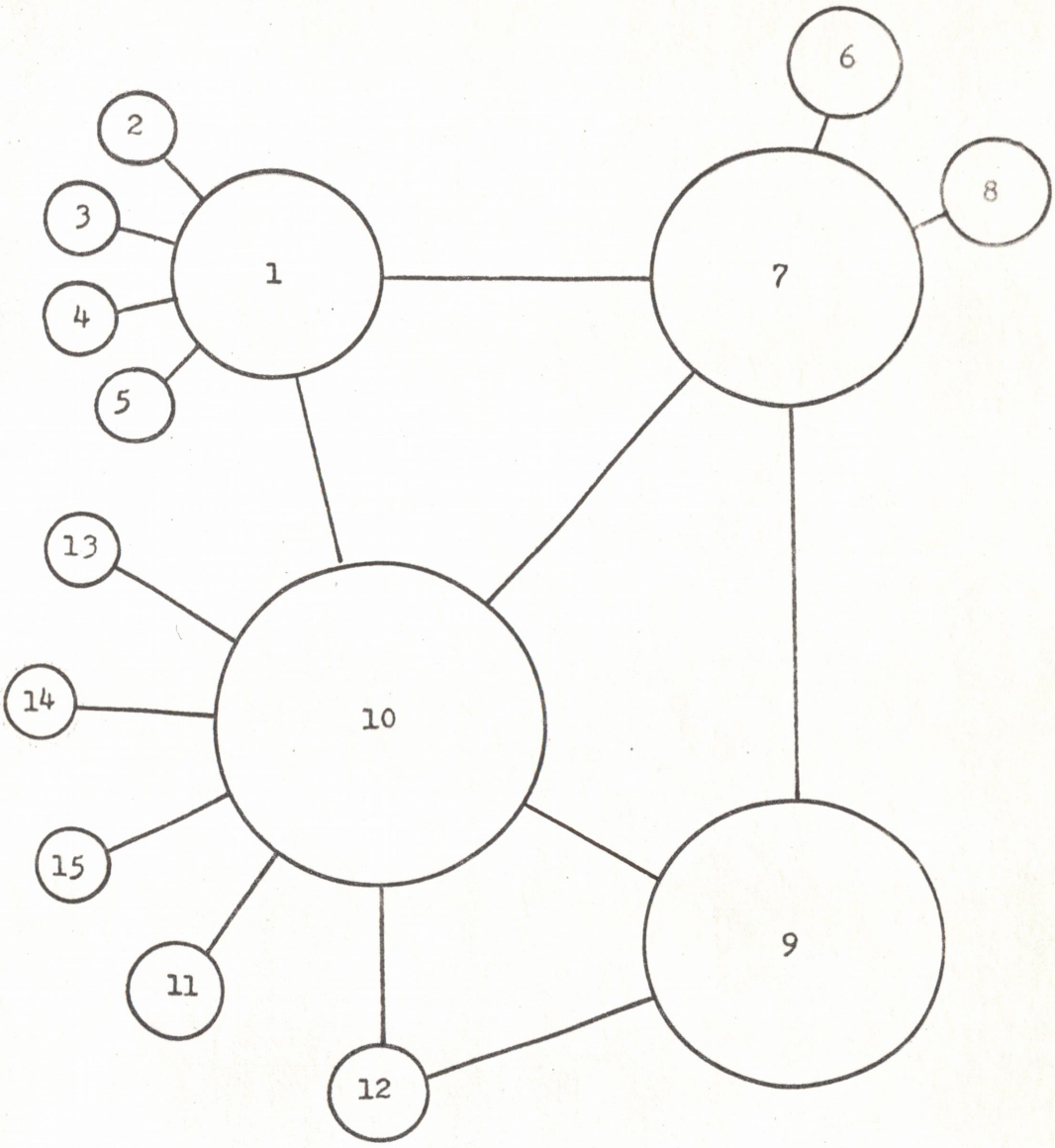
Furnace

Water heater

Approximate total building area is 21, 240 sq ft. An additional 1062 sq ft or about 5% of the building

area will be necessary for hall way space. The approximate gross area is 22,300 sq ft.

FLOW DIAGRAM




1. Lobby
2. Reception
3. Administration
4. General office
5. Public toilets
6. Exhibition
7. Lounge
8. Library
9. Multipurpose room
10. Housing
11. Kitchen
12. Dining
13. Mechanical
14. Housing toilets
15. Laundry

# Aesthetic

## INTRODUCTION

Aesthetics is an abstract concept, having to do with the principles of beauty in art and anture. The interpretation of aesthetics is subject to each individual's taste and appreciation, and cannot be accurately defined. In this section I must discuss general characteristics, rather than go into building details. The form, color, texture, and spatial arrangements of the building and its environs give rise to experiences and images which we may or may not term beauty. The architect, in his design process, seeks to create and integrate appropriate atmospheres with activities, and to arrange the spaces into a harmonious relation.

## FOREIGN STUDENT BACKGROUND

In many ways the background of the foreign students is different from that of American students, and again different among themselves. Foreign students may also be less flexible and adaptable than local students, and they may be more emotionally sensitive to and influenced by their surroundings.

Since they often feel homesick and may be easily depressed, they need friendly, interesting surroundings, and pleasant pastimes. Their need for privacy, when desired, is as great as their need for company. Foreign students do not want to live in surroundings that conflict with these facts of their lives.

## AESTHETICS OF THE LOCALE

The aesthetic value of any project is concerned with more than just the buildings and the site development. The view from each side of the building and the general character of the area are important. The view from the site of the International Center is inspiring. On the eastern horizon are the Bridger Mountains; adjacent to the site, on the east, is Thompson's subdivision, a very new development. To the west is the Montana State University campus with its dramatically tall buildings.

The development of the site, including landscaping and public utilities, must fit into these surroundings, and adapt to the contours of the site. It must absorb and reflect international character, yet it must neither compete with the surroundings nor blend into the site so much as to become insignificant.

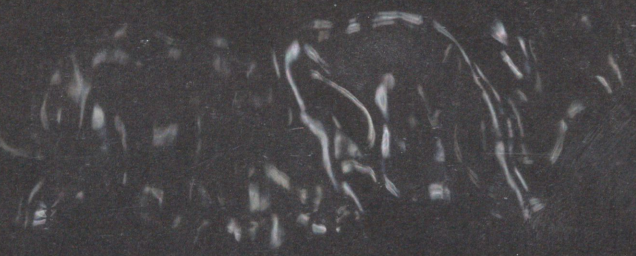
## AESTHETICS OF THE BUILDING

One of the primary aesthetic considerations in this building is to avoid an institutional or dormitory

atmosphere. The design should create a domestic effect. The color scheme should be warm and pleasant with warm and natural material such as wood and natural stone should be used whenever possible.

The design concept should allow for natural light to get in the buidling, for a good view, and for a feeling of openness in order to avoid a closed-in, dormitory atmosphere. This is especially important in the lounge areas, in the dining areas, and in the lobby. A residential feeling can also be achieved by scaling all facilities to the individual. This would give each person a feeling of having a personal home rather than making him feel like an insignificant member of a large group.

I believe that to experience some change from one area to another gives a pleasant feeling. By careful choice of materials and colors, I will seek achievement of a flowing, changing mood throughout the project.



# Economic

INCOME BUDGET

The International Center will be built primarily to meet the needs of the foreign and American students of Montana State University. It will hopefully offer an attractive place to live, both socially and physically.

The Center will be built to accommodate 60 residents. This number was chosen depending on the previous study to represent the cross-section of the international students on campus. The monthly rent paid by these residents would have to pay for operating expenses. The amount per month for board and room would come to about $100 per person. This would total the monthly income of $6000. International Club collects dues from its members totalling about $400 per quarter. This total income is enough to cover all the routine expenses, but it would not be enough to repay part of the loan to build the center.

FINANCING

In an interview with Helen Simpson, Foreign Student Advisor on the campus, she stated that the Center will not be financed by state and university funds; instead, grants by foundations and individual donations would be

the source of finance. For example, President Roland R. Renne and Dr. Harvey F. Baty, in preparation of technical experts for overseas service, made in 1958, a request to the Carnegie Corporation of New York for financial assistance to establish a pilot training program. The Carnegie Corporation responded with a grant of $90,000 for this purpose, to which it added $78,000 in 1961.

CONSTRUCTION COSTS

There are many factors that affect construction costs. Some of them are

1. Location of the project: Bozeman, Montana is an area in which costs of construction are fairly reasonable. Labor costs in this area may be lower than in many areas of the country. The prices of local materials are fairly low, but the cost of transported materials may be high.
2. Climate of the area: The building season in this area is 5 to 6 months for outside work. To work inside during cold weather, some heat would have to be provided.
3. Site: The site consists of 54,000 square feet. The building site drops gently at the east and south sides. (See topography)

BUILDING COST

There are several methods by which project costs may be estimated: the per capita cost method, segregated cost method, cubic footage cost method, and square footage cost method are only a few. For a project that is in the preliminary design stages, the Marshall Valuation Service recommends that the square footage method should be used.

These costs which are given by the Marshall Valuation Service are average for the final building costs throughout the United States. The costs include architect's fees and contractor's overhead and profit.. The costs estimated are divided into special types of buildings, such as commercial buildings, government buildings, offices, churches, etc. For this project the cost estimate would be the section of apartments, hotels, and clubs.

Building type:

Class "C" building: Masonry exterior walls, wood or steel roof and floor construction.

Exterior walls: Ornamental brick or stone facings.

Interior walls: Very good plaster and paneling, good carpet, terrazzo, parquet blocks.

Lighting and plumbing: Top quality standard fixtures.

Heating: Hot water system.

Total cost:

| Per sq ft | Local Multiplier | Current Cost Multiplier | Cost |
|---|---|---|---|
| $16.85 | 1.04 | 0.99 | $17.30 |

Approximate floor area: 22,300 sq ft

Approximate total building cost: 22,300 x $17.30 = $385,790.00

Landscaping $1,000.00

Parking $1,350.00

Total $388,140.00

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AN INTERNATIONAL CENTER

ARCH. 490
THESIS SUMMARY
Ahmad Jihayem

The purpose of this thesis is to design a building that will provide the following: (1) housing facilities for foreign and American students, (2) a library to supply foreign publications and study area for the residents, (3) an exhibit area illuminated by artificial lighting for the display of foreign culture and products, (4) a multi-purpose room to be used as a dining area and to provide space for social and educational meetings, (5) large living and recreation areas, and (6) a parking lot.

Greek Way is well-suited for the location of this International Center. The location is close to Campus, neighboring fraternities and sororities, and it is well-related to the future expansion of Bozeman.

In designing the floor plan, I felt that the relationship of the areas to each other, and their functions were the main factors. In the living areas, the natural light is psychologically very desirable.

In choosing materials for the building, I found concrete to be the best internationally representative material. Natural concrete is used throughout the structure. The housing units are identified by using white concrete.

I believe that the shaping and the distinctive lines of the building are pleasingly desirable to visitors as well as to its residents.

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