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Montana State University
Bozeman

A YMCA FACILITIES BUILDING FOR BOZEMAN, MONTANA

Part I

Undergraduate Thesis in Architectural Design

By
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at
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INTRODUCTION

In February, 1968, a symposium was held on the campus of Montana State University in Bozeman, Montana. As a result of this symposium, entitled 'Troubled Youth,' the conclusion was made that the most urgent need of the youth of this community was for a youth center or a YMCA program. This then resulted in an investigation into the YMCA program and correspondance was begun with the YMCA office in Helena, Montana and Seattle, Washington. A Feasability Committee was established as a result of our correspondance and discussions, and their investigation resulted in surveys being distributed throughout the Gallatin Valley. The survey resulted in 85.3% of the questioned people stating that Bozeman did need a YMCA; 11% that it did not; and 3.7% as being undecided. Of those who indicated a need, 21% would join as a family; 63% would participate in some form of individual membership; and 4.8% would have their children only joining the YMCA program.

These results then led the committee to act as a nominating board asking 20 of Bozeman's citizens to be on a temporary board of directors. The board first met on May 13, 1970, and elected a chairman who formed his needed committees. The next meeting was held May 27, 1970, at which time a constitution was approved, signed, and sent with a letter of application to the Secretary of State for incorporation as a non-profit organization. This application was approved and Bozeman, Montana registered its YMCA with the national Young Men's Christian Association Headquarters.

To begin a program, the Bozeman YMCA will have to take advantage of present facilities that are offered by Montana State University,

the Bozeman Senior and Junior High Schools, possibly the old Rosary School of Bozeman, and various other facilities located throughout the town. Within a short time (approximately 3 years) the board of directors foresees the possibility of constructing their own building. Although it will very likely be completed in stages, spanning many years, a final facility will be made available to the residents of Bozeman and the Gallatin Valley. This final structure is what I intend to present to the board of directors upon the completion of my Undergraduate Thesis.

SITE

In choosing a site, one was chosen that would serve the High School, Junior High School, metropolitan, and Bozeman's residential areas. A centrally located plot was searched for and found at the corner of Durston Road and North 11th Street. The plot is relatively flat and is large enough to accept the structure and its surrounding facilities.

Water, electricity, natural gas, and sewage are currently available and automobile accessibility is excellent. The site has a few large trees on it, some bushes, and a small creek is currently passing through the far eastern boundary of the plot of land. The following photographs picture the site as it exists today.

No photographs received for this copy

I. ADMINISTRATIVE

Administrative duties require the following functional spaces:

A. WAITING LOUNGE
B. SECRETARIAL AREA
C. COPY AND WORK ROOM
D. OFFICES
E. COFFEE LOUNGE
F. REST ROOMS

I.A. WAITING LOUNGE

1. Use
   a. Waiting place for YMCA business representatives
   b. Public lounge
   c. Meeting place
   d. Distribution point
   e. Receptive area

2. Occupants

a.	Business representatives	2
b.	Members	2
c.	Staff	2
d.	Public	2

3. Equipment

a.	Seating	8
b.	Tables	2
c.	Lamps	2
d.	Magazine racks	2
e.	Display stands	2
f.	Directory sign	1
g.	Staircase and elavator facilities	
h.	Desk or counter	12 sq. ft.
i.	Work area	70 sq. ft.
j.	Switchboard	
k.	Mail delivery and pick up	50 boxes

I.B. SECRETARIAL AREA

1. Use
   a. General office duties
   b. Telephone switchboard
   c. Receptional area

2. Occupants

a.	General manager's secretary	1
b.	Director's secretary	1
c.	Events director's secretary	1
d.	Financial secretary	1
e.	Housing secretary	1
f.	Three part-time secretaries	3
g.	Switchboard operator	1

3. Equipment

a.	Desks	6
b.	Four-drawer filing cabinet space	4
c.	Reception desk	1

4. Character

Must be easily accessable to all offices that it serves

I.C. COPY AND WORK ROOM

1. Use
   a. Copying and reproducing
   b. Organizing and making up programs

2. Occupants

a.	Full-time secretaries	5
b.	Part-time secretaries	3
c.	Switchboard operators	1
d.	Managers	1
e.	Directors	1
f.	Program co-ordinators	4

3. Equipment

a.	Table area	60 sq. ft.
b.	Seating	4
c.	Paper storage	50 cu. ft.
d.	Office supply storage	125 cu. ft.
e.	Ditto machine	1
f.	Mimeograph machine	1
g.	Work counter	
h.	Small single sink	

4. Character
   a. Clean and open
   b. Divided from public

I.D. OFFICES

1. Use
   a. Spaces required for organizational and administrative duties
   b. Interviews
   c. Meetings
   d. Operational duties

2. Occupants

a. Managers	1
b. Director	4
c. Program co-ordinator	2
d. Board of directors' meeting room	5

3. Equipment

a. Desk	1/office
b. Seating	5/office
c. Filing cabinet	1 double
d. Coat closet	15 sq. ft./office
e. Book, office supply, and utility storage	100 cu. ft.
f. Table	

4. Character
   a. Manager's offices will be comfortably equipped and decorated without being lavish
   b. Director's office should be richly decorated and larger than the other managers'
   c. Meeting room should be similar to the director's office

I.E. COFFEE LOUNGE

1. Use
   a. Coffee breaks
   b. Office staff relaxation
   c. Lunch room

2. Occupants

a.	Managers	1
b.	Director	1
c.	Secretaries	8
d.	Switchboard operator	1
e.	Program co-ordinators	2
f.	Instructors	3

3. Equipment

a.	Tables	
b.	Seating	12
c.	Counter space	25 sq. ft.
d.	Refrigerator	
e.	Double sink	
f.	Storage for kitchen equipment	
g.	Television	1
h.	Bulletin board	15 sq. ft.

I.F. REST ROOMS

1. Use
   a. Toilet requirements
   b. Rest

2. Occupants
   a. Men (staff)
   b. Women (staff)

3. Equipment

Men:

a.	Urinals	2
b.	Water closets	2
c.	Sinks	3
d.	Towel dispensers	2
e.	Mirror	1

Women:

a.	Water closets	3
b.	Sinks	2
c.	Towel dispensers	2
d.	Mirror	1
e.	Make-up counter	
f.	Seating	2 people
g.	Couch	1

4. Environmental control
   Fresh air fans suitable to freshen air as required

II. PUBLIC

The public area of the YMCA will require space for the following functions:

A. ENTRANCE, LOBBY AND RECEPTION
B. REST ROOMS
C. LIBRARY AND STUDY
D. CLASS ROOMS
E. PRO-SHOP

II.A. ENTRANCE - See I.A.

II.B. REST ROOMS (Public)

1. Use
   a. Sanitary needs
   b. Relaxation (women)

2. Occupants
   a. Men
   b. Women

3. Equipment

Men:		
a.	Urinals	3
b.	Water closets	3
c.	Standard toilet sinks	3
d.	Towel dispensers	2
e.	Mirror	1
f.	Supply storage closet	24 sq. ft.
g.	Seating	2
Women:		
a.	Water closets	3
b.	Standard toilet sinks	2
c.	Towel dispensers	2
d.	Mirror	1
e.	Supply closet	24 sq. ft.
f.	Seating	2
g.	Couch	1

4. Environmental control
   a. Standards as previously stated
   b. Circulating fans as needed to satisfy the rest room conditions

II.C. LIBRARY AND STUDY

1. Use
   a. Book storage
   b. Study and quiet reading area

2. Occupants
   a. YMCA members
   b. YMCA staff
   c. People living in YMCA quarters

3. Equipment

a.	Library book storage	5000 volumes
b.	Reading tables	ample
c.	Seating	12
d.	Magazine and newspaper racks	2
e.	3x5 card index files	2
f.	Coat storage	15 sq. ft.
g.	Film storage cabinet	40 cu. ft.

II.D. CLASS ROOMS 3

1. Use
   a. Instructional area for staff
   b. Instructional area for members
   c. Film showing
   d. Lecturers
   e. Meetings

2. Occupants
   a. Staff members
   b. YMCA members
   c. Guests
   d. YMCA international members

3. Equipment
   a. Partitionable walls so that rooms may be expanded
   b. Seating — 30/room
   c. Lecture podium — 1
   d. Blackboard — 30 sq. ft./room
   e. Display and work tables — 30 sq. ft./room
   f. Coat storage — 20 sq. ft/room
   g. Film and slide screen — 2
   h. Projection booth — 2

4. Character
   Must be quiet and conducive to learning

5. Environment
   Accoustically balanced

II.E. PRO-SHOP

1. Use
   a. Display and sell athletic equipment
   b. Sport professional headquarters
   c. Lesson orientation and scheduling

2. Occupants
   a. Shop director — 1
   b. YMCA staff members — 5
   c. Members
   d. Guests

3. Equipment
   a. Display shelving — 60 sq. ft.
   b. Wrapping and selling counter — 30 sq. ft.
   c. Cash register — 1
   d. Office area — 75 sq. ft.
   e. Large work tables — 15 sq. ft.
   f. Seating — 2
   g. Display for athletic equipment — 60 sq. ft.
   h. Bulletin board that is displayed for public — 15 sq. ft.

III. GYMNASIUM (Proper)

A. USE OF SPACE

1. Running track
2. Basket ball
3. Badminton
4. Vollyball
5. Tennis
6. Floor Hockey
7. Boxing
8. Wrestling
9. Gymnastics and Tumbling

B. OCCUPANTS

1. Participants	1 to 16
2. Spectators	max. 300
3. Officials	1 to 8
4. Staff	3

C. CHARACTER

Clean, open and unobstructed

D. EQUIPMENT

1. Running track
   a. A minimum 2 lane width, preferable 4 lanes; inside for slower runners and outside for faster runners
   b. Distance charts and markers — 2
   c. Hardwood track slightly sloped to middle and mounted on a wood frame
   d. Ample (2 minimum) entrance and exit spots unless continuously open

2. Basketball
   a. Basketball floor
   b. Basketball backboards and hoops with nets — 2
   c. Seating for participants — 30
   d. Seating for spectators — 300
   e. Appropriate ceiling clearance
   f. Removable backboards and hoops for practicing and instruction — 4
   g. Storage — 25 sq. ft.

3. Badminton

a.	An appropriately marked court	
b.	Net	
c.	Equipment storage closet	10 sq. ft.
d.	Seating for participants	10
e.	Seating for spectators	50
f.	Appropriate ceiling height	

4. Vollyball

a.	Appropriately marked court	
b.	Net	
c.	Storage closet	20 sq. ft.
d.	Seating for participants	8
e.	Seating for observers	100
f.	Minimum ceiling heigth	

5. Tennis

a.	Appropriately marked courts	
b.	Nets and standards to hold them	2
c.	Rackets and balls	pro shop
d.	Storage closet	20 sq. ft.
e.	Seating for participants	8
f.	Seating for spectators	50

6. Floor Hockey

a.	An appropriately marked court	
b.	Goals and their standards	2
c.	Sticks, rings, brooms, and balls (floor protective)	6 of each
d.	Storage closet	25 sq. ft.
e.	Seating for participants	10
f.	Seating for spectators	100
g.	Suitable floor covering	

7. Boxing

a.	Correctly marked ring	
b.	Appropriate personal equipment	
c.	Storage	20 sq. ft.
d.	Seating for participants	4
e.	Seating for fans	100
f.	Judges' tables and bells, etc.	

8. Wrestling

a.	Correct mats	
b.	Appropriate equipment	
c.	Storage closet for equipment	150 sq. ft.
d.	Seating for participants	30
e.	Seating for fans	300
f.	Judges' table and seating	2

9. Gymnastics and Tumbling

a.	Mats	10 standard mats
b.	Horses	4
c.	Spring boards	4
d.	Rings	2
e.	Trampoline	1
f.	Parallel bars	2
g.	High bar	2
h.	Beam	1
i.	Storage closet for all equipment	250 cu. ft.
j.	Storage room	150 sq. ft.
k.	Seating for participants	30
l.	Seating for spectators	300
m.	Judges' tables	4

IV. GYMNASIUM (Related activities)

A. USE OF SPACE

1. Squash
2. Handball
3. Weight training
4. Message and therapy
5. Sauna bath
6. First aid
7. Dressing and locker rooms (men and women)
8. Office

B. OCCUPANTS

1. Participants
2. Spectators
3. Officials
4. Staff

C. CHARACTER

Open and unobstructable

D. EQUIPMENT

1. Squash

a.	A correctly marked and sized court	
b.	Seating for players	6
c.	Seating for spectators	50
d.	Concrete walls and hardwood floor	
e.	Judges' view and table	1

2. Handball		
a. Correctly marked and sized court		
b. Concrete walls, hardwood floor		
c. Seating for players	6	
d. Seating for spectators	50	
e. Judges' table	1	
3. Weight training		
a. Assorted bar and dumb-bell	5000	lbs.
b. Slant boards	2	
c. Leg press machine	1	
d. Benches for bench press	2	
e. Leg exersizer	1	
f. Mats	150	sq. ft.
g. Mirror	2	wall
h. Punching bag	1	
i. Speed bag	1	
j. Chin bar	2	
k. Water fountains	3	
l. Treadmills	2	
m. Bikes	2	
4. Message and therapy		
a. Message tables	2	
b. Sun lamps	2	
c. Whirl bath	1	
d. Whirl pool	1	
e. Foot bath	1	
f. Double standard sink	1	
g. Counter	10	sq. ft.
h. Storage cupboard	75	cu. ft.
i. Storage room	25	sq. ft.
j. Ultra-sound machine	1	
k. Medicine cabinet	1	
l. Lifting bench	1	
m. Lifting table	1	
n. Assorted weights	200	lbs.
o. Various body harnesses		
5. Sauna bath		
a. Seating	15	
b. Shower stall	1	
c. Drinking fountain	1	
d. Heating cabinet	1	
e. Steam inlet	1	
f. Towel storage	20	sq. ft.

6. First aid

a.	Desk	1
b.	Clinic type beds	2
c.	Double stainless standard sink	1
d.	Equipment storage	25 sq. ft.
e.	Counter	15 sq. ft.
f.	Drug and medicine storage	1
g.	Small safe	1
h.	Recessitator	2
i.	Portable stretchers	2
j.	3x5 filing cabinets	2
k.	Access to exterior should be immediate	

7. Dressing and locker rooms (men and women)

		men:	women:
a.	Lockers	1000 sq. ft.	300 sq. ft.
b.	Seating	100	50
c.	Urinals	8	0
d.	Water closets	8	8
e.	Bathroom sinks	12	8
f.	Towel dispensers	6	4
g.	Mirrors	3	2
h.	Shower stalls	20	10
i.	Weight scale	2	1
j.	Hanging space for coats, etc. located very near the lockers		

8. Office

a.	Seating	3
b.	Desk	1
c.	Work table	1
d.	Standard stacked files	2
e.	Coat closet	15 sq. ft.
f.	Storage closet	15 sq. ft.

V. SWIMMING POOL

A. USE OF SPACE

1. Recreational swimming
2. Competative swimming
3. Diving

B. OCCUPANTS

1. Participants
2. Staff
3. Spectators
4. Officials

C. EQUIPMENT

1. Recreational swimming

a.	Pool	1
b.	Life guard chair	2
c.	Life saving poles	4
d.	Life saving rings	4
e.	One-meter board	1
f.	Three-meter board	1
g.	Deep-end rope	1
h.	Seating for swimmers	40
i.	Seating for spectators	300

2. Competative swimming

a.	Pool	1
b.	Life guard chair	2
c.	Life saving poles and rings	4
d.	Marked racing lanes	6
e.	Lane divider ropes or lines	5
f.	Seating for competitors	20
g.	Starting block for each lane	6
h.	Seating for spectators	300
i.	Judges' stand	2

3. Diving

a.	One-meter board	1
b.	Three-meter boards	1
c.	Standards for boards	1
d.	Pool	1
e.	Judges' stand	2
f.	Seating for spectators	300
g.	Life saving equipment as listed for swimming	

VI. SWIMMING POOL RELATED AREAS

A. USE

1. Equipment storage
2. Dressing, locker and rest rooms
3. First aid
4. Office

B. OCCUPANTS

1. Participants
2. Staff
3. Spectators
4. Officials

C. EQUIPMENT

1. Equipment storage

a.	Life saving equipment racks	3
b.	Bulk storage	200 sq. ft.
c.	Shelving	120 sq. ft.

2. Dressing and locker rooms
   See dressing and locker rooms in Gymnasium related section - IV.D. #7.

3. First aid

a.	Stretchers	2
b.	Sink	1
c.	Work counters	10 sq. ft.
d.	Recessitator	2
e.	Medical cabinets	1
f.	Seating	2
g.	Bed or cot	2

4. Office

a.	Desk and chair	1
b.	Seating	2
c.	Standard single file cabinet	1
d.	Clothes closet	12 sq. ft.
e.	Storage closet	12 sq. ft.

VII. LIVING

The living area will require the following functional spaces and duties:

A. LOBBY AND LOUNGE
B. REST ROOMS
C. APARTMENTS WITHOUT KITCHENS
D. APARTMENTS WITH KITCHENS

VII. A. LOBBY AND LOUNGE

1. Use
   a. Distribution point for tennants
   b. Guest waiting area
   c. Television viewing
   d. Relaxation place

2. Occupants
   a. Tennants
   b. Guests
   c. Staff

3. Equipment

a.	Seating	10
b.	Tables	2
c.	Access to rest rooms	
d.	Magazine racks	1
e.	Television stand	1

VII. B. REST ROOMS (public)

1. Occupants
   a. Guests
   b. Tennants

2. Equipment

Men:

a.	Urinals	2
b.	Sinks	2
c.	Mirror	1
d.	Water closets	2
e.	Towel dispensers	2
f.	Seating	2
g.	Coat storage	4 hooks

Women:

a.	Sinks	2
b.	Mirror	2
c.	Water closets	3
d.	Towel dispensers	2
e.	Seating	2
f.	Couch	1
g.	Coat storage	4 hooks

VII. C. APARTMENTS WITHOUT KITCHENS

1. Use
   a. Living quarters for one individual
   b. Overnight rental facilities

2. Occupants
   a. Permanent renters
   b. Overnight visitors
   c. Short term stayers
   d. Staff

3. Equipment

a.	Space for single bed	1
b.	One standard four drawer chest	1
c.	Seating	3
d.	Desk and chair	1
e.	Clothes closet	12 sq. ft.
f.	Television table	1
g.	Standard bathroom sink	1
h.	Small bathroom cabinet	
i.	Small under-counter storage closet	

VII. D. APARTMENTS WITH KITCHENS

1. Use
   Living quarters for permanent renters

2. Occupants
   a. Renters
   b. Staff

3. Equipment

a.	Single bed	1
b.	Six-drawer chest	1
c.	Seating	3
d.	Desk and chair	1
e.	Clothes closet	15 sq. ft.
f.	Television space	1
g.	Bathroom sink	1
h.	Double kitchen sink	1
i.	Sink cabinet	
j.	Kitchen counter	12 sq. ft.

k.	Kitchen cabinets	
l.	Kitchen storage	
m.	Small eating area	
n.	Refrigerator	1
o.	Range and oven	1
p.	Fan	1

VIII. FOOD SERVICE

The food service area will require space for the following activities:

A. CAFETERIA
B. KITCHEN
C. OFFICE
D. REST ROOMS (staff)
E. REST ROOMS (public)

VIII. A. CAFETERIA

1. Use
   a. Serving of food
   b. Consumation of food

2. Occupants
   a. Members
   b. Guests
   c. Boarders
   d. Local people
   e. Staff

3. Equipment

a.	Serving counter	15 sq. ft.
b.	Display counter	20 sq. ft.
c.	Work counter	15 sq. ft.
d.	Cabinets for service	2
e.	Cooler cabinets for service	2
f.	Refrigerator	1
g.	Counter for cash register	
h.	Standard double server milk cabinets	1
i.	Coffee and tea servers	2
j.	Tray storage	
k.	Adequate tray sliders	

l.	Dirty dish and utensil pick-up	
m.	Clean dish and utensil distributors	
n.	Napkin, salt and pepper dispensers	1
o.	Seating	50
p.	Table and counter space for customers	20 sq. ft.
q.	Coat storage	50 coats
r.	Waiting area	50 sq. ft.
s.	Water spouts and glass storage	3
t.	Storage bins for mobil tray racks for dish and garbage pick-up	
u.	Storage cabinets	
v.	Storage room	150 sq. ft.

VIII. B. KITCHEN

1. Use
   a. Preparation of food
   b. Dishwashing
   c. Garbage disposal
   d. Food storage

2. Occupants
   a. Cooks
   b. Dishwashers
   c. Clean-up people

3. Equipment

a.	Standard kitchen grills	2
b.	Commercial ovens	2
c.	Food preparation counter	20 sq. ft.
d.	Meat preparation counter	10 sq. ft.
e.	Meat storage	50 sq. ft.
f.	Refrigerator	1
g.	Food preparation sinks	2
h.	Standard cupboard storage	
i.	Wooden carving clock counter	12 sq. ft.
j.	Pot, pan and untensil storage	
k.	Heating elements for kettles	4
l.	Overhead hangers (mobil)	20
m.	Appropriate dishwasher	
n.	Large washing double sinks	2
o.	Storage cupboards	
p.	Garbage disposals	2
q.	Bulk storage	150 sq. ft.
r.	Seating	3
s.	Coat closet	15 sq. ft.
t.	Time clock	1

VIII. C. OFFICE

1. Use
   a. Staff orientation
   b. Menu organization
   c. Cafeteria management

2. Occupants
   a. Food service director
   b. Employees

3. Equipment

a. Desk and chair	1	
b. Seating	3	
c. Filing cabinets	2	
d. Work table	8	sq. ft.
e. Mimeograph machine	1	
f. Calculator	1	
g. Coat closet	10	sq. ft.
h. Bulletin board	15	sq. ft.
i. Storage closet	15	sq. ft.

VIII. D. REST ROOMS (staff)

1. Use
   Toilet needs

2. Occupants
   a. Men on staff
   b. Women on staff

3. Equipment

Men:

a. Urinals	2	
b. Water closets	2	
c. Standard bathroom sinks	2	
d. Mirror	1	
e. Towel dispensers	2	
f. Changing space and clothes hanging	75	sq. ft.
g. Seating	4	

Women:

a.	Water closets	3
b.	Standard bathroom sinks	3
c.	Mirror	1
d.	Towel dispensers	2
e.	Make-up counter	8 sq. ft.
f.	Couch	1

IX. CHAPEL

A. ASSEMBLY AREA

1. Seating
2. Pulpit
3. Office

B. OCCUPANTS

1. Members
2. Guests
3. Chaplin

C. EQUIPMENT

1.	Seating		
	a. Seating	200	
	b. Hymn book storage	100	
	c. Storage room	100	sq. ft.
2.	Pulpit		
	a. Speaking pulpit or stand	1	
	b. Organ or piano	1	
	c. Table	1	
3.	Office		
	a. Desk and chair	1	
	b. Storage closet	15	sq. ft.
	c. Coat closet	15	sq. ft.
	d. Book storage	200	volumes
	e. Double file	1	
	f. Seating	2	

X. JANITORIAL SUPPLY STORAGE

- Located throughout building where needed
- Central area needed for storage of extra equipment
- Each space includes slop sink

XI. MECHANICAL AREA

- Adequate space for all heating, air-conditioning, and water heating and circulationg equipment

XII. PARKING

- Parking to serve guests and members

XIII. ENTRANCE TO GROUNDS AND BUILDINGS

- Easily accessible
- Orient public to various areas

XIV. SERVICE AREA

- Easily accessible
- Space for at least two trucks

MONTANA STATE UNIVERSITY LIBRARIES
stks 720.6.M76B644 CA
A YMCA facilities building for Bozeman,
3 1762 00154569 6

~~NA 2540~~
[redacted]
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~~LIB. USE ONLY~~