

abstract

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Submitted for the degree of Master of Architecture in the Department of Architecture on August 20, 1956.

Ever since the white man came to the North American continent, the aborigine has been persecuted, murdered, pushed from his land, and has seen his culture virtually obliterated. In the past, few people have recognized the richness and beauty of the Indian tradition, but in the last fifty years some persons have become aware of the plight of the Indian and are determined to do something about it.

The men and women comprising the body of the Crazy Horse Commission are some of these interested persons. The commission, founded in 1947 under the leadership of Korczak Ziolkowski, has dedicated itself to helping the aboriginal people of our continent. The function of the commission is embodied in its three major purposes: one, to create the Crazy Horse Memorial, an area set aside to honor the great Indian leaders; two, the building of the Museum of the North American Indian, where the scattered collections from a hundred-odd museums can be gathered together, investigated, catalogued, and finally displayed before the public in a logical and comprehensible sequence, and three, the establishment of a University and Medical Center with the expressed purpose of helping the Indian to take his rightful place in our society. This thesis is directly concerned with the first two purposes of the commission.

In the spring of 1947, work was begun on a huge mountain carving, to be the major portion of the Crazy Horse Memorial. Now that the carving is

well under way, the time has come to begin work on the second part of the project, the Museum of the North American Indian. The purpose of this thesis is the design of the museum and its contiguous facilities to allow the visiting public to view the mountain from a short distance and to examine the culture of our aboriginal ancestors as displayed in the museum exhibits and galleries.

Because the time that the average visitor will spend on the site is very brief, a powerful emotional impact of some sort is the surest way to insure the retention of impressions. For this reason, the writer has tried to direct the visitor along a logical sequence of points of interest climaxing in a plaza which has a clear view of the mountain across an artificial lake. Surrounded by the rugged natural terrain and the towering pine forests that dominate the entire area, the visitor is yet kept constantly aware of the purpose of the project by being able to see the Crazy Horse sculpture from most points of the complex.

Cambridge, Massachusetts

August 17, 1956.

Pietro Belluschi, Dean
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dean Belluschi:

I hereby submit this thesis, entitled
"A Museum of the North American Indian" in
partial fulfillment of the requirements for
the degree of Master of Architecture.

Very truly yours,

Carl R. Nelson, Jr.

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South Dakota

foreword

When the first white settlers came from Europe in 1607 and again in 1620, they faced many problems—starvation, pestilence, capricious climates, and, largely through their own mistakes, Indian warfare. It must be remembered that the Puritans looked at the world with their own narrow perspective and they saw very little of worth in the "pagan" and "primitive" culture of the Indians. Believing that they were the sole possessors of all truth, they undertook to make the New World a Puritan world, eminently West European and thoroughly civilized. Disregarding the rights of the Indians as human beings, the white man systematically dispossessed the Indians for over two hundred years, pushing them farther and farther west.

During this period, treaty after treaty with the Indian nations was broken until, in 1860, President Andrew Johnson signed a treaty with the aborigines of the Dakota territories, preserving their sacred paha sapa (the Black Hills) as Indian territory forever.

In 1874, gold was discovered in the Black Hills, and the white man broke this treaty as well. At this breach of trust, the entire Sioux nation went on the warpath to preserve their land. When the fighting had subsided, the white man decided that the only way to break the Indians' resistance was to kill or imprison all of their leaders. Crazy Horse, a Sioux war chief, was the last Indian leader to be persuaded to make peace. He was bayoneted in the back while talking peace at Fort Robinson, on September 6, 1877. His life, a span of thirty-four years, was a mirror

* Carl R. Nelson, Jr., and Norman D. Day, "The University of North America." B. Arch. thesis, University of Minnesota, Minneapolis: 1955.

of all the wrongs perpetrated against the American Indian by the white man.

The treatment of the American Indian--the seizing of their land, the obliteration of their culture, and the crushing of their pride--is perhaps the blackest mark against the white man in the history of our nation.

Today, more people are becoming aware that the Indian people and their culture must be saved. Somehow, these few interested persons must raise up the Indian to a status equal to that of any other residents of the United States. One of these interested persons is Korczak Ziolkowski, who was born on September 6, 1908. The endeavors of this man, the son of Polish immigrants, were to bring a new hope for the deposed and nearly forgotten Indians, for, in 1947, Korczak Ziolkowski began work on the Crazy Horse Memorial.

The Crazy Horse Memorial will someday include a university, medical center, and museum for the Indians of North America. The memorial will include a huge carving of Crazy Horse, hair shirt warrior of the Lacota tribe of the Teton Sioux, that will be the largest piece of sculpture in the world. The real purpose of the memorial, other than creating a monument to the great Indian leaders of the past, is to provide the impetus for a technological, scientific, and cultural awakening among the Indians of North America.

In its eventual development, the memorial may extend for miles in all directions, preserving the surrounding area in its present state for the development of the University and Medical Center and its supporting community.

When the Crazy Horse Memorial becomes a reality, it will contribute greatly toward enabling the Indians of this continent to take their rightful place in our civilization.

introduction

Seventeen years ago, in 1939, a Teton Sioux Indian chief named Henry Standing Bear read an article in the New York Times praising the work of a young sculptor named Korczak Ziolkowski. Henry Standing Bear had seen the plight of his people grow continually worse ever since he was a young boy. He had seen the white man carve a huge monument to his great men into the rocks of the Indians' sacred Black Hills. He felt that the Indians should also have a memorial to their great leaders just as the white man now had. He wrote to the young sculptor and asked him to come to South Dakota to discuss the carving of such a memorial.

Ziolkowski came to the Black Hills to discuss a carving, but he was apprehensive about the real value of any such project as an end in itself. The most pressing problem of the North American Indian was his acceptance into society by the bulk of the people. The root of their problem seemed to be that the Indian needed more highly educated men and women who could lead their aboriginal ancestors out of their increasingly worsening situation. Ziolkowski felt that a University, including a medical center and a large museum for the purpose of showing and preserving the culture of the North American Indian, would be of infinitely more value to the Indian peoples than would be a carving only. A memorial sculpture of some type could then be incorporated to serve as an instrument of attraction to the thousands of tourists who frequent the Black Hills each year. Under these conditions Mr. Ziolkowski accepted the challenge.

At first, Mr. Ziolkowski planned to establish the University and memorial near Deadwood, South Dakota, where the greatest numbers of Black Hills

tourists come each year. However, after the war's interruption, in 1946, the land around and including Thunderhead Mountain near Custer, South Dakota, was brought to his attention.

The land was rugged and heavily wooded with virgin forest; the mountain was an almost perfect single piece of granite 3000 feet long, only about 100 feet thick at the top, and rising 520 feet out of ponderosa pine forest. The shape of the mountain, therefore, gave him an opportunity to make a three-dimensional sculpture of it and the northwest-southeast direction would take the best advantage of natural sun lighting of the sculpture; the land adjoining would be ideal for a dramatically-situated campus secluded from the public.

Now that the site had been chosen, Mr. Ziolkowski purchased the nearby homestead of Mr. William Eller and established his residence there. In the spring of 1948, work on the Mountain began. In that year Mr. Ziolkowski built his studio home, completed the groundwork for the establishment of a substantial dairy ranch, and made a complete geological exploration of the mountain.

During 1948, the sculptor tried to run the project on contributions from tourists, but it proved to be grossly inadequate. Fearing that federal aid would imply too much government control, he turned to charging admissions, the method of financing employed until the present.

The establishment of the Crazy Horse Memorial Foundation, consisting of a state commission and a national commission, in 1948 was followed by the federal government's making the foundation tax-exempt because of its future educational value. The commissions employ a full-time public

relations man, Mr. Gordon Sessions, in Washington, D.C., to write articles for the Hearst papers and for several national magazines.

During the last eight years, the engineer-sculptor has painted the outline of the carving on the face of the mountain to help clarify the explanations to the tourists, has done a substantial amount of work on the memorial, has staked out the airstrip to be used in conjunction with future development, and has cleared the path for the main road to the museum.

Construction of the museum will begin within the next few years with construction of the university and medical center to follow as soon as funds allow.

Presently, the project is carried on entirely by Mr. Ziolkowski with the state and national commissions of the Crazy Horse Memorial Foundation serving in advisory capacities.

The state commission, which meets twice each year, consists of from nine to twenty-four members (twelve at the present time) and has the following members:

Mr. Korczak Ziolkowski, Chairman	Custer, South Dakota
Mrs. Korczak Ziolkowski	Custer, South Dakota
Col. Will Robinson, State Historian	Pierre, South Dakota
Mr. Bob Lee, Executive Assistant	Pierre, South Dakota
Congressman Harold Lovre, State Representative	Washington, D.C.
Dr. Jonas, President, Spearfish T.C.	Spearfish, South Dakota
Mr. Ken Keller, President, Homestake Gold Mine	Custer, South Dakota
Mr. Eric Heidepriem, Board of Regents of South Dakota	Rapid City, South Dakota

Mr. Hoadly Dean, State Highway Commissioner	Rapid City, South Dakota
Dr. Paul Calvird, physician and surgeon	Custer, South Dakota
Mr. Leslie Jensen	Hot Springs, South Dakota
Mrs. J. A. Wallace	Custer, South Dakota

The national commission of twelve members, selected for life, consists of the following persons:

Mr. Charles A. Morse, Past President of the Automotive Eng. Ass'n. and retired engineer of Pratt and Whitney Aircraft	West Hartford, Conn.
Mrs. Esther Van Wagoner Tufty, President of Tufty News Bureau and representative of King Feature Syndicate	Press Bldg., Washington, D.C.
Mr. Samuel A. Thompson, for 30 years Chief of Educational Dep't., of the Indian Bureau, Dep't. of the Interior	Washington, D.C.
Mr. Karl Mundt, Senator from South Dakota, member of the Committee on Expenditures in the Executive Dep't., and also of the Senate Investigations Subcommittee	Madison, S.D., and Wash- ington, D.C.
Mr. Fred Christopherson, Editor of the <u>Daily Argus Leader</u> , leading S.D. newspaper	Sioux Falls, South Dakota
Col. W. G. Robinson, State Historian of S.D.	Pierre, South Dakota
Judge D. W. Davis, Judge of the County Court, Custer County	Custer, South Dakota
Chief Henry Standing Bear (deceased), Leader in the Tribal Council of the Oglala tribe of Sioux Indians, in South Dakota	Pine Ridge, South Dakota
Justice N. B. Johnson, Justice of the Supreme Court of Oklahoma	
Mr. Will Rogers, Jr., member of Nat'l. Congress of American Indians, Beverly Hills Citizens' Bldg.	Beverly Hills, Calif.
Mr. Korczak Ziolkowski, sculptor of Crazy Horse,	Custer, South Dakota
Dr. Paul Calvird, physician and surgeon, Treasurer	Custer, South Dakota

To date, the project has been financed almost entirely by the tourists' admissions. The sale of contributory bonds in amounts from 50 to 5000 dollars is another method of financing which has been started by the commissions. The latter idea is still in its infancy, but will gain momentum as the project grows. The third method of financing is through outright gifts to the fund. The project has had only a few donations of this type, but more are expected in the future.

statement of the problem

The problem is the design of the Museum of the North American Indian, including facilities for both the general public and the students. The complex, it is expected, will someday be the center for study of the culture of the North American Indian. The main purpose of the museum is the presentation of material which will reveal the meaning and value of the history and the culture of the American Indian; secondly, the museum must preserve and catalog articles and artifacts of any significance.

There are existing presently museums neither large enough nor complete enough to enable the student of the North American aborigine to get a comprehensive picture of the ancient civilizations and cultures.

The material for such a museum does exist, however, but it is scattered through more than a hundred museums all over the continent. One of the main purposes of this museum, then, is to gather this material from all over the continent and make it available to all interested people, whether students or spectators. It is interesting to note that the Crazy Horse Commission has been offered the complete collections of twenty-two museums once the facilities are made available to house them. If such cooperation and foresight now exist in the continent, the procuring of the material necessary to make the museum the heart of our aboriginal culture will be made far less difficult.

The museum complex will consist of the following parts:

a. Administration

The purpose of this section is the supervision of the museum and the direction of all of the activities connected with the museum. It will include

all of the offices of the curators and of the assistant curators.

b. Public Exhibition

The public exhibition area will be the principal area of the complex and is for the purpose of presenting the material in as congenial and attractive surroundings as possible so as to reduce the fatigue which results from monotony.

c. Semi-public Functions

The semi-public functions are all those things to which the general public will not ordinarily be admitted, and in which they will probably not be interested. But should people want or have need for access to these areas, admittance will be granted. The areas will include research galleries, work rooms, class rooms, a library, a photography room, an art room, and an auditorium. The auditorium will be open to the public most of the time.

d. Research and Laboratory Areas

These spaces will be available only to the staff of the museum, to a limited number of students, and to any individual acquiring permission from the director or from one of the curators.

e. Service Areas

The service facilities are all those operations and spaces necessary for the successful functioning of the entire complex. A superintendent's office and employee facilities will be included in the service area.

f. Social Functions

The social functions are included principally for the convenience and education of the tourist, but, of course, may be used by the students,

faculty, and staff as well. The social functions will include a restaurant, lounges, and a trading post.

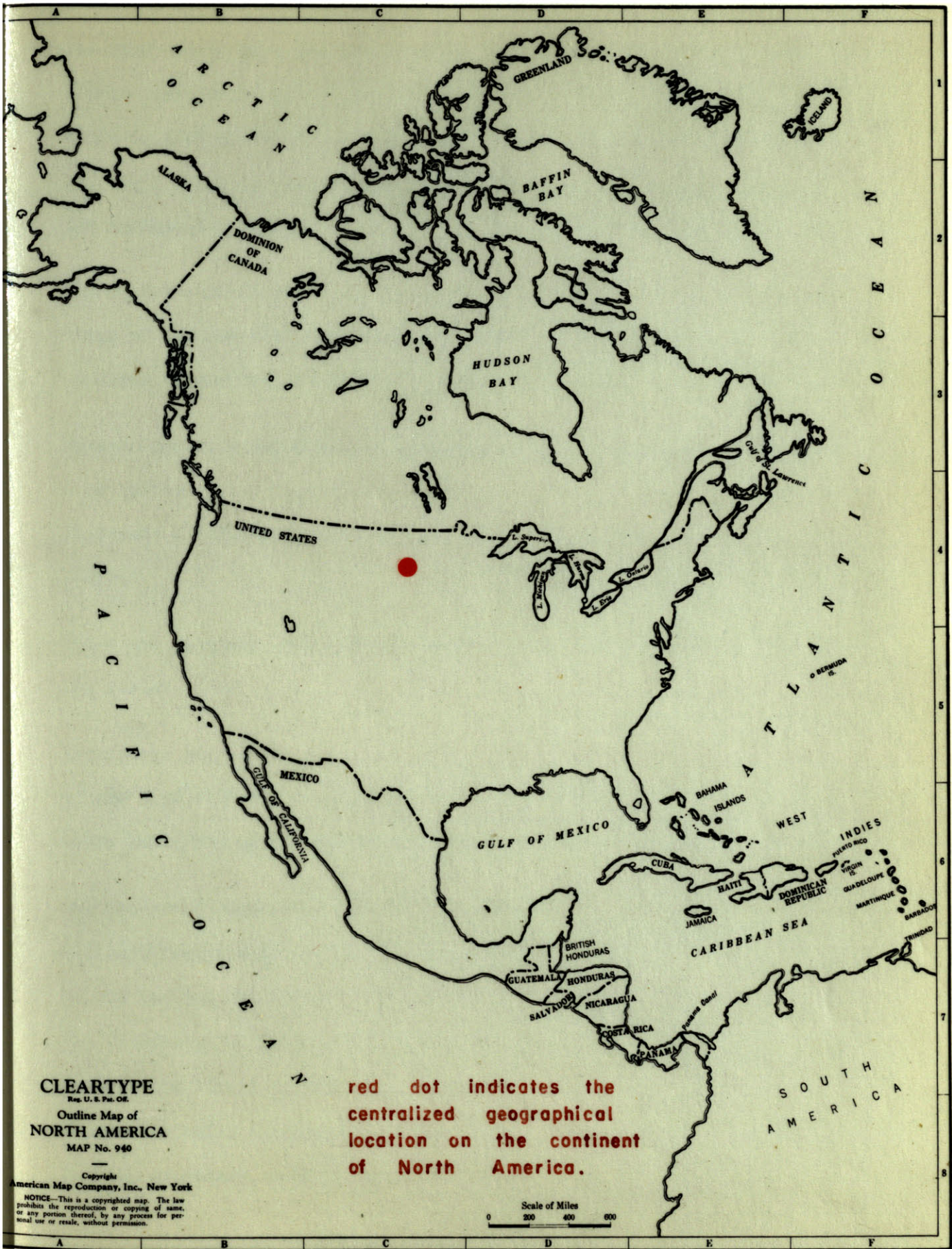
In addition to the above, a large plaza is to be incorporated with the complex so as to allow the tourist to view the mountain carving across the reflecting lake.

THE SITE

The site consists of approximately 10 acres of virgin ponderosa pine National Forest, 800 feet to the SW of Thunderhead Mt., lying approximately four and one half miles north of Custer, South Dakota, in the northeast quarter of Section 34, Tract 2, South, Range 4 East, B.H.M., Range Management map, State of South Dakota. The site is a portion of a 360-acre tract of land that Mr. Ziolkowski recently acquired from the National Forest Service in exchange for 360 acres of land near Wind Cave National Park.

The land is part of the Black Hills uplift consisting of an irregular dome-shaped anticline of an oval-shaped area 60 by 125 miles. The area is of Pre-Cambrian crystalline rocks (schist) brought above the general surface level and surrounded by a complete sequence of Paleozoic rocks from Cambrian to Lerenic, all dipping away from the central nucleus. It is a region of exceptionally fine and rugged exposures, having a great many erosion-formed canyons and gorges.

The climate is quite temperate, though changeable, throughout most of the calendar year, with the temperature seldom dropping below zero. The amount of snow from year to year is not constant, seldom staying very long when it does come, and is not, therefore, of too great a consequence.



red dot indicates the centralized geographical location on the continent of North America.

CLEARTYPE
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 Outline Map of
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 MAP No. 940

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Scale of Miles
 0 200 400 600

The wind coming from the nearby plains of Wyoming and Montana is very strong throughout most of the year. The prevailing storm path in the hills is from the Rocky Mountain areas of Wyoming, Montana, and Idaho, and the prevailing ground breezes throughout most of the year are from the northwest.

The museum site is rocky and generally irregular, with granite outcroppings of various sizes and shapes. Immediately to the southeast of the 10 acres is the bed and flow of Laughing Water Creek.

Between the site and Thunderhead Mountain lies a wide ravine containing many springs lying in positions where their flow may be easily dammed up to create a reflecting lake between the ~~mountain~~ mountain and the museum and its plaza.

There are no roads on the site at present save a few old logging and mining roads.

Contiguous structures are of no consequence, for there are no buildings of any kind within one quarter of a mile of the site, but in the future other buildings of the University and Medical Center will be nearby.

The projected contiguous areas and functions are as follows: entrance to and exit from the site will be along a northeast-southwest line, entering NE and leaving SW; to the northwest is the proposed site for the campus of the University of North America, with the semi-public function buildings such as the Fine Arts Theater, Administration Building, and the Main Auditorium being closest to the museum, i.e., the public facilities; to the ~~the~~ southeast, as was previously stated, lies the bed and flow of

Laughing Water Creek, across which is the proposed site for the Medical Center. It is the wish of Mr. Ziolkowski that the area between the public and the mountain be flooded to serve as a reflection for the carving and to prohibit the public from going up to the actual sculpture.

An unlimited supply of granite is available on the site either for masonry units in themselves or as aggregate for concrete. Also available in a more limited quantity is ponderosa pine and a small amount of birch. Brick is quite hard to come by, as are soft stone and tiles, the nearest supply being hundreds of miles away.

program

THE MUSEUM COMPLEX

The functions will be divided into the following classifications:

- a. Administration
- b. Public Exhibition
- c. Semi-public functions
- d. Research and labs
- e. Service
- f. Social functions

Restaurant

Lounges

Auditorium

Trading Post

a. Administration

The administrative section is the "brain" of the entire complex. Its purpose is the supervision of the museum complex proper and the organization of the activities within or directly related to it. Financial matters will also be handled within this section.

Its location should be positioned so that it is not directly available to the public. It should be directly related to the library, however, and easily accessible to the research facilities and the laboratories. It needs no special servicing of any kind.

1. Director's Office

The director's office should be accessible to the public through a reception area with control being effected by the director's secretary. The

director may or may not be provided with a separate lavatory and/or toilet.

400 sq. ft.

Director's secretary

160 sq. ft.

2. Curatorial offices and assistant curatorial offices (three of each)

These offices should again be accessible from the reception area and should be closely related to the director's office. Space for two secretaries will be provided with provision for two part-time secretaries when necessary. The curatorial offices will be provided with lavatories; the assistant curators' offices will not.

Each curatorial office

320 sq. ft.

Each ass't. curatorial office

240 sq. ft.

Secretarial space

600 sq. ft.

3. Reception area

This area should be accessible to circulation so that the public need not interfere with the functioning of the administrative section. It may be possible to make the library accessible from this space as well. It is merely a small waiting area serving as contact between administration and public. Toilet facilities need not be provided unless accessibility to the nearest ones is difficult.

320 sq. ft.

4. Conference Room

The conference room will be used for public, board, commission, and staff conferences. It should, if possible, command a pleasant view. It should likewise be directly accessible from the reception-waiting area and from the director's office, although these relationships are not extremely important.

800 sq. ft.

5. Bursar's Office

This area should be adjacent to the reception area and secretarial space. It should be amply secure from any possible theft and should be substantially constructed. A large safe will be included. The bursar's office will handle all museum payrolls and all receipts from the complex.

240 sq. ft.

b. Public Exhibition Space

The primary purpose of the exhibition space is the presentation of material that will reveal the meaning of the history and culture of the North American Indian. To do so, the museum must accomplish the following three things:

1. Present a dramatic and precise picture of the story that is to be told to the public.
2. Illustrate in a never-to-be-forgotten manner the story of the North American aborigine.
3. Show the Indian situation as it is today and what it will be or should be in the future.

The exhibits must be varied, and the story of progress and development should be shown in a manner that expresses the interrelationship of the physical environment--animals, birds, plants, insects, heavens, etc.--with the life of the Indians. For the sake of the public, it is important that the exhibits be logically classified, i.e., chronologically, etc., not only for the orderly presentation of the material, but also so that a visitor may see as much or as little of the material as he desires. A classification by division of this sort has the disadvantage of tending toward segregation, with the result that comparative interests and values

are frequently obscured or lost, except for the few specialists who want them and who know where to look for them.

The exhibition area or areas must be as flexible as possible so that the organization and sequence of material may change from year to year or from director to director. Absolute flexibility is also important when one considers that a museum is never complete because it is continually expanding.

All available sources on museum display seemed to agree that no permanent exhibits should be included in any museum, for science is moving ahead too swiftly; new discoveries are made almost daily that prove other information incorrect, obsolete, or at least subsidiary. Permanent-type exhibits, however, that can be handled as an integral unit are in many cases extremely advantageous.

Access to the exhibition space should be very free and easy, both physically and psychologically. Architectural expression should not form a barrier to the inexperienced visitor, for museums usually labor under inherent disadvantages.

The most serious failing of museums in the United States is "museum fatigue." This is the gradual decrease in interest as visitors move through the exhibits. Many studies have been made to determine the exact cause of "fatigue," and suggestions have been made to correct the situation. Below are some of the findings of these studies:

1. Exhibits of uniform size and arrangement do not attract the visitor as do varied exhibits, each of which has something special to offer.
2. The more monotonous the exhibits, the more that the attention will be diverted and will wander to other things.

3. Modern and adequate lighting do much to enhance the exhibits.
4. Fireproof construction so that smoking will be allowed in the exhibit areas helps ease some physical tension.
5. Resting facilities with comfortable seats at intervals will allow people to take a break when they wish.
6. "If it is possible for the visitor to have a drink, he will be completely happy." *

30,000 sq. ft.

c. Semi-public Space

The semi-public area will include the functions with which the general public will not be generally or solely concerned. Parts of it must, however, be accessible to those who do wish to use them. This area, which includes the curatorial space,** work rooms, research galleries, the classrooms, auditorium, and library, will be used principally by the students, faculty, and by small outside groups wishing to use its special features.

1. Research galleries

These will be areas of exhibits where students and faculty may study specimens at their leisure, free from the noise and interruption of the public. Here the exhibit pieces will be catalogued in scientific manner, i.e., by family, genus, species, etc., or other comparable arrangement. These galleries will contain the objects less obviously significant than those on public display. They should be adjacent to work rooms and easily accessible to curatorial space and to the library and laboratories.

3200 sq. ft.

* 4:82

** The space where collections are kept and studied. There must be no dead storage space for collections. 5-1:212

2. Work Rooms

Eight work rooms will make up a portion of the semi-public area, their assignments being according to the proportional amount of use by students, faculty, and visitors. The rooms will be adjacent to the research galleries and easily accessible to the library.

Each work room	400 sq. ft.
Total area of work rooms	3200 sq. ft.

3. The Library

The library is necessarily one of the core elements of the museum. The stack areas of the library must be available to students, faculty, staff, and public. In addition, it must be readily accessible to the research galleries, work rooms, and laboratories. A large lounge with chairs and writing tables, adjacent to the periodicals, would be a great convenience. Stacks would also contain film storage used both for museum use and for renting or lending to private individuals or agencies. Film viewing facilities will be available in some or all of the class and lecture rooms and in the auditorium.

A small office adjacent to the lounge and/or stacks will be provided for the librarian.

8000 sq. ft.

4. Classrooms

Four classrooms for the instruction of students of the proposed University and ^{for} occasional talks or lectures to small groups of the public will be provided in conjunction with the semi-private museum functions. These four spaces should be capable of seating up to fifty people for lectures, but only need accommodate a maximum of twenty-four students for class

instruction. The rooms should all be equipped for visual education.

Each classroom	800 sq. ft.
Total classroom area	3200 sq. ft.

5. Auditorium

The auditorium is to be provided mainly for the public, but will also be used by student groups of the university. It will be employed mainly for talks and motion pictures about aboriginal North America. A small stage with a cinema screen and a projection booth should be provided.

The auditorium will seat a maximum of 400 people.

6000 sq. ft.

6. Curatorial Space

This is a storage area and reference room which is adjacent to the research galleries and work rooms so that people who wish to do so may secure things from the permanent museum collections and then study them in either of the aforementioned contiguous functions. In addition, the reference room should not be far removed from the library stacks, where books used in the study would be obtained.

20,000 sq. ft.

d. Research and Laboratory Space

The research and laboratory space will be used by students, faculty, and by visiting scientists and scholars. It will contain six laboratories, which will be for the use of the faculty and staff of the museum. These labs will be used for special research projects, scientific investigations, and preparation of exhibits and specimens for the museum proper. Curators and assistant curators will be provided with their own small private research laboratories. Other members of the staff will have private

offices in this area. A photography room will be available for copy work, developing, and printing.

1. Taxidermy lab

The taxidermy lab will be the area where all specimens will be prepared for exhibits. The space must be amply equipped with work space and laboratory equipment. In addition, a large cold-storage room must be provided for storing carcasses previous to their preparation. The cold-storage room may be central to the laboratories needing such a facility.

480 sq. ft.

2. Anthropology lab

The anthropology laboratory is similar in its requirements to the taxidermy laboratory. The lab will be used in conjunction with the taxidermy laboratory in the preparation of exhibits and with the archaeology lab in the investigation of specimens and the determination of their classification.

480 sq. ft.

3. Archaeology lab

The archaeology laboratory will be principally concerned with the identification and classification of ancient material. A balance room and examination room, both dust-free, must be included.

480 sq. ft.

4. Zoology lab

The zoology lab, which will be operated in conjunction with the zoology department of the future University, will be composed of work space and standard laboratory equipment. Storage must be provided for instruments and pickled specimens.

320 sq. ft.

5. Botany lab

The botany lab will be similar in its composition and operation to the zoology laboratory.

320 sq. ft.

6. Geology lab

The geology lab again will be similar to the two preceding laboratories, but in addition a small assay room with the necessary equipment must be provided.

320 sq. ft.

7. Curatorial laboratories

The three curators and their assistants will be provided with small private laboratories, where they may carry on personal research as they see fit.

Each lab

240 sq. ft.

8. Staff offices

Twelve small offices for the laboratory staff will be situated in the area. These spaces are not for research, but are merely places where each member may keep his own records, books, etc.

Each office

120 sq. ft.

9. Curatorial staff offices

Ten small offices will be available for the curatorial staff for the keeping of records, storing of books, and for working on other data not directly used in laboratory work.

Each office

120 sq. ft.

10. Photography area

The photography area will be composed of three parts: one, the copy room, which is the largest of the three, ^{which} will be used for both photographic and photostatic copy work; two, the dark room, used for developing; and three,

a space to be used for printing. It will be necessary to provide ample storage for material and equipment of all kinds.

920 sq. ft.

11. Art Work area

The art work area functions consist of layout, drafting, and lettering material for the exhibits throughout the museum complex. It will be equipped with several layout tables, two drafting tables, and storage for supplies and tools.

400 sq. ft.

e. Service Areas

The service areas consist of loading, receiving, temporary storage, general work space, superintendent's office, first aid area, and employees' rooms. The loading and receiving areas are self-explanatory. The temporary storage area is for shipments previous to shipping or just after receiving or for exhibits prior to their being positioned. The general work area is principally for the construction and destruction of exhibits or models of exhibits. The superintendent's office should be centrally located in relation to the above so that he may exercise control over the service activities. The employees' facilities will include lockers, showers, toilets, and lounge for the staff of the museum complex. The first aid area is basically for the benefit of the visiting public.

1. Loading and receiving

This area should be kept entirely away from the public circulation. It will be the service center for the entire complex, including the restaurant and auditorium, and should, therefore, have convenient access to all of the storage areas. Adjacent to this area should be the assembly and

temporary storage area. All service is presumed to be vehicular.

800 sq. ft.

2. Assembly and temporary storage

The assembly and temporary storage area is adjacent to the loading and receiving area. It is for the assembly of outgoing shipments and the temporary storage of incoming material prior to its distribution throughout the complex.

800 sq. ft.

3. General work space

The general work space is an area for the preparation of exhibits, the building of models of the exhibits, and for the use of the museum staff and students. It is a space or spaces to be used as a multi-purpose area by anyone or for any purpose not otherwise provided for. This space may be divided into several components if it is deemed necessary or advantageous to the efficient functioning of the complex. It must provide for storage of materials, work bench space, and must have both hand and power tools. Circulation to the exhibition areas must be ample and quite direct.

3200 sq. ft.

4. Superintendent's office

The superintendent's office should be located in the immediate area of the loading, receiving, storage and work spaces so that the superintendent may easily exercise control over the service activities. He will organize outgoing shipments, check incoming shipments, be in charge of construction of exhibits, and direct the operation of the maintenance and custodial staff.

240 sq. ft.

5. Men and Woman Employees' Rooms

The employees' facilities will include locker rooms, toilet and shower

areas, and lounges where the staff may dress, clean up, eat lunch, or rest.

Each area

2000 sq. ft.

6. First Aid area

The first aid room will be a small one, easily accessible to the public functions, which will contain two cots in small rooms and a central examination space equipped for minor ailments. A toilet and wash bowl should be provided for the central space.

320 sq. ft.

f. Social and Commercial Areas

Within the museum complex, facilities must be provided where tourists can rest a while and have something to eat or drink. A restaurant will be accessible to the public for such occasions. In addition, a trading post will be provided where students of the university and members of tribes can sell art and handicraft. This will be one way by which students may earn money to help themselves through school.

1. Restaurant

The restaurant will be equipped with a main dining room which will seat approximately 250 people. In addition, a small private dining room should be provided where small groups may meet, secluded from the public. Additional outdoor space for dining may also be provided. A complete kitchen arrangement capable of preparing entire dinners will be included.

6000 sq. ft.

2. Trading Post

The trading post will be a sales and display area, again readily accessible to the public, where Indian students may display and sell their

art and handicraft work. Tribal craftsmen from all over the continent will likewise be allowed to display and sell work in the trading post.

3200 sq. ft.

g. Plaza and Circulation

The plaza and circulation areas are all those areas in which the public, students, staff, and faculty will move throughout the complex, and from which the public will view the huge memorial.

1. Plaza area

The plaza will be a large area, principally paved, within the complex, from which the public may view the mountain. In addition, areas of the plaza may be used for outdoor exhibitions or displays, outdoor dining in conjunction with the restaurant, etc.

2. Circulation areas

The circulation areas are all those spaces in which movement through the complex will be accomplished. The approximate area cannot be estimated or assigned, for it will be determined by the designer as the design progresses. Included in this section is all of the lobby and lounge space deemed mandatory for the functional operation of the complex and the comfortable accommodation of the public.

solution

The treatment of spaces and areas within the site was the most difficult problem encountered in attempting this thesis. Primary research indicated that the museum buildings should ideally be a compact unit, flexible within, for the most successful operation. A first scheme was guided by an attempt to satisfy this theory, but failed in that the mass of the building seemed almost to compete with the mass of the mountain.

A second scheme, then, abandoned the ideal solution and split the museum into a principal museum building, four exhibition buildings, and separate public facilities. This scheme was likewise put aside, for, when a strong solution was being approached, the distances which would have to be traversed by the visiting public over this rugged terrain became far too great to be practicable. Upon discarding the second solution, it was necessary to rethink the entire situation. The third and final scheme evolved from a complete reevaluation of the problem.

General Layout of the Area

The entry to the project is almost a mile southwest of the mountain, off of U.S. Highway #16. The public must drive over undulating terrain to get to the mountain. A strong axis seemed to be the most logical way to create a sense of dignity and monumentality within such a dominating site. This axis or mall will eventually be interrupted near the point of entry by the construction of an airstrip. When this is built, the means of access will be diverted through a tunnel under the strip and then will swing back onto the mall.

Minor memorials will be constructed along the mall in honor of Indian

leaders from all over the continent. These areas will in part help the visitor to realize that the dominant element, i.e., the Crazy Horse sculpture, is meant as a symbol of all Indian peoples.

A ring of unidirectional vehicular circulation was placed around the area containing all public functions. Where this loop meets the mall, a circular interchange will channel traffic to and from all points, including public parking facilities.

A visitor, upon entering the memorial and arriving at one of the parking areas (situated inside the ring road to either side of the axis) will be channeled along a pedestrian collecting mall, again on the axis. This will lead him to the large plaza. The plaza serves as a point of orientation and a place of arrival, all public functions being related directly to it.

The arrival at the plaza will be the culmination of the sequence of the mall. The real impact of the climax will come from the visitor's discovery of the artificial lake which serves as a barrier between the public and the mountain and as a reflector of the monument. The forward portion of the plaza is lowered six feet so that the visitor upon arriving at the plaza will see a greater expanse of water and thereby get a greater feeling of monumentality. The lower plaza extends forward from the upper portion, spanning the road and extending out over the open water. It is intended that this lower area will be the actual viewing platform, while the upper area will be devoted to the museum, to temporary exhibits, to dining, to the selling of souvenirs, etc.

The plaza is paved, for the most part, but landscaping will be incorporated in the area to give shade and a better sense of scale to the

visitor.

Arrangement of the Buildings

The functions have been arranged into four buildings: the first contains the public service facilities, i.e., the trading post and the restaurant; the second and third contain the public interest facilities which are available to the public (the auditorium and exhibition spaces, including the museum); and the fourth contains the functions with which the public will not generally be concerned--the library, curatorial space, administration, laboratories, etc.

The public interest and public service facilities are all entered from the upper plaza level, the public service facilities being near the principal means of access and egress and the public interest facilities being more removed so that the sequence of the mall is not likely to be interrupted by diverting the visitor's attention.

The functions with which the public is not generally concerned are contained in a single compact building set on a much lower elevation and screened from the public by the trees. Access to this building is by a separate road feeding from the ring road.

Design of the Buildings

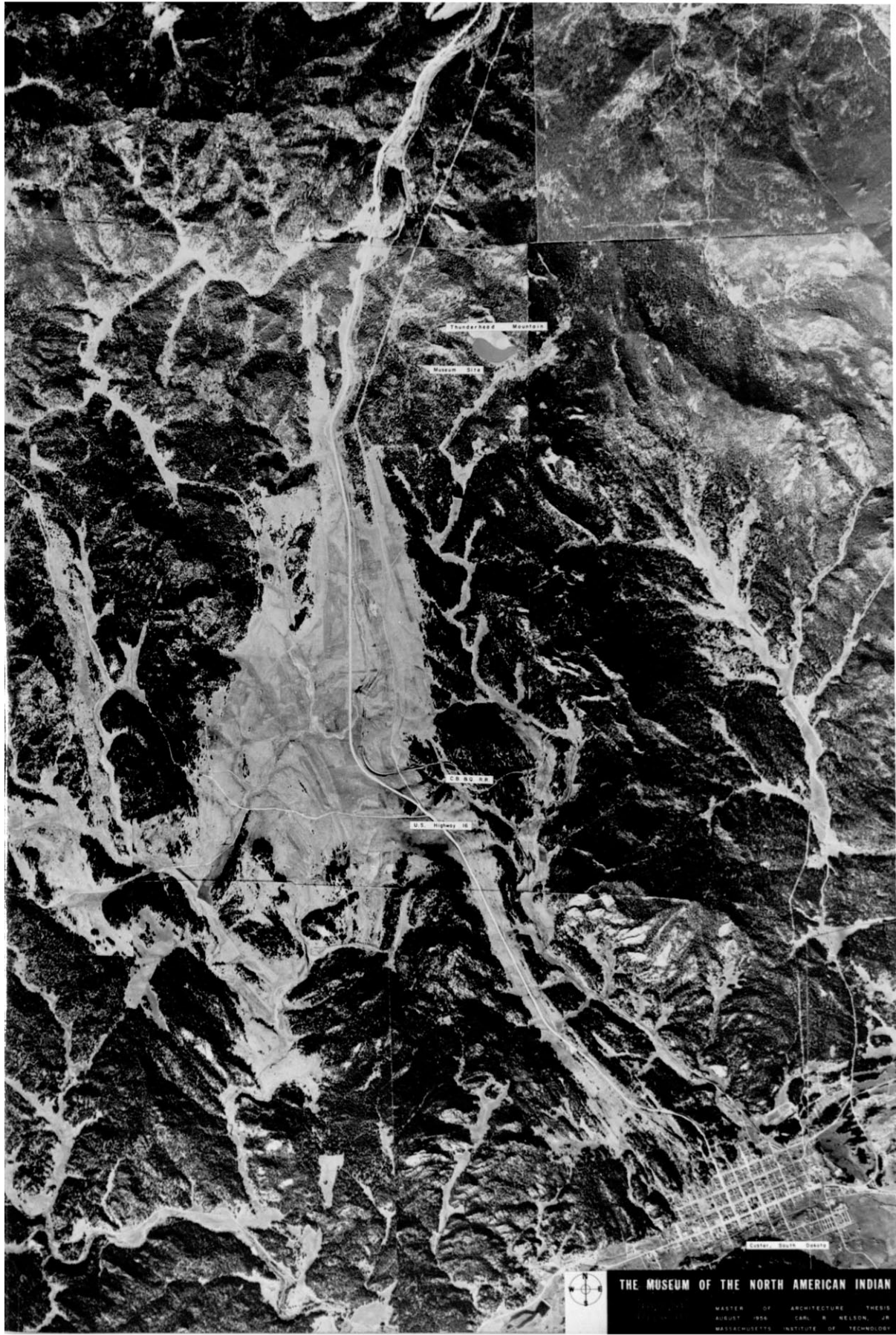
The design of the buildings was a difficult problem, for the plasticity and abruptness of the topography seemed at first to indicate an organic approach which would allow the architecture to fuse with the site. Further study and work with the site, however, produced convincing evidence for stronger forms, placed logically into or upon the contours or plaza, which would gi

which would produce a marked contrast to the powerful site. In detail a modular type construction using natural, exposed concrete and rough-hewn wood will add strength to the simple forms. Ornament and decoration are achieved by patterning the formwork, by precast concrete sections, and by brilliantly colored stains on the wood.

- Allen, D.A.; Cox, Trenchard; Edwards, A.S.; Forsdyke, Sir John; Kaufmann, Edgar, Jr.; Peate, Iorwerth C.; and Svenberg, Elias. Museums in Modern Life. Royal Society of Arts, London: Geo. Barber and Son, Ltd., 1949.
- Agunvongse, Kresta. A Graduate School for Bangkok, Thailand. Master of Architecture thesis, Cambridge: Massachusetts Institute of Technology, 1956.
- Barrett, Frank T. New England Museum of Natural History. M. Arch. thesis, Cambridge: M.I.T., 1940.
- Boston Society of Natural History, Board of Trustees, Ludlow Griscom, president. "A Report on the Boston Museum of Science". Boston: 1953.
- Coleman, Laurence Vail. The Museum in America. 3 vols. Baltimore: Waverly Press, Inc., 1939.
- Coleman, Laurence Vail. Museum Buildings. Baltimore: Waverly Press, Inc., 1950.
- Coles, Robert T. A Redevelopment Study of the Endicott District in Buffalo, N. Y. M. Arch. thesis, Cambridge: M.I.T., 1955.
- "Frank Lloyd Wright's Masterpiece." Magazine of Building, Architectural Forum ed., 96 (April, 1952), 141-144.
- Markham, S. F. The Museums and Art Galleries of the British Isles. Edinburgh: T. and A. Constable, Ltd., 1938.
- Nelson, Carl R., Jr., and Day, Norman D. The University of North America. B. Arch thesis, Minneapolis: University of Minnesota, 1955.
- New York Museum of Science and Industry, R. P. Shaw, director. "Exhibition Techniques." New York: N.Y. Museum of Science and Industry, 1940.
- Porter, Mildred C.B. Behavior of the Average Visitor in the Peabody Museum of Natural History, Yale University. Washington: The American Association of Museums, 1938.
- Rathbun, Richard. A Descriptive Account of the Building Recently Erected for the Departments of Natural History of the United States National Museum. Washington: U.S. Government Printing Office, 1913.

In addition, the following periodicals were consulted:

- Architecture d'Aujourd'hui. 22 (Feb., 1952), iv-vii; 23 (Aug., 1952), 98-99; 24 (June, 1953), 21; (July, 1953), 18-20; (December, 1953), 14-15; 25 (Jan., 1954), 100-101.
- Architectural Forum. 93 (Sept., 1950), 137; 100 (May, 1954), 154-157; 102 (May, 1955), 146-149.
- Architectural Record. 109 (Feb., 1951), 28 (L.V. Coleman); 116 (August, 1954), 176-179.
- Architectural Review. 112 (Sept., 1952), 160-163; 113 (Mar., 1953), 179-182 (N. Pevsner); 114 (July, 1953), 12-13; 115 (May, 1954), 336-340.
- Art Digest. 24 (Sept., 1950), 16; 29 (i.e., 28) (Mar. 1, 1954), 13 plus.
- Art Index. Museums, 1929-1954.
- Beaux Arts Institute of Design Bulletin. 26 (Aug., 1950), 19-22; 27 (June, 1951), 1-6; 28 (Jan., 1952), 1-11.
- Interiors. 112 (Mar, 1953), 122-125.
- Museum Journal. 50 (Jan., 1951), 245-246 (L. V. Coleman); 53 (Dec., 1953), 230-231.
- Museum News. 28 (Nov. 15, 1950), 1; 28 (Sept. 15, 1950), 1 (L.V. Coleman); 29 (Mar. 1, 1952), 5-7 (C.W. Simpson).
- Progressive Architecture. 32 (Sept., 1951), 124 plus (L.V. Coleman); 34 (June, 1953), 78-82 (P. Thiry); 35 (May, 1954) 88-101, 130-131.
- Werk. 39 (Dec., 1952), 414-416.



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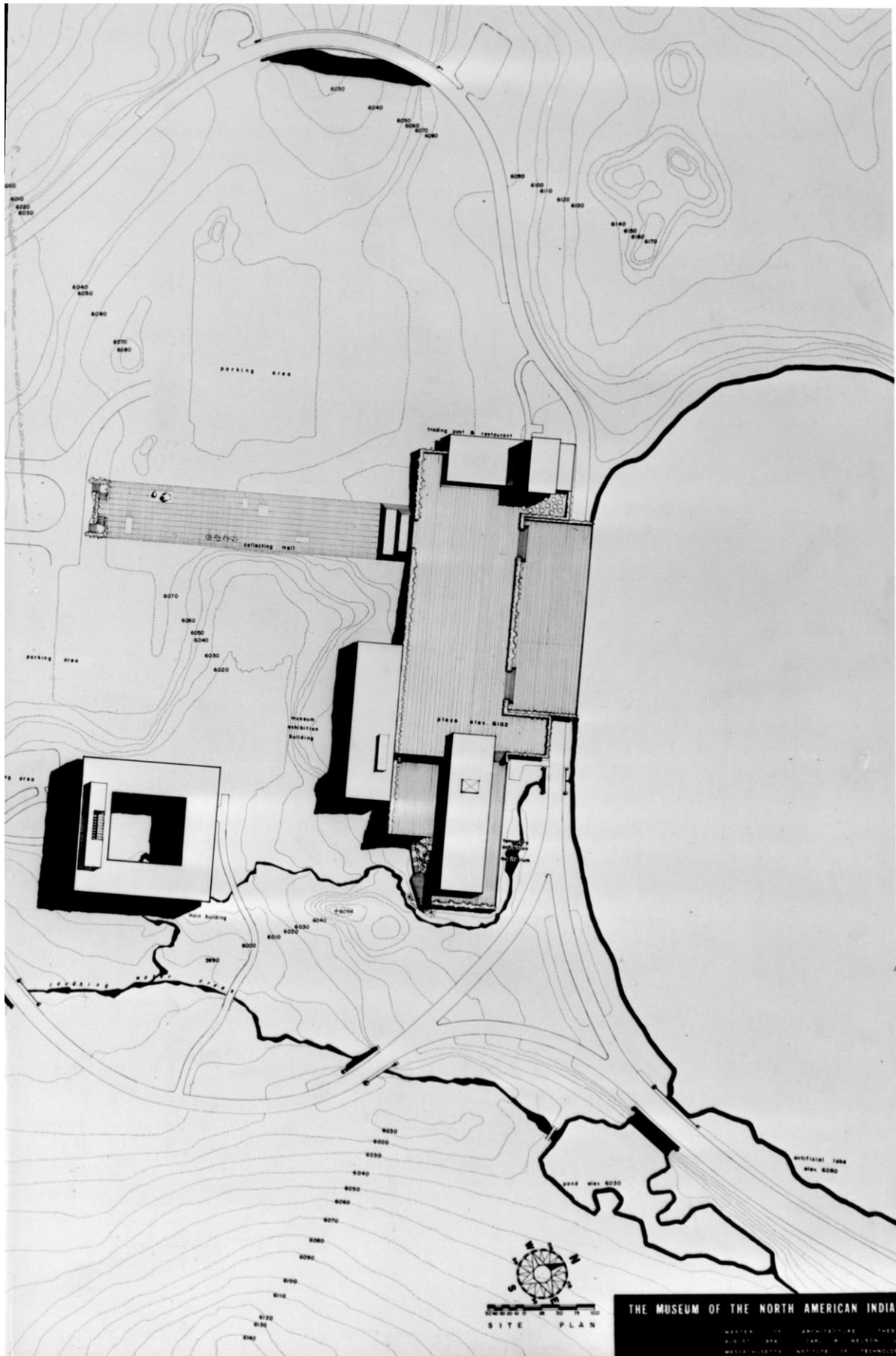
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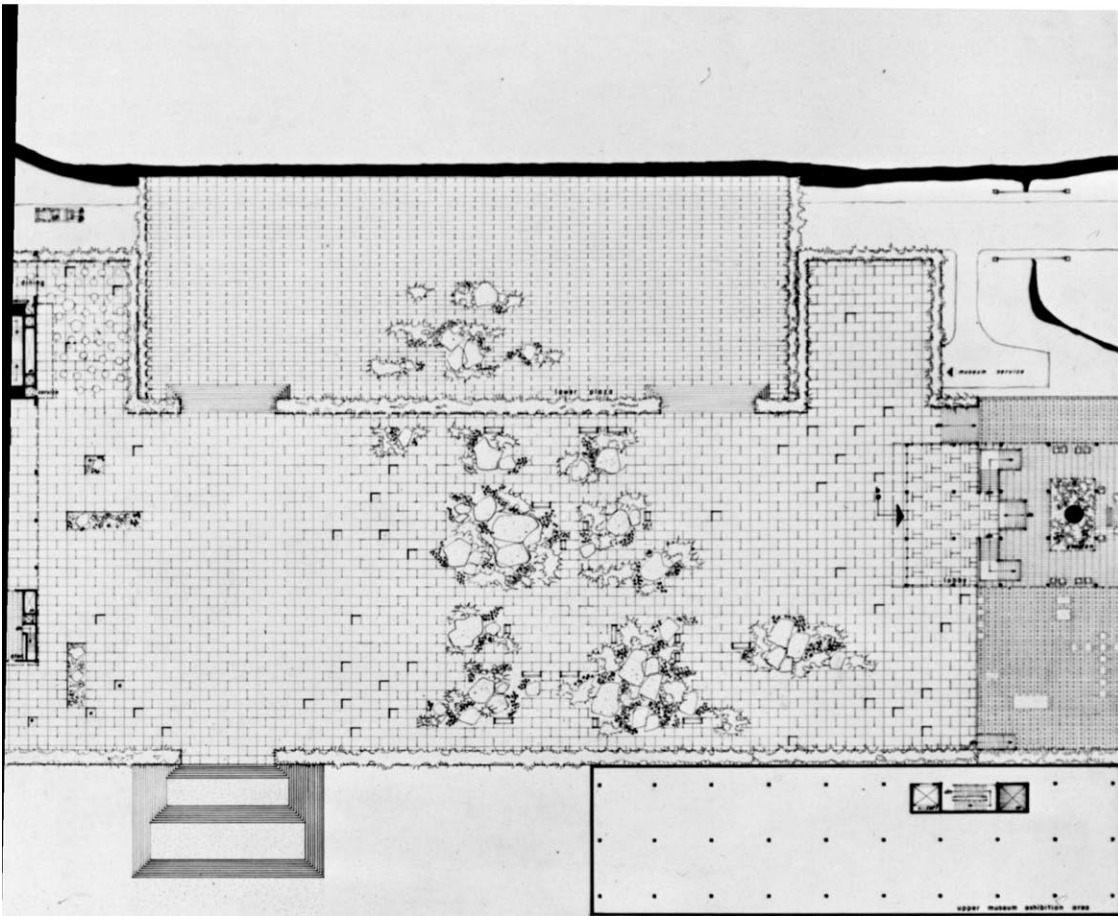
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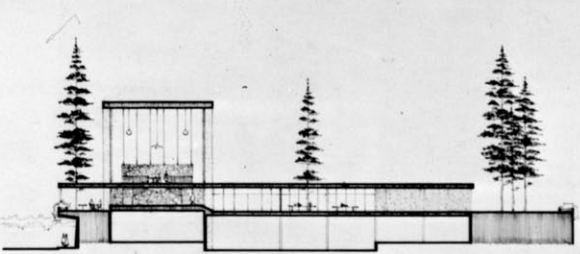
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 LANDSCAPE ARCHITECTURE: HENRY W. HAYDEN
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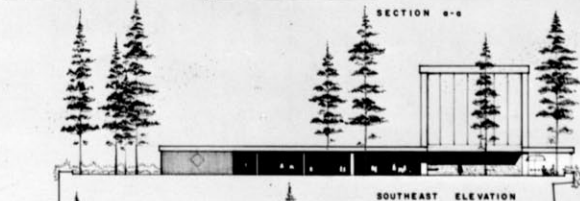
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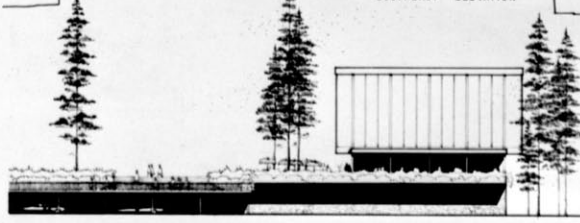
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SECTION 1-1



SOUTHEAST ELEVATION



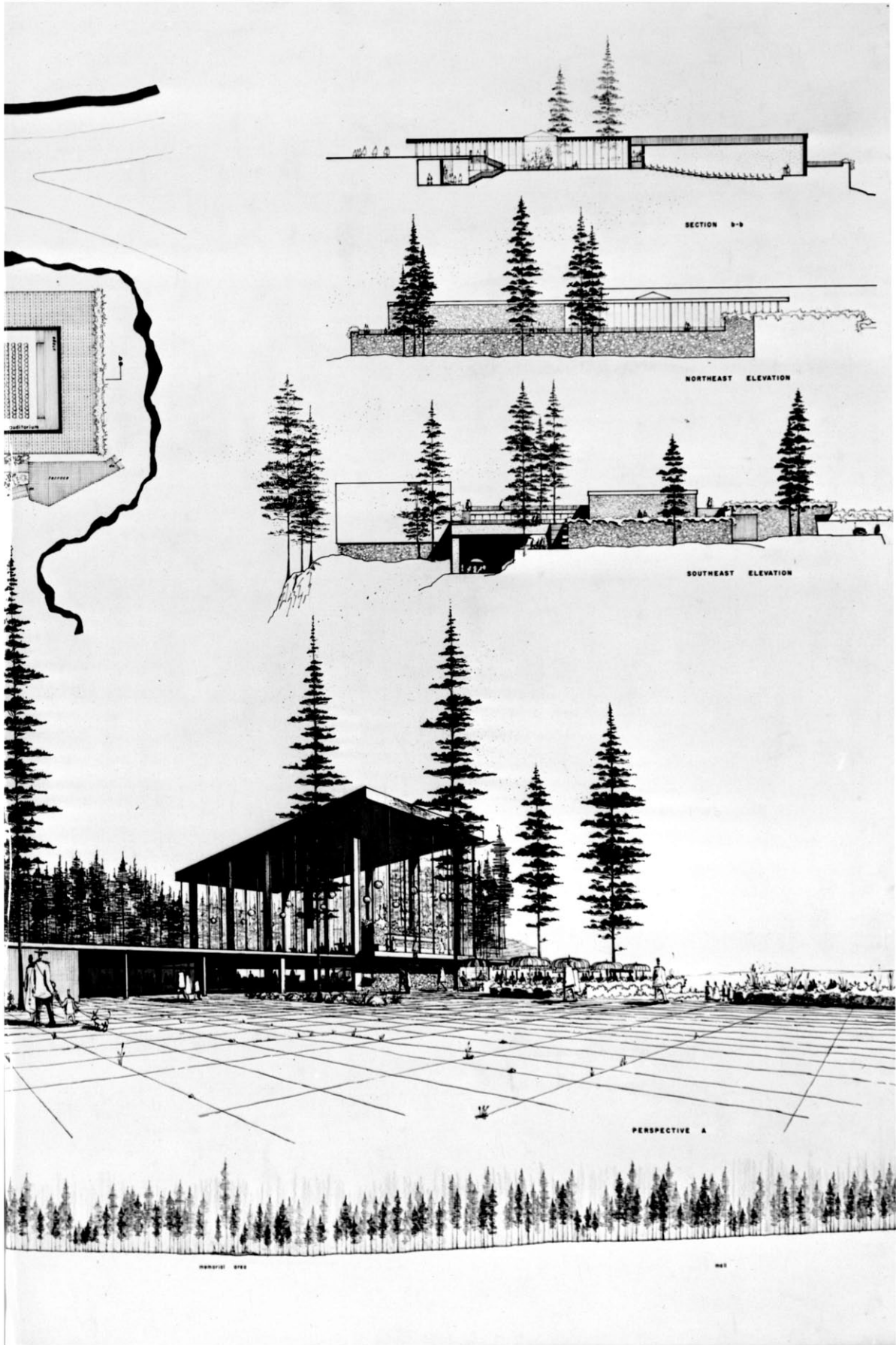
NORTHEAST ELEVATION

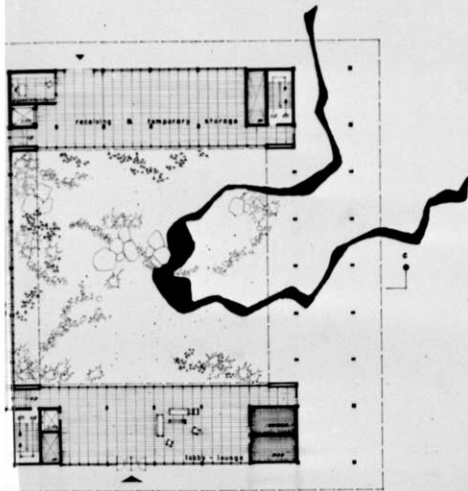


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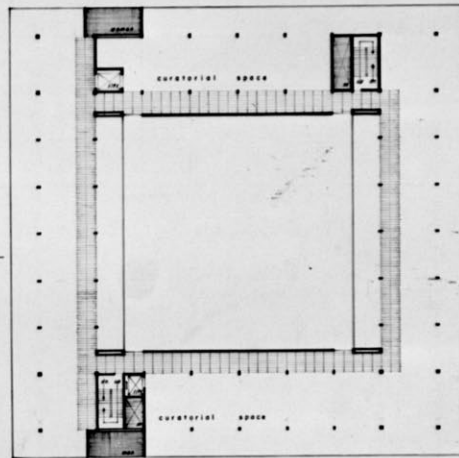
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John S. Squire

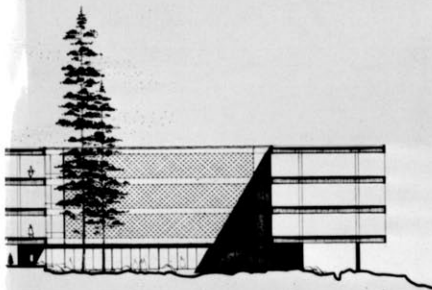




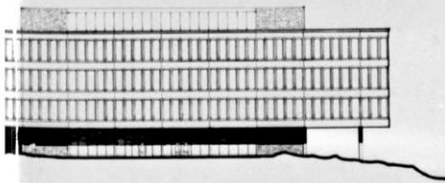
GROUND LEVEL PLAN



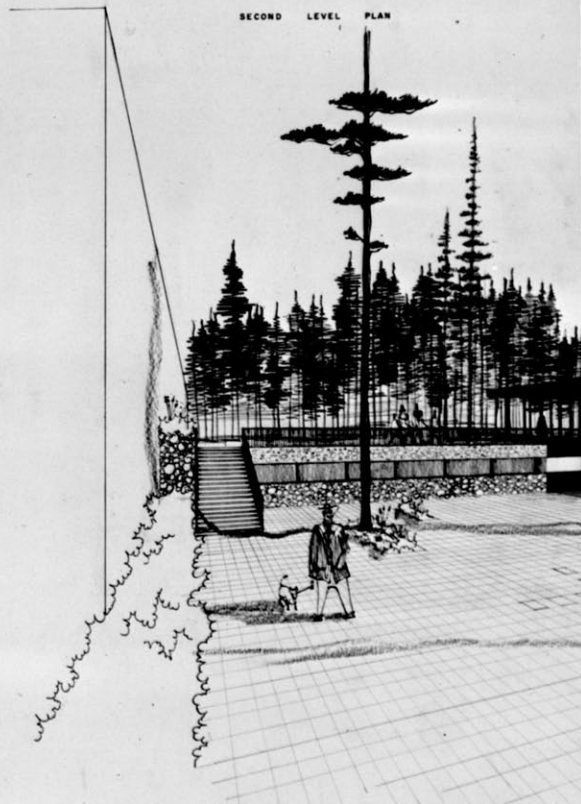
SECOND LEVEL PLAN



SECTION C-C



SOUTHWEST ELEVATION



PERIMETER VIEW

VIEW

