An Area of Civic Development in Silver Spring, Maryland

Keith Williams

Submittedfor the degree Master of Architecture
in the Department of Architecture,
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ABSTRACT

AN AREA OF CIVIC DEVELOPMENT IN SILVER SPRING, MARYLAND

Submitted for the degree Master of Architecture in Department of Architecture, Massachusetts Institute of Technology, January 19, 1953.

In response to the concern of certain civic groups with existing zoning policies in Silver Spring, this thesis proposes the reorganization and development of the area known as the "Armory Plot" as a civic complex to serve as buffer between residential and commercial zoning.

The project includes a multi-level parking building for 833 cars, a municipal theatre seating 800, and a public library housing 75,000 volumes. All development expenses for this proposal would be incurred by the County Government.

It is hoped that civic interest aroused in this scheme might establish a more sound future zoning precedent.

19 January 1953
Cambridge, Massachusetts

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

Dear Sir:

As partial fulfillment of the requirements for the degree, Master of Architecture, I submit my thesis, "An Area Of Civic Development For Silver Spring, Maryland."

Respectfully submitted,

Keith Williams

Arch. - Nov. 12, 1953

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INTRODUCTION

Silver Spring, Maryland, is a residential community adjacent to and directly north of Washington, D.C. It is the northern-most and central link in a periphery chain of such suburban environments.

Its growth is characteristic of the phenomenal population increase of the Washington metropolitan area which has climbed from 450,000 in 1949 to 1,400,000 in 1950. Silver Spring has increased its fold from 10,000 in 1949 to 164,000 in 1950. It has been heralded in national publications as an East-Coast boom-town.

Like the Nation's capitol, it has never enjoyed a completely autonomous governmental system, but relies upon the remote and awkward expedient of a County seat government several miles away. Uniquely, it is the gangling indigent to a vicarious legislative hand - to which it may impute its case but fail to receive its rightful civic patronage. Yet, this community, the second largest in Maryland, is the chief source of revenue for Montgomery County.

There are those who defend the present system on the grounds that incorporation would be too costly, but the general evils resulting from a long absence of self-government are evident in this town.

Execution of roads and arteries is at the discretion of a county and state road system. Planning is primarily under the counsel only of a worthy organization - the Maryland Division of the National Capitol Planning and Park Commission. In general the citizens have little voice in resolving the visual and functional entirety of their community. Planning for the Washington metropolitan area is administered by the National Capitol Park and Planning Commission, with local divisions for the adjacent states of Maryland and Virginia. It is a very worthwhile organization, but lacks any more than verbal representation of the small unincorporated suburban areas which have no city engineers, no planning boards. In effect, their local problems are often of necessity by-passed in the grand scheme. This is the case in Silver Spring where by continued neglect of their own community responsibilities, the citizens have failed to adequately represent their own case in the over-all planning of the Washington area.

The subject was suggested by Mr. Loren L. Murray, of the firm of Johannes and Murray, Architects, in response to a newly formed citizens organization which has become concerned with the existing policies of zoning in Silver Spring.

As the town has mushroomed over the past ten years, there has

been a natural demand for increased commercial facilities. The space for these facilities has been obtained too often by the acquisition of cheap residential properties contiguous to the original commercially zoned core - constantly threatening the older established residential areas. Certainly their anxiety is justified, for the bulk of the initial shopping area is run-down, prairie-front, tinder-box construction. It is reasonable to assume from the general growth patterns of our towns that this core may have been re-developed with permanent commercial buildings if the zoning boundaries had been more rigidly confined. It is generally agreed amongst building entrepreneurs and land economists that the initial cost of raw land (whether high or low) is an extremely small portion of the over-all building budget. The resultant differential in rent to a business tenant when weighed against cheap or expensive initial land costs per building is negligible.[1]

The result in Silver Spring is a central commercial area of obsolete buildings surrounded by a new periphery growth of shiny construction leaning hard against established residential properties. There is no attempt at a buffer between these extreme functions. Nearby residents find their front

1 Leo Grebler, "Land Economics"

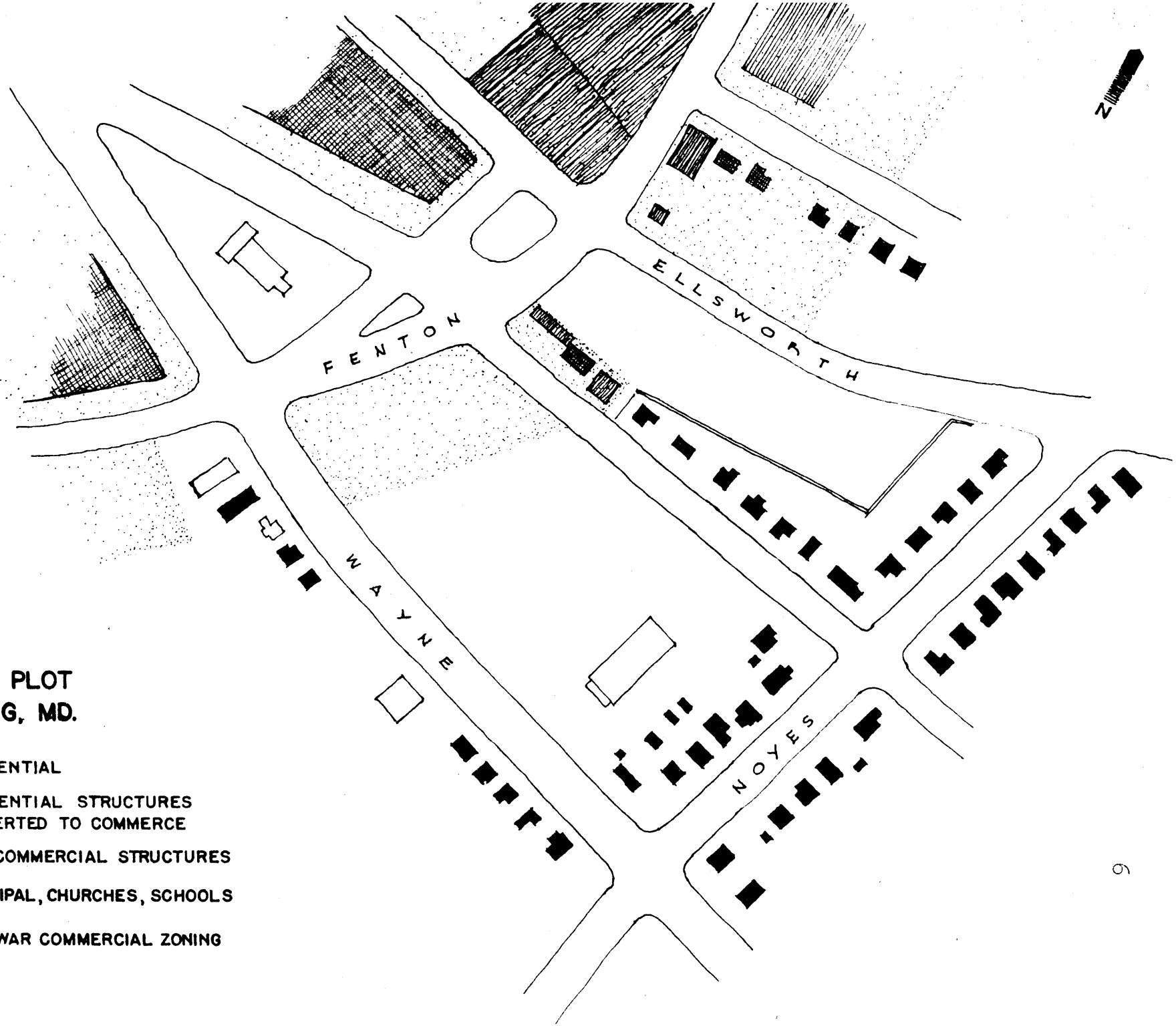
yards and driveways the parking area for persons attracted to the new Silver Spring businesses from neighboring towns and communities.

It is the author's opinion that the Maryland division of the National Capitol Park and Planning Commission made every effort to defy house by house, block by block, the pressure to expand the physical limits of commercial zoning. Here would have been an opportunity for a representative citizenry (as in an autonomous government) to have rallied against the evils resulting from uncontrolled mushrooming of the commercial core.

THE SITE

The site for this development has been commonly known as "The Armory Plot" - a triangular wedge of land, the point of which pierces deeply into new commercial zoning. It was the intent of the interested civic group that a plan be developed for this land manifesting those particular community facilities which Silver Spring sorely lacks. This plan might then be presented to the County Council as a potential development criterion to arouse the interest of both public and private citizens to the need of a more comprehensive study of the central portion of the community. This plot might well become the new "center" of residential, commercial and municipal properties, as well as create a buffer or meeting ground for these diverse activities.

As is shown on the accompanying zoning map, Page 6, the Armory Plot is bounded on the northern side by Ellsworth Drive, on the east by Noyes Drive, and on the south, Wayne Avenue, intersected in a north-south direction by Fenton Street and east and west by Pershing Drive. A 245' strip along Fenton Street is zoned commercial, and nineteen houses (three owned by the County) and one church are located along Pershing and Noyes Drives to the west. A County owned public parking lot for approximately 175 cars



THE ARMORY PLOT
SILVER SPRING, MD.

- RESIDENTIAL
- RESIDENTIAL STRUCTURES CONVERTED TO COMMERCE
- NEW COMMERCIAL STRUCTURES
- MUNICIPAL, CHURCHES, SCHOOLS
- POST-WAR COMMERCIAL ZONING

is located on the property bordering Ellsworth Drive. To the north, east and south lies the oldest established residential area, and to the west the newest commercial zoning.

The upper lot (between Pershing and Wayne) is currently used as a parking lot during peak shopping periods, such as Christmas, and occasionally as a playground for an adjacent parochial school.

Many suggestions and plans have been made for the development of this property as a civic complex, and public interest in this vein has been aroused intermittently. Under the old County Commissioner system, the land was ceded to the National Capital Park and Planning Commission. The new County Council (part of a governmental system voted in several years ago, to give more representation to Silver Spring in the County Seat) has contested the Maryland National Capital Park and Planning Commission's ownership of the land; which ownership is currently in litigation in the court. In the May 1952 legislative session, the County Council authorized the possible future expenditure of $500,000.00 for the purchase of land. It is presumed by most County officials and the author that this appropriation is to be used to purchase the lot in the event the County

Council loses its case in court. Several large business organizations have negotiated to buy this plot from the Maryland National Capital Park and Planning Commission for approximately $500,000.00 and it is believed that they intended it be used as a private parking lot or to be resold to competitive business interests.

UPPER ARMORY LOT

LOWER ARMORY LOT

PROPOSAL

The citizens group interested in this scheme felt that two of the most needed civic buildings in Silver Spring would be a public library and an auditorium for public assembly.

Present library facilities for this community of 85,000 persons are housed in small branches in churches, schools and donated buildings - under the most adverse conditions. The following is an excerpt from a letter by George B. Moreland, Director, Department of Public Libraries, Montgomery County, Maryland:

> "That Silver Spring needs a library building is certainly true. With an annual circulation of 150,000, a book collection of 25,000, a staff of nine, including four professional librarians, they are simply bursting at the seams."

The only existing library facility in the down-town area of Silver Spring is a two-story frame house in Jessup Blair Park - the most southern portion of the community - adjacent to Washington, D.C. It was felt by the committee and this author, that the library would be an extremely worthwhile project.

"The shopping district is the magnet which draws the crowd, and a library, to do the greatest good, must be near the charmed

circle."[1]

This theory of location and operating condition is staunchly advocated and defended by all current literature and proposals for libraries by the American Library Association. In a score of A.L.A. bulletins, and A.I.A. bulletins apropos library design, this theme was reiterated. The tempo of our contemporary society makes nearly all functions rivals for convenience within the urban core. Yet this very location seems incompatible with the meditative atmosphere one generally associates and seeks within a library.

The armory plot offers an ideal meeting ground for these conflicting thoughts; backed against a residential area and at the same time thrusting well into the new commercial area. By assuring no further encroachment of the residential periphery of the armory plot, this project would score a moral victory for the home owners and establish a precedent for community development.

Adequate site is available for future expansion as required; an extremely important factor, considering both the problem of library obsolescence and the phenomenal growth of this area. A portion of a letter from Mr. George B. Moreland,

1 Wheeler and Githens, "American Public Library Buildings"

Director, Department of Public Libraries, gives some weight to the problem of properly predicting future needs:

"1. Population: The trend of population increase in Montgomery County has been a steady 10% each year from 1940 to 1950 according to the decennial census of those respective years and intermediate estimates of the Census Bureau. That this is continuing is substantiated by statistics furnished by the Potomac Electric Power Company which show an increase in installation of home units during 1951 of 7,350. Taking a conservative average of three persons living in each home (Census Bureau used 3.7 in estimating), this indicates a population increase in 1951 of 22,000. This is more than 10% of the population as of April 1, 1950 (164,401). It is believed the population of the County will be more than 300,000 by 1960. And it is not too foolhardy to think that it will be at least 500,000 by 1970. Since the Silver Spring area, whose boundaries north and west are pretty nebulous, now holds about 50% of the population, there is fairly sound basis to project a population for that area of 250,000 by 1970.

2. Character of Population: According to the County and City Data Book, G.P.O., 1952, Montgomery County is the only county or city in the United States where more than 50% (51.6%) of the population 25 years of age and over have completed high school. They need and desire public library service, and, what is equally important, have the money to pay for it. The annual rate of circulation of books from our seven libraries as of July 1, 1951, was 160,000. As of July 1, 1952, this annual rate of circulation of books had increased to 670,000, partly aided by the inauguration of library service from three new bookmobiles. But the existing libraries showed an increase of 85% in the year as contrasted to the national public library average decrease of 4% in book circulation."

The remainder of this letter, which covers building standards and requirements, is omitted here and summarized under the Library Building Program. Mr. Moreland has cited the citizens' need, desire, and ability to pay for these library services.

There are at present no auditoria to accomodate any type of

public meeting or function in the general Silvery Spring area, with the exception of those in various high schools and churches. These are not always available or convenient, and it is questionable whether they are the ideal location for any spirited civic gathering. To the authors of this program it seemed extremely prudent that any community of this size should have its own auditorium for public assemblage.

In addition, where building programs permit, such an auditorium should serve as many types of functions as possible, to make its initial erection economically feasible to the local municipality. Such functions should include: civic meetings, charitable benefits, drama, political rallies, speeches, educational films, lectures, etc. This criterion would come under the heading of a speech auditorium. Proximity to the center of the business district and free public parking, as well as access to adjacent residential areas idealize this site.

Local dramatic, educational and political groups would be unencumbered by the present inaccessibility to high rental properties. The legitimate theatre, currently enjoying a boom in the small civic groups while losing popularity in its former meccas, could discover new audience exposure in Silver Spring, which boasts the highest educational standards of any American community, but some of the poorest cultural

facilities.

Though these buildings would be financed by the County Government, it is anticipated that they might one day become the property of a new Silver Spring municipality.

Perhaps the crux of this entire proposal lies in the disposition and use of the lower plot, currently a paved parking lot for approximately 175 cars, and owned by the County. It is one of several such lots throughout Silver Spring; instigated by the local merchants to induce consumers from nearby towns to shop in Silver Spring. The present lot, generous by many town standards, is inadequate on most shopping days, and cars line, and at peak seasons fill, the upper lot - crowding on lawns and property of neighboring residences. To increase parking facilities in an orderly fashion and placate both the neighboring residences and business interests, it is proposed that a multi-level parking building be located on the lower lot. This unit, by virtue of the gradient between Ellsworth and Pershing Drives, could be approached from several levels on each street. It would be metered to produce a steady revenue for the County, and insure adherence to "shared use." Approximately 700 cars would be accommodated, with easy access to each level. All levels would be available to crowds from the auditorium directly across the street, when that building is functioning. This is the last available

site in or near the commercial core on which there are presently no major structural incumbrances.

LIBRARY

This building shall provide the following facilities:

I. Capacity

(a) 75,000 volumes

1. at least 50,000 on open shelves

2. 25,000 in stack storage

(b) 150 persons capacity seating

1. 100 adults

2. 50 children, preferably in two age groups

II. Public Rooms - all on first floor

(a) Popular reading room

(b) reference and quiet reading room

(c) children's and intermediate age reading room

(d) circulation and catalog space

(e) Magazine-periodical room

(f) meeting room - lecture auditorium for approximately 200 people.

III. Staff Facilities

(a) librarian's office and work room

(b) toilets and closet facilities

(c) one work space (possibly in basement to handle work on visiting exhibits)

(d) delivery space (basement or first floor)

(e) janitor's toilet and mop, broom, storage room, work room

(f) mechanical equipment room for library and auditorium

(g) a garden tool storage for landscaping maintenance of entire lot

All public facilities should be located on the ground floor with no stairs between street and floor level. Varying conditions make flexible division of interior spaces highly desirable. Work and repair rooms may be minimized, since most of book maintenance is done in the Central Library at Gaithersburg, Maryland.

I wish to thank Mr. George B. Moreland for his assistance in preparing the library program. A portion of his letter on building requirements follows:

"3. Building Requirements: Since Silver Spring Library is now an agency of the Department of Public Libraries its building needs are somewhat different than was the case when it was independent and in a very real sense an autonomous city library. Now, for instance, all books are ordered, purchased, cataloged and repaired at the Central Library here in Gaithersburg. This reduces considerably the need for staff and staff room at Silver

Spring for these operations. With a central reservoir for books and magazines, we do not have to consider Silver Spring as needing too much room for shelving a future stock of 150,000 volumes which would be true had it remained autonomous. It is my belief that we should plan for a library which would never have more than 75,000 well-selected and up-to-date volumes. This is enough to give excellent material on all subjects for the average person, even in a community of such intellectual superiority. We have daily inter-library loan service, including the Library of Congress, (Washington, D. C.) so that books for which there is little demand can be made available within 24 hours. I believe open shelves should hold at least 50,000 of the possible 75,000 total collection.

With two other libraries (Four Corners and Wheaton, Maryland) in the area, the seating capacity should be considerably reduced from your approximation, probably not more than 150 with one-third of these for children.

There might well be the following public rooms: popular reading room, reference room, children's room, circulation and catalog room, periodical room and a small meeting room or auditorium with seating capacity of 200. Naturally, there should be a staff-room and a work room, together with toilets, etc. The entire public area should be planned with as little use of permanent partitions as possible, allowing for elasticity of use in the future, which no one is bright enough to foresee.

The community is such that almost everyone has some kind of Victrola and certainly those interested in good music would have such a machine so that listening rooms are not necessary. The meeting room could be used for story hours, motion picture screenings and musical concerts. Storage of films would be at Central, but some space would be required in work room for records.

The public space should be on the ground floor which should not require <u>any</u> steps from the street. Ample parking space should be provided. (Bethesda, Maryland has room for 30 cars)."

To provide future flexibility for unpredictable needs, the library program requires a minimum of permanent compartmentalization. Any solution would be enhanced by movable (even token) partitions. In the proposed scheme, most function separators are partial height glass partitions or panel construction, such as Hauserman. However, to provide a degree of sound privacy, it is proposed to enclose the toilets in cinderblock construction. Since the background noise level in libraries is very low, the flexible panel partition is adequate for sound isolation.

The functions of this building are grouped in two major divisions - a two-story high central reading portion which includes the stacks, and a low one-story portion facing the street and housing the children's area, public toilets, lobby and lecture room.

Both areas, children and adult, adjoin reading terraces usable in the fair Spring and Fall seasons. Access to the library is encouraged by two alternate entrances on these terraces. The main access faces the shopping area. A sheltered, shaded view of the glass exhibit area is provided to entice the passerby to browse within. In this respect, librarians use commercial show-window appeal to

attract new patrons. For the same reason steps to the street are eliminated.

The popular reading room, catalogue space and librarian's work area are developed around a three-level book stack - the lower level of which (basement) may be closed to the public if desired. These stacks are lighted by continuous glass three stories high on the Northeast, diffused sky-lights above, and secondary light from the general Southern exposure. Natural light is controlled on the low portion of the building by the deep over-hangs of the continuously independent roof structure and from the South and West in the main reading room by adjustable exterior aluminum louvers. The angle of the louvers may be adjusted to control direct sun or raised completely to permit maximum light on over-cast days. In addition, the large areas of glass are pro-tected from excessive summer solar radiation.

The framing system for both portions of building is essentially post and lintel. On the higher building, pre-fabricated roof deck and finish is applied directly to beams 20' c.c. The infilling between columns is plate glass. The roof of the lower section is framed independently of the en-closing walls by steel joists bearing on continuous steel lintel supported by pipe columns. The colored panel-wall construction then conforms to the particular plan requirements.

The basement (under the higher portion of building) is devoted to the lower levels of the stacks, service elements, and mechanical equipment. Since it is anticipated that the library operation will be more continuing than the auditorium, the steam boilers for both buildings will be located in the library. A split-heating system is proposed, i. e., steam radiation in the floor slab and/or walls and warm or cool air provided through ducts to overcome sudden temperature changes. The same duct system would be employed for both warm and cool air circulation.

AUDITORIUM REQUIREMENTS

In order to justify the initial and operating expenses, a municipal auditorium must provide for varied usage; amongst them: public rallies, citizens meetings, dramatic presentations, lectures, special movies, and occasionally some musical performance. Each additionally required usage provokes more thorough weighing of the integrated functions of the building, so that inevitably one must sacrifice a bit on requirement A to more nearly satisfy requirement B. Circulation in a motion-picture theatre is far more complex than in a college lecture hall, while the stage requirements for a legitimate theatre differ greatly from the concert auditorium. The designer, then, must accept all requirements, arrange them in their order of priority, and satisfy the entire criteria accordingly. A review of the usages of this auditorium suggests that functions involving speech are the most frequent, but that occasionally (though not ideally) it will be necessary to include musical productions. Auditoria acoustically designed to satisfy a speech criteria do not generally afford the best musical environment. Such rooms are generally too "dead" for music.

STAGING

The difficulty of accurately predicting all the possible future uses of a municipal auditorium certainly warrants the greatest flexibility in stage facilities. The simplest system

of introducing scenery to stage, both from the shop (and in the case of road shows) from the exterior, should be studied. Movement of suspended props from above and flats from the side stage must be geared to amateur handling. Dressing and make-up facilities need not be optimum, but should be adequate for fifteen to twenty actors in groups of three to five in a room. Chorus spaces should be provided, but it is generally agreed that the rehearsal room doubles adequately for this purpose. The shop should provide paint, electrical and carpentry facilities. A portion might also be equipped with several sewing machines for costume repair. Storage and space for props, scenery and costumes are necessary, as well as a paint frame of adequate height. Spot lighting from some point in the auditorium is necessary to supplement stage light.

PUBLIC FACILITIES

It is agreed amongst theatre owners that lounge and lobby space must be furnished for the entire audience to provide for the intermission stretch and smoke. Since refreshments have become a part of this intermission scene, some such facilities should be included. Toilets, 100% coat checking space and administrative office are all equally important.

In general, the requirements for a legitimate community theatre satisfy lecture hall or motion picture use.

Gross-room shaping is singly the most important consideration in the acoustic design of any type listening room. By proper shaping, we may conserve and redirect sound energy to the listener's ear. Special attention has been given to the most satisfactory orientation of all room planes. The walls and ceiling are so shaped that each is effectively reflecting sound energy into the audience, thus reinforcing the direct sound signal to each listener. This complete use of all enclosing planes, and the relatively small size of the auditorium makes a public address system unnecessary.

The absorptive treatment on the rear wall is designed to reduce the possibility of a troublesome echo to a speaker on the stage.

Speech auditoria are generally too "dead" for successful use with orchestra or chorus. The reverberation time for a music room is considerably higher than that for the equivalent-volume speech room.

Because of the small volume and general shaping, speech conditions would remain ideal if the "liveness" of the hall were increased to more nearly attain the music room optimum. This could be accomplished without sacrifice of speech intelligibility.

The criteria for proper reverberation are established from recording and compiling years of audience reaction to varied reverberant conditions, the resultant being a cross sectional mean.

The optimum reverberation time (abbreviated T opt) for this volume speech room would be 0.9 seconds and for an equivalent-size music hall, 1.2 second.[1] By compromising the optimum to 1.1 seconds we approach the music criteria. Motion picture use is also satisfied by this speech condition. Reverberation time is a function of the sound absorption in the space.

Calculations for the reverberation time are as follows:

1 Knudsen and Harris, "Acoustics in Architecture"

Desired Topt = 1.1 seconds[1]

Volume = 155,000 cu. ft.

Total required units of absorption = 5400 sabins[2]

Tabulation of actual sabins in auditorium:

location	material	sq. ft. area	coefficient	units
Ceiling	plaster	8000	x .06	= 480
Sidewalls	furred plywood	1960	x .15	= 294
Rearwall	absorptive blanket covered with perforated hardboard	300	x .8	= 240
Absorption below Radio-T.V. booths	absorptive blanket covered with perforated hardboard	160	x .8	= 128
Stage Opening		640	x .1	= 64
Floor	tile on concrete	6000	x .02	= 120
Miscellaneous Units				= 800
	Material Total			2126
Audience (75% capacity)		600	x 4.5	= 2700
Upholstered chairs		200	x 3.0	= 600
	Room Total			5426

1 All calculations are at an average frequency of 500 c.p.s.

2 1 sabin = 1 sq. ft. of open window

Reverberation varies considerably with audience size; therefore, upholstered seating should be used to minimize the variation in reverberation time with different size audience.

Lobby facilities include snack-bar, coat storage, toilets and lounge area. The snack-bar encloses a refrigerator for soft drinks, coffee urn, and storage for serving implements. Space is provided for 100% coat storage. The entire lounge area comprises approximately 60% of the auditorium floor area. A small administrative office is located above the coat-snack-bar area.

A projection booth for 2-16 mm or 35 mm projectors and a film rewind room is situated in this central service core.

Spot-lighting - to augment side-stage lighting - is provided in the apex of the auditorium ceiling with access from the loft space above the projection booth.

There are in the Washington suburban area, several small, independent television and radio stations (in addition to the larger networks) which might capitalize on the local performances, meetings and lectures to be held in this auditorium. Three spaces, one on either side of the auditorium, and one position in the projection booth, have been provided for mobile radio or T.V. equipment.

Heating and ventilating are provided by warm or cool forced air. The air supply, originating in the mechanical equipment room below the lobby is forced up the central shaft and distributed to the ceiling areas of the auditorium, lobby and stage facilities. A special arrangement of varied-sized air outlets would provide the appropriate air velocity to cover the audience uniformly. This air is introduced to the auditorium along the edges of the triangular-shaped, rear-most ceiling plane, projected to a desired point over the audience and by gravity (or recirculatin convexion) drops to the seating level. Air is returned through a mushroom system under the floor and hence to mechanical equipment room. The system is essentially the same for both warm and cool air circulation. All ducts are lined with sound absorptive material to minimize ventilating noises. Steam heat is provided through an under-ground conduit from the library boiler room, thus reducing initial installation and operating costs.

In several respects, the stage house varies from conventional design. Only the immediate portion over the effective acting area rises to the required gridiron height. The adjacent off-stage work areas, shops, dressing rooms and rehearsal room are housed in a lower structure, 30 ft. at the highest point. Rolling 30 ft. fire-doors separate the stage house from attendant areas. This system not only reduces the usual stage volume, but alleviates some of the unsightlyness

of such a mass.

The rehearsal room which is equipped with a small kitchen, serves also as an actors' lounge and rentable meeting-room. For those productions involving a chorus, the rehearsal room provides temporary wardrobe and lavatory space.

A flying plywood canopy, lowered from the front of the gridiron and fastened by guys to the rear of the permanent cyclorama or hoisted at the rear of the gridiron, furnishes an over-head sound reflecting canopy for either speech or musical use.

PARKING BUILDING

Since it is the purpose of this building to alleviate some of the present congestion, access to the parking building should be simple and direct. There should be no occasion for crossing opposing traffic lanes to reach parking building - thus necessitating some form of right-hand-traffic approaches. Simplification of the parking space location and metering will minimize maintenance personnel. Excessive personnel, a requirement of attendant parking, has made many present parking buildings obsolete because of large labor capitalizations. The building should, therefore, be operable without parking attendants.

The four-level parking building proposed accommodates 833 cars. The twolower levels are approached on grade and by ramp respectively from Ellsworth Drive; the two upper from grade and by ramp from Pershing Drive. All approaches are from the East with auto discharge at the West end. The two lower levels discharge directly on Fenton Street and the two upper levels on Pershing Drive. Approaches and exits result in a right-hand traffic pattern around the subject block. Since the customer must be able to drive directly to his parking position, disposition to the proper slot is controlled at the two approaches. An electronic signal device, triggered as a car moves into a parking spot, would

indicate to the driver whether there were any available spaces in any row or on any floor. Each parking position would be metered to produce municipal revenue. Egress is direct and requires no supervision.

Space is available on the lowest floor for a maintenance shop and small office. Personnel could be restricted to a roving maintenance man; also available to extricate any traffic snarls.

Construction is reinforced concrete. Because of the rather long spans between columns, (33 c.c.) a system of flat concrete arches was elected to decrease the depth of the transverse section over the columns. The concrete frame is "infilled" with sections of terra cotta pipe to protect the interior from summer sun and all but driving rain or snow, and, at the same time, preserve 80% open area for through ventilation. The floor-to-floor dimension is 9' - 6". Direct access is provided from the parking building to the auditorium-library lot.

A strip of property on Pershing Drive, presently occupied by six residences (three owned by County) would be converted to a green-play area for children whose parents are shopping

in the area. Stairs lead from the parking building to this area. A shelter house with office, toilets, and covered play-area is proposed for inclement weather, but temporarily the County-owned houses could suffice for this purpose.

This fenced-green area could be administrated by either the playground department or a collaboration of local merchant interests. It would include the usual swings, see-saws, and climbing bar for child-play. The site is adequately large, and beautifully situated in a grove of sixty and seventy-foot oaks.

A few such previous nursery-care ventures have proved very successful in stimulating local trade.

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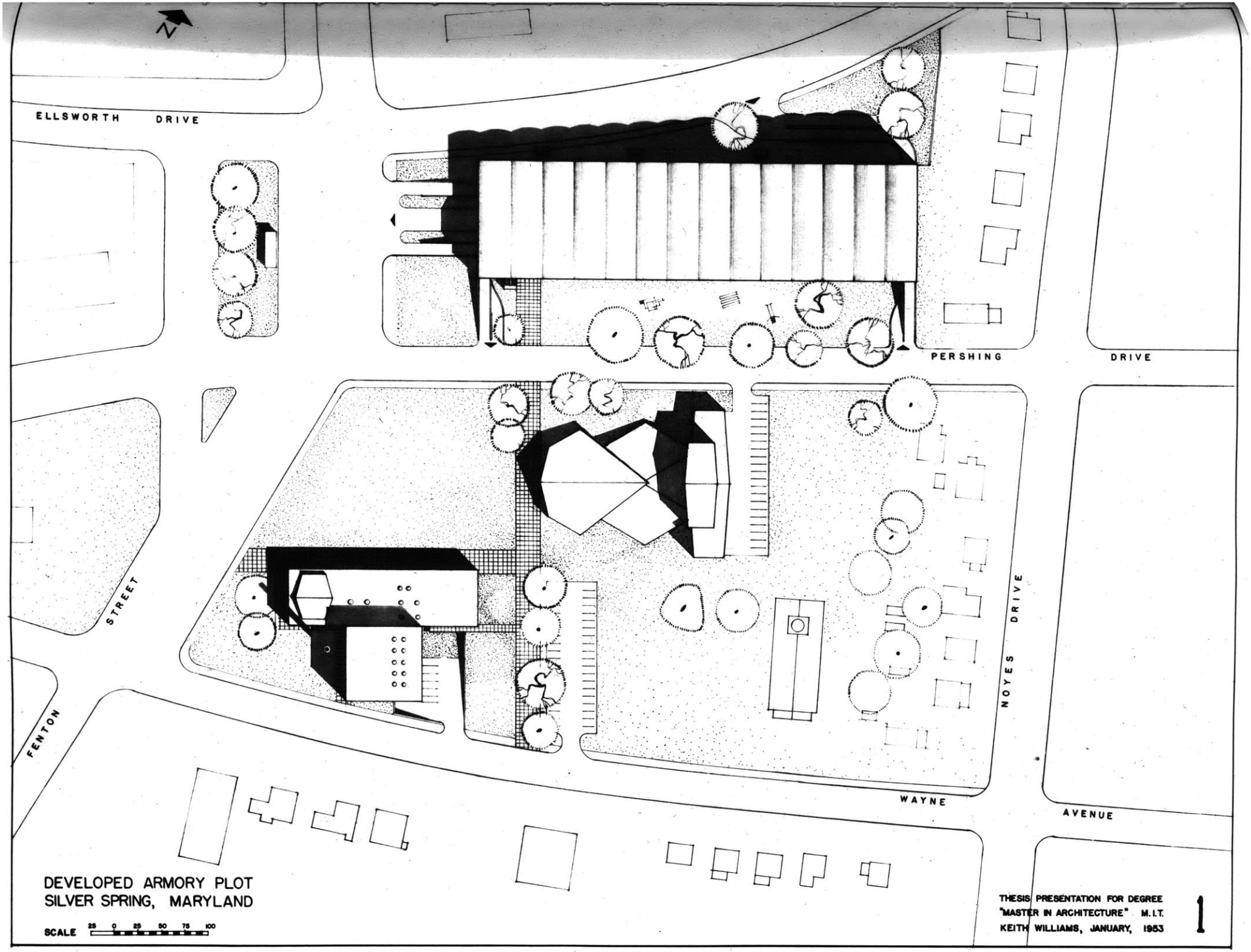


DEVELOPED ARMORY PLOT
SILVER SPRING, MARYLAND

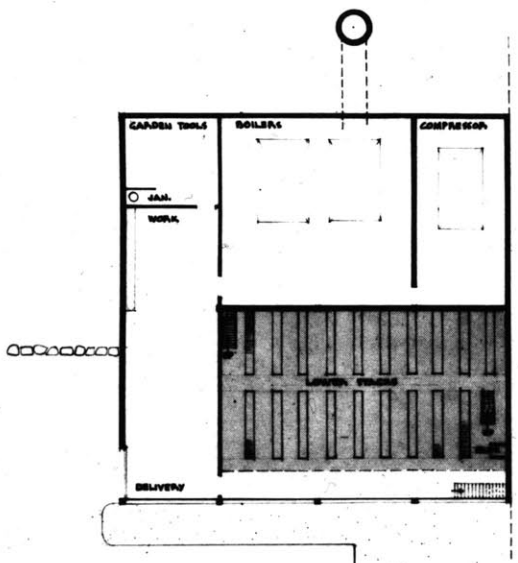
SCALE 25 0 25 50 75 100

THESIS PRESENTATION FOR DEGREE
"MASTER IN ARCHITECTURE" M.I.T.
KEITH WILLIAMS, JANUARY, 1953

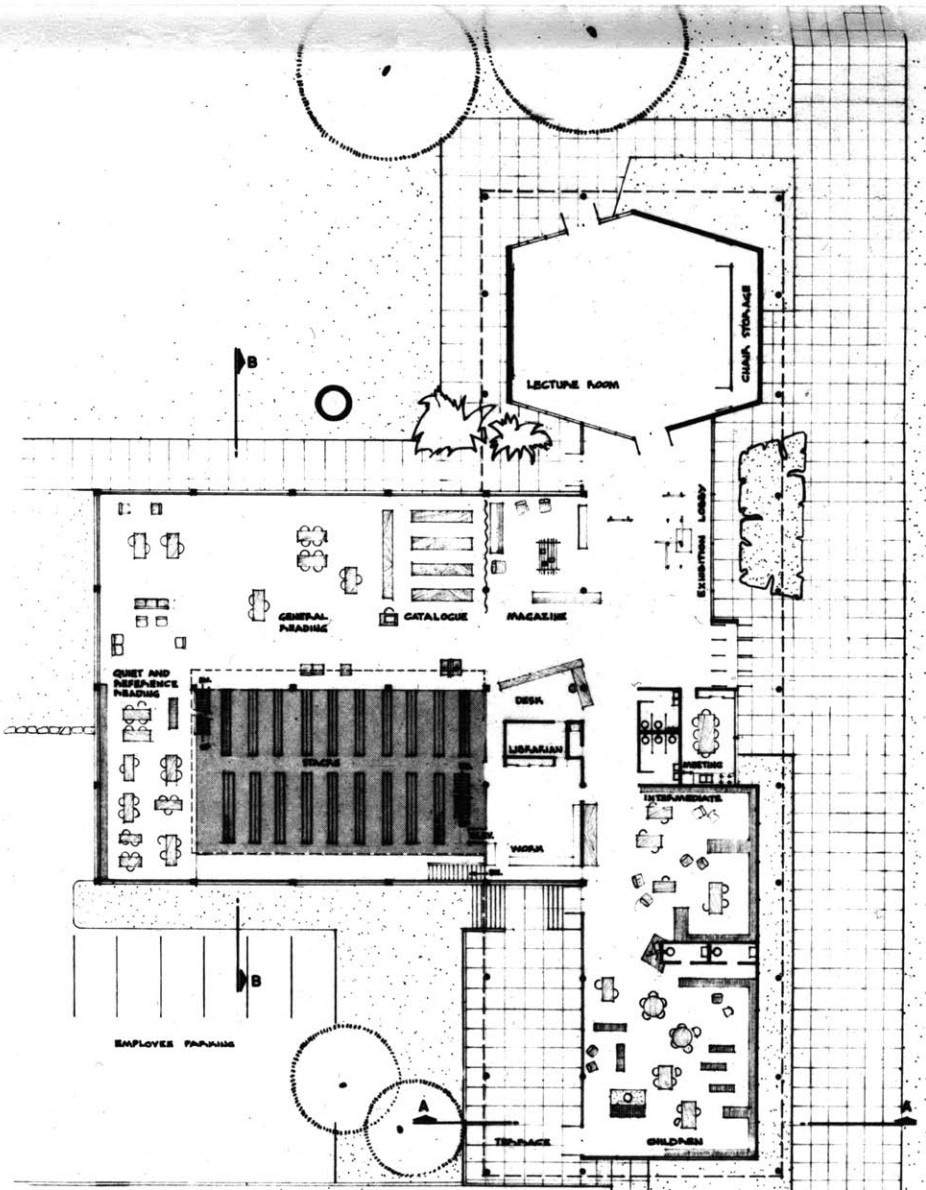
1

THE LIBRARY BUILDING

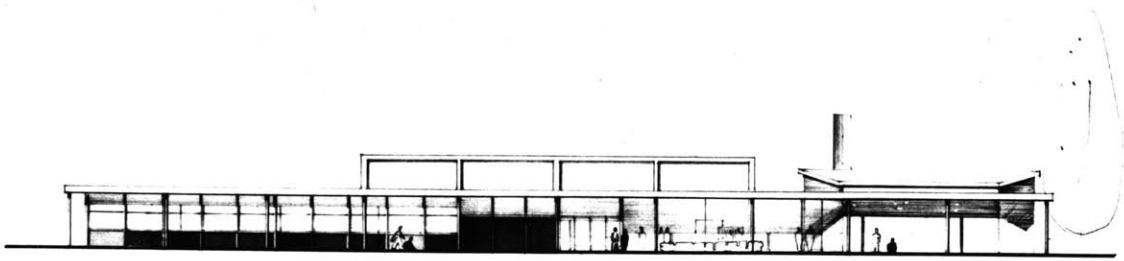
SCALE 5 0 5 10 15 20 25



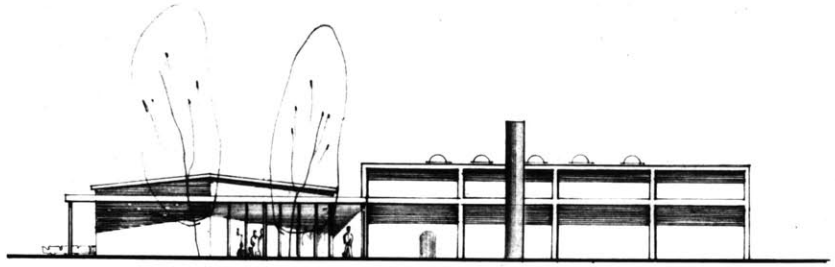
BASEMENT FLOOR PLAN



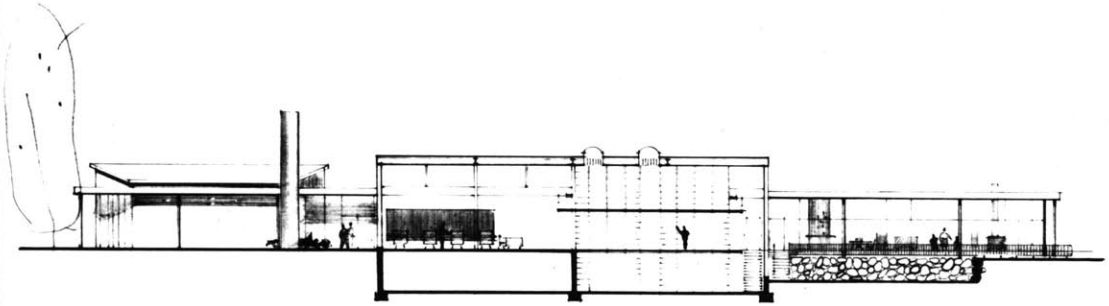
GROUND FLOOR PLAN



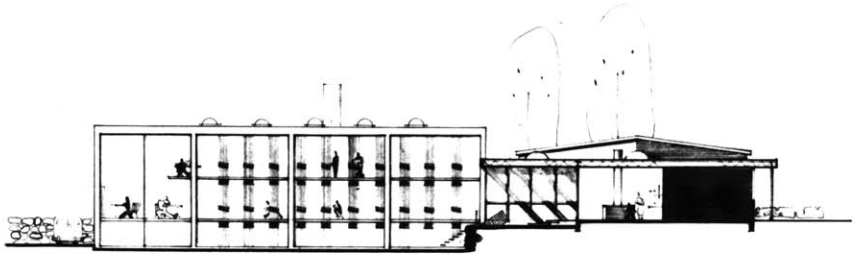
NORTH ELEVATION



EAST ELEVATION



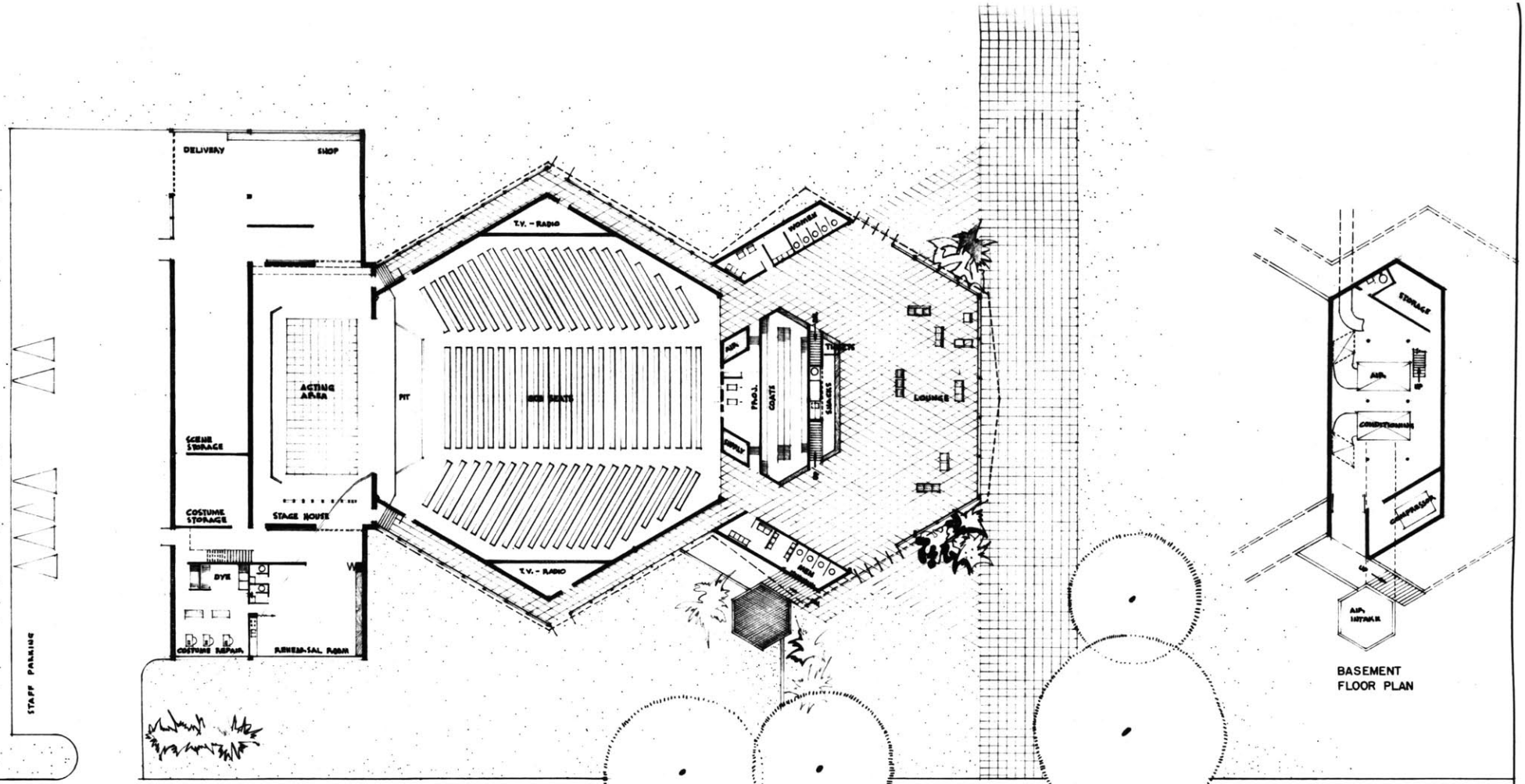
SECTION BB



SECTION AA

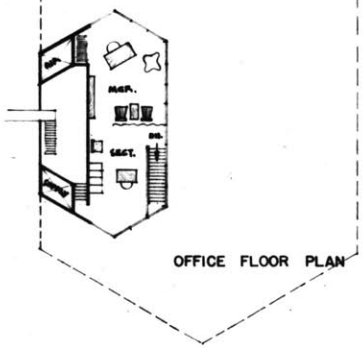
LIBRARY BUILDING

SCALE 5 0 5 10 15 20 25



GROUND FLOOR PLAN

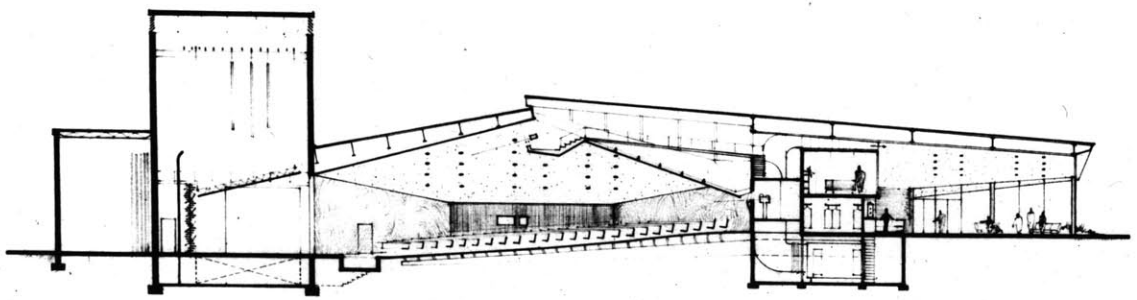
BASEMENT FLOOR PLAN



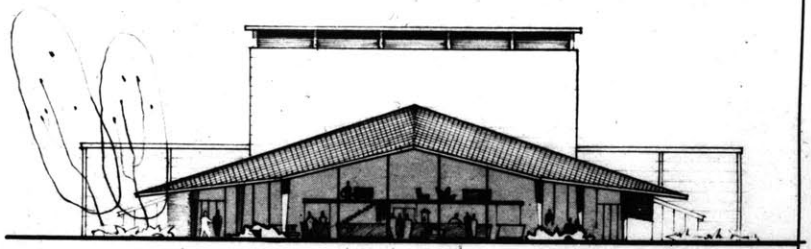
OFFICE FLOOR PLAN

THEATRE BUILDING

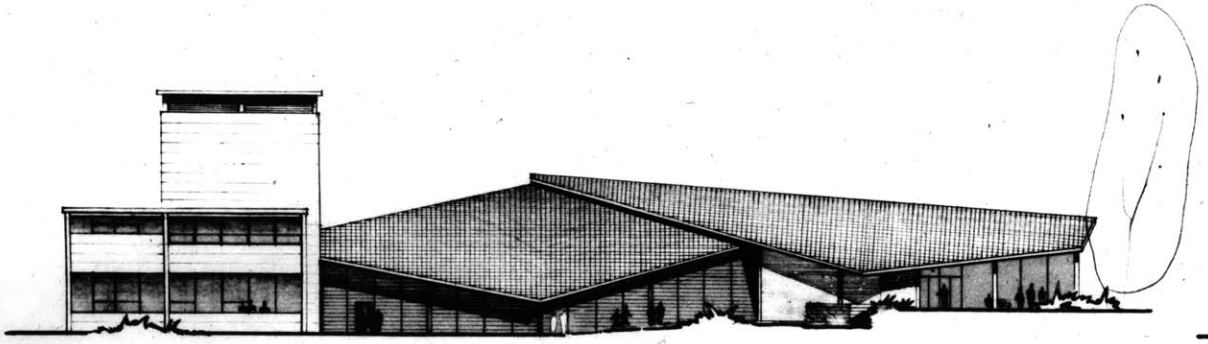
SCALE 5 0 5 10 15 20 25



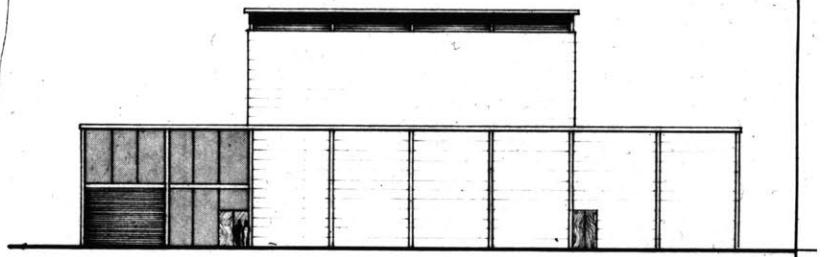
LONGITUDINAL SECTION



EAST ELEVATION



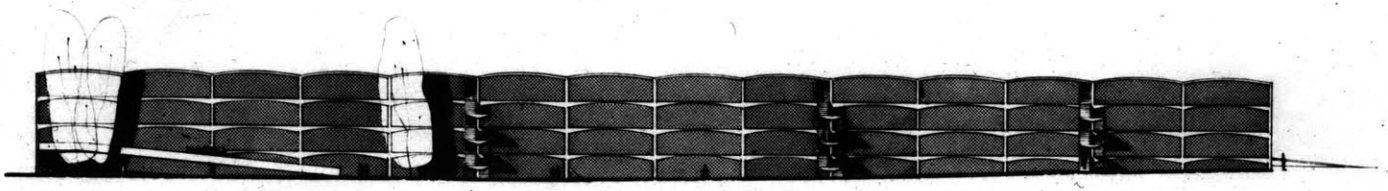
NORTH ELEVATION



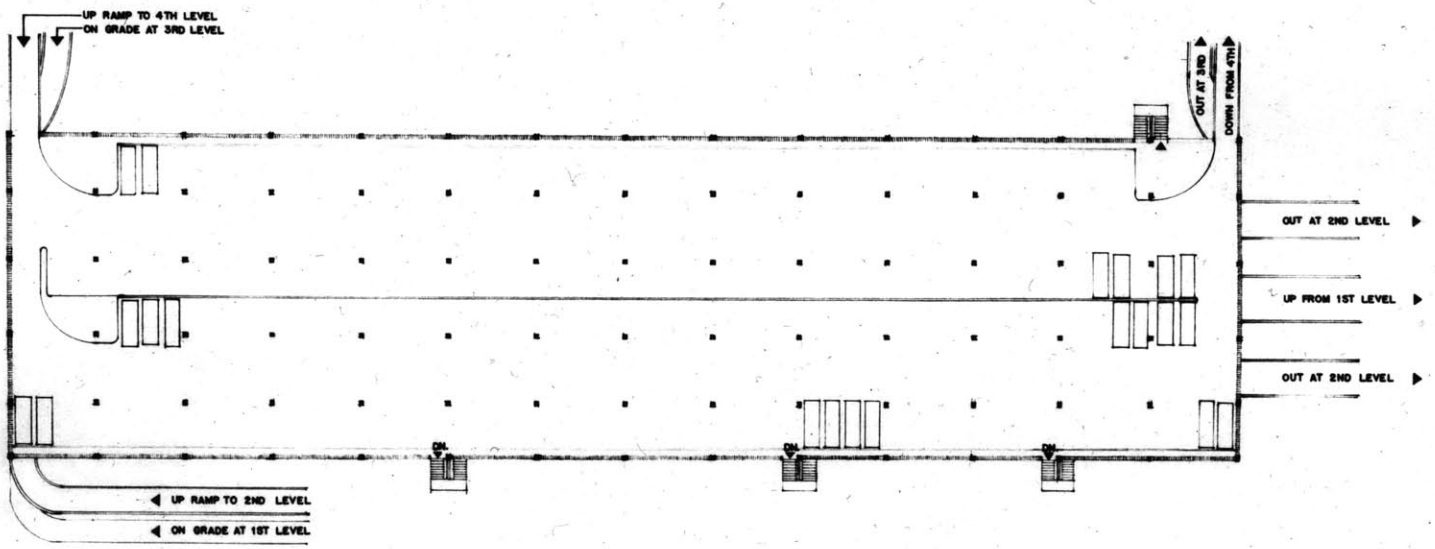
WEST ELEVATION

THEATRE BUILDING

SCALE 0 5 10 15 20 25



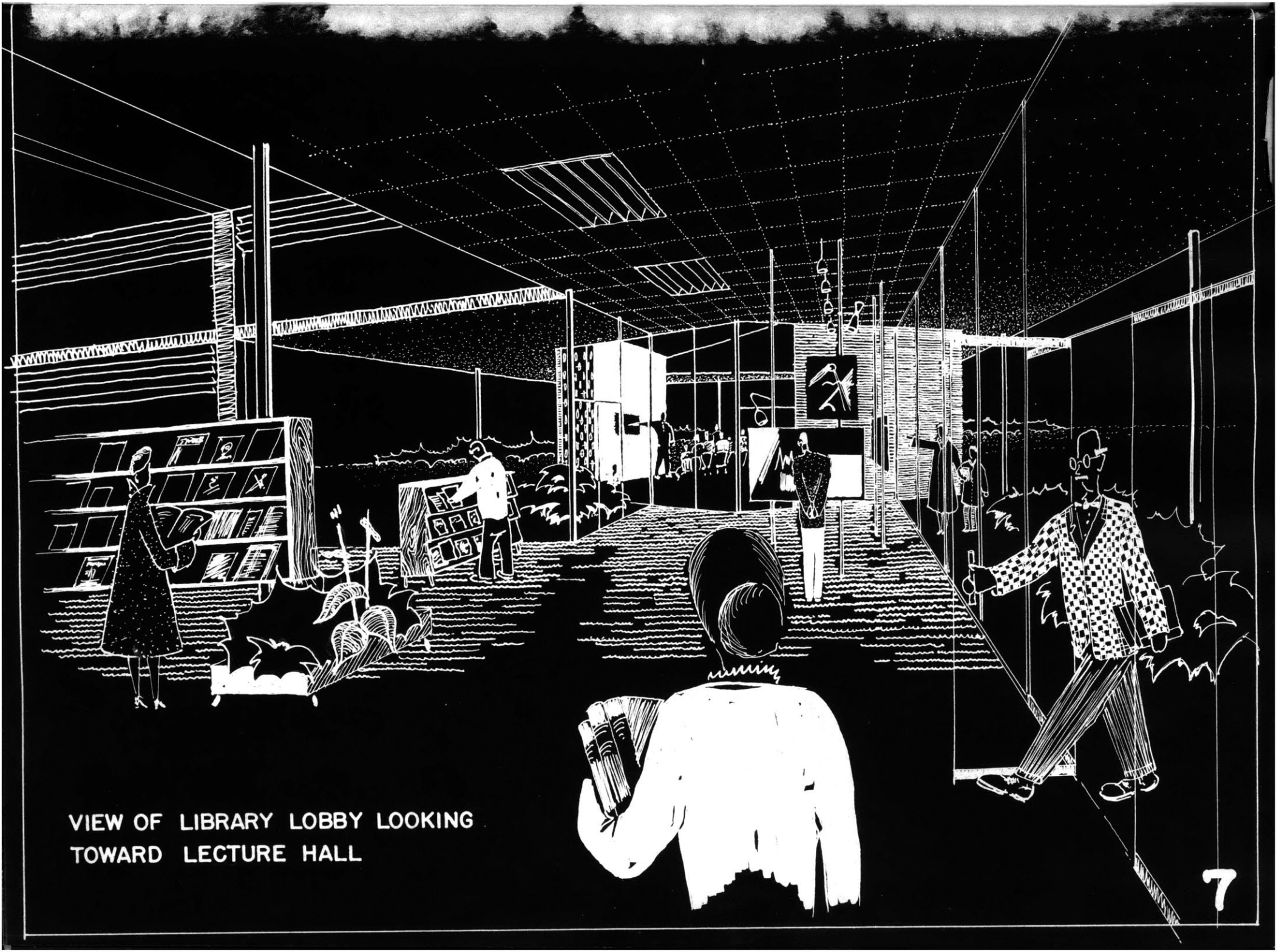
ELLSWORTH DRIVE ELEVATION



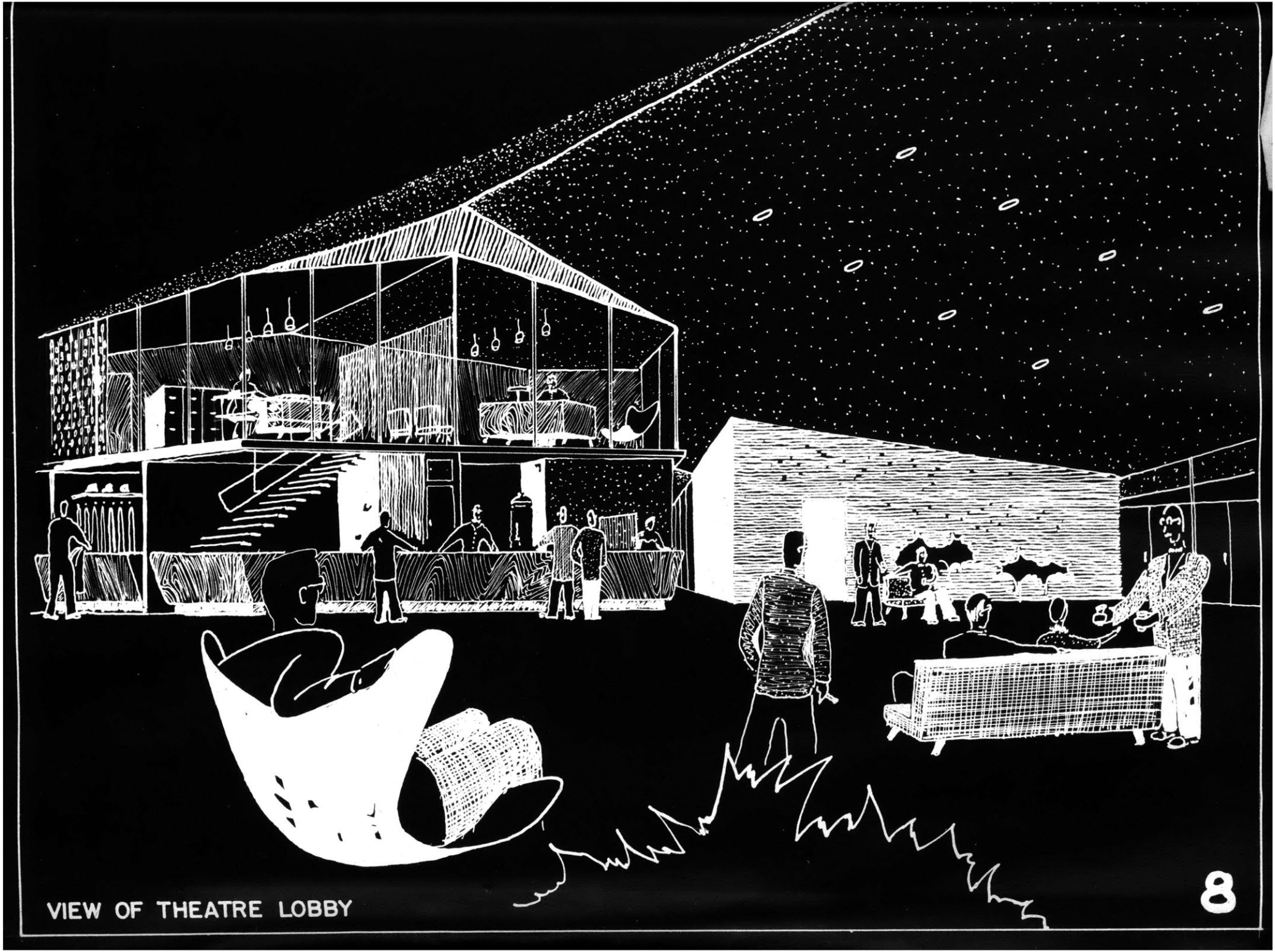
FOURTH LEVEL—TYPICAL OF ALL LEVELS

PARKING BUILDING

SCALE 10 0 10 20 30 40 50



VIEW OF LIBRARY LOBBY LOOKING
TOWARD LECTURE HALL



VIEW OF THEATRE LOBBY