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ABSTRACT

The Burris School facility has been physically investigated in terms of existing and future needs. A priority-based sequence of remodeling and additions is suggested to meet these demands. The sequence consists of 31 distinct operations that can be grouped into eight major phases for purposes of financing and construction. The design proposals, by using buildings inside and outside, emphasize making learning resources inviting and available to the entire community and encourage the development of a symbiotic relationship among Burris, the University, and the community. Through the proposed use of building form, land development; appropriate scale, materials, graphics, and circulation, the investigators feel that the school can serve more diverse community interests. (Photographs may reproduce poorly.) (Author)

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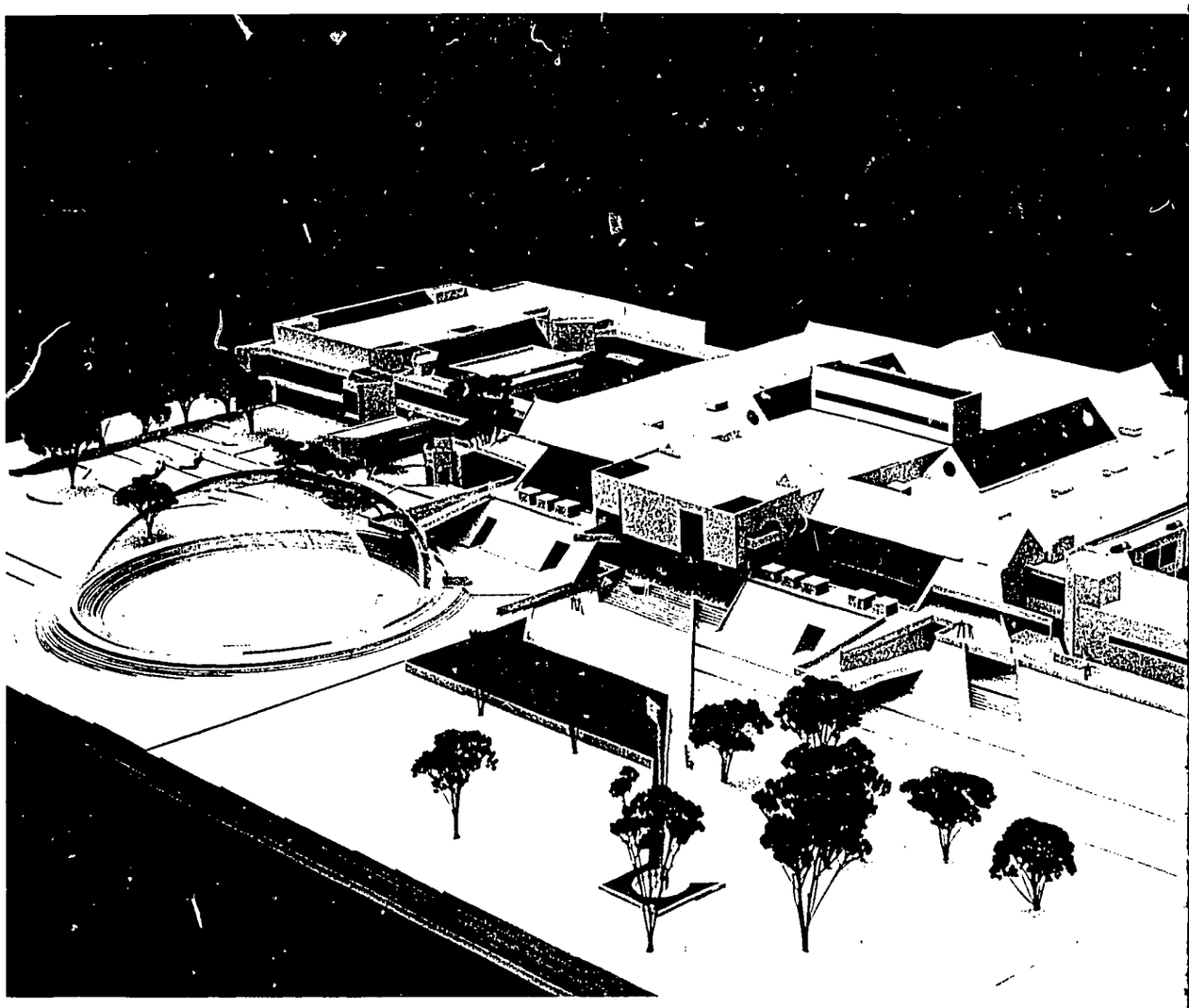
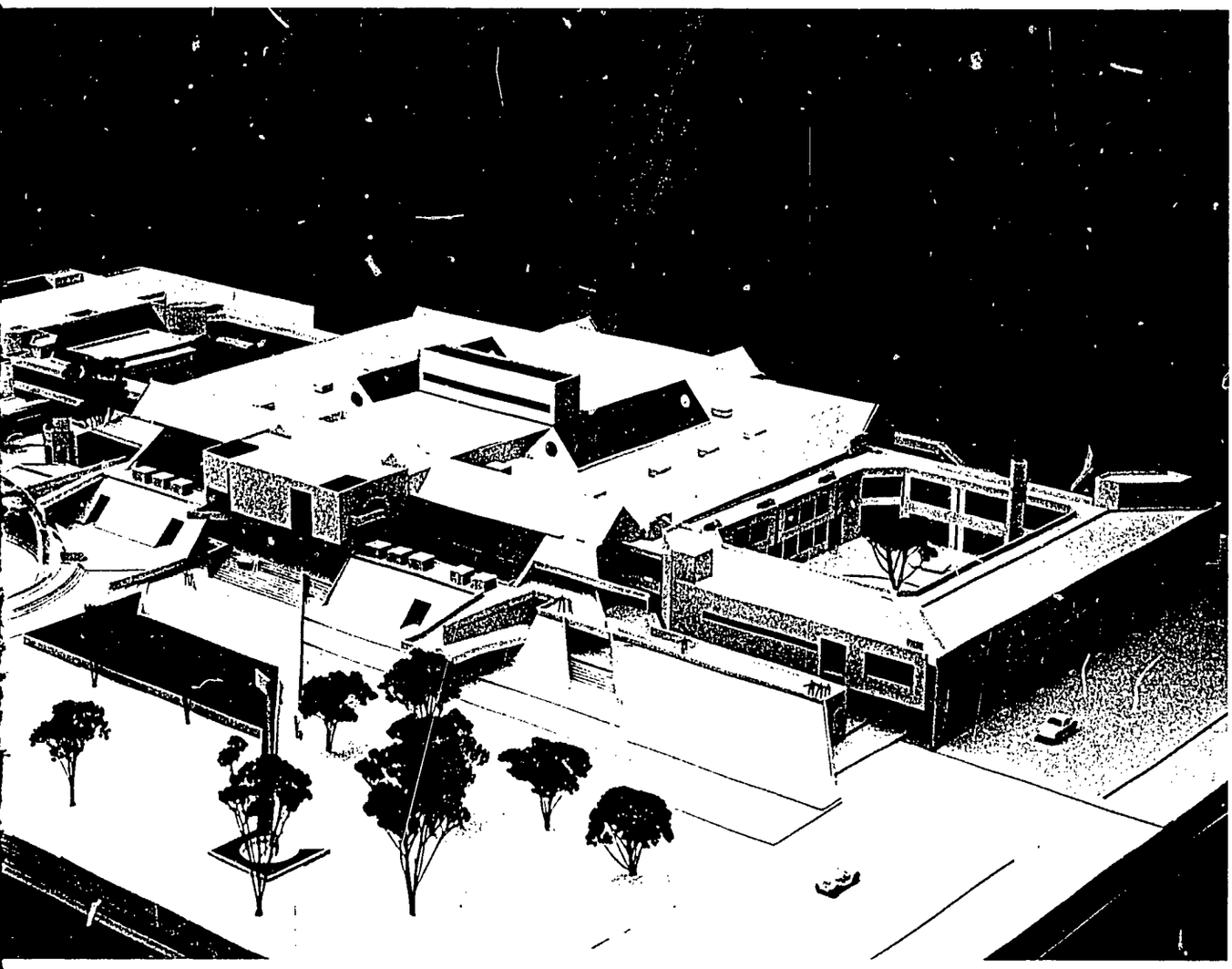
Plato "Let education be a sort of amusement; you will then be better able to find out the natural bent."





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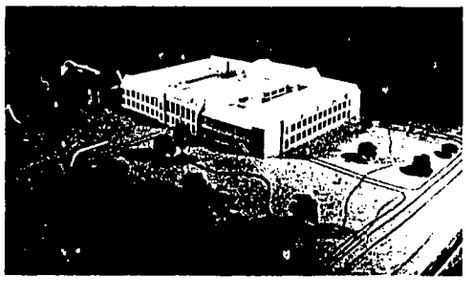
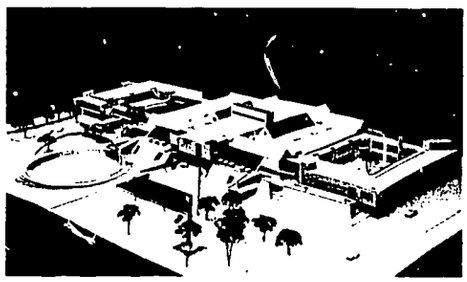
Credits and Acknowledgements





Design Team

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Craig W. Mullins—Instructor in Architecture

and the following students from the College of Architecture and Planning:

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Cleon Stutler--Third Year
Kenyon Tilbury—Fifth Year

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Interiors—Brock Arms, Architect and Interior Designer, Chicago
Media—Dr. Philip Lewis, President, Instructional Dynamics, Inc., Chicago
Theater—Frank Carioti, Producer/Director of Old Town Players, Chicago
Construction Economics—Michael R. Morris, ARICS AIQS, Hanscomb Roy Associates, Chicago

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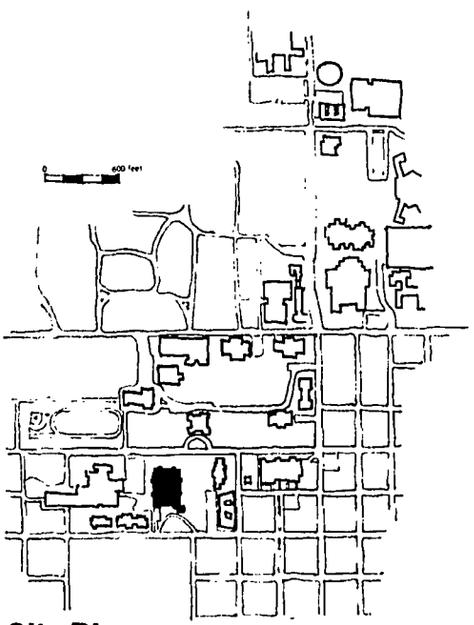
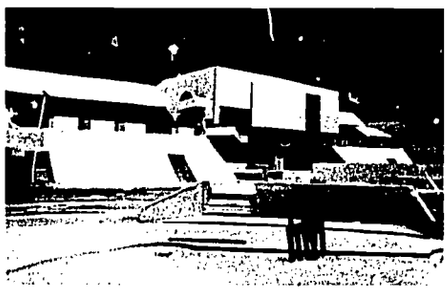
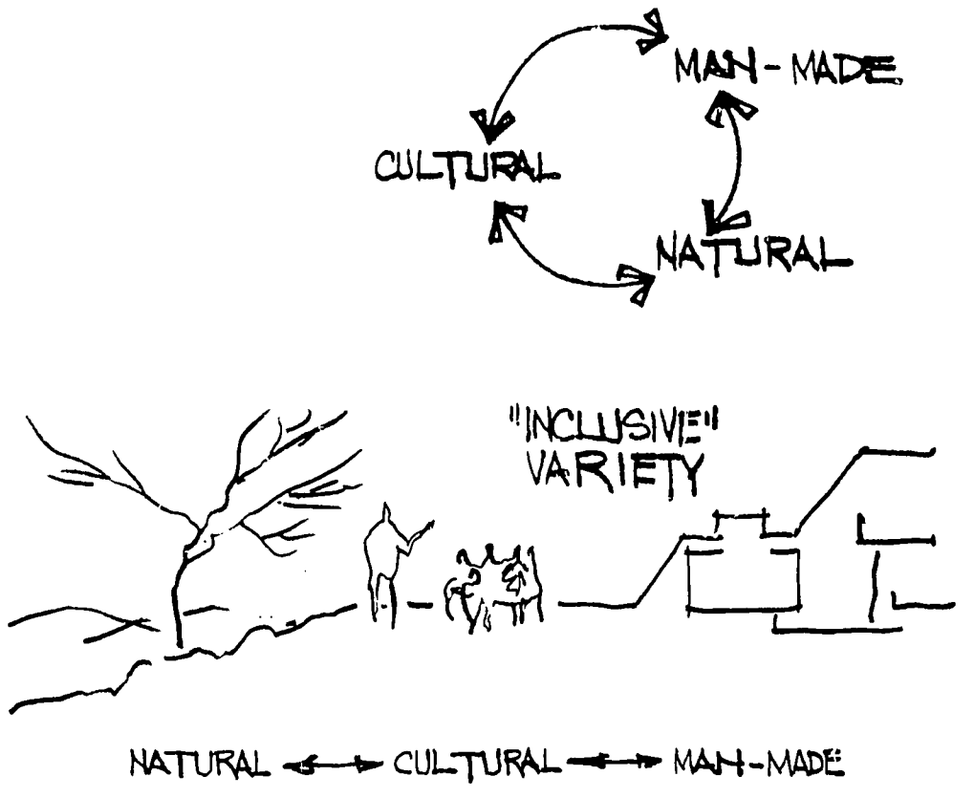


Site Plan



What is the Best School?

Let's Have "Inside-Out"



There are omnipresent dangers in oversimplification. There is richness and **continuity in diversity**; the school child at the turn of the century probably learned more on the way, than in school itself—trips through the market, past the fire station, across the park, were then commonplace. Children today are carefully driven to windowless school rooms in the very vehicles that have made walking to school a hazard. Much is lost for these youngsters who thrive on **environmental stimuli.** "Open plan" facilities—often "empty box" facilities—do little to inspire total environmental awareness in their inhabitants, especially outside the confines of the building. The best school could teach us how to live with ourselves and with others, and how to live with our environment, both natural and man-made. Why confine it to a box?

The best school would then seek ways of enriching its **cultural/human** input with interacting **natural** places and **man-made** forms and objects for an **inclusive** rather than an exclusive environment. Why should the school duplicate athe real world when the school could become the real world? **Duality** rather than duplicity should be the goal. Why not bring the classroom to the grocery **or** the grocery to the classroom. **The best school becomes the city, rich and exciting, just as the city itself becomes the school.**

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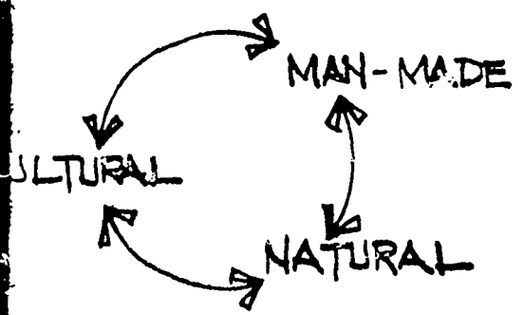
Let's Have "Inside-Out" Schools!



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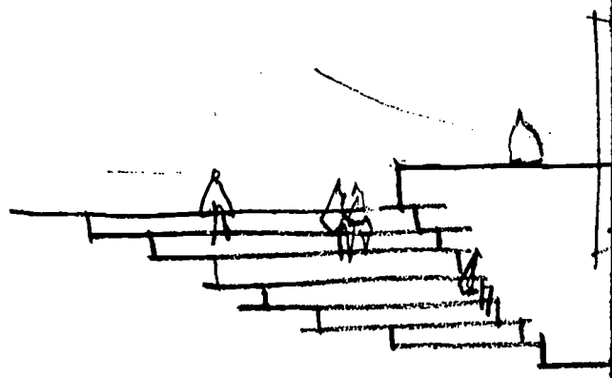
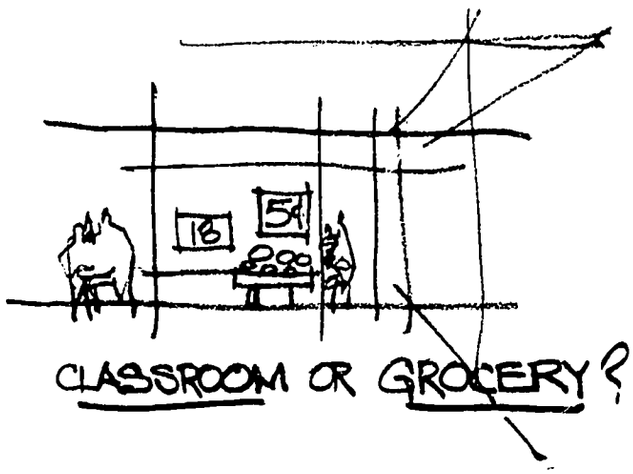
Much of what is happening in today's schools is literally hidden from all outsiders. Valuable resources and hours of planning and preparation are often spent on relatively few. A recent article in a campus newspaper of a large midwestern university read like this:

> "The Music Department library contains 2000 records and 500 tapes. It is equipped with nine study booths with stereo headphones, soundproof rooms for group listening . . ., etc. The library, at the end of a long hall in the basement of the Music Building, is open to all students. **But few know it exists.**"

In ghetto areas of our large cities, record shop proprietors frequently install outdoor speakers, hung over their entranceways, aimed at the sidewalk, beckoning prospective buyers or listeners. **Where are our schools and universities?** Why are they not beckoning prospective learners with sounds and images everywhere—more outdoor or visable experiments, for a truly transformable environment, like a circus?



STAIR OR FORUM



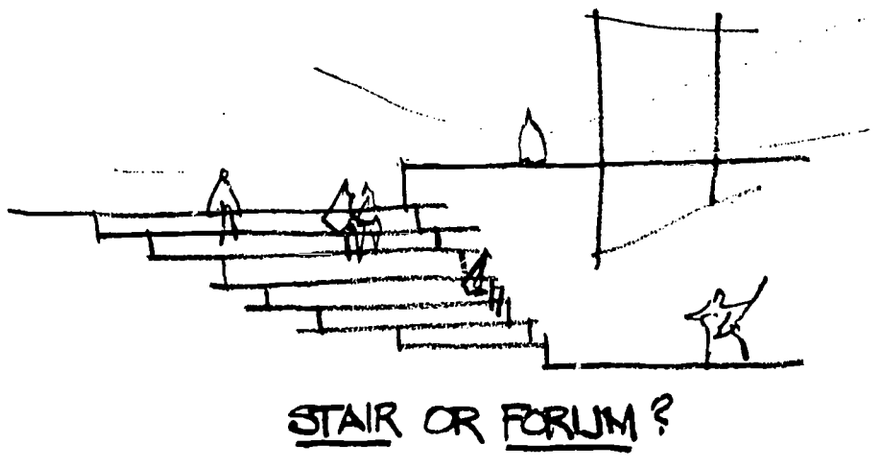
CLASSROOM OR GROCERY?

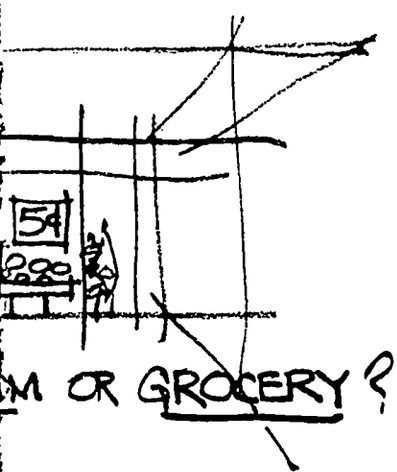
An accomplished educational administrator, when asked to describe his favorite school facility, told of a school in Texas "that was once a factory building whose three floors were opened and connected with a variety of activities, all of which could be changed if desired!" When asked how someone a block away would know about it, he replied "I guess they really wouldn't." The **best "open plan" should in some way open into** the **"real world."** This can be achieved in many ways in new schools and in remodeled old ones.

Recent attention has been given to approaches that open city resources to the learner; but what about the thousands of existing school facilities, bastions of learning, whose physical plants, although structurally sound, are imposing, rigid and foreboding to their inhabitants? What about new facilities, for that matter, whose internal activities are artificially separated from the "real world" by boring precast concrete slabs? It is not uncommon to visit new high schools where the biology greenhouse is the only thing to poke its way through the educational facility **wrappings.** Wrappings are fine for gifts but learning is a right not a commodity.

Inundated by "systems" and bound by budgets, architects frequently think that the best school can be built in the least time for the least money; with few exceptions, are these really schools? Or are they boxes? Do we look at cities in these terms **only**?

The ideal environment for learning should strongly interactive, **inside** and **outside.** It should be a place that has the unique ab to serve the talents of the individual, who may in turn interpret it in different ways. T school, like the city, should plan for **happening** rather than performance—learn by accident as well as by schedule—by removing from the student the fear of judgment. The student should experimen as well as **in** the school, using it as a tool to explore structure, nature and other people ideas. There is wisdom in Winston Church statement: "We shape the tools and therea they shape us." We might say: We **shape our schools** and **thereafter they shape u in our attitudes towards ourselves, towards others, and towards our environment.** We must never overlook th critical nature and the valid interaction of human/cultural (2) natural and (3) man-m elements in our environment. For these thre factors determine our success in life itself, should **all** be a part of the "inside-out" school or university, whose outer surface would indeed be available to everyone.





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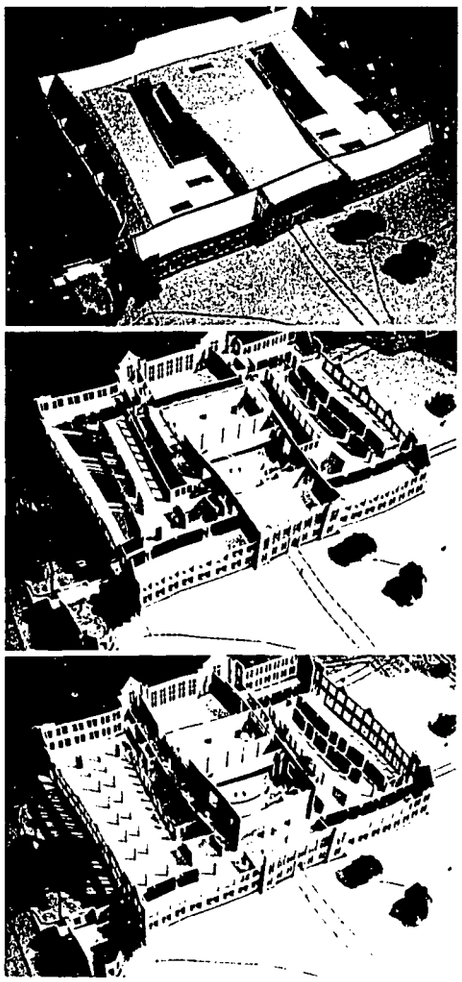
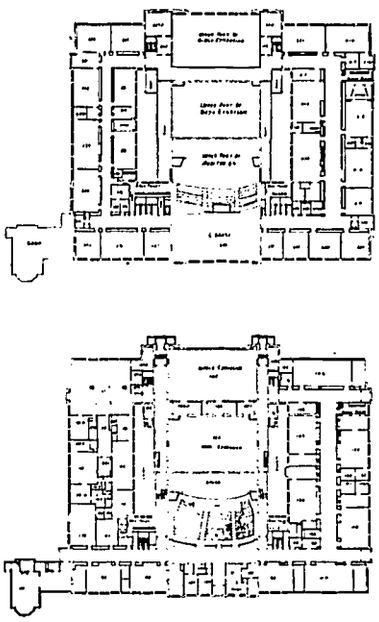
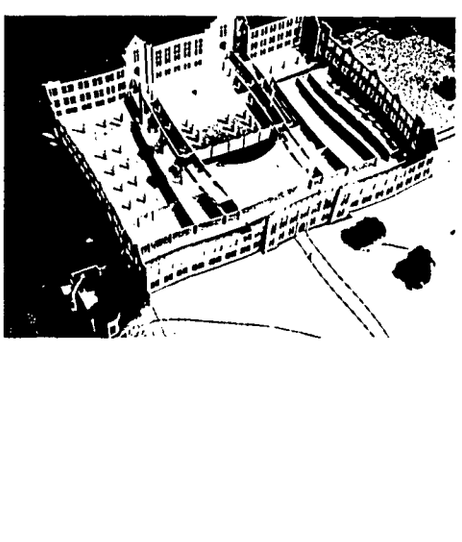
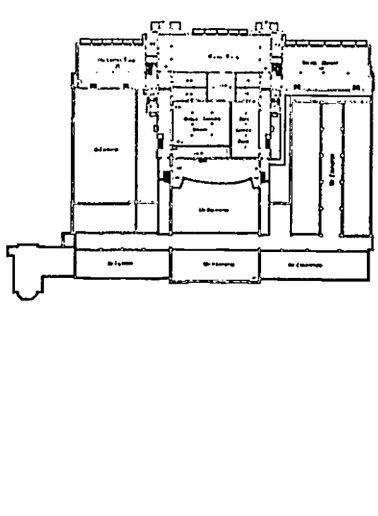
Plans of Existing Facility



sequence through preliminary study model from roof to basement showing existing mechanical chase spaces and structure—all non-bearing partitions have been removed for clarity







Introduction and Philo for Burris

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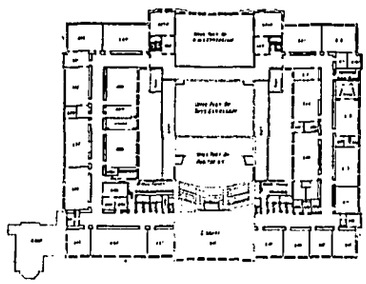
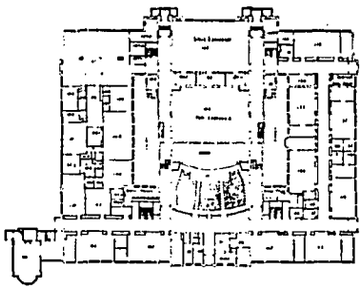
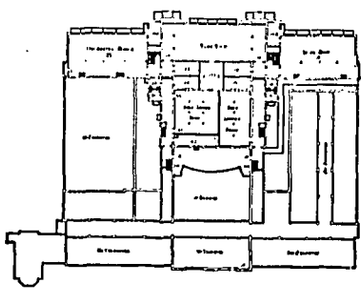


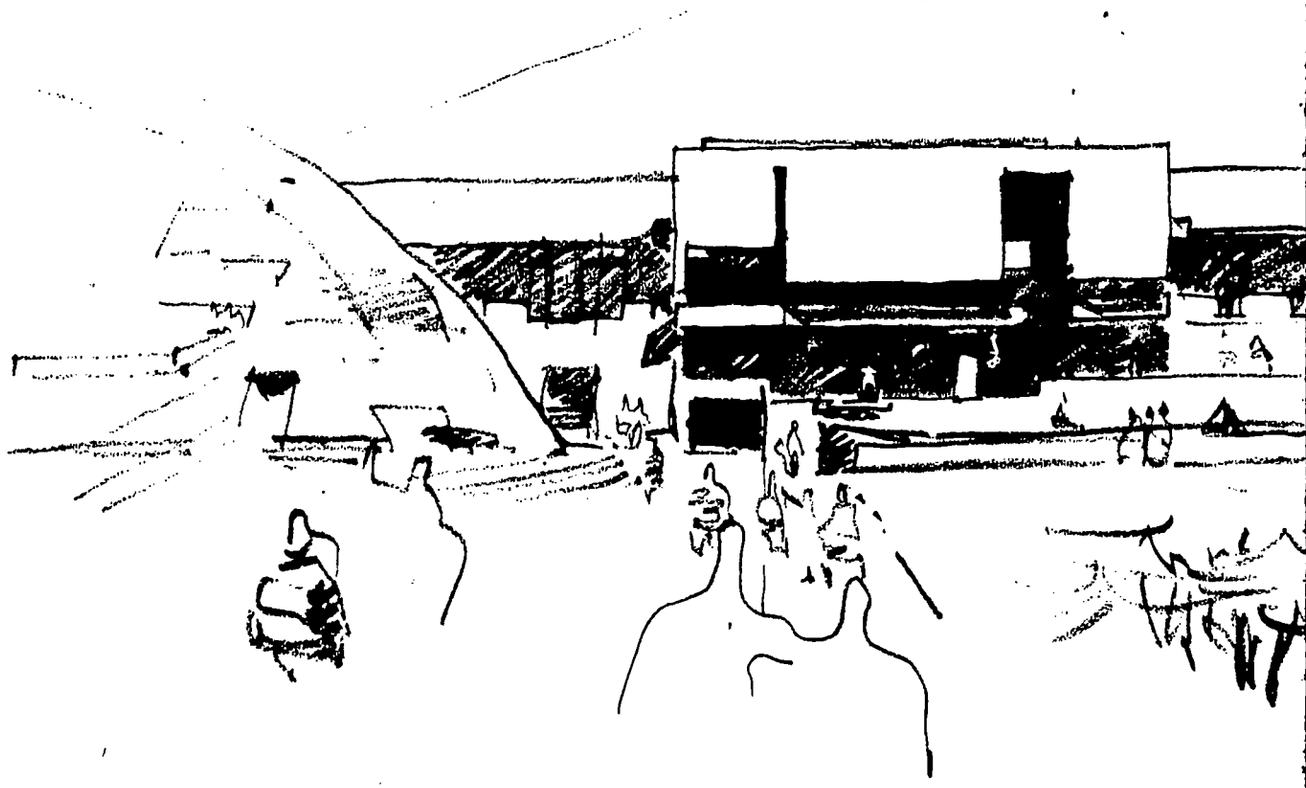




Introduction and Philosophy for Burris

Ball State University's Burris Laboratory School was designed, for the most part, in 1928. Although its educational programs are highly innovative, its physical facilities are cramped and antiquated. Its structure is sound, yet it imposes inordinate rigidity on possible future educational programming. The following two paragraphs describe, in greater detail, its objectives and history:

The Laboratory School, a Department of the Teachers College, serves as a laboratory for testing teaching methodology and learning environments, for developing instructional materials, and for involving university students in teacher education programs with children. The Laboratory School serves children living in an attendance area of the Muncie Community Schools; thus it is a unit of the Muncie Community Schools system. The school is a K-12 facility with an enrollment of approximately 900 students and has been in operation since September, 1929.



Programs developed through the years in the Laboratory school which have served as patterns for other schools include unified arts, core curriculum, multi-age grouping, and individualized instruction. One of the more popular modern mathematics programs had its inception in the Laboratory School. It was developed by Robert Eicholz, Phares O'Daffer, and Charles Fleenor and is now published and distributed by Addison Wesley Company. Another recent program of national prominence, The Oral-Aural-Visual Stimuli Approach to Teaching of Written Composition, was developed in the Laboratory School under the direction of Dr. Anthony L. Tovatt.

In essence, the Burris Laboratory School sits as an island, physically isolated from its university and community neighbors; learning operations are in many ways confined to the artificial anonymity of its four monotonous brick walls. The "subject matter" of its classrooms has become so interwined with "real life" that the two are becoming one; **presently there is no physical indication of this** at Burris.

Learning can be **everywhere; we should** use **buildings** for their **exterior** as **well as interior forms and surfaces, to involve the total community.** Learning has become a continuing process of communicating systems, with a setting rapidly extending beyond the limits associated with conventional "school buildings." Differentiation is gradually diminishing between libraries, art museums, shops and parks, while greater stress is placed on the creation of a maximum number of **options for the individual and the group**; with adaptability for growth and change through **direct means** (books, computers, teachers, classes) and through **indirect means** (varieties of stimuli en route to other places).

The limits of educational systems and facilities have transcended the mythical boundaries of the classroom in thought as well as action; and flexibility in space and time, once thought the panacea for every educational facility ill, has taken second place to **accessibility.** Concern for the design inside the classroom is rapidly giving way to design interest of a more critical nature— that of the **total community.** The Burris School can easily become a more inte
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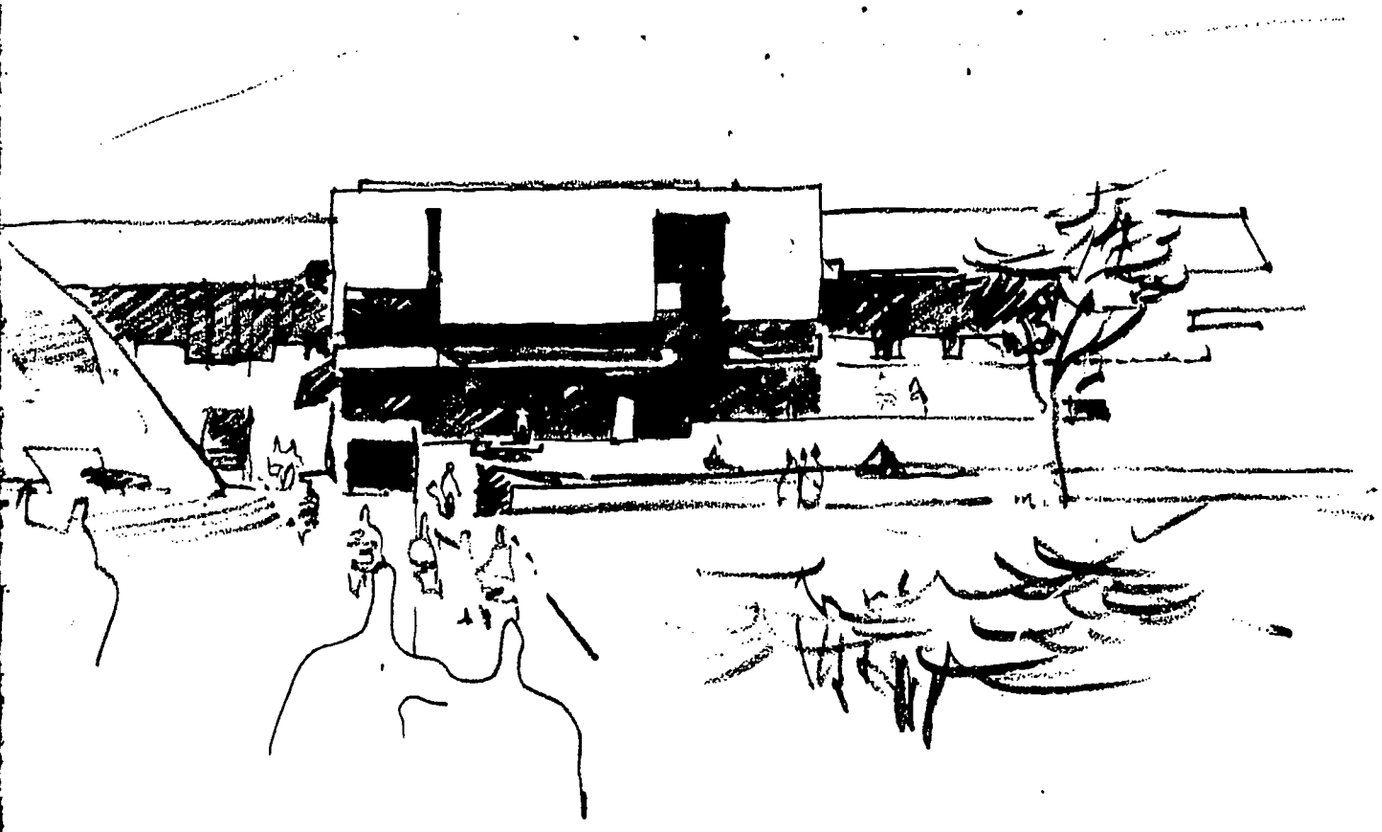

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The goals formulated by the Burris faculty are clear. Their primary objective is **to allow** a **student to learn about himself, through activities stressing perception,** self **expression and self expansion.** These activities may take the non-verbal forms of music, art, or physical development. Another objective is **to expand into the community through exposure, inviting and encouraging participation from other individuals and institutions.**

Plans were based around the following enrollments: Pre-kindergarten, 50; kindergarten, 50; grades 1-6, 300; grades 7-12, 540. The proposed design would be essentially unaffected by a gradeless situation.

The information below was furnished by Burris School as a guide in beginning the study:

The educational program will be designed to allow for the development of **continuous learning programs;** that is, the educational program will be designed to meet the needs of the **individual** learner. Continuous learning patterns will be in effect from pre-kindergarten through grade 12. Continuous learning programs are characterized by being **flexible.** The learning spaces must be designed to accommodate large groups in an area from which small groups and individuals can work in special activities. Since students will operate out of large areas, it will be necessary to have the responsible faculty centered within these areas.

As we visualize the Burris program during the next twenty-five years, the 300 children in the **elementary** area would be assigned to **two groups of 150 each.** There would be a minimum of five full-time faculty who would direct the learning programs for children at this age level. These five would be assisted by a psychometrist, a specialist in developmental or corrective learning programs, a specialist in physical education, another in music, another in art, another in industrial and technological programs. The specialist would work with each of two centers and the five teachers in each center. In this program each of these specialists would need to have an area for directing his specialty; that is, a gymnasium for physical education; a room for music, art, and industrial and technological centers. The specialists in developmental and corrective programs would need an isolated room for working with children who have special learning problems. There would need to be a room for the psychometrist.

The program for the **seventh and eighth grades** would provide for a **planned transition** through a learning program designed to meet the needs of the early adolescent. The students would spend a major portion of their day, i.e., approximately one-half, working in a **core** of subjects that would represent their common learning or general education experiences. The other one-half would be spent in specialized activities such as art, physical education, music, and possibly in some subjects such as mathematics, typewriting, foreign languages. The core program would need a large open area for the **large group of 90 students** with many facilities for **small group** and **individualized instruction** supported by computer assisted learning devices including information retrieval centers. Three or four teachers who would be responsible for directing the core programs would need to be housed in the learning area. The special learning programs could be housed in areas designed for instruction in the specialty, i.e., art center, music center, typing center.

The program in **grades 9-12** would place emphasis upon developing **continuous** learning programs, which means individualization of instruction. Hence the program would need to be centered in areas that would have the tools and instructional aids conducive to directing learning in the major areas for which the secondary school will be responsible. Specifically, the **center** for the development o a center for identifying **social problems** that man must res his fellowman and to resolv production, consumption, an goods and services; a cente proficiency in **languages** othe tongue; a center for identifyin problems in controlling the e using the **natural resources** t benefit of all mankind; a cen systems of **logic** and express **quantitative relationships;** a identifying issues and proble providing for **family living** food, sanitation; a center for express himself through aest such as dance, music, dram jewelry; a **technology** center design and fabricate materia the needs of man; a center **social activities;** a center for **manipulative** skills such as keep records, secretarial act

As you see, the school of the will not be organized in terms disciplines but rather in term social issues confronting m areas described above are in ought to be grouped around In each of the areas there sh to computer assisted instruct and visual aids such as TV, v a projection booth.

Teachers who direct progra areas ought to have their h that **instructional** area. That building ought to be designe communication among teach see it, there would be no nee private office. However, in ev ought to be places in which small groups could assemble the total group. Also, in each some place in which **private**

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industrial and technological programs. The specialist would work with each of two centers and the five teachers in each center. In this program each of these specialists would need to have an area for directing his specialty; that is, a gymnasium for physical education; a room for music, art, and industrial and technological centers. The specialists in developmental and corrective programs would need an isolated room for working with children who have special learning problems. There would need to be a room for the psychometrist.

The program for the **seventh and eighth grades** would provide for a **planned transition** through a learning program designed to meet the needs of the early adolescent. The students would spend a major portion of their day, i.e., approximately one-half, working in a **core** of subjects that would represent their common learning or general education experiences. The other one-half would be spent in specialized activities such as art, physical education, music, and possibly in some subjects such as mathematics, typewriting, foreign languages. The core program would need a large open area for the **large group of 90 students** with many facilities for **small group** and **individualized instruction** supported by computer assisted learning devices including information retrieval centers. Three or four teachers who would be responsible for directing the core programs would need to be housed in the learning area. The special learning programs could be housed in areas designed for instruction in the specialty, i.e., art center, music center, typing center.

The program in **grades 9-12** would place emphasis upon developing **continuous** learning programs, which means individualization of instruction. Hence the program would need to be centered in areas that would have the tools and instructional aids conducive to directing learning in the major areas for which the secondary school will be responsible. Specifically, there should be a **center** for the development of **communications**; a center for identifying **social issues and problems** that man must resolve to live with his fellowman and to resolve the problems of production, consumption, and distribution of goods and services; a center for developing proficiency in **languages** other than the native tongue; a center for identifying issues and problems in controlling the **environment** and using the natural **resources** therein for the benefit of all mankind; a center for developing systems of **logic** and expressing **spatial** and **quantitative relationships**; a center for identifying issues and problems man faces in providing for family **living** including housing, food, sanitation; a center for learning to express himself through **aesthetic activities** such as dance, music, drama, art, sculpture, jewelry; a **technology** center for learning to design and fabricate material things to serve the needs of man; a center for **recreation** and **social activities**; a center for developing **manipulative skills** such as learning to type, keep records, secretarial activities, etc.

As you see, the school of the immediate future will not be organized in terms of subject disciplines but rather in terms of the large social issues confronting man. Many of the areas described above are interrelated and ought to be grouped around common centers. In each of the areas there should be access to computer assisted instruction and to audio and visual aids such as TV, video tape, and a projection booth.

Teachers who direct programs in the large areas ought to have their **headquarters within** that **instructional area.** That is, the building ought to be designed to facilitate communication among teachers. As we would see it, there would be no need for the so-called private office. However, in every area there ought to be places in which individuals or small groups could assemble in isolation from the total group. Also, in each area should be some place in which **private conferences**

could be held. Serving the total program will be some centers such as the gymnasia, recreation center, auditorium, library, teaching materials center. The number of children in the school would warrant having separate elementary and secondary libraries.

There should be administrative offices for secondary and elementary schools and an administrative office for the director of the school program. In the elementary and secondary administrative offices provision should be made for guidance counselors. In the director's office there should be a school nurse service, provision for a social psychologist, a psychometrist, and a speech and hearing therapist.

Since the laboratory school will be serving undergraduate and graduate professional education inservice programs, there should be an area large enough to accommodate the maximum number of university students that would be assigned to the laboratory school for professional experiences at any one time. A rough approximation would be to serve a group of 100 university students. Associated with this room ought to be offices for the director of these professional experiences and for the university faculty who will be working with him in the program. Since the university elementary and secondary programs are in separate departments, we would assume there ought to be provision and offices for a director of elementary and a director of secondary professional laboratory experiences. However, the large classroom-learning center could serve university students in both the elementary and secondary programs.

Since one role of a laboratory school is to provide opportunity for various individuals to observe the teacher-learner environment, the learning areas should be open-to-viewing. The interior of enclosed areas should be visible from within and without, i.e., no one-way glass except in rooms in which the learning activity would be modified negatively if the observer is visible, such as in testing rooms used by psychometrist and in therapy rooms used by speech-hearing therapist.

Associated with the laboratory school director's office should be a conference room that would accommodate fifty to sixty people. This room would be used as a center for the inservice programs, including faculty meetings. This room would be equipped with closed circuit television, a computer head, and an information retrieval system. In the immediate future the public school teachers working with the university as critic teachers for student teachers will be expected to spend a portion of their time working in the laboratory center to keep abreast of the teacher education program. This room would serve as their headquarters.

The Burris School facility has been physically investigated in terms of existing and future needs. A priority based sequence of remodeling and additions is suggested to meet these demands. It consists of 31 distinct operations that can be grouped into 8 major phases for purposes of financing and construction. The phases, in turn, can be combined to form larger development packages if desirable. It is the intent of the study that these changes can be made without disrupting the normal operations of the existing facility.

The design proposals for the existing Burris School facility encourage the development

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2) It is located in an area
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3) The existing structure
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4) Funds for a new Burris
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5) The existing building ca
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Intent of Design Feasibility Study

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The Burris School facility has been physically investigated in terms of existing and future needs. A **priority** based **sequence** of remodeling and additions is suggested to meet these demands. It consists of 31 distinct operations that can be grouped into **8 major phases** for purposes of financing and construction. The phases, in turn, can be combined to form larger development packages if desirable. It is the intent of the study that these changes can be made without disrupting the normal operations of the existing facility.

The design proposals for the existing Burris School facility encourage the development of a symbiotic relationship among Burris, the University, and the community. The "connective tissues" of these groups is felt to be a primary source of information dissemination. Through the proposed use of building form, land development, appropriate scale, materials, graphics and circulation, it is felt that Burris can serve more diverse community interests.

It is felt that the existing University Avenue site is appropriate for the future development of Burris Laboratory School due to the following factors:

1) It is a prime location with regard to the University, especially the Teachers College.

2) It is located in an area where, because of the University, there will always be students.

3) The existing structure is physically sound and well maintained.

4) Funds for a new Burris School facility are not as readily available as funds for renovating the existing facility.

5) The existing building can easily be adapted to meet the educational goals set forth by the Burris faculty.

It is hoped that the designs suggested in this feasibility study are successful in showing how a facility which is a "laboratory" for programs in teaching and learning can also be a suitable **"laboratory" for learning environments.** It is intended that this remodeled facility can set an example for many schools under similar physical restraints.

Finally, it is hoped that this design study can become an inspiration and benefit to teachers, students, and parents from this community as well as others across the country, as a **"real" place to learn.**

Intent of Design Feasibility Study

The design illustrated for this project is merely schematic in nature. Greatest stress has been placed in developing an approach that illustrates possibilities for true "**inside-outside**" facilities. Many ideas were felt inappropriate or out of scale for this particular setting* and were therefore not included. The whole design could be considered a **smorgasbord** of operations, any of which would be, in our opinion, an improvement of the existing facility.

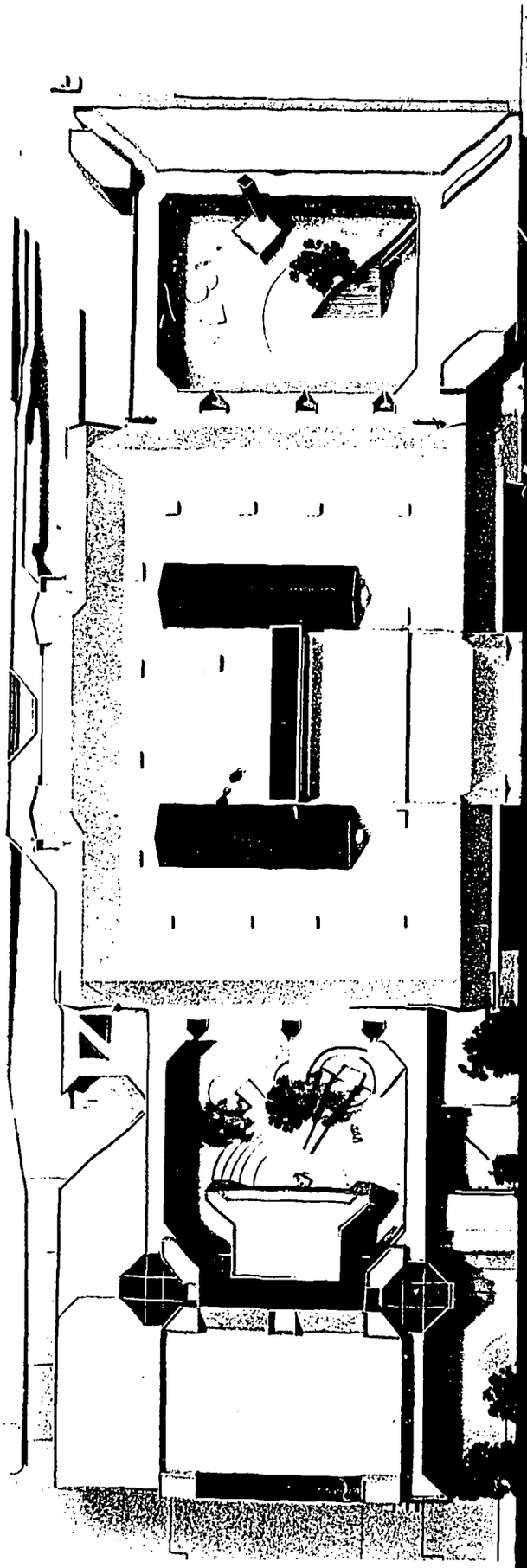
Adding a new wing to an old building is a tricky business. If the addition works so hard at looking like the original building, it could be embarassing; or the new wing might ignore the old entirely and appear to be stuck on with scotch tape—as an afterthought. We opted for neither the desperately conforming or the sore-thumb approach. Our additions show distinct sympathy to the existing roof profiles and buiiding volumes; at the same time they introduce new and exciting forms, spaces, and materials.

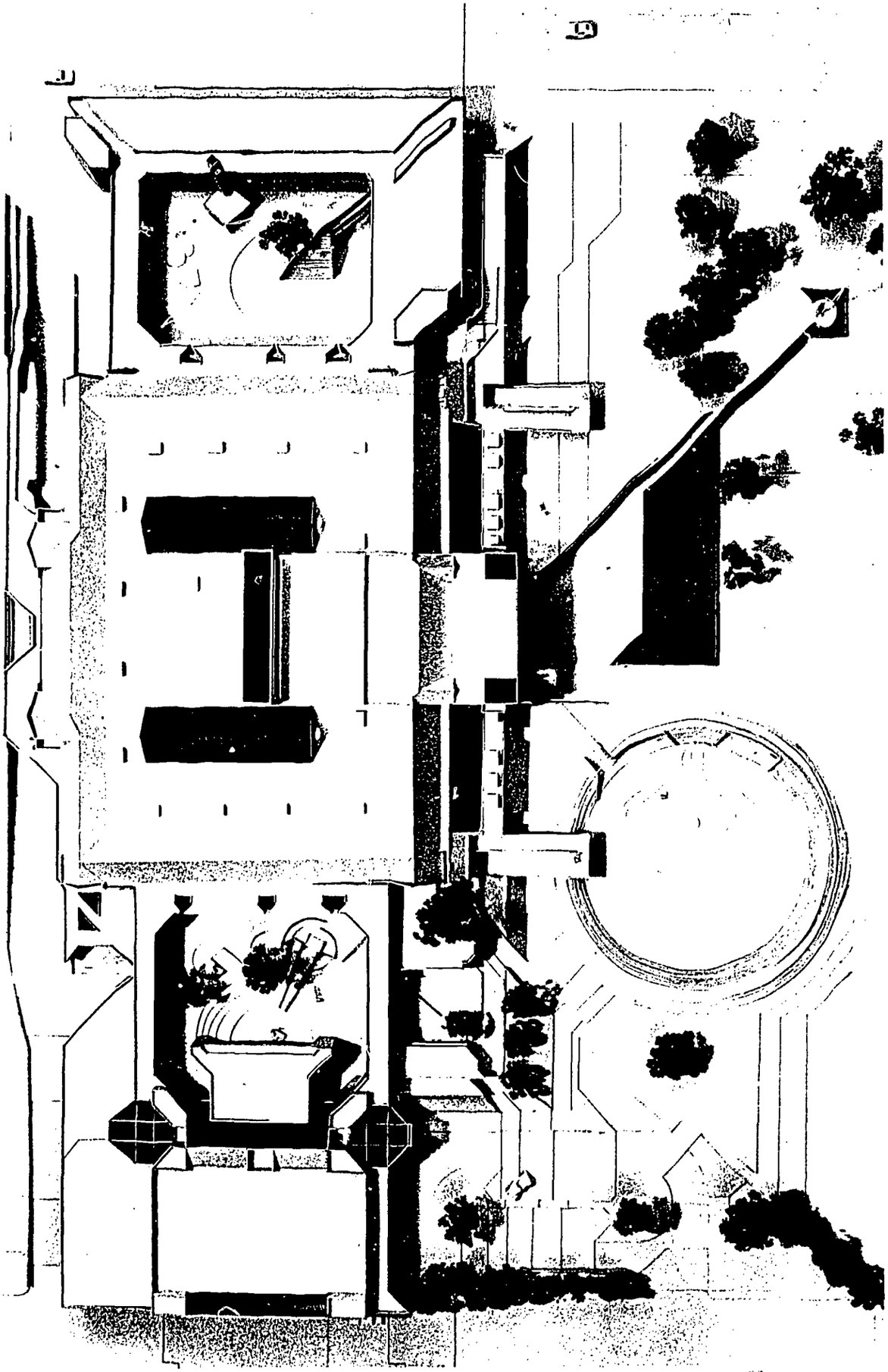
The greenhouse effect exists for plants and people. Clear and tinted plexiglass is used to acoustically segregate spaces as well as to admit prodigious amounts of light to circulation spaces, arcades, library/information center, etc. Glass is used to provide visual egress into garden/playcourts.

The total proposal is considered a **laboratory** not a loft—a series of spaces with options for change, yet a physical design that in itself becomes a tool for studying behavior in varieties of circumstances and environments.

Areas represented were based on the educational program for 940 students (nursery through 12) that was provided by the Teachers College.

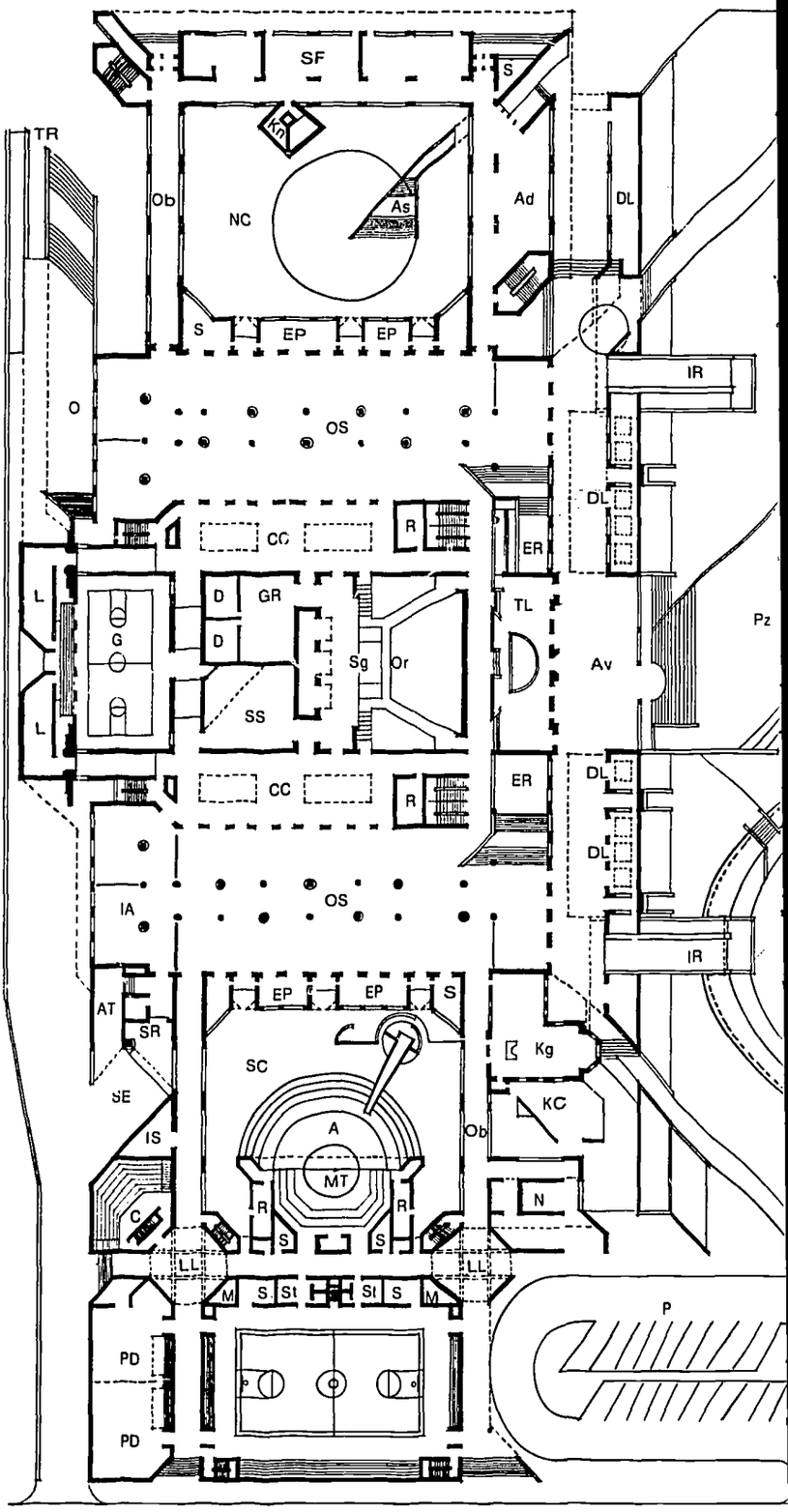
*These include image projection techniques, special lighting effects, electronic capabilities, materials experimentation, kinetic structural experimentation, etc. We would like to develop these further on future projects.

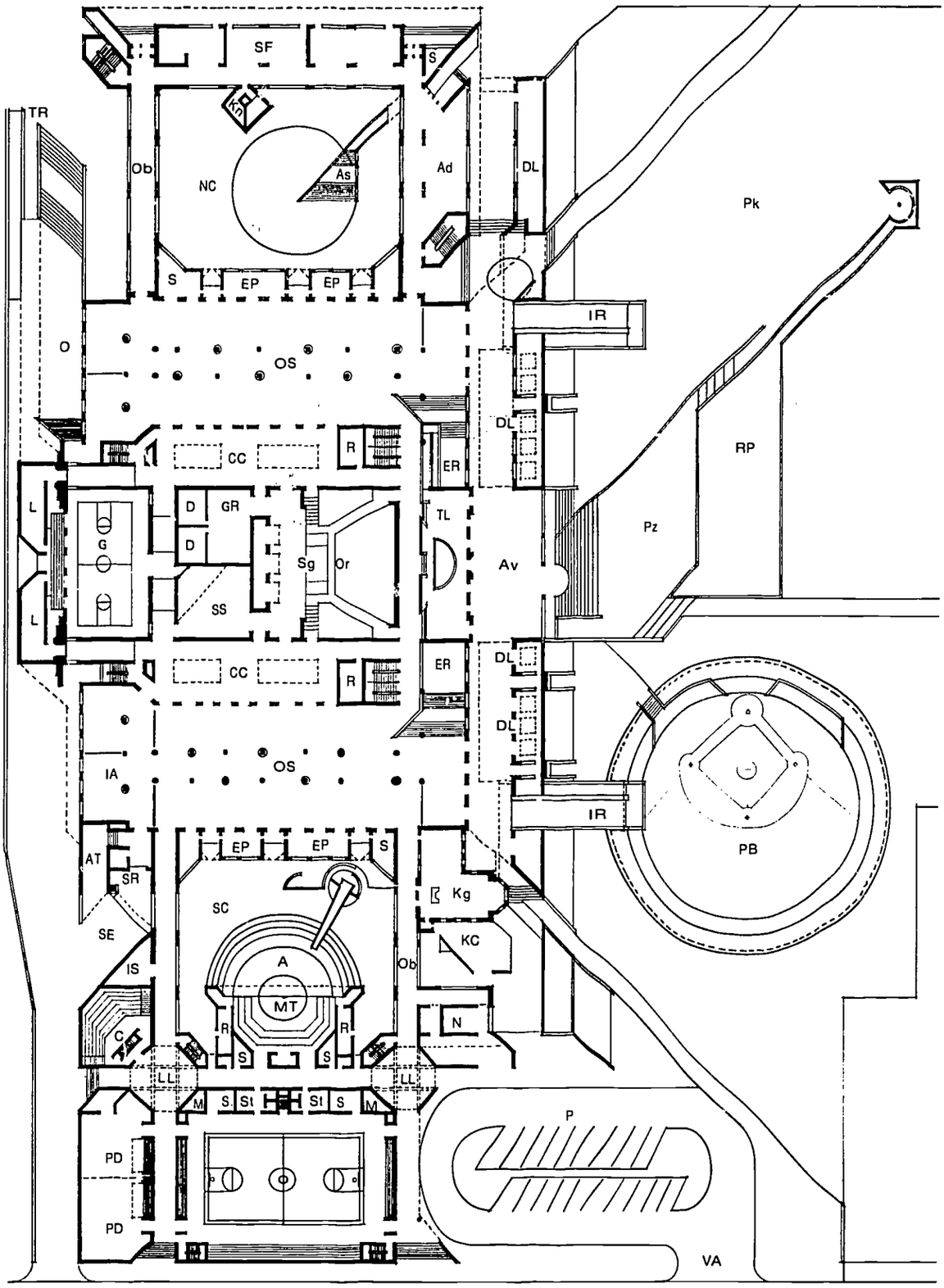




14

A Amphitheatre
Ad Administration
As Amphi-stair
AT Automotive Technology Shop
Av Arcade Vestibule
C Choral Room
CC Circulation Court
D Dressing Room
DL Discovery Labs
EP Exterior Pods
ER Elementary Resource Center
G Gymnasium
GR Green Room
IA Industrial Arts
IR Interaction Ramp
IS Instrument Storage
KC Kinder-Court
Kg Kindergarden
Kn Kiln
L Lockers
LL Learning Lobby
M Mechanical Equipment
MT Music Theater
N Nursery
NC North Garden/Play Court
O Outdoor Area
Ob Observation Gallery
OS Open Space
Or Orchestra
P Parking
PB Play Bowl
PD Physical Development
Pk Park
Pz Piazza
R Rest Rooms
RP Reflecting Pond
S Staff
SC South Garden/Play Court
SE Service Entry
SF Storefront Facilities
Sg Stage
SR Shipping/Receiving
SS Scene Shop
St Storage
TL Theater Lobby
TR Terrace Ramp
VA Vehicular Access

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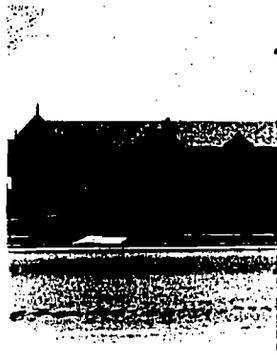
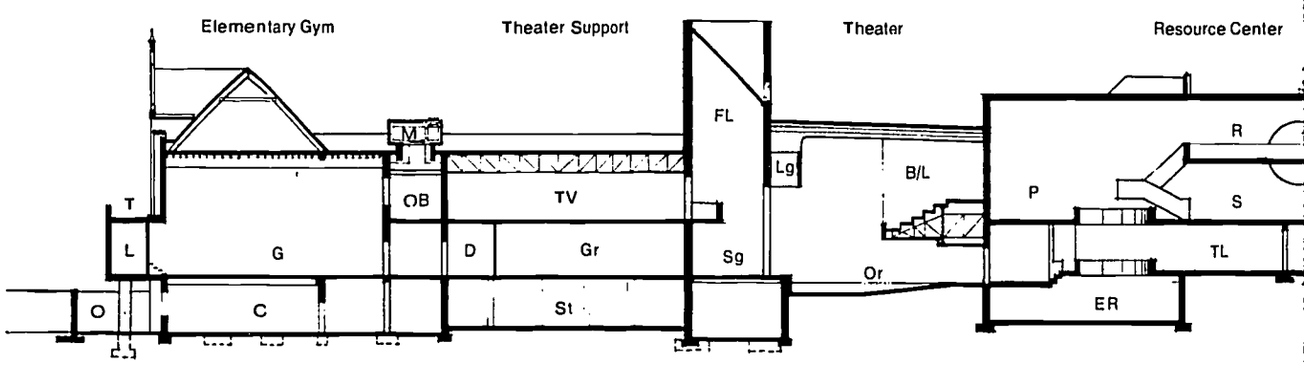
Av Arcade-Vestibule
B/L Balcony/Lecture Facilities
C Cafeteria
D Dressing Rooms
ER Elementary Resource Center
FL Fly Loft
G Gymnasium
Gr Green Room
L Lockers
Lg Lighting Grid
M Mechanical
O Outdoor Area
OB Observation Gallery
Or Orchestra
P Periodicals
Pz Piazza
R Reference
RP Reflecting Pool
S Stacks
Sg Stage
St Storage
T Terrace
TL Theater Lobby
TV Television Center





East/West Sections

Av Arcade-Vestibule
B/L Balcony/Lecture Facilities
C Cafeteria
D Dressing Rooms
ER Elementary Resource Center
FL Fly Loft
G Gymnasium
Gr Green Room
L Lockers
Lg Lighting Grid
M Mechanical
O Outdoor Area
OB Observation Gallery
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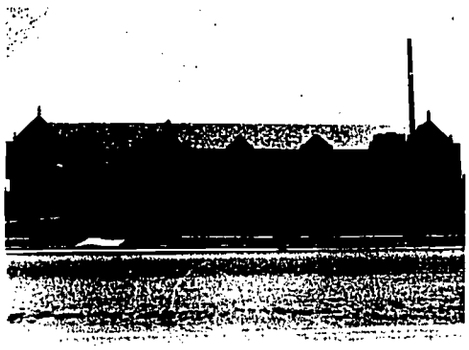

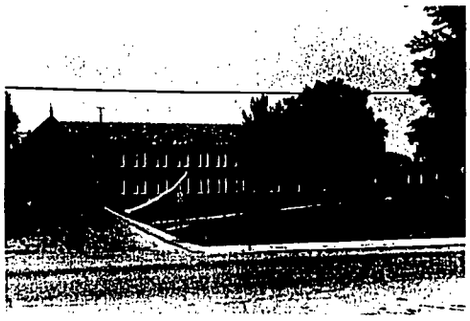

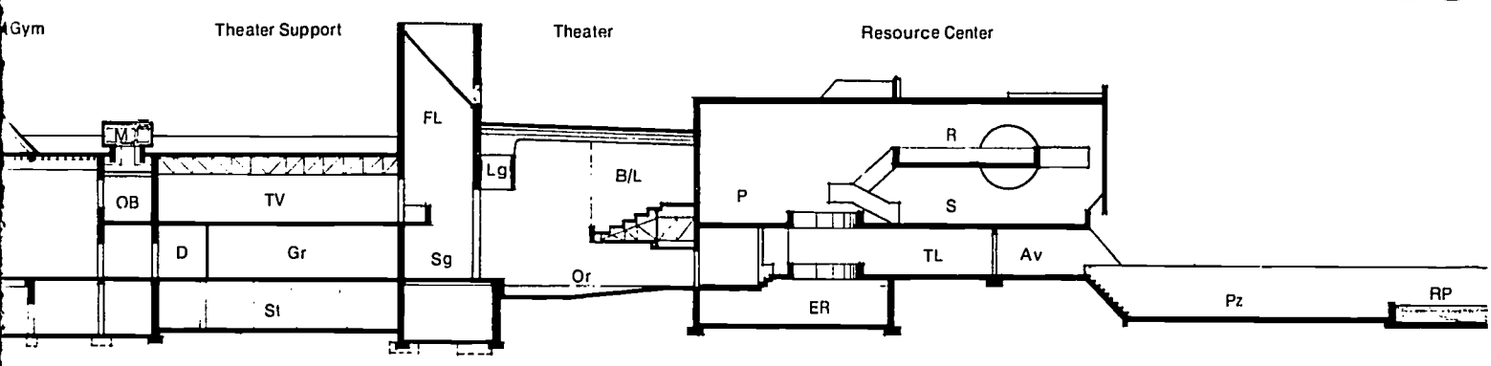

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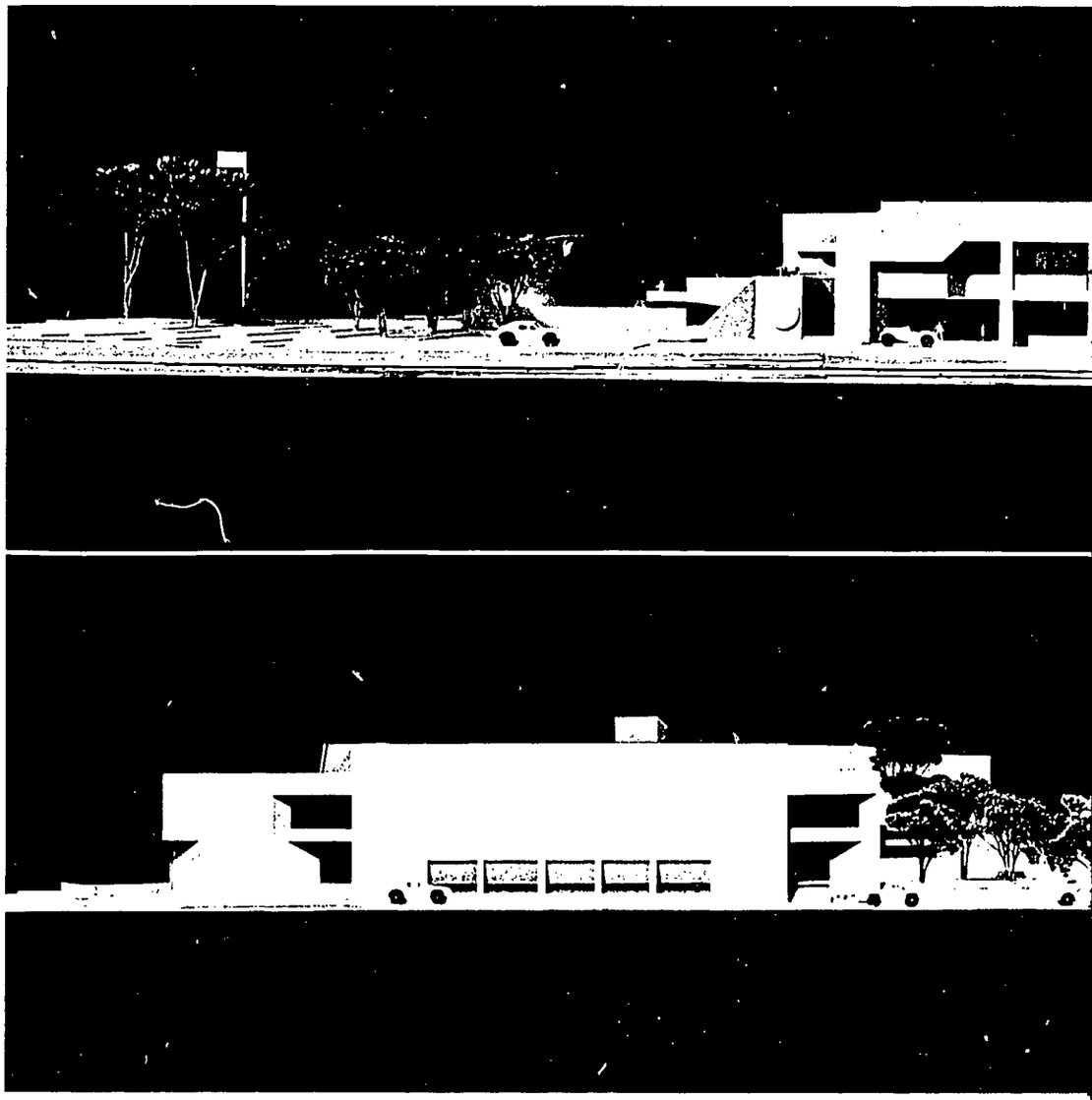
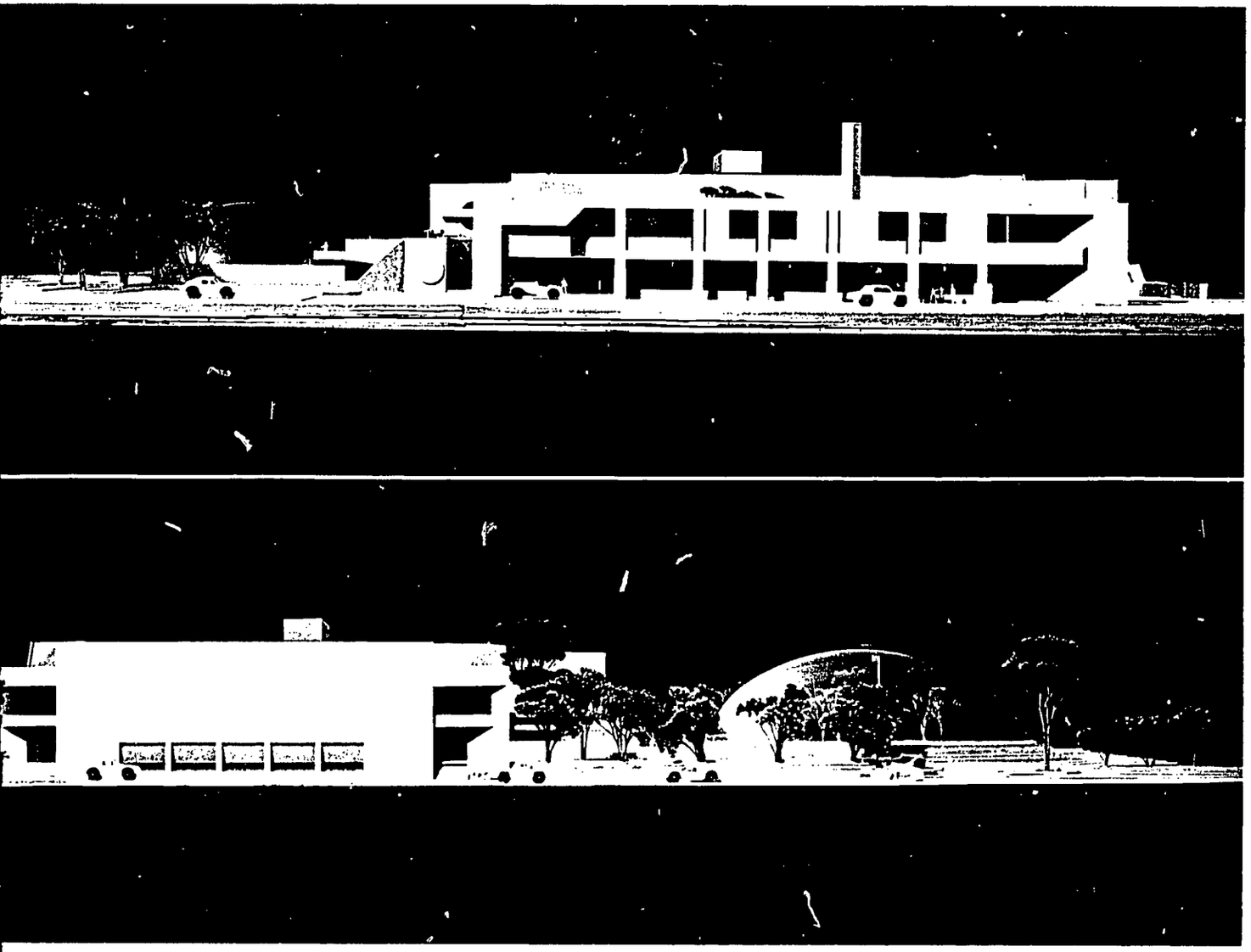


North/



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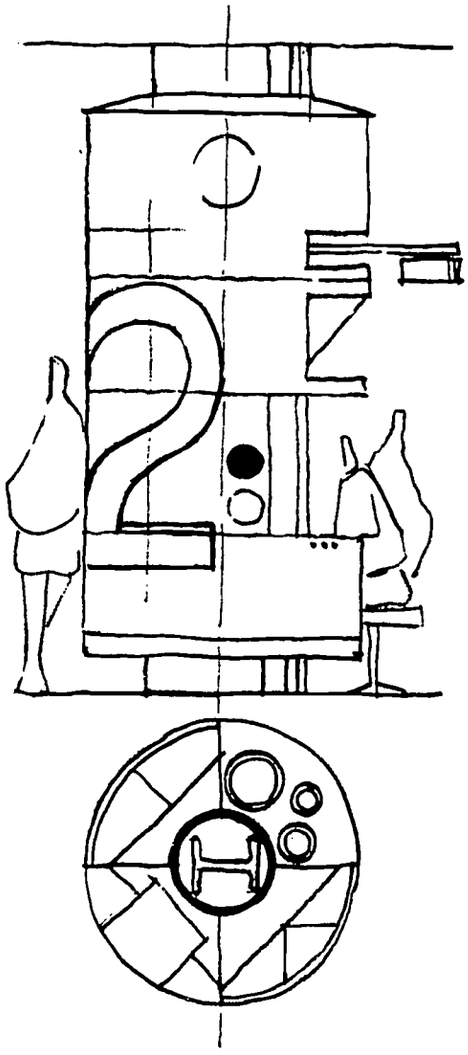
North/South Elevations

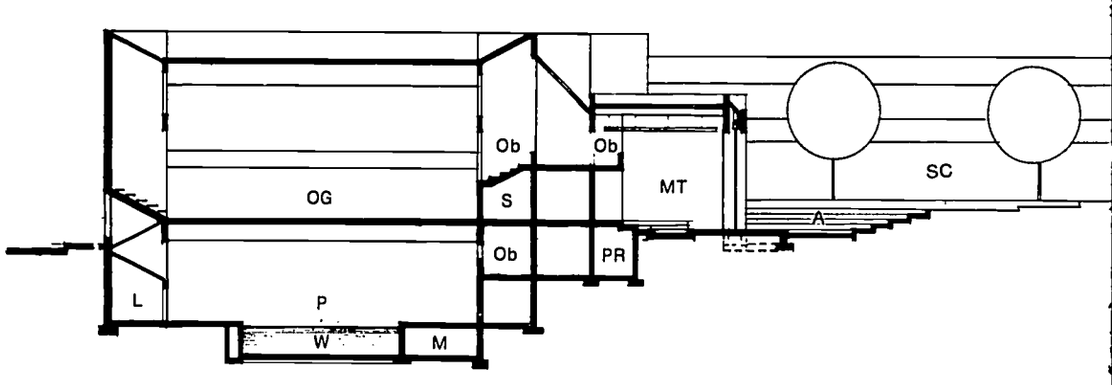


A	Amphitheater
Ad	Administration
CC	Circulation Court
EP	Exterior Pod
Gr	Green Room
L	Lockers
M	Mechanical
MT	Music Theater
NC	North Garden/Play court
Ob	Observation Gallery
OG	Observation Gymnasium
OS	Open Space
P	Pool
PR	Practice Rooms
S	Staff
SF	Storefront Facilities
SC	South Garden/Play Court
SS	Scene Shop
St	Storage
TV	Television
W	Water

AUDIO-VISUAL
"TOTEM"

Physical Education/Music

South Garden/Play Court



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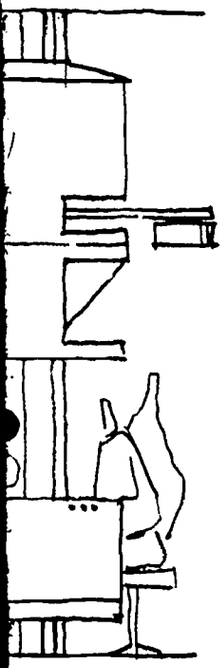

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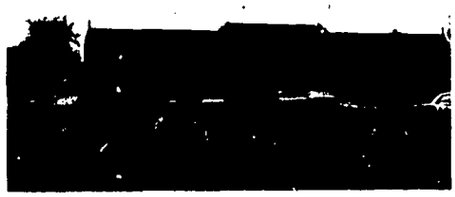

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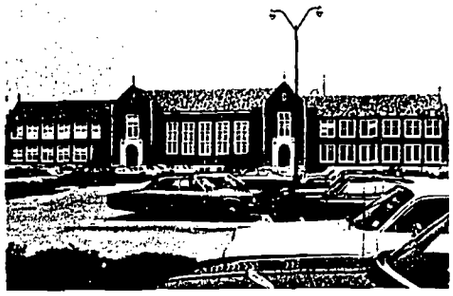

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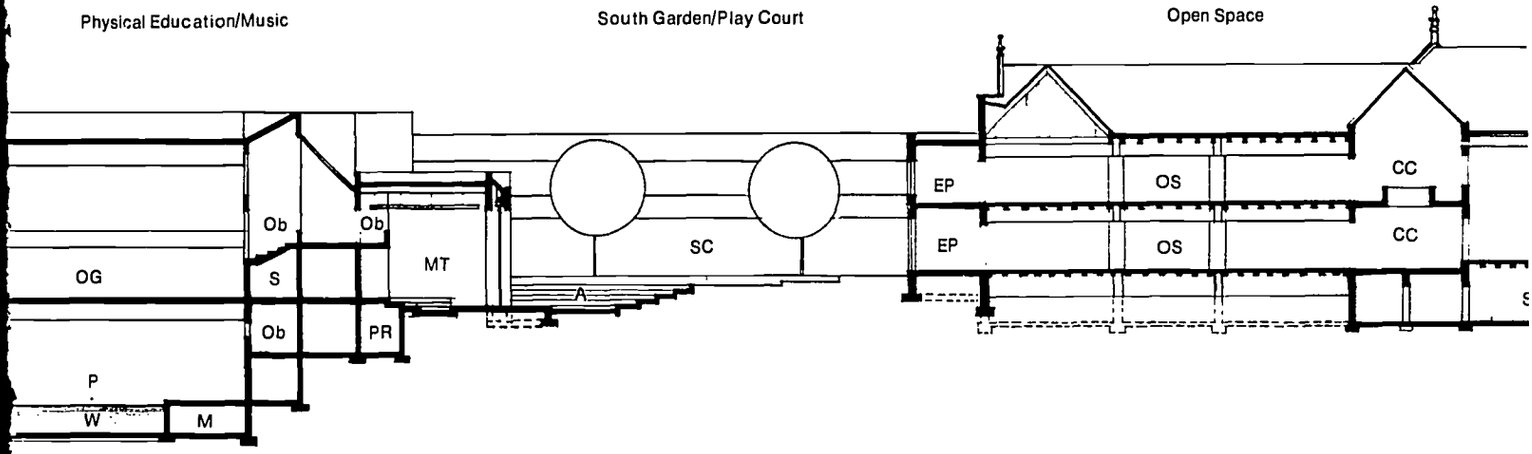
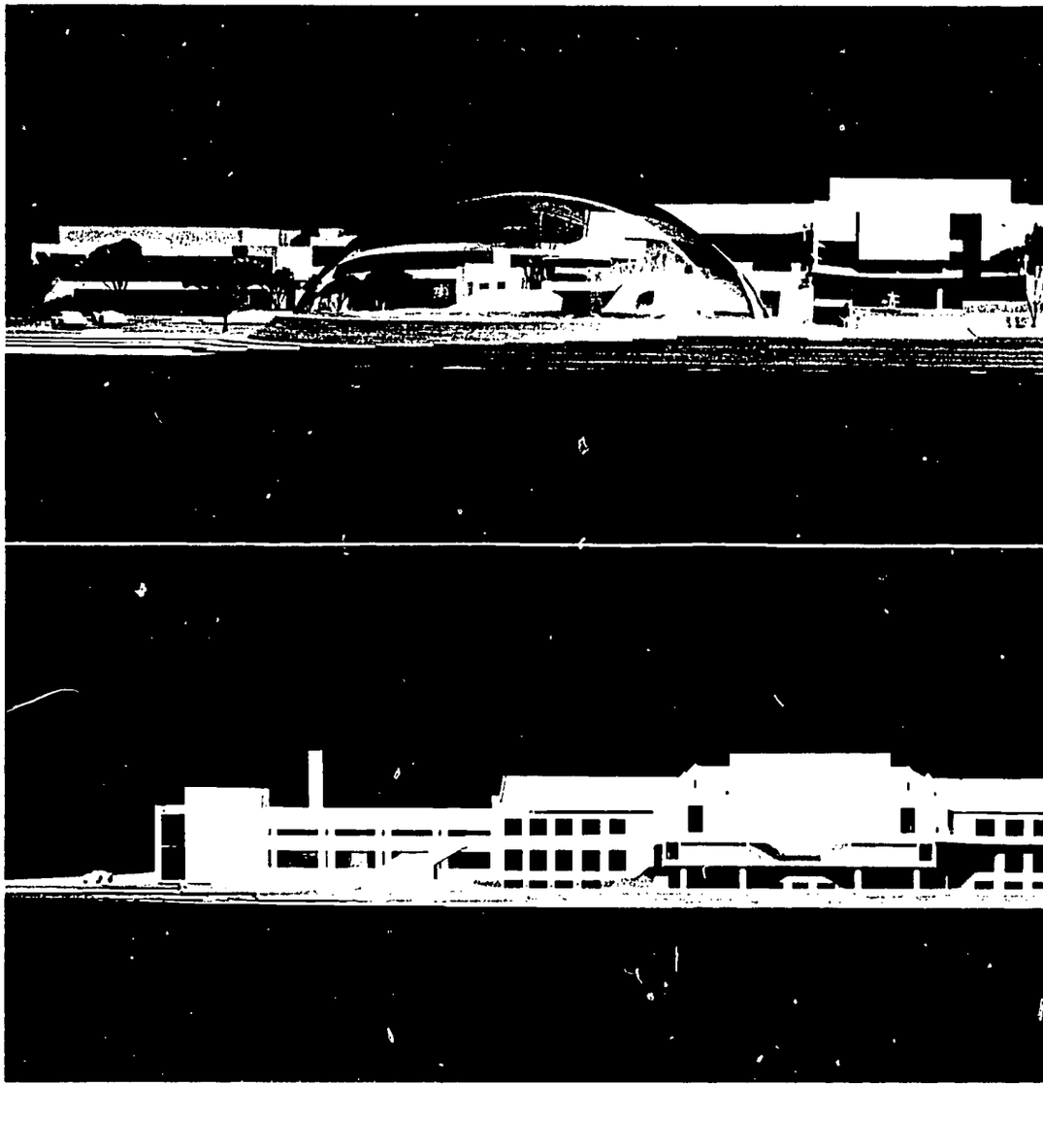
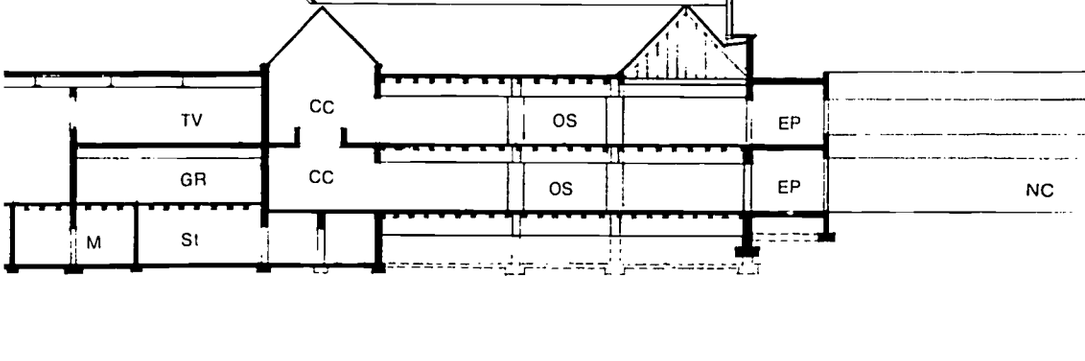


North/South Section

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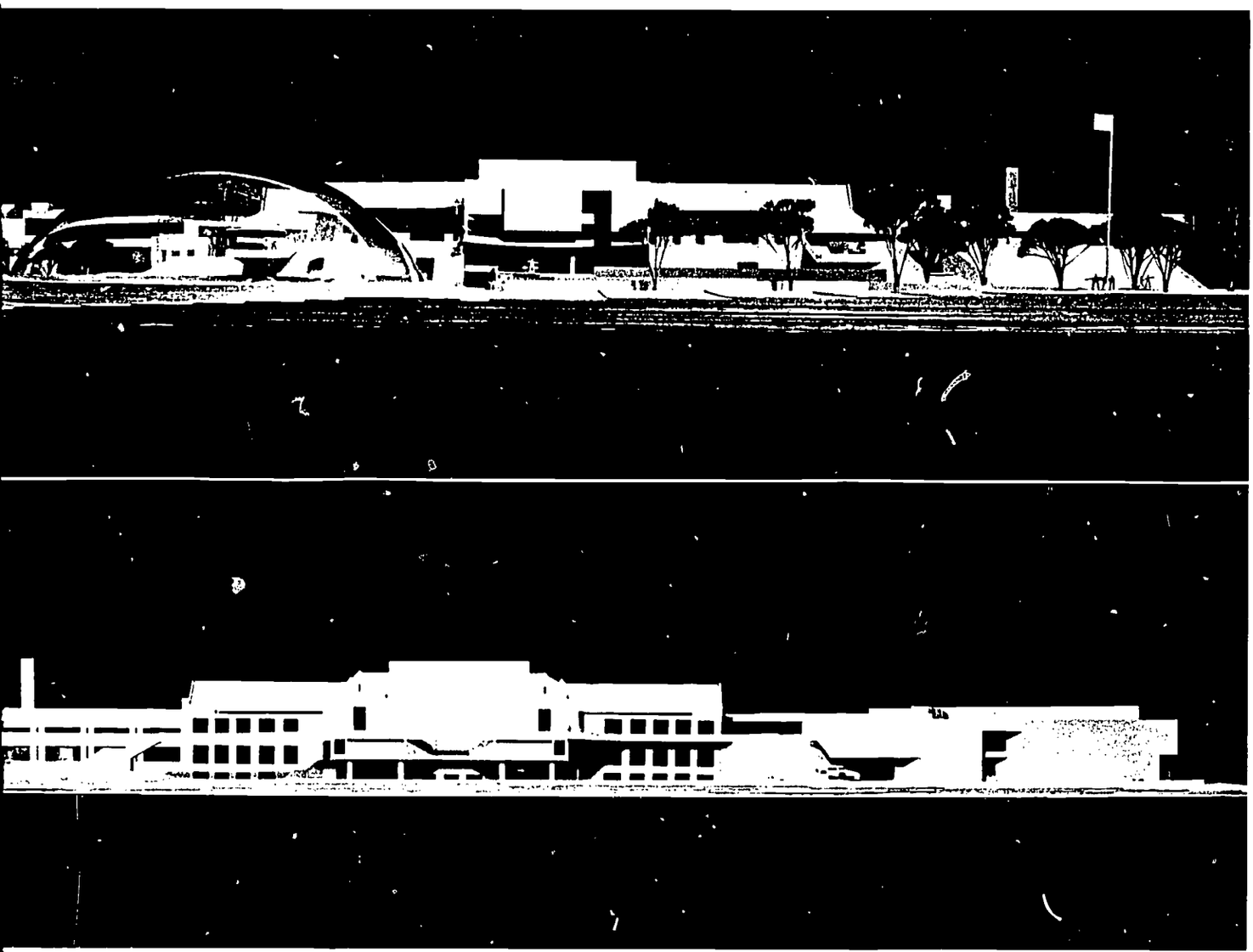

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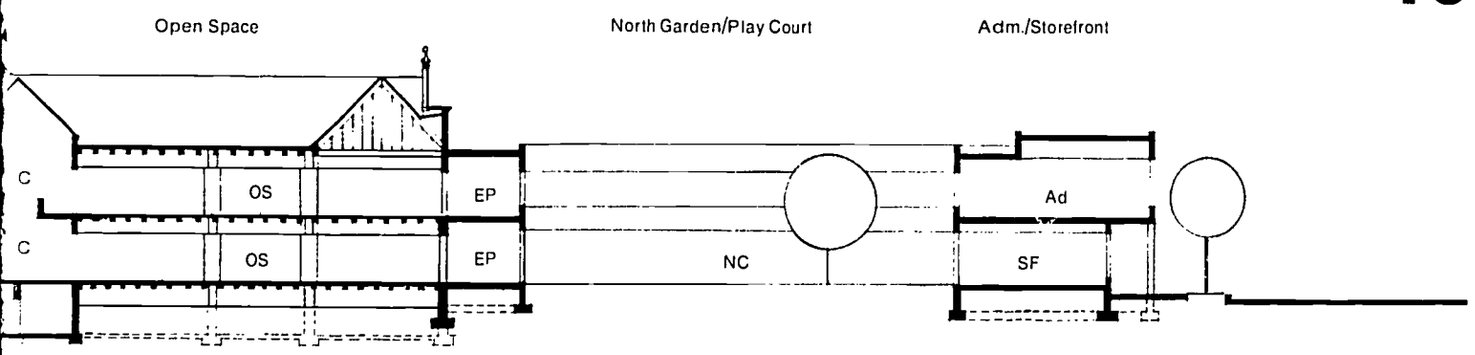
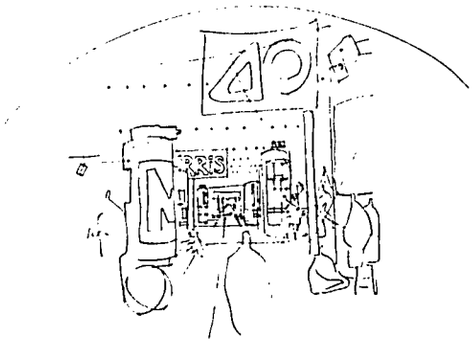
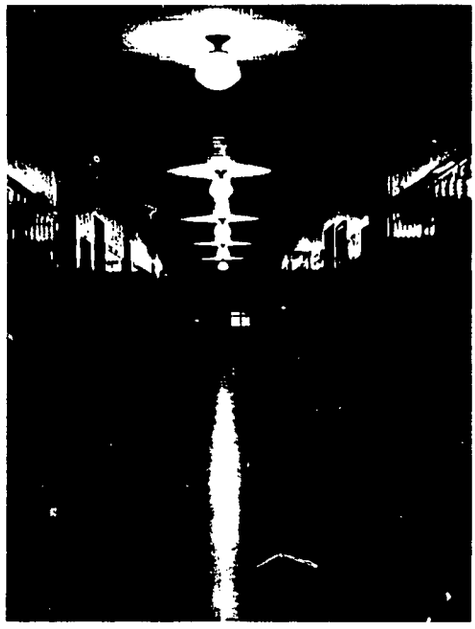


East/West Elevations

Structure/Mechanical





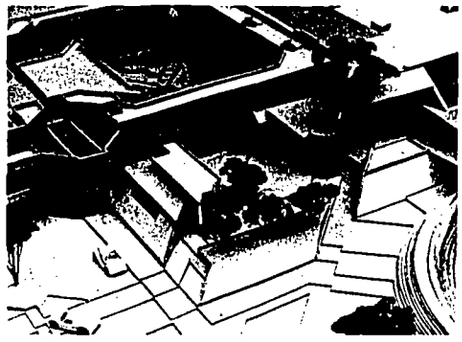
In the renovated portions of facility most non-bearing structural members have been removed, leaving a basic column grid in place of double loaded corridors. The resulting open space shall be fully carpeted.

The individual columns (free-standing in two 12,000 square foot open spaces per floor shall be alternately built up to three foot diameters and redesigned as "au**dio-vi**sual **totems**"—power sources for equipment, storage areas, TV monitor stations, and container/ dispersers for high velocity unit air handling equipment that can be added in individual roof units. These separate units facilitate comfort zoning of particular areas; at the same time they allow easier rooftop installation for the new mechanical equipment when and where it is needed.

Structural alterations have been limited to portions of the central activity core of the existing facility in order to obtain: 1) an enlarged library/resource center; 2) a modernized theater/lecture space; 3) adequate theater support facilities; and 4) improved circulation in the old courtyard spaces.

Nursery and Kindercourt

B-1, 2, 3



The nursery addition, located on the community/residential south side of the site, encloses a small "Kinder-court" with the existing kindergarten. Both facilities are immediately accessible to a vehicular drop-off as well as larger contained recreation areas such as the south garden/play court and the air supported "play-bowl."

Interior and Exte

D-3, E-2,

Circulation through dar old corridor "audio-visu **"greenhous** light wells b level span a a plexiglass have been c arched walk

The new co vegetation, informal in observation spaces, for receives da new Burris cameras mo totems" and administrati

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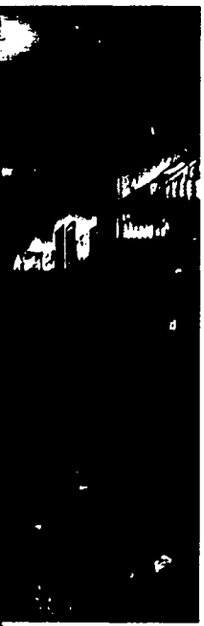

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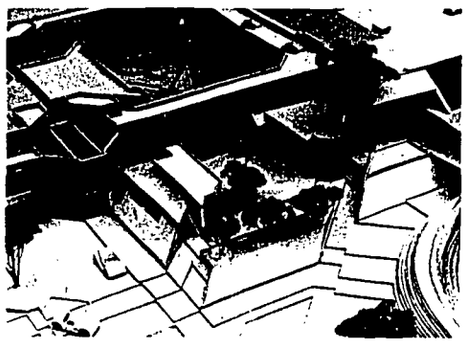
Nursery and Kindercourt

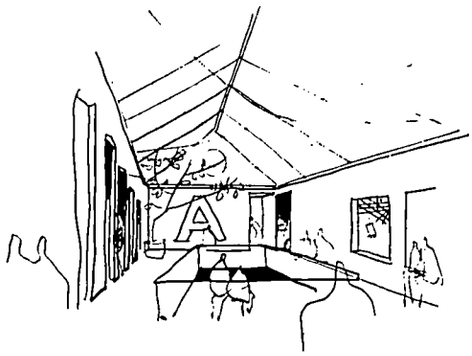
B-1, 2, 3



The nursery addition, located on the community/residential south side of the site, encloses a small "Kinder-court" with the existing kindergarten. Both facilities are immediately accessible to a vehicular drop-off as well as larger contained recreation areas such as the south garden/play court and the air supported "play-bowl."

Interior Circulation Courts and Exterior Pods

D-3, E-2, 3, 4

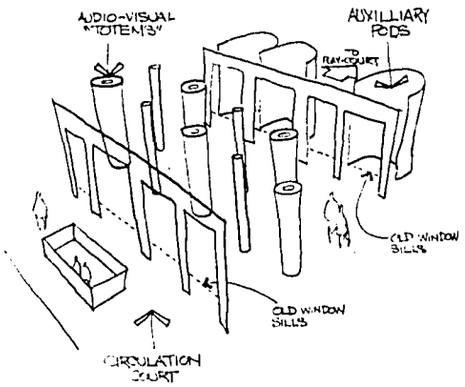


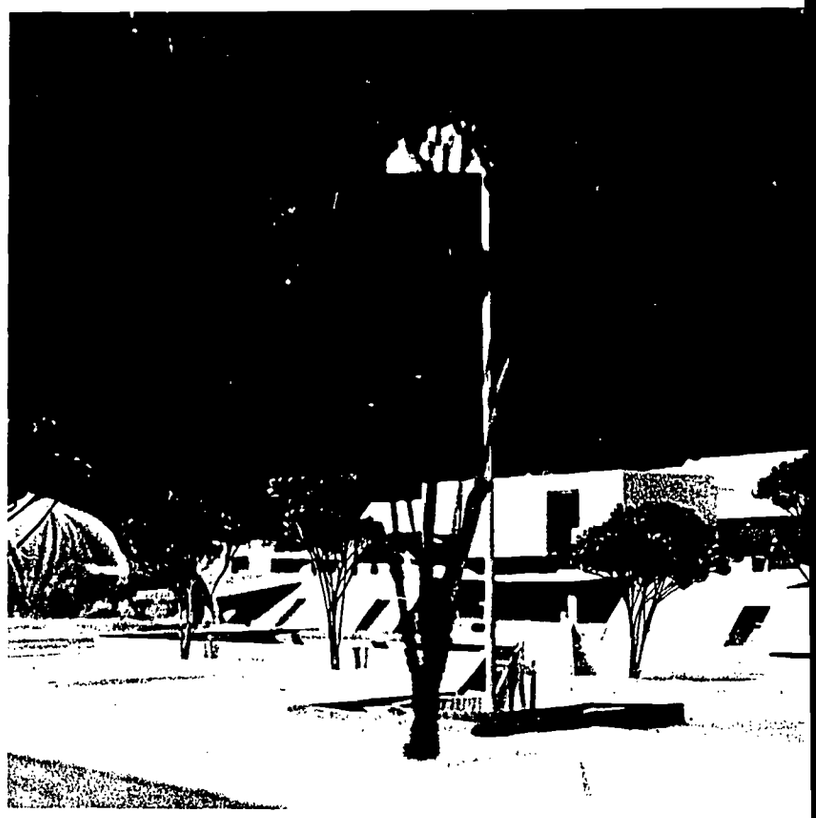
Circulation in the new facility is no longer through dark, steel locker-lined corridors. The old corridors have "dissolved" into a series of "audio-visual totems." The **new circulators** are **"greenhouse courts"** built into the old interior light wells by decking-in a perforated second level span and by roofing-over the top with a plexiglass greenhouse roof. Window sills have been dropped to floor level, making arched walkthroughs in place of windows.

The new compact circulators, filled with vegetation, beanbag chairs, and low lockers are informal in character. They provide physical observation spaces into the neighboring open spaces, for the many observer/visitors Burris receives daily. Additional observation in the new Burris school would be from revolving TV cameras mounted on alternating "A-V totems" and monitored centrally in the north administration wing control room.

Resource Center

C-1, E-2





The circulation courts include new as well as existing toilet facilities besides stairs and light wells.

Each large open space (on first and second levels) is enclosed with easily-attached seminar/office/storage/observation **"pods."** The pods provide the necessary support functions for a viable "open plan" situation. The "pods" help direct the use of the large open space. They also serve to break the harsh scale and monotony of the existing north and south facades, in order to achieve a multi-penetrable facility with greater respect for the needs, comprehension, and scale of the tiniest learner.

The existing library has been extended to protrude through the **north-south arcade** and over the public piazza to form a prominent new information/resource center, a significant and symbolic link between the school and the community (hopefully the school and the community will eventually become one!).

The main information center is **central** with regard to the new facility; however, it is **not hidden within it**, as are a number IMC's (instructional materials centers) seen today. The new information center/IMC/library can keep its own hours (24 hours/day if desirable) as can some of the other functions along the arcade (theater, play-bowl, discovery labs, gym, etc.)

Directly below the main information center (separated by the theater lobby, however) is the elementary resource center, also accessible from the **piazza.**

Both resource centers are serv
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The elementary resource center
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Resource Center

C-1, E-2

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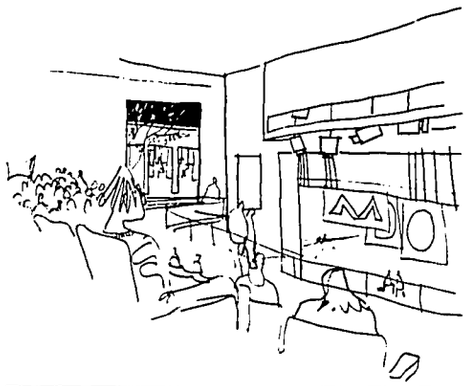
Directly below the main information center (separated by the theater lobby, however) is the elementary resource center, also accessible from the **piazza**.

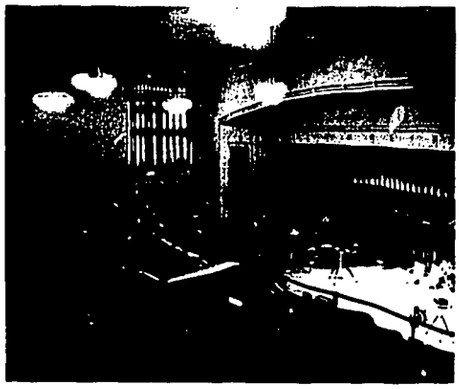
Both resource centers are serviced through a basement service spine extending east from the southwest corner delivery area.

The elementary resource center is scaled for the small child and links the two main elementary open spaces. Visitors step or ramp down into intimate grotto-like reading and story telling areas.

Theater Facilities

D-1, 2, G-4





The existing auditorium is incapable of supporting full dramatic performances; consequently the existing east gymnasium was partially decked at second level and converted to include a scene shop and storage area, a green room, dressing rooms, toilets, and a television center. A fly loft has been added to the stage (structural provisions for a fly loft can presently be found in the existing facility). The existing administrative area has been converted to a lobby for the new theater. The existing balcony has been converted to two convertible lecture facilities with a central projection booth to service the theater. A new "bridge" now connects the two large existing auditorium windows and affords access to the two lecture halls as well as a view of the theater. The existing stage has been altered to a system of moveable platforms which, depending upon their arrangement, can form a thrust stage. A new lighting grid has been proposed above the stage. Small balcony areas behind stage on second level provide possibilities for a choral or instrumental background or special multi-media effects. Carpet-covered step seating has been proposed that will accommodate a thrust stage; it will also create an informal "forum"/back-and-forth atmosphere for discussion and interaction, rather than the existing formal one-directional pattern.

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Second Level Terrace

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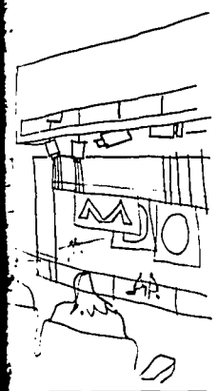

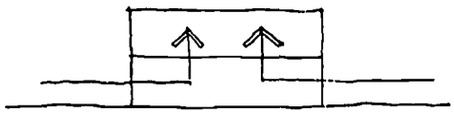

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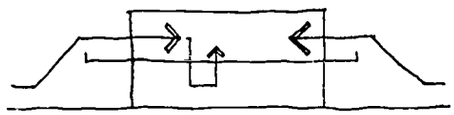

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Most of the site has been designed to contain activities for very young children, locating them wherever possible adjacent to interior spaces. Major recreational space for the secondary students exists across University Avenue to the north.

The second level terrace, prominent on the east and west sides of the facility, provides a social space for the upper class students. The terrace at the same time gives individual identity to the secondary portion of the facility. Furthermore, it now becomes possible to enter directly to the second level, via two large ramps on the east side, accessible from the arcade, and stairs at other points.

The terrace, on the east, looks into the north-south exhibition arcade, down into the "discovery labs", across the park, public piazza, and reflecting pool, and into the "play-bowl."

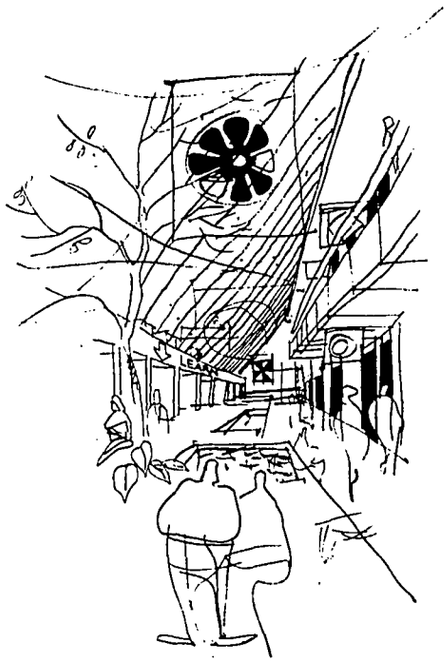
The terrace, on the west, bridges the new gym with the outdoor recreation facilities to the north. It also steps down to join the community rooms at the north-west corner.

Play-bowl
D-4

This area is enclosed with a transparent air supported dome whose mechanical support lies under the south ramp. The surrounding earth has been bermed to further define the activity space; the berm can also be used for spectator seating. The play-bowl—**heated in winter with the air that supports it**—can be used all season for carnivals, pep rallies, exhibits, and recreational activity. In the summer, the dome can be easily deflated and stored.

The domed play-bowl provides a large economical space that, in addition to the above mentioned uses, becomes a necessary transition space for recreational activities during conversion of the existing gym volumes and before the construction of the new "observation gym" is completed.

North-South Arcade
E-1, G-2

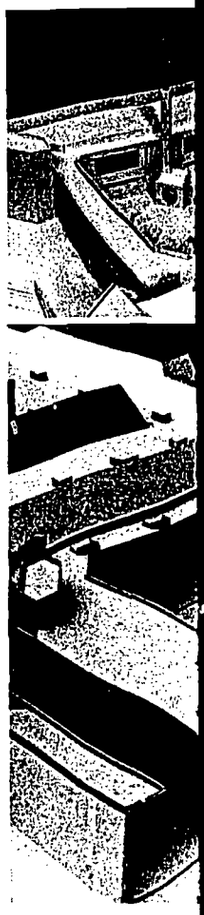


The glass enclosed, bermed, and ramped north-south arcade becomes the circulation and **activity spine** of the new Burris facility. Highlighted with small **"discovery labs,"** whose skylights pop up for attention, an inviting new information center, a theater, a "play-bowl," and a public piazza, the **"arcade"** is a spatial-mixer experience-giver for everyone.

The "arcade" can be enlarged with the addition of new wings to connect from the north entrance/bus stop (bus stop is necessary for Burris seminared participants in the other Muncie community schools) to the south gymnasium drive.

The earth is bermed all along the arcade, echoing the sloping roof forms of the existing building. More important however, the berms are climbable; holes can be poked through for experiements in chemistry, biology, or meteorology from individual "discovery labs." **A school should be fun inside and out!** Learning should take place everywhere, and the physical facility should excite, provoke and encourage new spaces for learning all over!

North Garden
G-1



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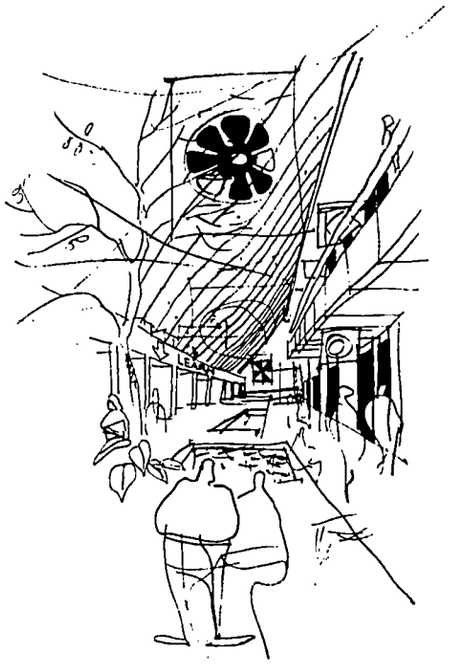
North-South Arcade

E-1, G-2



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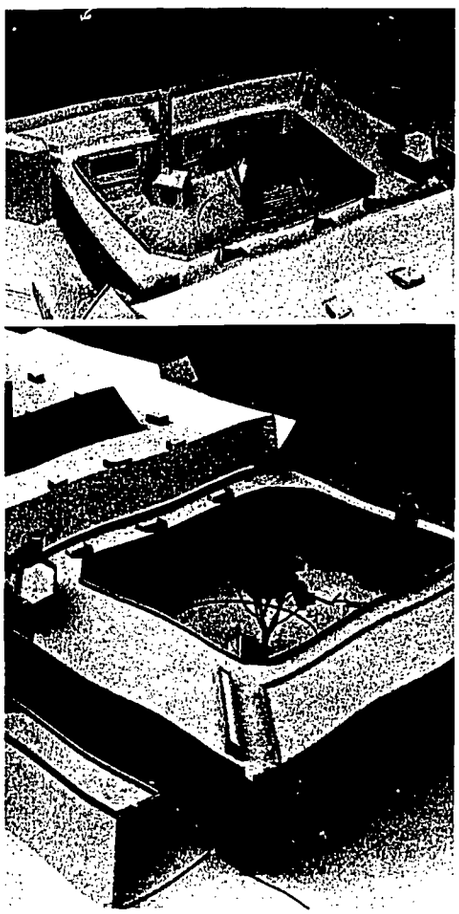
North Garden/Play-court

G-1



The north garden/play-court contains an oversized **"amphistair"**—the outdoor steps leading from the second floor administrative area to the play-court below. The amphistair can be used by play groups as "audience bleachers" for "speakers" etc. Also included is a large kiln and stack to replace the old "well"-bound kiln. The new kiln becomes another focal point for the crafts area; it also relates to the art/crafts **"museum"** along the street.

The new garden/play-court provides safe, visually and physically contained open space, suitable for observation from surrounding indoor areas, while, at the same time, providing a pleasant view from these spaces.

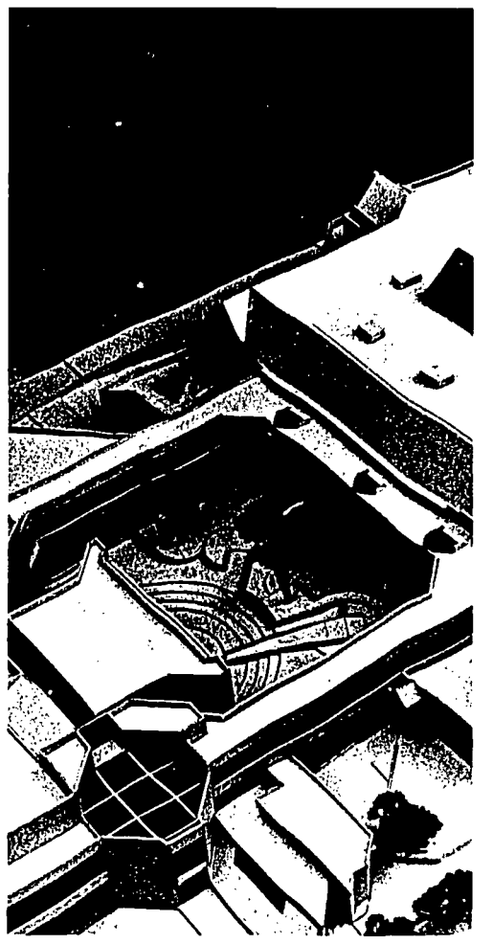
Both the north and south garden/play-courts relate to the two large interior elementary open spaces. They each provide adjacent outdoor space via a series of **individual entrance-ways** that accommodate changing interior uses while concurrently providing identifiable entries for the children. These entries could be further identified with the application of large colorful symbols or numerals.

Administration/Store-Front Wing
G-3

The additions surrounding the north garden/play court might be called "**operation stethescope,**" for they reach out to sense the activity of the street. Lower level "store front" **activities include** a **bookstore, soda fountain/ student center,** and **art/crafts museum.** These facilities can be open into the evening and on weekends to gather students from the surrounding neighborhood. The storefront activities provide an intermediate location or "stepping stone" from the home to the "classroom."

The **new administrative location** overlooks the on-site park as well as the University. It serves as entrance to Burris for all University participants. The administrative area has its own identity and literally **ties** the lab school with the University. This area includes **seminar spaces** (over "store fronts") for students and faculty involved with participation programs in Burris and elsewhere in Muncie. It is the department **headquarters for participation programs** of the Ball State Teachers-College. These offices are also conveniently located between the actual Burris School and the University.

South Garden/Play-court
H-1



The south garden/play-court is enclosed by the new music/physical education wing. The space takes advantage of the natural slope in this portion of the site by stepping down levels to form an outdoor **amphitheater** interspersed with **play sculptures** and **fountains** for the younger elementary group. The amphitheater focuses upon a **stage** divided from the music theater behind it by a rolling door. The door, when open, allows the music theater an "outdoor stage"—when the conditions are reversed, it becomes possible, in good weather, to sit outside and view an indoor performance.

The south garden/play-court can also be used by the adjacent kindergarten and nursery spaces should they desire an activity space larger than the small scale "kinder-court" (located between the kindergarten and nursery).

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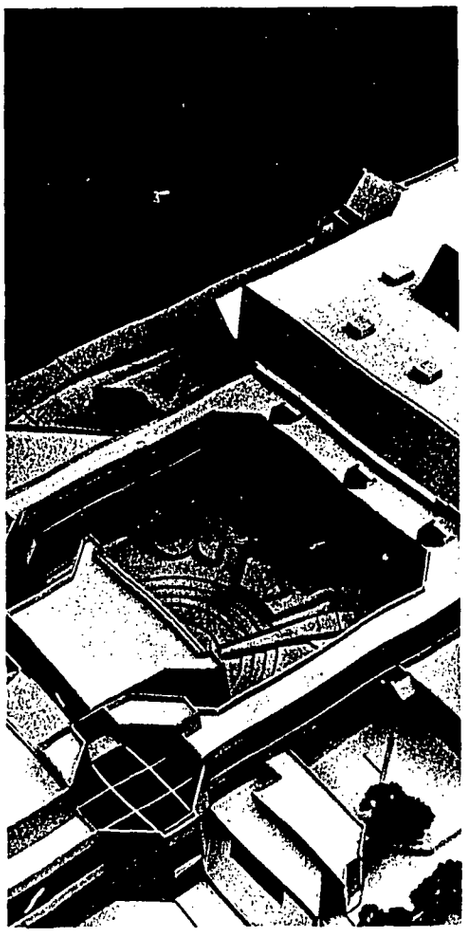
South Garden/Play-court
H-1



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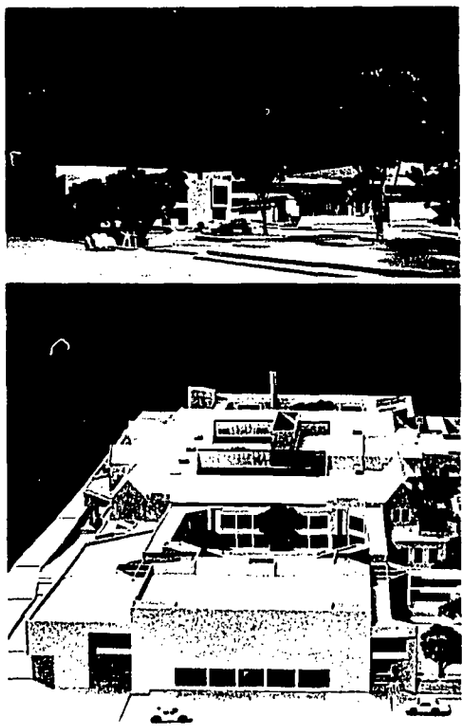
Physical Education/Music Wing
H-2, I-1, 2, 3, 4



The new physical education/music wing, a large, noise generating volume is located to the south where the site drops ten feet. This enables the large mass to fit comfortably with the scale of the rest of the complex. This wing also defines and encloses the south garden/play court. Circulation "tubes" leading to this area afford outdoor views to a variety of play areas, especially appropriate for observation.

The entire gymnasium complex has been designed for group observation of the various activities contained within. It is hoped that Burris will be selected by the President's Council on Physical Fitness to be a demonstration center for secondary programs in physical fitness for the entire United States.

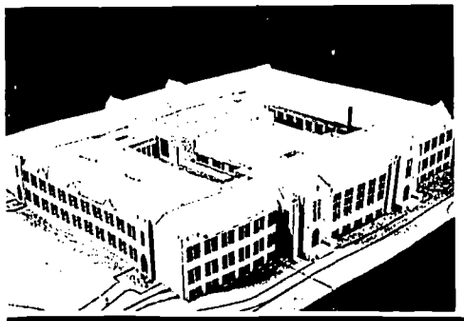
The large "**observation gym**" planned for secondary school use is divisible into two smaller spaces, both of which are washed with north light from huge light hoods above.

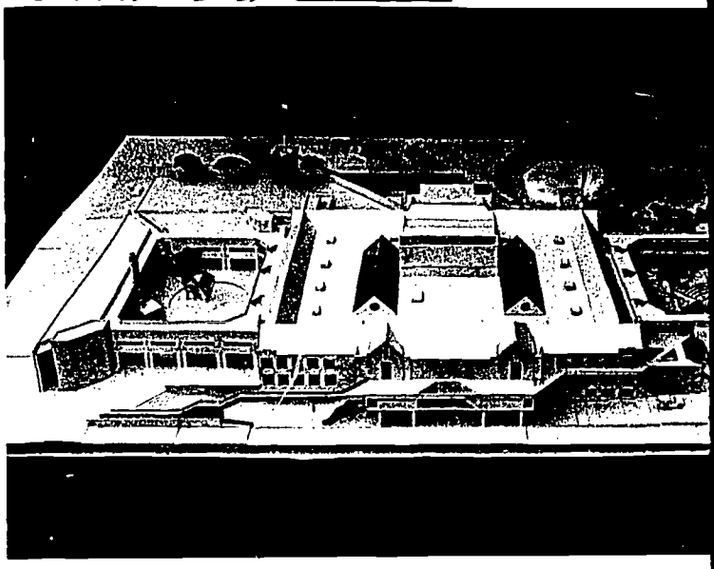
Cafeteria and Community Room

F-4, 5

Service and Ve

B-3, F-3





Below the gym is a **swimming pool** visible from the street through long eyelevel windows. Additional spaces provide for instruction in specialized activities such as dance, body development, etc.

The music areas include individual, group practice, and rehearsal rooms as well as a small **indoor-outdoor** music **theater.**

The existing Burris School contains three large rooms along the west basement. These rooms, once music practice areas, have been converted to a cafeteria and community rooms. The cafeteria opens onto an outdoor eating area that resembles a **sidewalk cafe.** This outdoor area is partially sheltered from rain by new locker rooms added to the elementary gym above. The old refuse-collecting and water gathering basement wells that once provided minimal light to these large rooms have been replaced with a new **sunken entrance** level. The old windows are now all doors opening onto this space, which in turn flows from the University Avenue sidewalk.

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Cafeteria and Community Room

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Service and Vehicular Access

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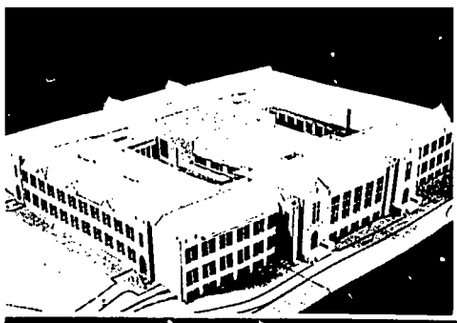

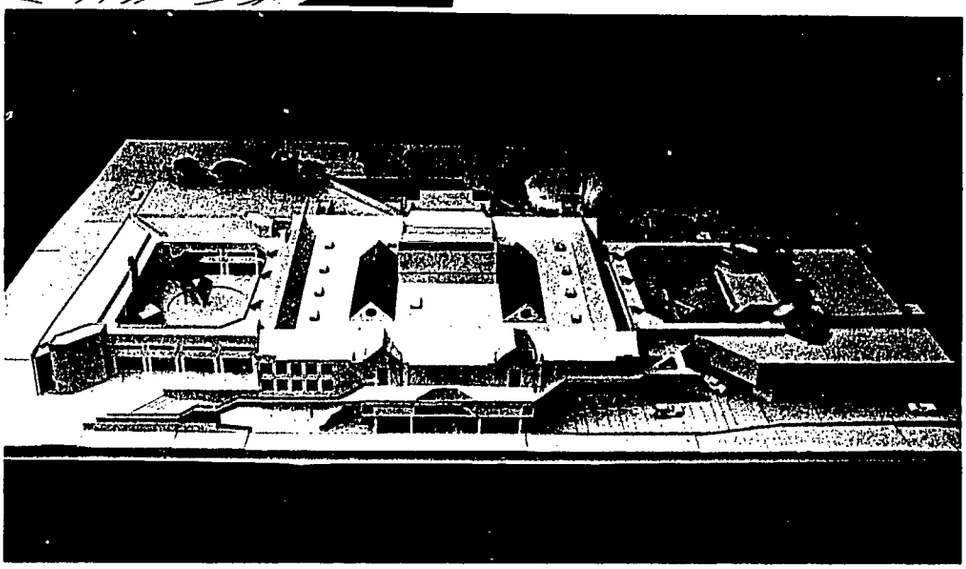

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Service for the entire facility is provided by means of a loading area at the southwest corner of the existing school. A new loading ramp at that location receives supplies and equipment that is in turn distributed along a basement **spine** running eastward and then up to the different floors.

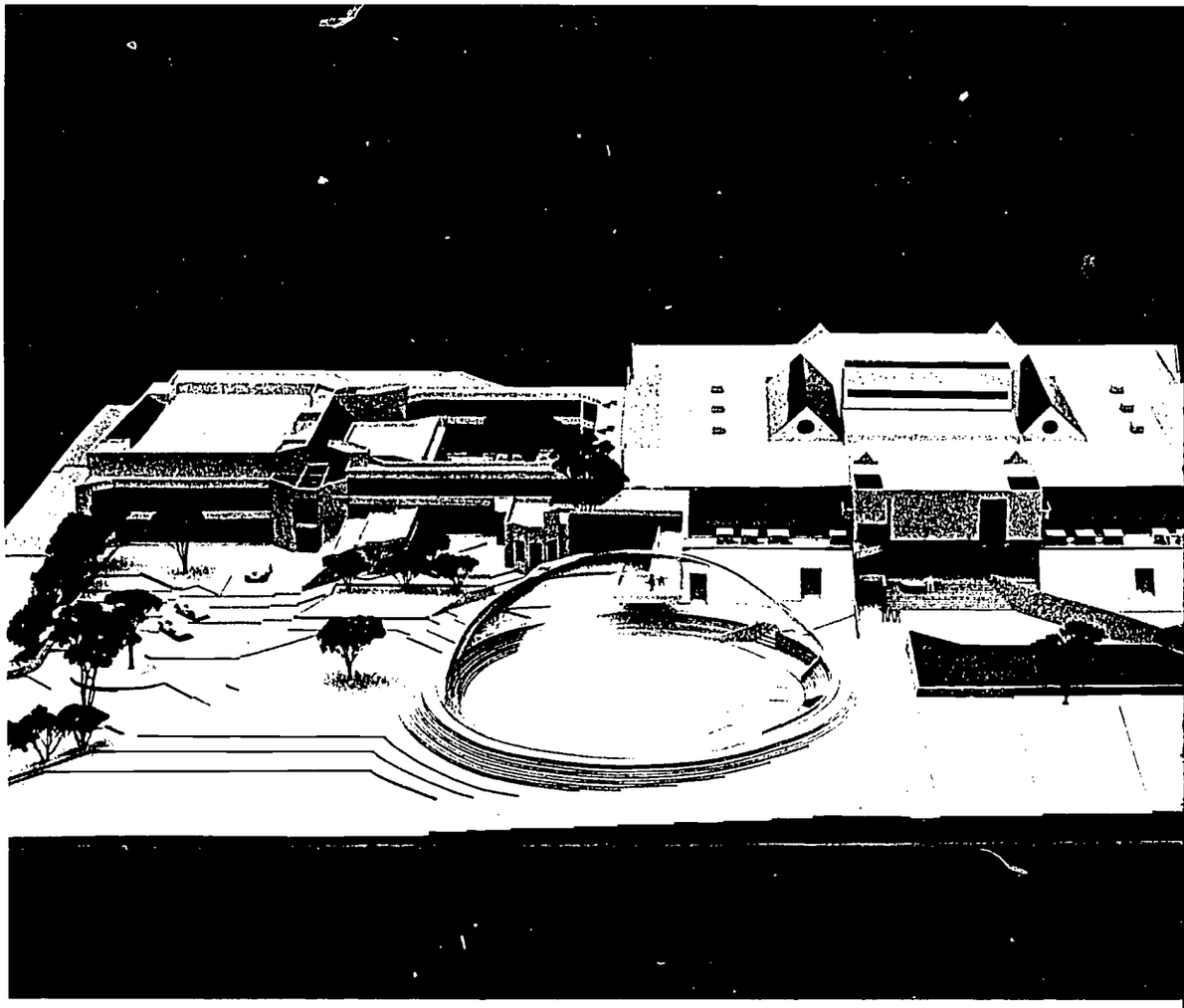
The ramp also delivers prepared food to a new cafeteria located below the elementary (west) gym.

A smaller ramp services the shop and contains a garage for car craft or driver training cars.

Vehicular access in the new facility has been limited to a drop-off immediately adjoining the nursery and kindergarten areas as well as a sheltered drop-off which can also be used for events in the gymnasium or theater and other areas of the activity spine. Parking is provided for only a small number of visitor's cars.

Site Development

B-2, 3 C-2, 3, 4 F-3, 4 G-1 H-1



An attempt was made to fully utilize every square foot of the existing site. "Kinder-court," "garden/play-courts," "play-bowl," "arcade," and "west sidewalk cafe" were described.

Many alternatives for expansion were considered, concentrating and dispersing various elements on various portions of the site. It was finally decided that the land between the existing school and the streets (north and south) could be further defined, controlled and preserved with the development of substantial play-courts (unlike the old central wells). Furthermore, this enables the facility to connect, physically, street-to-street, university-to-community.

The remaining site provides a **visual** connection from community to university— towards the physical university symbol, the Beneficence statue. This portion, although visually open, contains a **variety of land treatments**; moving south, these range from "park" (most trees already exist here) to "pond" (for ice skating in winter and wading

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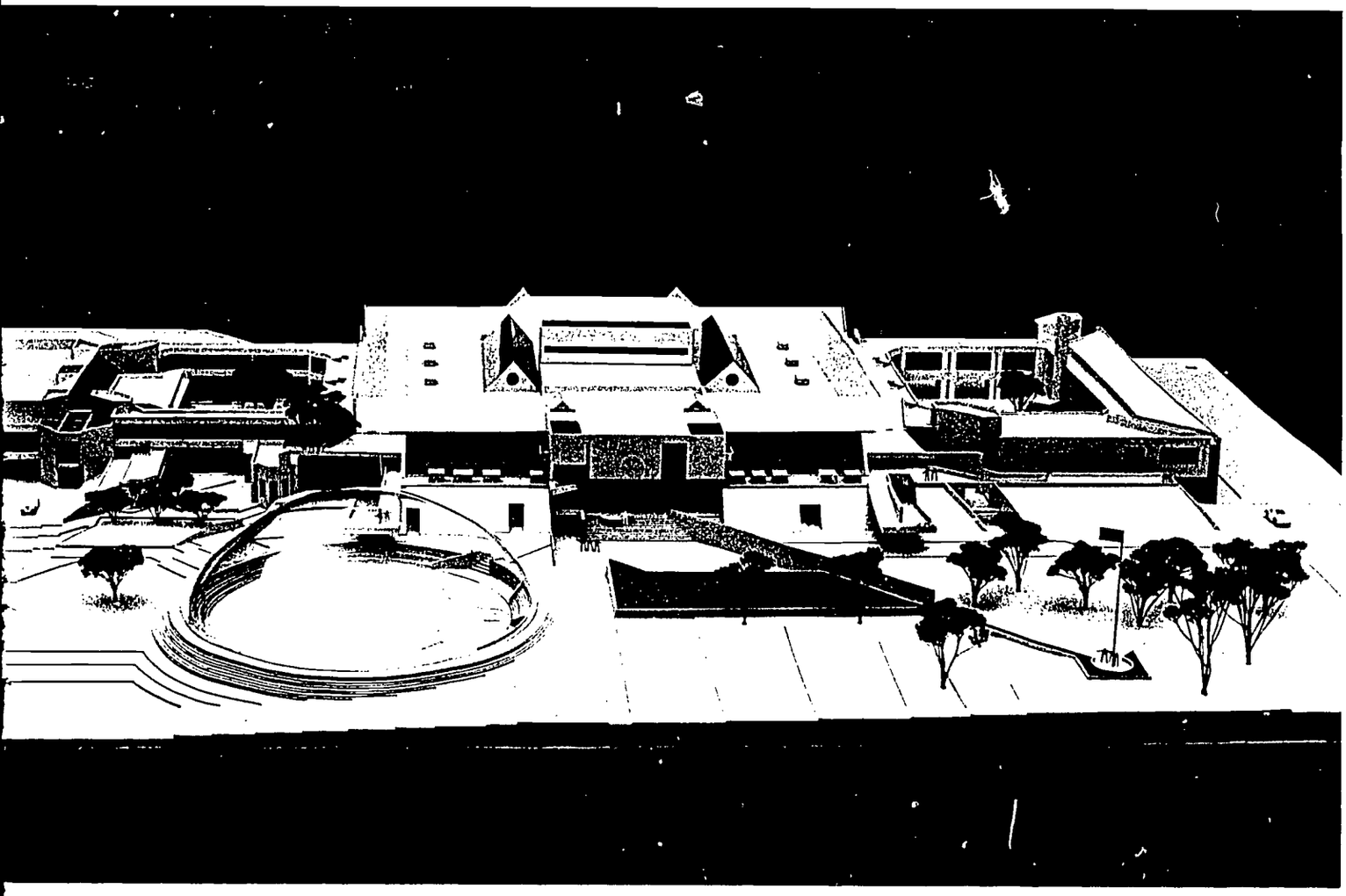

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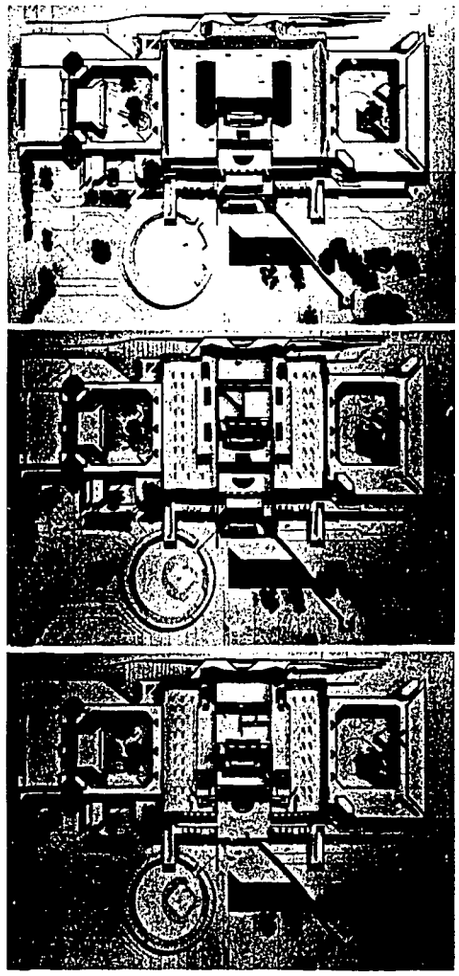
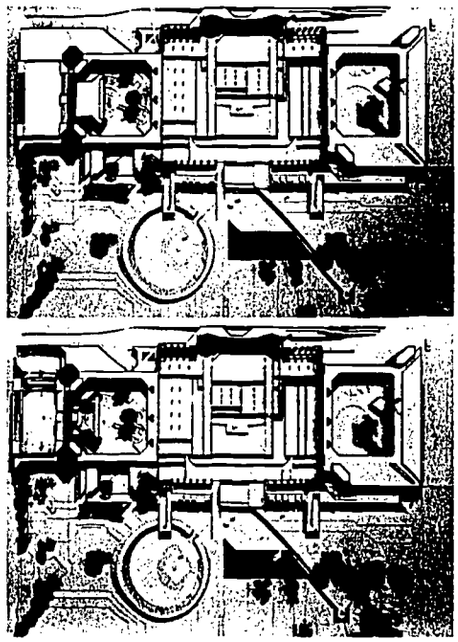
The remaining site provides a **visual** connection from community to university—towards the physical university symbol, the Beneficence statue. This portion, although visually open, contains a **variety of land treatments;** moving south, these range from "park" (most trees already exist here) to "pond" (for ice skating in winter and wading in summer) to "public piazza" (for exhibitions and gatherings) to "play-bowl" (for carnivals and recreation all season—open in summer), to vehicular access. Varying treatments incorporate **contrasting surfaces and materials, worthy of exploration.** A major walkway, extending on a diagonal toward the center of the University, is reinforced with a water channel, for model sailboats, that anchors and surrounds a flagpole. Additional walks are directed toward the University Student Center to the east and the community to the south. Future expansion of the Ball Memorial Hospital on the west provides a firm edge with respect to planned development in that direction.



sequence through final design model from roof to basement showing all spaces in existing facility



Preliminary Phasing and Cost Estimate

Phases A, B, and C

This preliminary estimate is based on the following:

1) Areas provided by the College of Architecture and Planning and amended as per discussions M. Rosenman/M. R. Morris.

2) Outline sketches, photographs, project reports and inspection of models all produced by the College of Architecture and Planning.

3) Median standards of construction.

4) Normal ground conditions.

5) Complete new plumbing, heating, ventilation and air conditioning and electrical installations to the new and all existing structures.

6) The format of this estimate is based on the phasing noted in the feasibility study and includes for construction costs only.

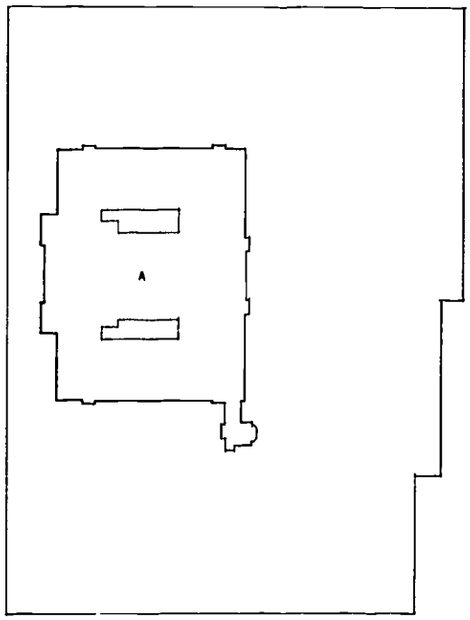
The following are not included:

a) Equipment, furniture, furnishings.

b) Professional fees.

c) Escalation in excess of 5% of todays prices

	Area Sq. Ft.
PHASE A—EXISTING	
PHASE B—(New Construction)	
Single story Nursery building with link connection to existing building.	2,500 s.f.
Kindercourt area paved with fencing and play areas, drainage and lighting.	4,000 s.f.
Parking area including curbs, drainage, lighting.	12,800 s.f.
	TOTAL PHASE
PHASE C—(New Construction and construction inside existing structure)	
Resource center partly new construction and partly constructed into existing Library.	6,800 s.f.
Paved public plaza area with drainage, lighting.	4,800 s.f.
Reflecting pool and related construction.	4,200 s.f.
Allowance for Park Development.	
	TOTAL PHASE



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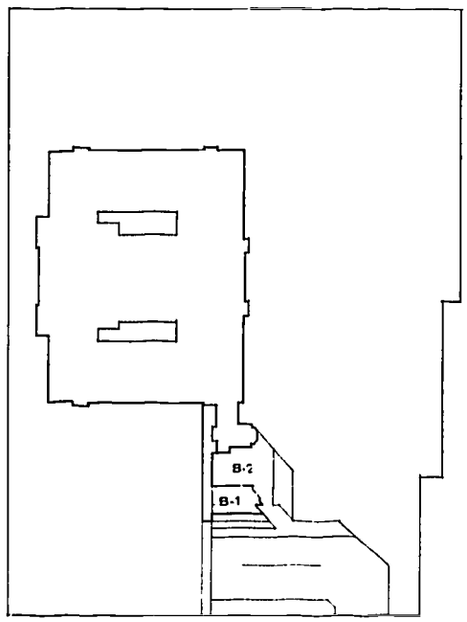

B

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Phases A, B, and C

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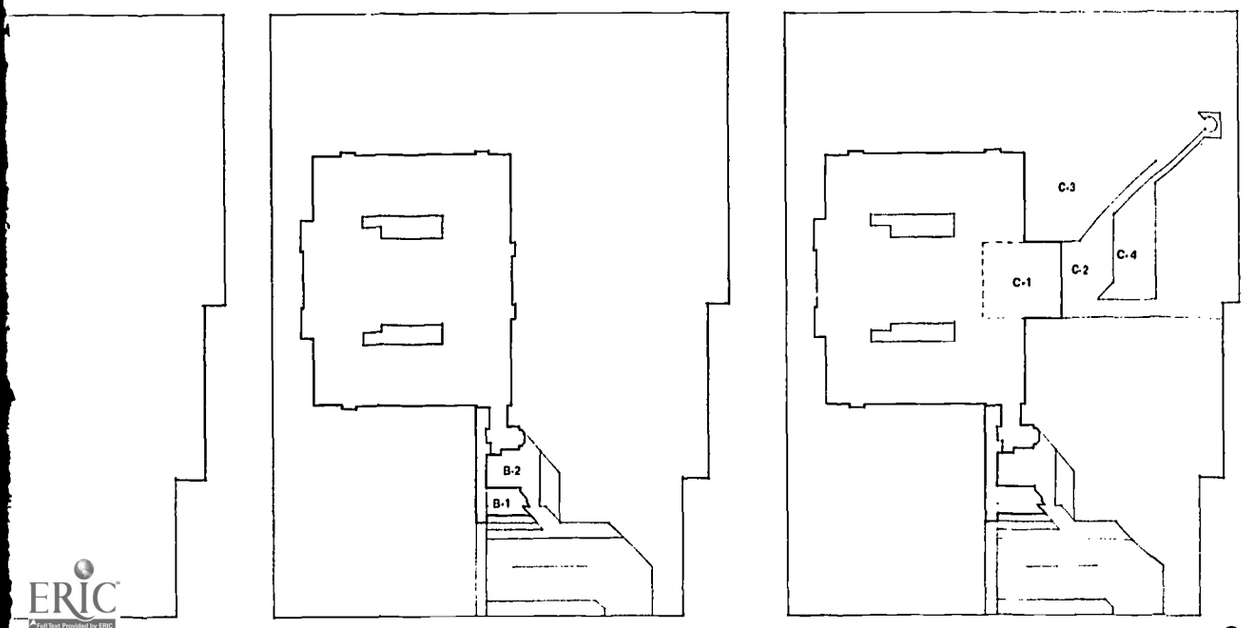
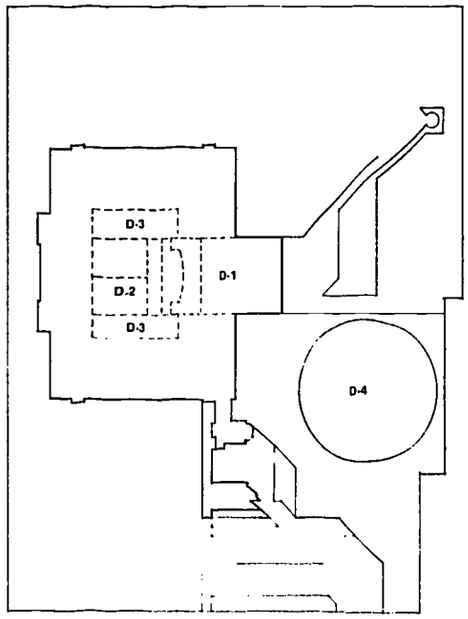
	Area Sq. Ft.	Cost
PHASE A—EXISTING		
PHASE B—(New Construction)		
Single story Nursery building with link connection to existing building.	2,500 s.f.	10,000
Kindercourt area paved with fencing and play areas, drainage and lighting.	4,000 s.f.	112,000
Parking area including curbs, drainage, lighting.	12,800 s.f.	32,000
	TOTAL PHASE B	**154,000**
PHASE C—(New Construction and construction inside existing structure)		
Resource center partly new construction and partly constructed into existing Library.	6,800 s.f.	204,000
Paved public plaza area with drainage, lighting.	4,800 s.f.	22,000
Reflecting pool and related construction.	4,200 s.f.	21,000
Allowance for Park Development.		20,000
	TOTAL PHASE C	**267,000**



A B C

Phase D

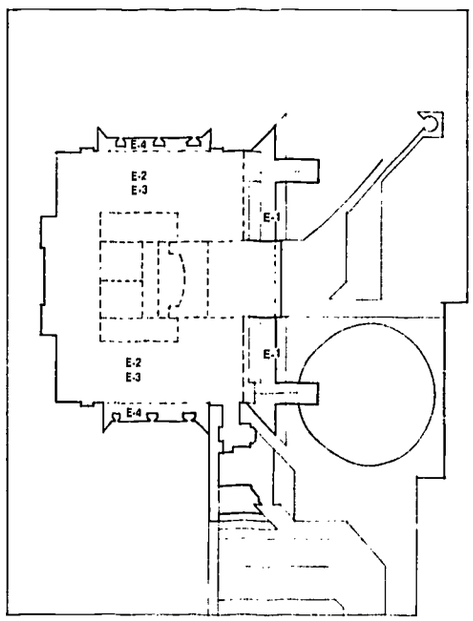
	Area Sq. Ft.	Cost
PHASE D-1—(Modification to Theater)		
Convert existing Theater balcony to form two Lecture Halls by the use of sliding doors from central core to form enclosures. Carpet existing stepped floor, install new suspended ceiling and renovate walls.	2,400 s.f.	67,000
Extend flyloft.	1,200 s.f.	24,000
Construct new bridge to edge of existing balcony with balustrade one side.	450 s.f.	13,000
Remove existing Theater seats, realign existing Theater floor level and cover stepped floor with carpet, install new suspended ceiling with grid for lighting over stage and make good and paint walls.	5,400 s.f.	**114,000**
PHASE D-2—(Gymnasium Conversion)		
Create Theater support area by introduction of new mezzanine floor in existing Gymnasium.	2,400 s.f.	58,000
New load bearing dividing wall inside existing gymnasium including foundations, pilaster, etc. and make good.	1,800 s.f.	**24,000**
PHASE D-3—(Enclosing existing courtyards)		
Demolitions of existing structures is courtyard areas.	Say	4,000
Modification to existing windows overlooking old courtyard areas.	Say	5,000
4'0" Fill, grade slab, second floor with open wells surrounding with balustrading plexiglass roof covering to Courtyard areas. Existing brickwork cleaned and pointed, average floor and ceiling finishings. (Two courtyard areas.)	15,000 s.f.	**375,000**
PHASE D-4—(Playbowl area)		
Playbowl area grassed with grassed perimeter embankment having holding down points and with retaining walls for approximately ¼ of the circumference. Air inflated translucent dome shaped canopy including heating and electrical.	17,600 s.f.	**93,000**
	TOTAL PHASE D	**777,000**



D

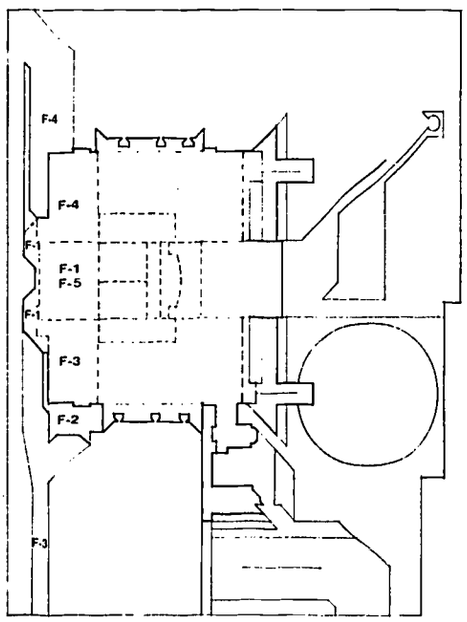
Phase E

	Area Sq. Ft.	Cost
PHASE E-1—(New construction connected to existing structures)		
North/South arcade (Phase 1) with new external walls with earth embankments roof with domed roof lights modification of existing windows to form blank openings walkways in certain area, plexiglass roof enclosures in two areas, modifications to existing facade. Main entrance glazed entrances with steps.	10,000 s.f.	280,000
PHASE E-2, 3—(Remodeling interior)		
Demolition of existing partitioning on 1st and 2nd floors to create open plan configuration, construction of audio/visual totems around approximately 50% of existing columns, carpet covered floor and accoustic tile surfaces.	62,800 s.f.	1,005,000
Construction of new Elementary Resource Center within existing building in previously unexcavated areas.	4,400 s.f.	132,000
PHASE E-4—(New construction connected to existing structures)		
Two story learning pods connected to existing building.	3,500 s.f.	126,000
	TOTAL PHASE E	**1,543,000**



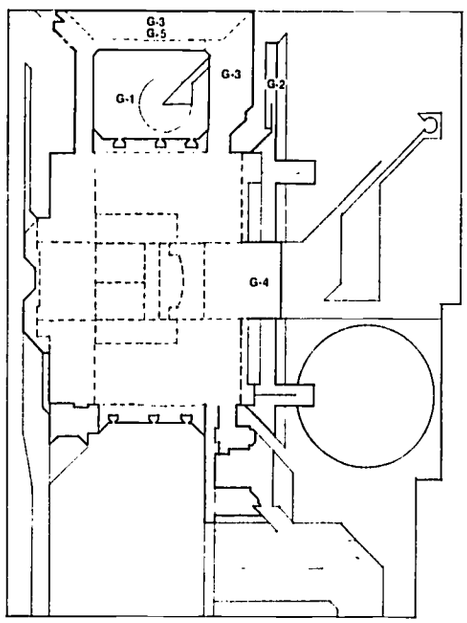
Phase F

	Area	Sq. Ft.	Cost
PHASE F-1—(Modification to existing elementary Gymnasium and new locker area) Form opening approximately 50'x20' in existing wall for new bleachers, new locker areas with ramped access.	2,300	s.f.	81,000
PHASE F-2—(New Construction) Single story auto shop and entrances.	1,600	s.f.	37,000
PHASE F-3—(Modifications to existing and new work) Construct concrete ramped access to service entrance into curbs, drainage, lighting.	8,000	s.f.	40,000
Modifications to existing structures to provide service facilities (minimal work).	3,000	s.f.	75,000
PHASE F-4—(Modifications to existing basement) Convert existing facility to community rooms with carpet covered floor and accoustic tile ceiling in demountable grid suspension system throughout, renovate existing wall surfaces.	4,600	s.f.	76,000
PHASE F-5—(Modification to existing basement) Convert existing storage areas to Cafeteria and food service facility with impervious floor finish and pan metal or acoustic tile ceiling in demountable grid suspension. Renovate existing wall surfaces, provide service for kitchen equipment.	4,300	s.f.	86,000
TOTAL PHASE F			397,000



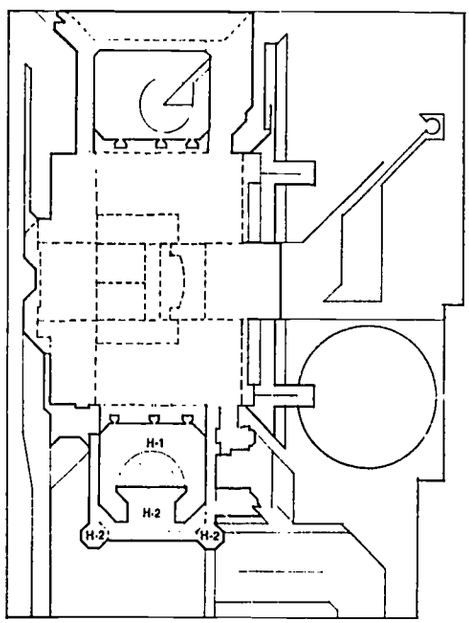
Phase G

	Area Sq. Ft.	Cost
PHASE G-1—(New construction)		
North garden playcourt surface 50% grass, 50% pavings, drainage, lighting, etc.	9,000 s.f.	27,000
Allowance for Kiln.	Say	10,000
Allowance for staircase.	Say	6,000
Tree planting.	Say	**1,000**
PHASE G-2—(New construction)		
North/South Arcade Phase No. 2 including planetarium.	2,000 s.f.	**40,000**
PHASE G-3—(New construction)		
Construction of two story administration and professional program area.	15,500 s.f.	511,500
PHASE G-4—(Modifications to old administration area)		
Remodel existing administration areas to form new Theater Lobby including make up levels and new floor and renovate existing walls and ceilings.	2,500 s.f.	50,000
PHASE G-5—(New construction)		
Construction of new museum area and storefronts for student center.	3,600 s.f.	**129,600**
	TOTAL PHASE G	**775,100**



Phases H, and I and General

	Area Sq. Ft.	Cost	
PHASE H-1—(New construction)			
South garden playcourt with stepped pavings, drainage, lighting, etc.	8,000 s.f.	56,000	
Allowance for water display.	Say	15,000	
Tree planting.	Say	**1,000**	
PHASE H-2—(New construction)			
Inside/outside Music Theater with moveable stepped floors, learning tubes and glass enclosed walkway.	4,700 s.f.	**188,000**	
	TOTAL PHASE H	**260,000**	
PHASE I-1—(New construction)			
Swimming pool and locker areas at basement level situated beneath new gymnasium.	9,900 s.f.	347,000	
PHASE I-2—(New construction)			
Observation gymnasium.	9,900 s.f.	297,000	Phase B
PHASE I-3—(New construction)			Phase C
Additional music facility (double height).	2,000 s.f.	66,000	
Two story storage facility.	2,000 s.f.	**50,000**	Phase D
PHASE I-4—(New construction)			Phase E
Additional Physical development spaces.	3,500 s.f.	**105,000**	
	TOTAL PHASE I	**865,000**	Phase F
GENERAL			Phase G
Mostly new plumbing, new H.V.A.C. and electrical installations to existing structures additional to phases above. No other renovations included.	21,200 s.f.	212,000	Phase H
			Phase I
Allowance for strengthening steam line and 800' of new chilled water lines.	Say	**60,000**	General
	TOTAL GENERALLY	**272,000**	**TOTAL**



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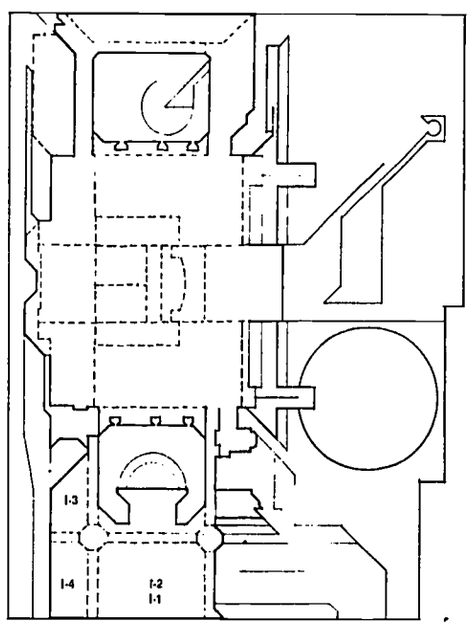

I

Area	Sq. Ft.	Cost
8,000 s.f.		56,000
Say		15,000
Say		**1,000**
4,700 s.f.		**188,000**
TOTAL PHASE H		**260,000**
9,900 s.f.		347,000
9,900 s.f.		297,000
2,000 s.f.		66,000
2,000 s.f.		**50,000**
3,500 s.f.		**105,000**
TOTAL PHASE I		**865,000**
21,200 s.f.		212,000
Say		**60,000**
TOTAL GENERALLY		**272,000**

	Cost
Phase B	154,000
Phase C	267,000
Phase D	777,000
Phase E	1,543,000
Phase F	397,000
Phase G	775,100
Phase H	260,000
Phase I	865,000
General	272,000
TOTAL	**$5,318,100**

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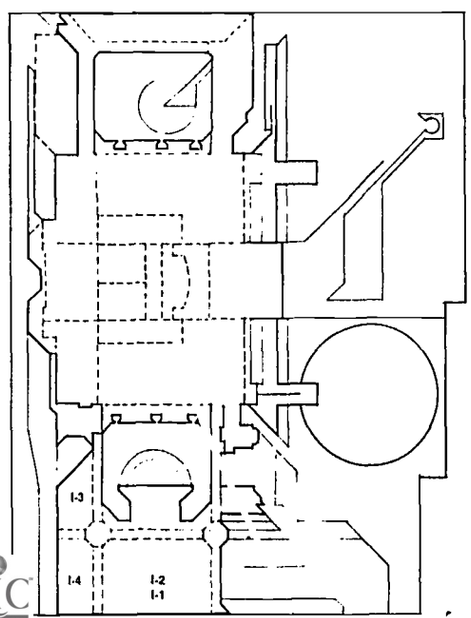

Whittier — Still sits the school-house by the road
A ragged beggar sleeping.

Le Corbusier — Let us build for ourselves a new consciousness,
the lever of fruitful deeds.

Marvin Eli Rosenman AIA, a registered architect, has written and lectured on the subject of educational facilities. In 1970 he received Ball State University's McClintock Award for Research. Mr. Rosenman holds Bachelor of Arts (with honors in 1964) and Bachelor of Architecture (1965) degrees from the University of Pennsylvania, Philadelphia, and a Master of Science in Architecture degree (with specialization in Educational Facilities Design) from Columbia University (1967). He was twice AIA Knopf Scholar, 1964 and 1965, and a William Kinne Fellows Traveling Fellow from Columbia in 1967. His experience in New York, Philadelphia and Indiana has included work on the new Columbus, Indiana High School. He was a contributor to the book New Schools for New Towns published by Rice University and the Ford Foundation's Educational Facilities Laboratories. He is currently Associate Professor of Architecture at the College of Architecture and Planning at Ball State University.

Anthony J. Costello AIA, a registered architect, has been a Fulbright Scholar in Turkey (1966). He has been awarded Bachelor of Architecture degrees from both Middle East Technical University, Ankara (1965), and Pratt Institute (with honors in 1966). In 1967 he received the degree Master of Science in Architecture from Columbia University, where he concentrated in Urban Design. He is the recipient of the Dean's Medal from Pratt and the William Kinne Fellows Traveling Fellowship from Columbia. Mr. Costello has had architectural experience in New York and Indiana and is currently Associate Professor of Architecture at Ball State University.

Craig W. Mullins, Alpha Rho Chi Medalist of Ball State's first graduating class in architecture, received the degree Bachelor of Architecture in 1971. His experience includes work in Indiana and with the internationally recognized firm of Roche and Dinkeloo and Associates, Hamden, Connecticut. Mr. Mullins is currently Instructor in Architecture at the College of Architecture and Planning.

A special thanks to the faculty and students of Burris School who have generously contributed their ideas and suggestions to make this project more meaningful.

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Architectural drawings: Mullins and Costello
Models: entire design/research team
Model photography: Craig Kuhner
Existing facility photos: Kenyon Tilbury
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