

Chapter 5 Illustrative Examples

5-1.	Introduction	5-3
5-2.	The Case for Small Facilities	5-3
5-3.	The Intimate Room	5-4
5-4.	A Small Dance Theater	5-6
5-5.	Music and Dance Together	5-8
5-6.	Two Small Frontal Rooms	5-10
5-7.	Thrust Form in a Movie House	5-14
5-8.	A Multi Form Theater	5-16
5-9.	A Larger House	5-18
5-10.	The Vital Context	5-22
5-11.	A Recital Hall	5-24
5-12.	A Traditional Concert Hall	5-26
5-13.	A Surround Concert Hall	5-28
5-14.	Two Dual Facilities	5-32

5-1. INTRODUCTION

A selection of performing arts building projects is presented in this chapter. These are not hypothetical prototypes, but examples of actual responses to several different user programs and design goals. The examples are drawn from the work of a single firm which has seen more than thirty of its performing arts facilities built and successfully operated during the past fifteen years. Thus, a cross-section of recent experience is offered to demonstrate that major variations and similarities among design responses stem from fundamental principles and program demands rather than stylistic choices. Other individual designers would doubtless produce buildings that "look" somewhat different; a secondary purpose of this chapter will be to suggest how the criticism of style can be separated from the analysis of functional rationale.

While this Guide has refrained from imparting aesthetic and formal bias in discussions of design, it has assumed certain conceptual directions and program priorities (see Chapter 2 and Section 3-2) derived from consultations among Army Performing Arts personnel at every level of command. The Music and Drama Center Programs are unique in that they exist within a much larger institutional context and are primarily for the benefit and satisfaction of the soldiers and soldiers' families who participate in the activities. Private and commercial programs have slightly different imperatives with respect to economic survival, academic instruction and artistic or intellectual pursuits. There are no average design responses because there are no average program demands.

5-2. THE CASE FOR SMALL FACILITIES

In the examples which follow—and indeed in recent practice—brand-new small proscenium theaters and small concert halls are seldom found. This may be indicative of the state of the art, but it is also a function of finance. The expenses of building and maintaining a fully-equipped stagehouse or acoustically excellent recital space, plus the expense of mounting a major production or preparing skilled musicians, must ordinarily be offset by consistently high ticket sales and frequent performances to large capacity houses. At the same time, the steady growth of the cinematic, video and electronic recording industries siphons off a considerable portion of the live music and theater audience and has generally altered audience expectations. Even where a commercial theater market survives, the economic risk in full-scale production is great. Most established traditional theaters have undergone extensive modification to accept a variety of backup programs and rapid production turnover. For the successful repertory theater, the existing flyloft is a valuable asset. But the profit margin (if any) is inadequate to attract capital investment in new construction. Regional non-profit cultural centers, sponsored and subsidized on a grand scale, have been the main source of new, fully-equipped multi-use Rooms. Smaller new theaters must either compete in the box-office by offering a difference, an avant-garde contrast, or content themselves with meager budgets. Many small theaters today are low-cost community enterprises or college auxiliaries for whom repertory income is of little consequence. They thrive on ingenuity, involvement and imagination.

5-3. THE INTIMATE ROOM

A theater's purpose is to define and intensify the relationship between audience and performers; in most cases the Room's architecture makes a clear distinction. However, the psychological separation has diminished historically. In the past, ballet, opera, symphony and drama were complete and ordered forms of expression, reinforcing a similar understanding of social and natural order. Contemporary experience is full of conflicting values, variety, fragmentation, absurdity and even brutality. As a way to externalize and deal with this perceived quality of existence, the arts are challenging traditional forms of expression, softening the audience-performer boundaries. The burst of monumental cultural center construction that took place in the late 50's and 60's tended to overemphasize traditional ceremonial patterns for the enshrinement of Art, and glorification of benefactors. The corresponding quests for perfection have made these facilities peculiarly inflexible in the face of new ideas. Yet new approaches to staging, composition and movement demand legitimate architectural solutions.

While experimental designs will doubtless add much to the formal vocabularies of theater arts and architecture, the built-in distinction between audience space and performers' space will most likely remain for the present. Conscious enhancement of psychological participation and intimacy, however, has become a common characteristic sought in new facilities. The three basic audience-performer relationships—Frontal, Thrust and Surround (Section 3-2)—can each be employed to this end.

The eye-to-eye relationship established by Frontal arrangement works well for verbal presentations, the actor's face seen against a background that can itself add meaning and nuance. Thrust staging presents the actor as a freestanding element in relation to a scenic background that identifies location; the performance becomes three-dimensional. Surround arrangement requires the actor to move to be understood, with minimum obscuring scenery; it emphasizes the communicative aspect of body actions. In all, the observer must exert his faculties to make the connections among spoken words, sounds, gestures, images, harmonies and juxtapositions.

Enthusiasm for experimentation has led to fascination with "flexibility" to change the audience-performer relationship. To do so physically at any but small scale (less than 500 people) involves a disproportionate amount of machinery, expense and building volume. It is wiser to permit the stage director and scene designer leeway to explore a variety of production techniques within a fixed relationship. Clarity in the choice of how the audience will meet the performer is essential.

In music, concert hall design seems to be undergoing a slower evolution—but there are so few new concert halls change is deceptive. Electronics and amplification have had profound impact on the content, presentation and audience expectations of music. Users of small rooms often rely on electronic systems to create the listening environment regardless of intrinsic natural qualities. Recent departures from traditional concert hall design have mainly been on a gigantic scale, for mass audiences far exceeding the physical limits of natural acoustics. Ampli-

fication brings to music what the television camera brings to theater, a paradoxically close-in remoteness, an expansion of possibilities along with preselection and control of the delivered experience. In the extreme, electronic media strip music and theater of the give and take between performers and audience, and it is that communion which live music and theater—and the Army's MDC program—seek to restore and enhance.

The attempt to unite audience and performer creates a conflict in architectural objectives. Most of the examples illustrated use an architectural language that acknowledges dissimilar elements, unlikely juxtapositions and frank utility to create a whole understandable for the contrasts among parts. Each has been crafted in its own way, making no assertions about absolute correctness or universality. However, it can be said each addresses the objective of intensifying the audience-performer interaction by using the resources at hand.

The audience can be encouraged to explore visually a great variety of materials, textures and objects taken out of everyday context and set in unexpected juxtaposition. New Lafayette Theater invites the observer's participation in figuring out the room, which is composed of glazed tile, expanded metal, marble, concrete, plywood, corrugated plastic, lightbulbs and fragments of opposing organization. It prepares the audience for what takes place in three dimensions on the Thrust stage.

The audience can be placed unconventionally in an otherwise simple volume, which at once heightens awareness of the overall singular space and the existence of two entities, audience and performers, within it. In a basically Frontal room like the small theater at Eugene Performing Arts Center, one senses an immediate confrontation as the audience advances on the performer from two directions. At Simon's Rock, where dance movement demanded a diagonal placement to increase stage dimension, the performance space seems to cut off and work on the audience. Stage extensions which provide a greater variety of entrances also reinforce the impact of the diagonal.

The audience can be made more aware of itself, which increases the impression of intimacy. Boettcher Concert Hall seats 2,750 listeners in a Surround relationship. But the room's geometry has no single focal point. Each portion of seating is placed at a different level and angle of vision, each occupant has a "special" place but is made aware of the rest of the audience. A surprising proportion of "front-row" seats confronts the performers on all sides, and they must actively address themselves to their audience.

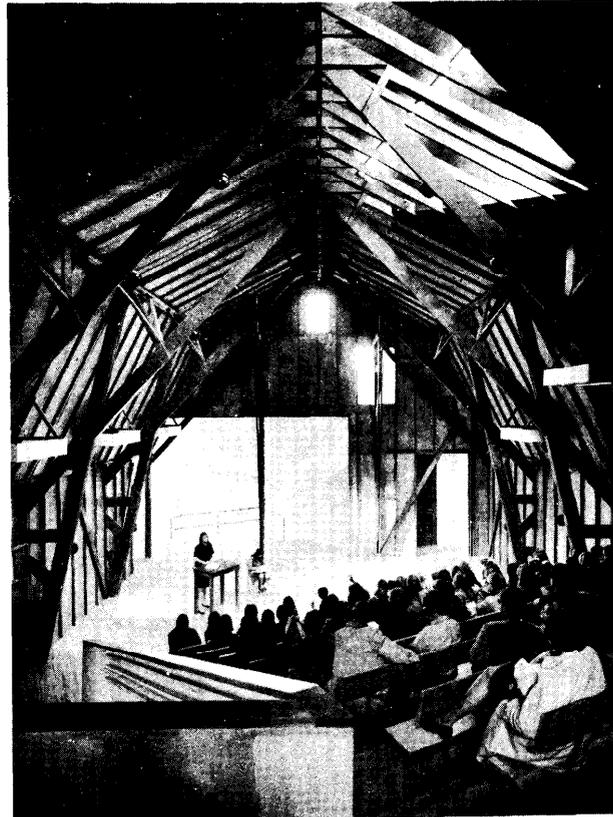
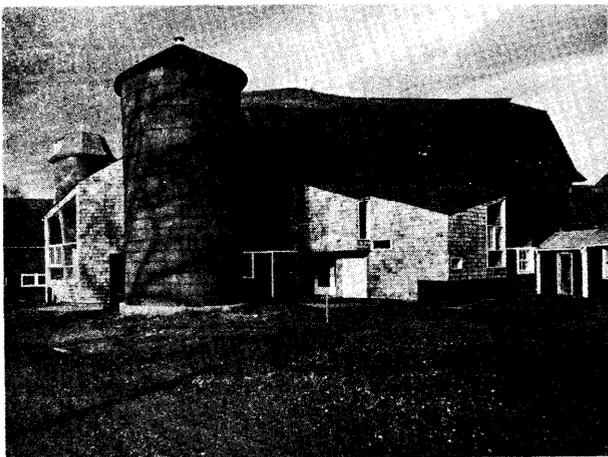
The audience's expectations of traditional formal characteristics can also be played on to refresh awareness of audience-performer relationship. One of the classical characteristics is symmetry. At Playhouse in the Park, a geometrically constant seating bowl meets an asymmetrical playing area; their centerlines do not coincide. One side of the audience is higher above stage than the other as the performing area cuts through and leads to entranceways at different angles. At Fisher Theater, the audience is asymmetrically arranged in two segments, which permits the action to seep into the generous playing area from all corners. Both solutions operate in an active relationship rather than a static one.

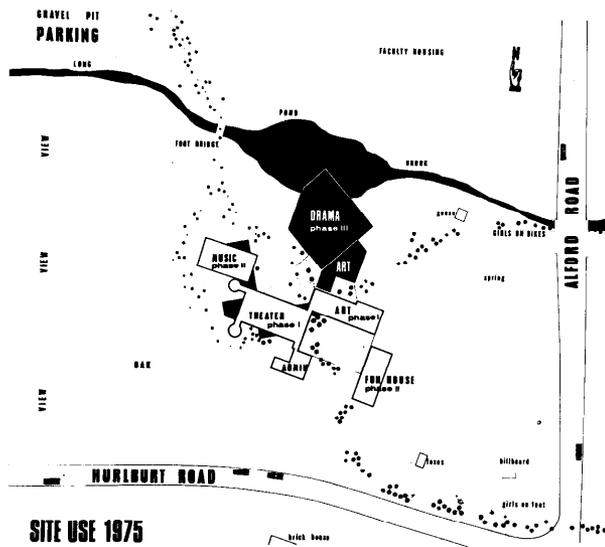
5-4. A SMALL DANCE THEATER

Built for a small progressive college in a rural setting, Simon's Rock Art Center occupies a former dairy farm complex and houses both visual and performing arts in adjoining barns. It is part of a plan for program expansion to include Drama and Music, but present teaching involves dance movement.

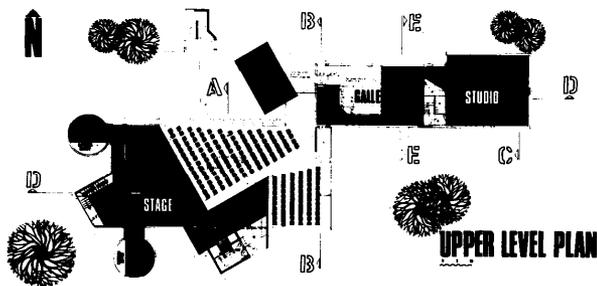
By placing the leading edge of the Stage diagonally in the 30 foot wide barn, 10 feet were added to its dimension. The rest followed logically—extensions in the same geometry to provide six different ways to enter the Stage, and a parallel seating pattern that emphasizes something new and interesting is going on. Another unusual element is the use of natural light called for by the director; it enters through a skylight over the seating area and through an angled window behind the stage.

There is a conscious consistency in the way new elements have been added to complement the existing fenestration, structure and materials of the barn which remains intact except for the cattle stanchions. Detailing is simple and low cost. A small but adequate shop and dressing area is tucked into the lower level (originally for farm wagons). Mechanical equipment is housed independent of the structure as an element of an outdoor terrace. Since most access to the complex is literally footpath pedestrian in nature, the outward changes have been kept small in scale and visually engaging at low-speed ambulation.

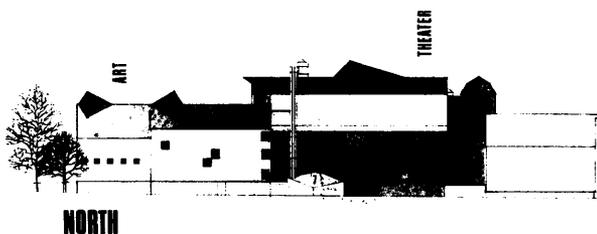




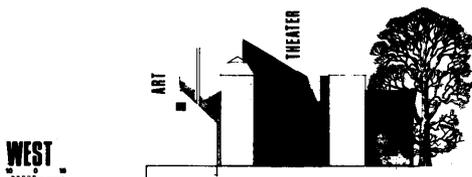
SITE USE 1975



UPPER LEVEL PLAN



NORTH



WEST

Project:
Simon's Rock Art Center

Location:
Great Barrington, Massachusetts

Date of const:
1966

Owner:
Simon's Rock School

Architect:
Hugh Hardy and Associates

Uses:
Dance Theater and Art Studios

Capacity:
200

Form:
Frontal, Open Stage

Adjusted Cost:*
\$290,000

Gross Area:
11,000 GSF

Net Room Area:
2800 sf

Room Volume:
43,000 cf

Net Backstage:
3700 sf

Net Front End:
N.A.

**All Figures Washington D.C., Jan 81*

5-5. MUSIC AND DANCE TOGETHER

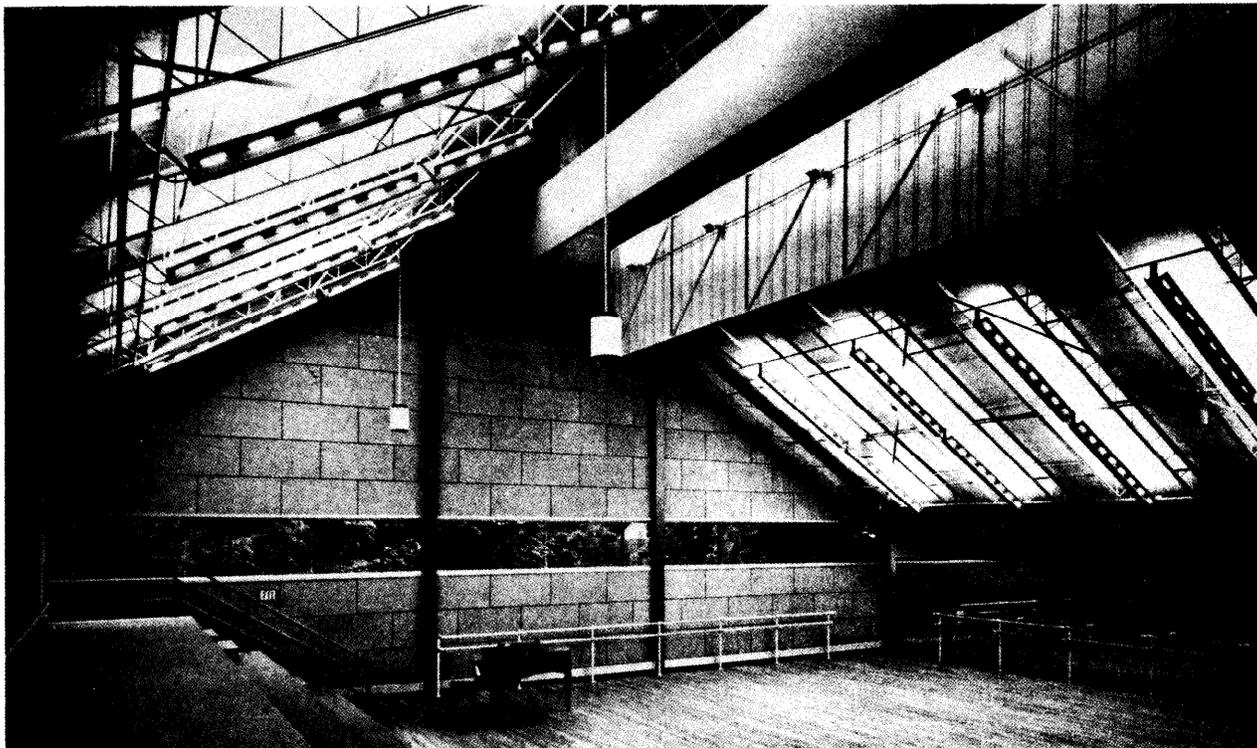
The Performing Arts are an important part of the curriculum at St. Paul's School. For its teaching programs in Drama, Dance and Music, this New England preparatory school chose to build new facilities in the heart of its parklike campus. A 300-seat experimental theater has been added to the existing 750-seat Memorial Hall Auditorium; the small Drama Room is a workshop space, easily altered, square in plan with a universal lighting grid. However, Music and Dance have been housed together in a free-standing building.

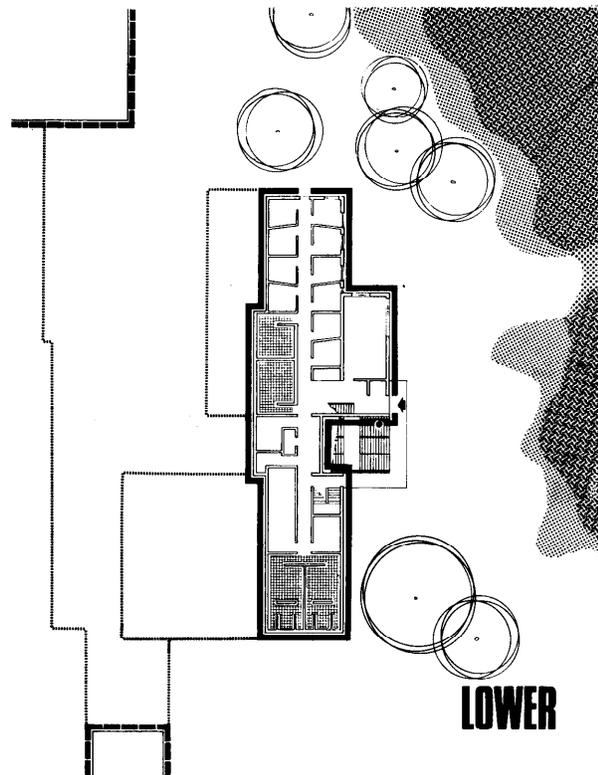
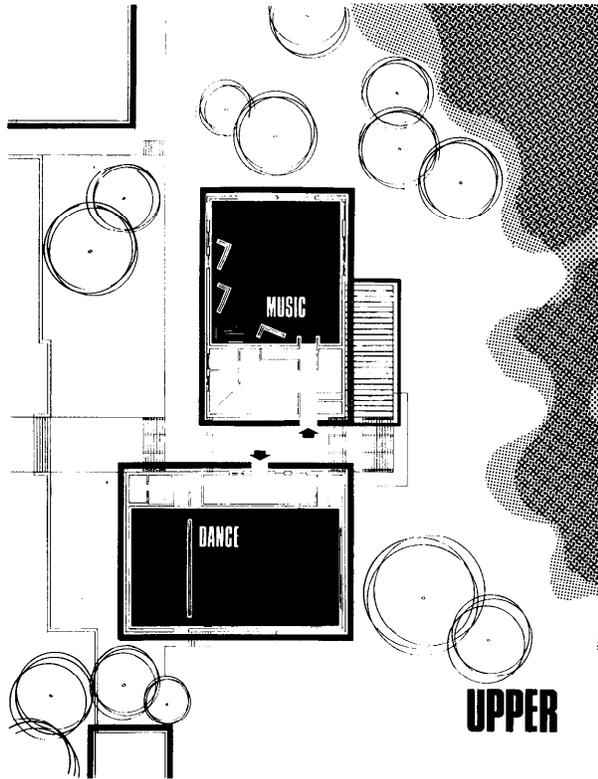
The Dance Studio and Music Performance Hall each accommodate 200 people in separate Rooms rising from a ground floor "podium" which contains dressing and practice rooms. Primarily classrooms in concept and use, each space is technically simple but generous, and has built-in provisions for seating an audience on carpeted bleachers in the Dance Studio and/or moveable chairs. The Studio is equipped with a sound system and is wired for theatrical lighting from a catwalk. The Music Hall has a bi-level

floor and flying mezzanine which permit a variety of musician-listener relationships to be explored. Both Rooms have clerestory skylights, but are oriented at right angles, giving each a different quality of natural light. The Studio floor is a soft five-layer basketweave construction; walls and ceiling are mostly surfaced with sound-absorbing tectum panels. Wood finishes dominate the Music Hall; skewed partitions and sloping ceilings mitigate standing waves. Ventilation is supplied at low velocity through oversized lined ductwork from a central plant located below the outdoor plaza from which each Room is entered separately through vestibules.

Support facilities include a library and two listening rooms adjoining the Music Hall entrance, above which is a large music rehearsal room. The lower level contains small and mid-size practice rooms, visitor restrooms, instrument storage and showers, lockers and dressing rooms for men and women.

It is a steel frame structure enclosed with brick-faced concrete block for noise exclusion, except that a corrugated transite skin has been used to accentuate the two "sheared" end faces. Coper roofs are supported on open-web steel joists visible within.





Project:
Dance Studio and Music Performance Hall

Location:
Concord, New Hampshire

Date of Const:
1980

Owner:
St. Paul's School

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Teaching, Rehearsal and Performance or Dance and Music

Capacity:
150 (Dance)
200 (Music)

Form:
Varied, Open Studios

Adjusted Cost:
\$1,120,000

Gross Area:
16,600 GSF

Net Room Area:
3100 sf (Dance)
2850 sf (Music)

Room Volume:
83,000 cf (Dance)
45,000 cf (Music)

Net Backstage:
6000 sf (both)

Net Front End:
2100 sf (both)

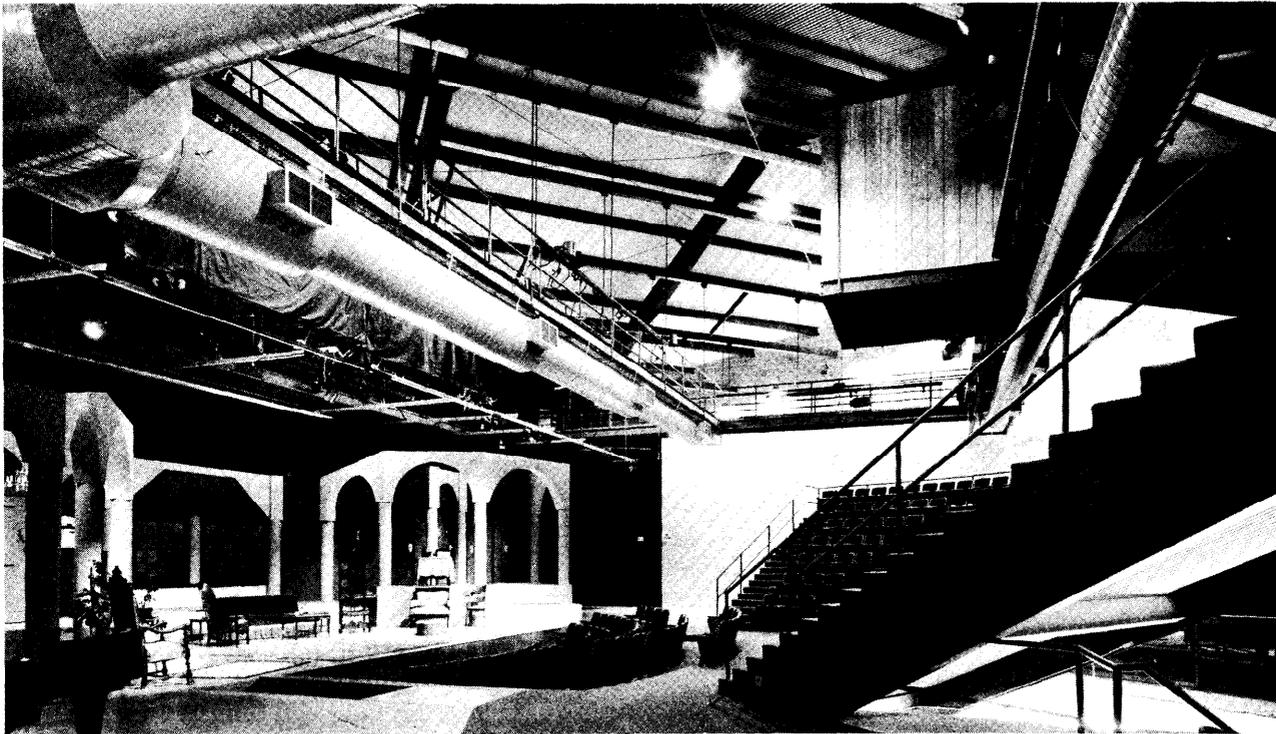
5-6. TWO SMALL FRONTAL ROOMS

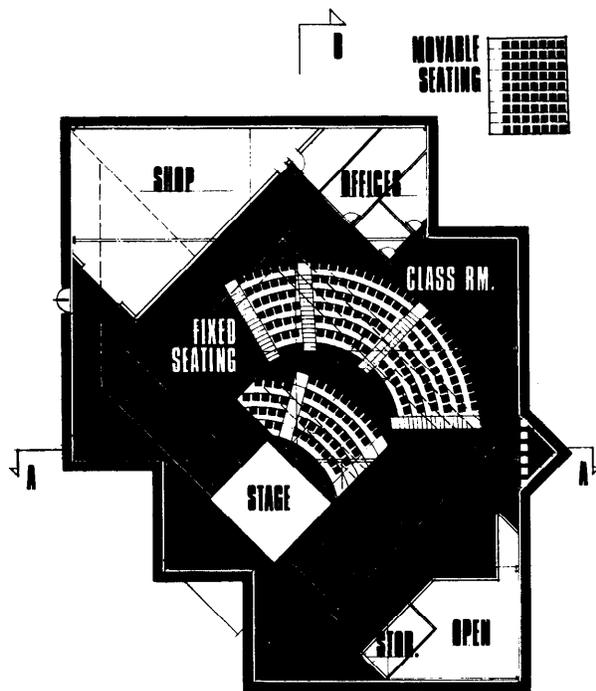
Both of these theaters are examples of small facilities built to a rock-bottom budget, but their design programs involved different site characteristics and different client attitudes toward their eventual appearance. Fisher Theater's sloping site afforded some concealment; the key objective was to provide flexibility in the staging of student productions. Emelin Theater was to be built above an existing parking lot and had to visually blend with a neighboring fieldstone library (1927) and its 1966 addition; its initial program sought to accommodate everything from puppet shows and recitals to theatrical productions.

Fisher Theater seats the audience in a two-part asymmetrical dish. The playing area is very wide; its interpenetration with the seating almost makes the Stage become the entire Room. Combined with the forthright exposure of back-stage equipment, lighting, rigging, catwalks and mobile pipe towers, this arrangement provides directors with potentially great flexibility in production design, at the same time, welcoming the

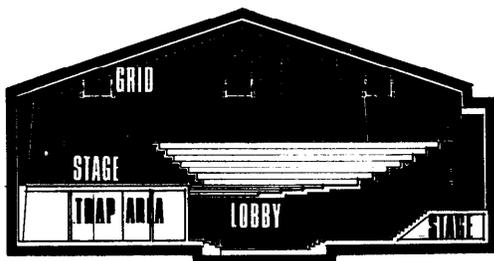
audience's visual participation. Since its technical accessories were necessarily fairly basic due to budget, this frankness makes it easy to use and experiment with. A simple catwalk grid allows ample lighting and rigging coverage of the open Stage and reinforces the general orientation of the Room at 45 degrees to the enclosing structure. There is a shop at stage level, traps and three entrance stairs from the lower level dressing facilities. The lower level also contains a rehearsal space of correct size, plus the lobby and audience support.

Fisher Theater is constructed of pre-engineered building components readily available "off-the-shelf". However, these systems are designed for single-story applications and compact plans. Consequently, a good deal of modification—reinforcement for suspended loads and extensive foundation work—was required to make standard parts fit a non-standard solution. One would expect to encounter problems similar to those of converting an existing building, but so far, the only criticism is that the height over Stage could be a few feet greater to separate rigging and mechanical system ductwork. It should be noted that more time was spent with shop-drawings than working drawings; the manufacturer furnished half the working drawings from its computer.

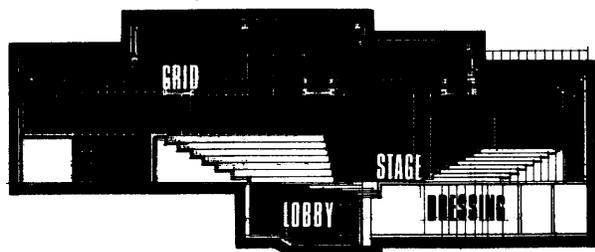




PLAN UPPER



SECTION A-A



SECTION B-B

Project:
Fisher Theater

Location:
Exeter, New Hampshire

Date of Const:
1970

Owner:
Phillips Exeter Academy

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Production, Rehearsal and Performance of Drama

Capacity:
260

Form:
Frontal, Open Stage

Adjusted Cost:
\$1,475,000

Gross Area:
16,500 GSF

Net Room Area:
6700 sf

Room Volume:
163,000 cf

Net Backstage:
6000 sf

Net Front End:
2380 sf

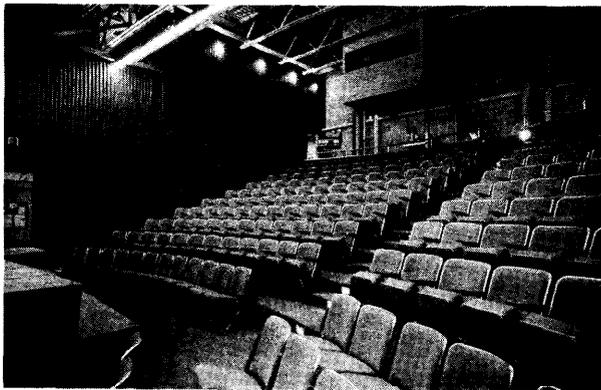
Emelin Theater is less than 40% as large as Fisher Theater, yet it seats a comparable audience in 151 permanent seats plus 114 moveable seats. By repositioning seats and a sliding wall, the audience-performer relationship can be changed from its basically Frontal form. Its small size was achieved by eliminating the backstage—or rather, by combining it with audience facilities. In a one-story plan 72 x 58 feet, every available cranny has been put to use, sometimes to more than one use. The narrow side lobby becomes a side stage. Dressing rooms share a corridor with the box office—latecomers may pass a costumed actor hastening to his entry cue.

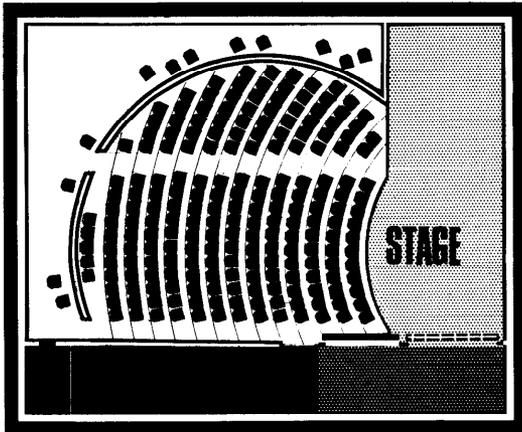
While this spareness is far from ideal, its intimacy has a curiously appealing flavor. The Room works remarkably well with a minimum of fuss. Very little scenery is used, carried in from the side stage (which doubles as musician's platform) or projected on the back wall. Catwalks constructed of long-span joists provide overhead lighting.

Since Emelin is built over a parking lot, about 30% of the budget went to holding it up on columns, but if the city ever relinquishes the land, a trap room and backstage spaces can be built at ground level.

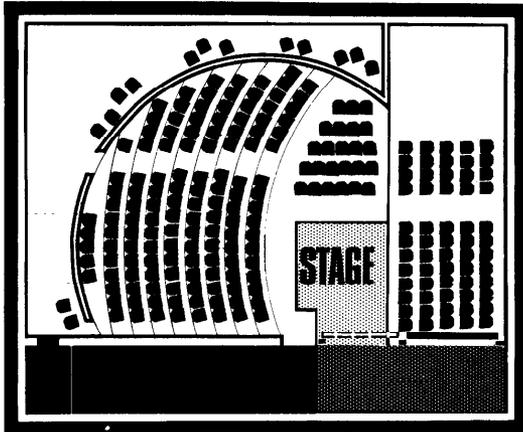
Despite spartan appointments, the Room has very good acoustical qualities due to the wood-faced steel stud walls separating backstage and lobby from auditorium, absorptive fabric-covered curved wall, upholstered seats and carpeted floors.

The building committee rejected the suggestion to use pre-engineered building components. The basic structure is a steel-framed box carried on 10 foot fireproof columns, with a curtain wall of two kinds of concrete block. The ribbed block approximates the texture of fieldstone and the smooth block the limestone bands of the library's cornice, coping and spandrels.

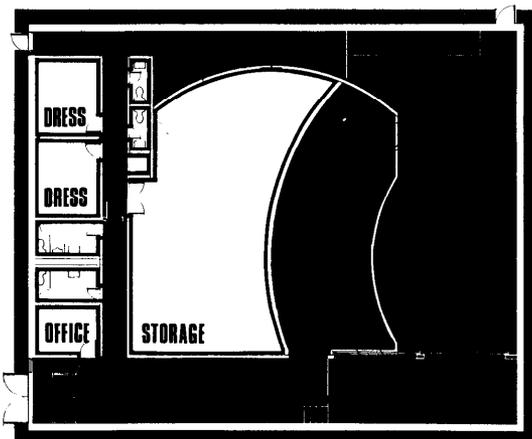




PLAN . A



PLAN . B



PLAN - LOWER

Project:
Emelin Theater

Location:
Mamaroneck, New York

Date of Const:
1972

Owner:
Mamaroneck Free Library

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Drama, Lecture, Music recital Performance

Capacity:
265

Form:
Frontal or Thrust, Open Stage

Adjusted Cost:
\$450,000

Gross Area:
6200 GSF

Net Room Area:
3232 sf

Room Volume:
73,500 cf

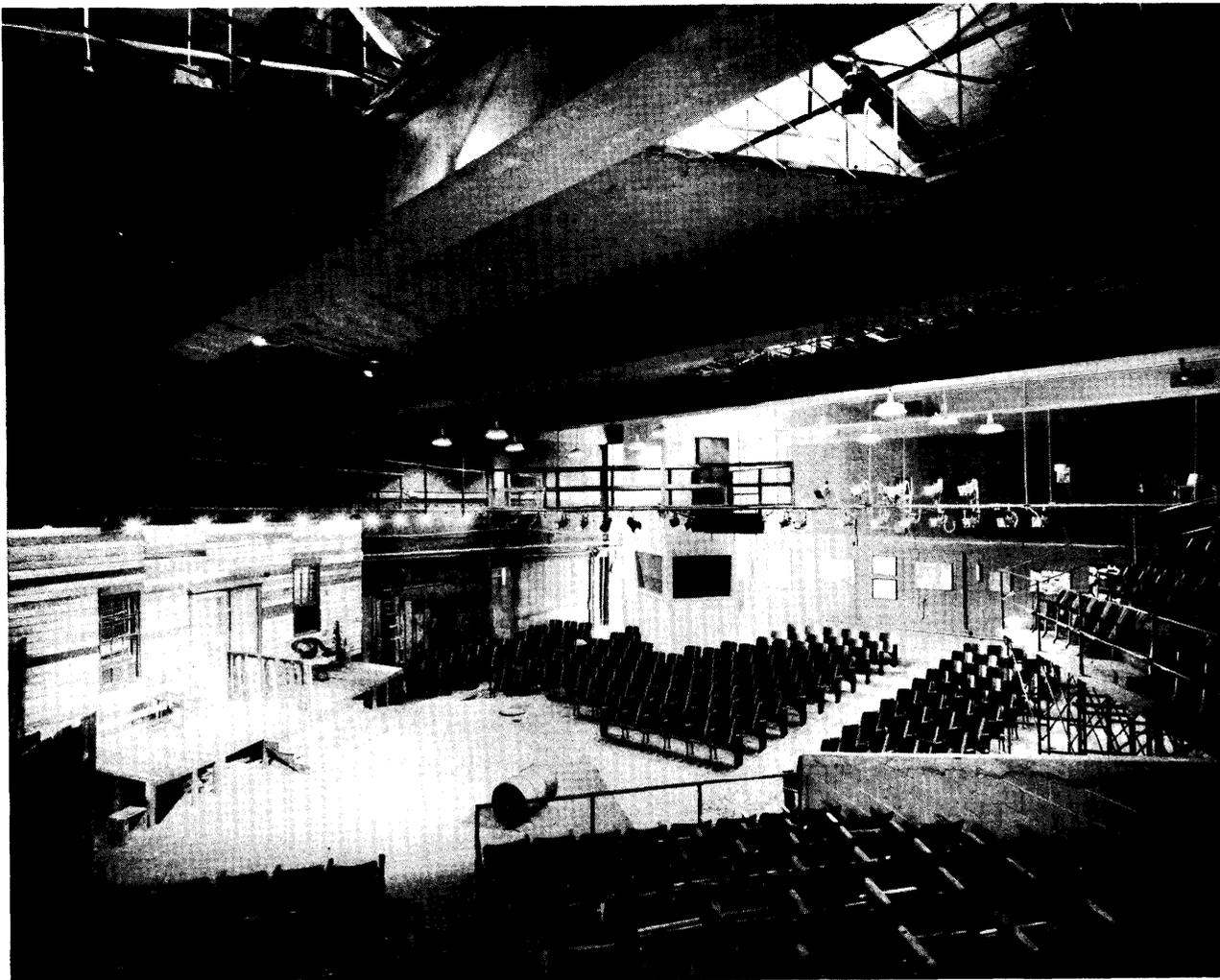
Net Backstage:
1300 sf

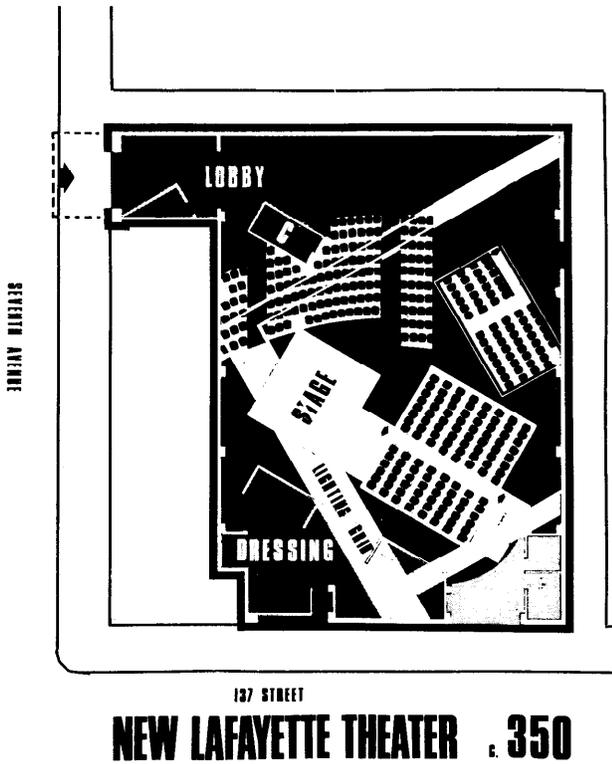
Net Front Bend:
490 sf

5-7. THRUST FORM IN A MOVIE HOUSE

New Lafayette Theater is a community theater for Harlem. The building was typical of urban movie houses, with maximum area devoted to seating, minimum street exposure and lobby space. In this conversion, intermissions take place in the lively setting of the Room. It is an assemblage of contrasting elements that invites participants to think about the many ways things can be built and to speculate actively about what makes this particular room what it is.

A predominantly Thrust relationship has been established between the trapped performance platform and three distinct segments of seating. One of these segments is a portion of the original movie house seating dish recalling the room's origins and the demolished Lafayette Theater, a bygone cultural landmark. A second segment rides in a ceramic tile boat and the third floats above as part of the expanded metal catwalk bridge system. In combination with backdrops, bountiful lighting positions, runways and actor entries, production directors use all these elements and associations to create presentations involving the entire theater environment with great economy of means. Relatively austere performers' facilities occupy the space below the new stage platform.





Project:
New Lafayette Theater

Location:
New York, New York

Date of Const:
1968

Owner:
Robert Macbeth

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Drama and Musical Drama Performance

Capacity:
300

Form:
Thrust, Open Stage

Adjusted Cost:
\$362,500

Gross Area:
11,000 GSF

Net Room Area:
7000 sf

Room Volume:
No Data

Net Backstage:
2400 sf

Net Front End:
Adjoining Building

5-8. A MULTI-FORM THEATER

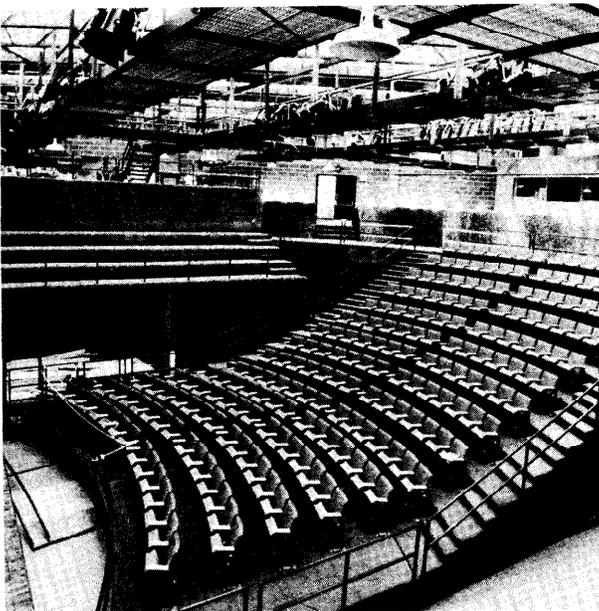
Here is a design solution that appears to contradict one of the fundamental principles emphasized by this Guide—that a Room which seeks to be all things masters none. Olmsted Theater was commissioned by a university to be a laboratory for teaching the basics of theater craft and stage design, beginning with the underlying concepts of audience-performer relationships. The solution was to provide audience seating on modular sections that can be rolled around and cranked up and down while leaving the Stage and related equipment alone. It is an apparatus designed primarily for the performers' experience of various staging situations without complicated or expensive technology. Although resulting sightlines are not always ideal, the "device" functions remarkably well as a theater. It is interesting to note that the full range of potential variations is seldom used for actual productions, which tend to settle on the Frontal or Thrust arrangements.

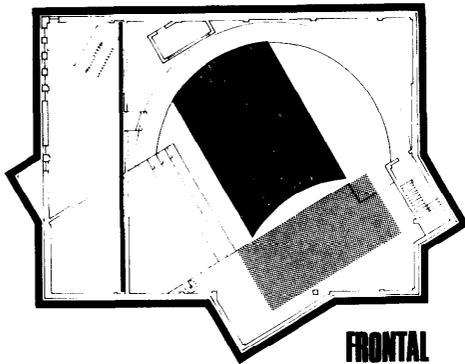
Diagonal orientation was again chosen to create an awareness of enclosing structure around a single space. The masonry box was designed to reject aircraft noise from a major flight path overhead. Work lighting and mechanical systems

follow the structural grid, below which an extensive catwalk grid is suspended, rotated 30 degrees for full-coverage theater lighting and rigging. The entire floor can function as stage; there is only one section of fixed seating, elevated for actors and scenery to pass below.

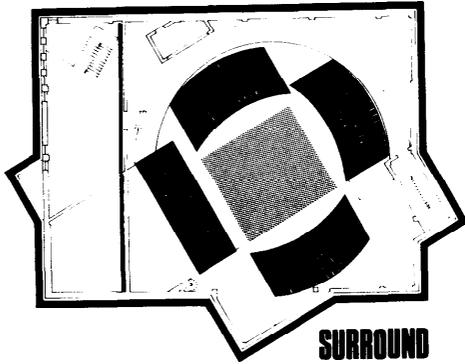
The rolling sections can be locked together and/or to a semicircular track providing upper level audience access. The arcade behind the seating serves sometimes as wrap-around actors' passage, offstage, sidestage or audience cross-aisle. The Stage and double-high shop are located at ground level, both directly accessible from the service receiving yard. The 30 x 65 foot "permanent" Stage has an effective width of 45 feet in Frontal arrangement. Its leading edge and pit zone are fully trapped. Belowstage is devoted to dressing and storage, with a rehearsal classroom under the shop.

The lobby is entered at ground level under a driveup canopy. The vestibule, angled to improve sound and light interception, leads to a compact multi-level lobby that functions as a stairway. Downstairs a truly spacious public space opens up with a sunken meeting area suitable for impromptu presentations. Half of the area is a sculpture gallery-daylighted, through large plate glass window walls opening to an earth-and-timber amphitheater equal in size to the Room above, yet hidden by the theater's bulk.

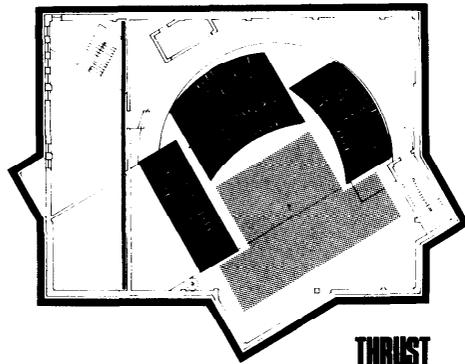




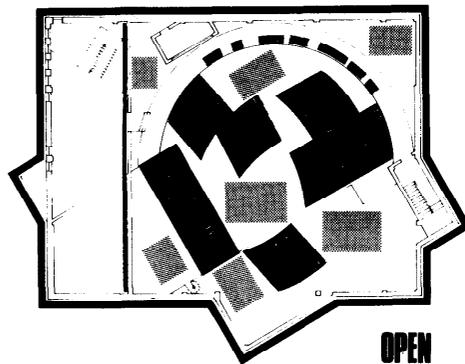
FRONTAL



SURROUND



THRUST



OPEN

Project:
Olmsted Theater

Location:
Garden City, New York

Date of Const:
1974

Owner:
Adelphi University

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Teaching, Production and Performance of Drama

Capacity:
300

Form:
Variable Frontal, Thrust, Surround

Adjusted Cost:
\$1,345,000

Gross Area:
22,000 GSF

Net Room Area:
7000 sf

Room Volume:
198,000 cf

Net backstage:
4900 sf

Net Front End:
5900 sf

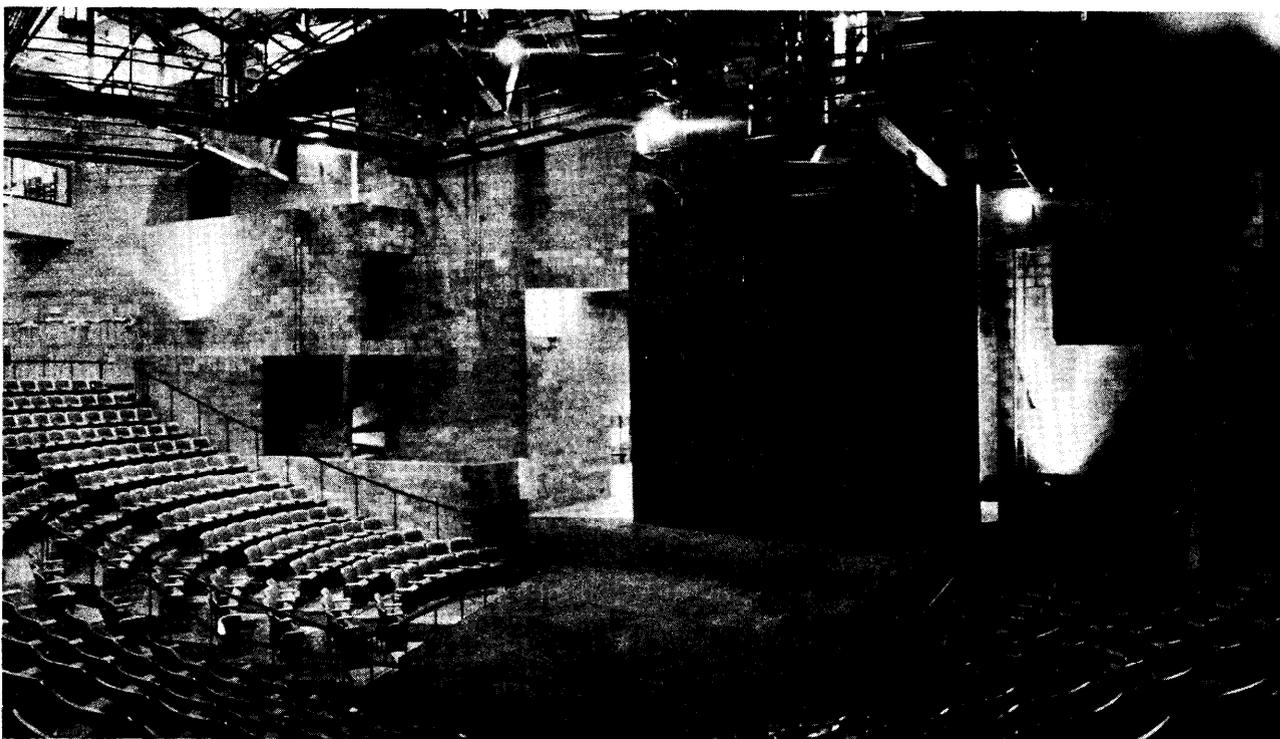
5-9. A LARGER PLAYHOUSE

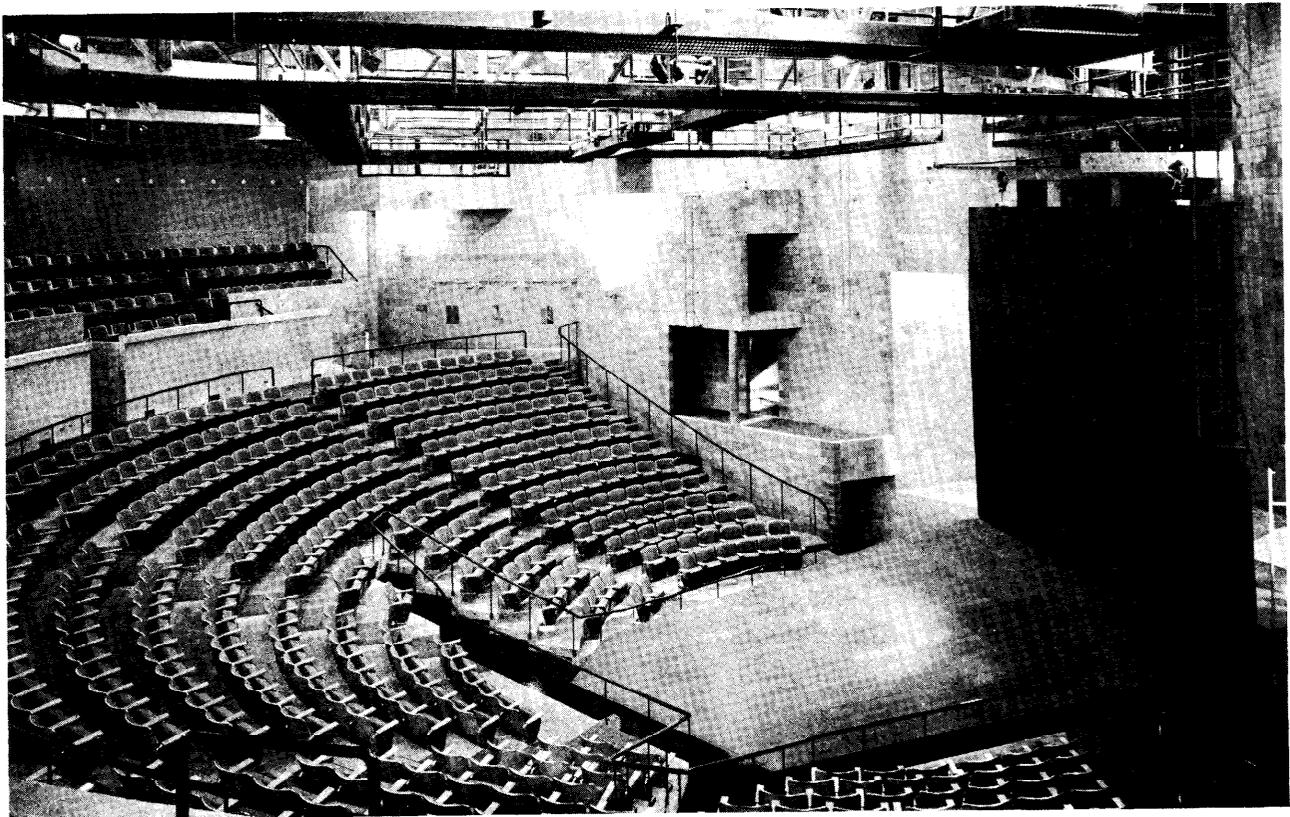
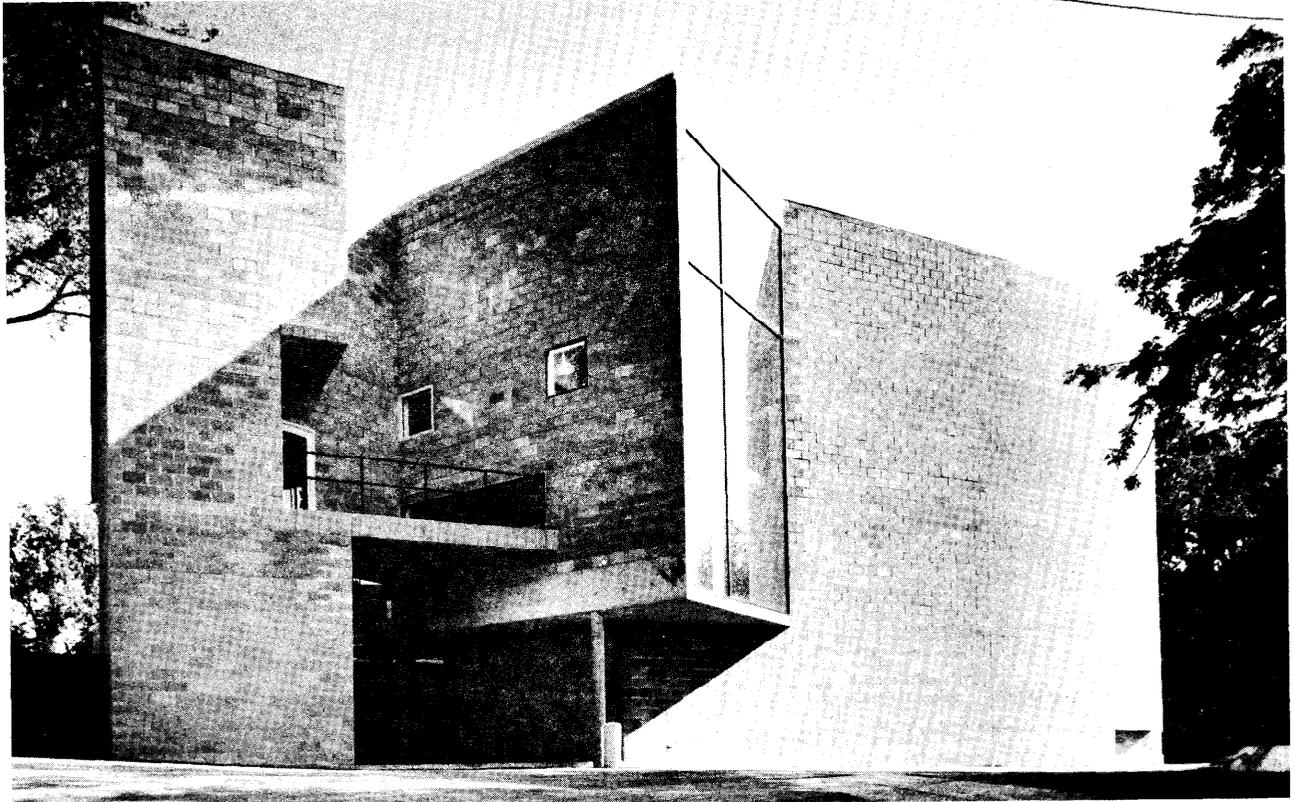
The Robert S. Marx Theater (Playhouse in the Park) in Eden Park is an example of Architect/Theater Director collaboration. The seating embraces an asymmetrical Thrust Stage, giving the focused "teacup" a multiplicity of interest centers. The classic amphitheater shape contains a maximum optimum capacity with fine sightlines, while its steep slope also delivers a high proportion of direct sound to the audience for heightened intimacy. But the director wanted to maintain the distinction between actors and audience—"actors should be larger-than-life-sized people"—so the Stage was cut off from the seating by a continuous moat that also gave access from any point on its perimeter. Asymmetry increases the tension between audience and performers, and provides opportunities for movement in all sorts of ways. There are 24 distinctly different means to get onto the Stage. Some are provided by the sidewalls, full of holes, projections and levels treated as working extensions of the Stage rather than blank or decorated surfaces.

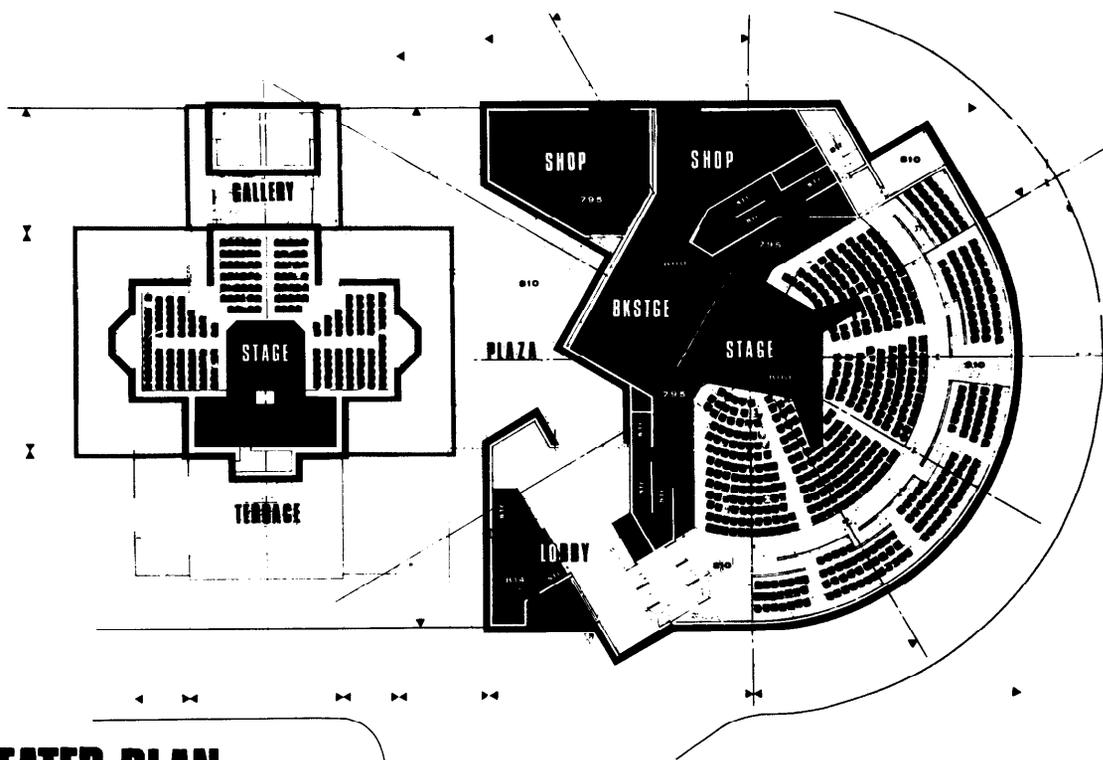
The backwall pivots on a light structural frame that can support scenery or a neutral backdrop or disappear entirely. An extensive catwalk grid covers every lighting angle desired from the house, side angles, overstage and backlighting. Two generous, double-high shops are available, one with direct access to Stage and storage below stage. Other performance support is tucked under the seating dish. It includes dressing for a large cast and a wardrobe workroom.

The five-level lobby is an intricate stairway tying together floor elevations. The entry is from a small plaza shared with the Victorian Playhouse, a former park shelter house. The new building appears small and in scale with its neighbor because the roof slopes down to reduce the lobby wall height. Roof and walls are stainless steel, reflecting the image of the earlier Playhouse and people crossing the plaza. The true bulk of the new building is revealed on the opposite side, because it is sited on a grassy knoll.

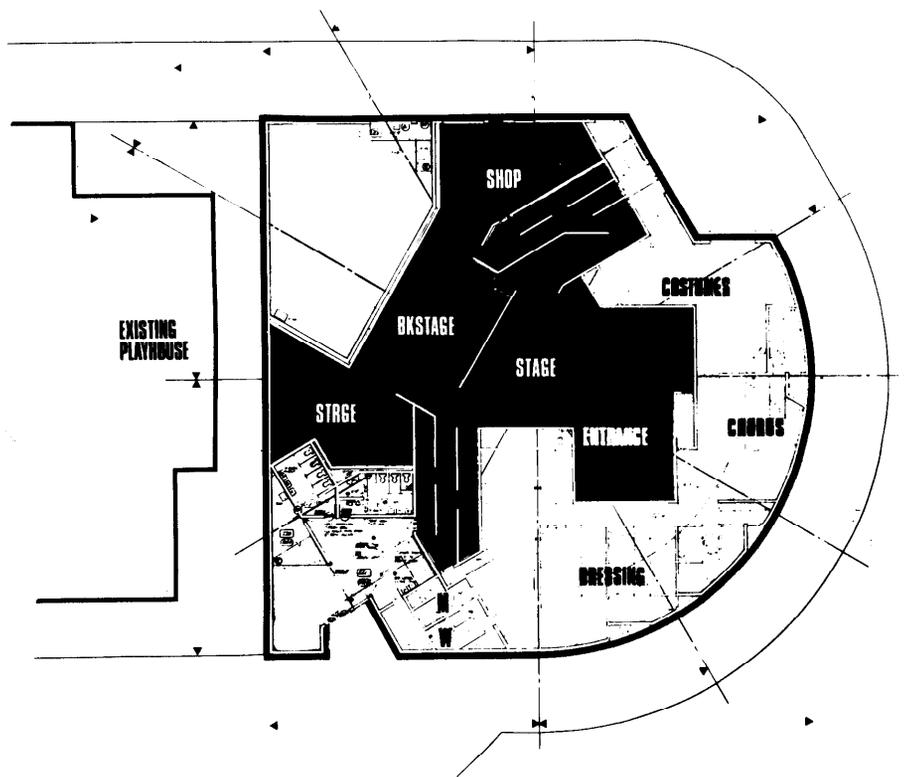
The shelter house was the first theater in the complex. A symmetrical arrangement of 225 seats in three sections with right-angle relationships to the Trust stage was built within the 44-year-old pavilion in 1963. Both production and audience are fixed by the architecture.







THEATER PLAN



LOWER PLAN

Project:
Robert S. Marx Theater

Location:
Cincinnati, Ohio

Date of Const:
1968

Owner:
Playhouse in the Park Corporation

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Production and Performance of Drama

Capacity:
672

Form:
Thrust, Open Stage

Adjusted Cost:
\$2,500,000

Gross Area:
28,600 GSF

Net Room Area:
8725 sf

Room Volume:
285,000 cf

Net Backstage:
12,700 sf

Net Front End:
2700 sf

5-10. THE VITAL CONTEXT

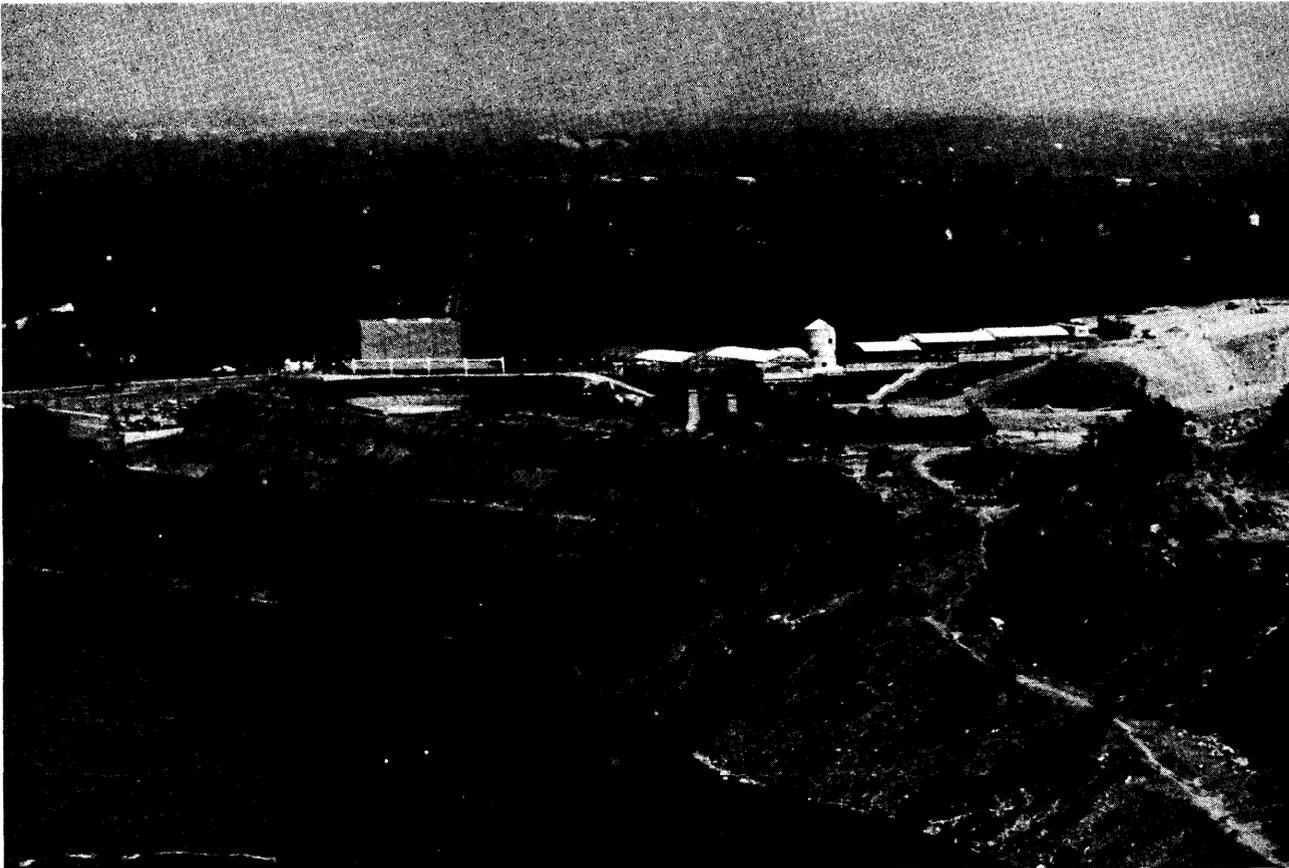
Artpark is cited as a reminder that performing arts cannot survive in a vacuum. On a spectacular site at the edge of the Niagara River Gorge near the small community of Lewiston, New York State built a 2,400-seat summer festival Theater with an outdoor seating lawn to accommodate another 1,500 people. Similar in concept to Wolftrap, it was fully equipped with the latest available technology, and programmed with all facets of the performing arts—classical and popular. The State realized, however, that with no additional activity audiences would be small.

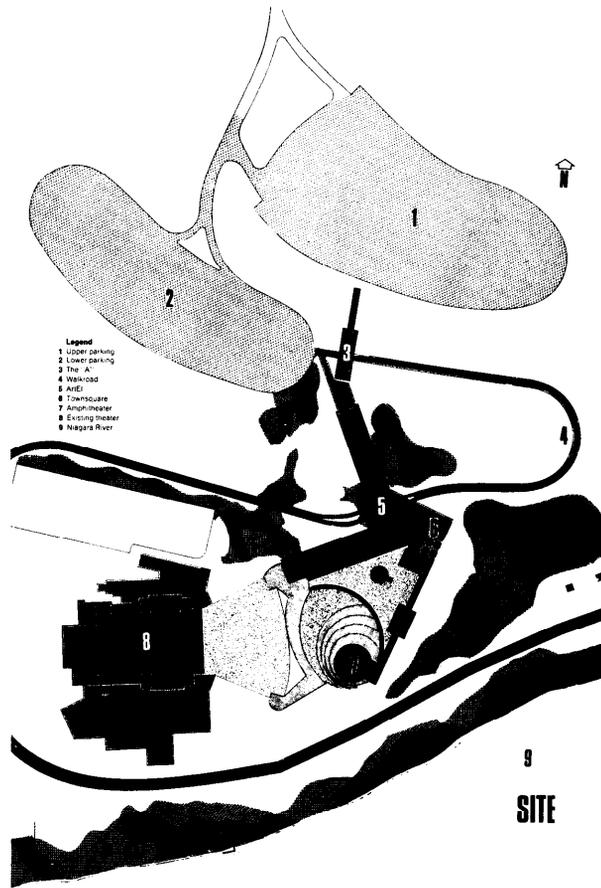
To ensure greater attendance Artpark was developed on an 180-acre landfill and chemical dump adjacent to the Theater as an outdoor cultural center where the public can watch artists and performers at work. Its purpose is to attract and satisfy the widest possible audience, from

sophisticated viewers attending matinee and evening productions of ballet and opera to the family-camper tourist.

The activity complex is in three parts: ArtEI, a 500-foot-long, 40-foot-wide L-shaped elevated boardwalk designed to serve as workspace for artists and walkway for theater patrons; a 300-seat amphitheater (a pre-engineered pole-barn contains dressing rooms and storage for mobile stage equipment); and an adjacent brick patio "Town Square". These areas provide a wide range of work and play spaces. The simple amphitheater is occasionally programmed, but continuously active with spontaneous performance before the magnificent natural backdrop.

Although distinct in concept and execution (Artpark was originally considered a temporary expedient), these two major elements of the first State Park developed entirely for the performing and visual arts are mutually supportive during a season which now includes spring as well as summer.





Project:
Earl Bridges Theater/ArtPark

Location:
Lewiston, New York

Date of Const:
1974

Owner:
New York State Parks and Recreation

Architect:
Vollmer Associates (Theater)
Hardy Holzman Pfeiffer Associates (ArtPark)

Uses:
Opera, Symphony and Popular Entertainment
(Theater) Impromptu and continuous Drama,
Music, Dance, Exhibition and Refreshment
(ArtPark)

Capacity:
3900 (Theater)
300 (Amphitheater)

Form:
Frontal, with Flyloft and Pit (Theater)
Surround, Open-Air (Amphitheater)

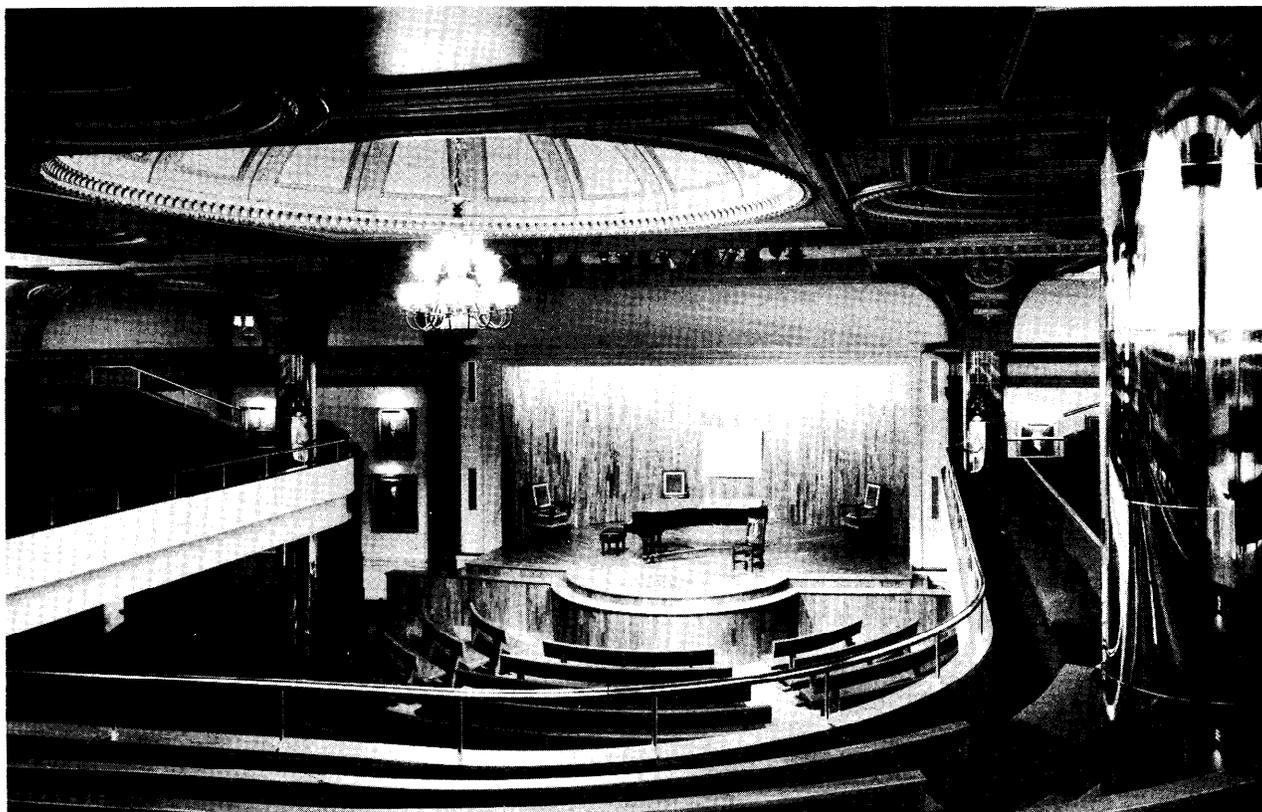
Adjusted Cost:
\$10,940,000 (Theater)
1,500,000 (ArtPark)

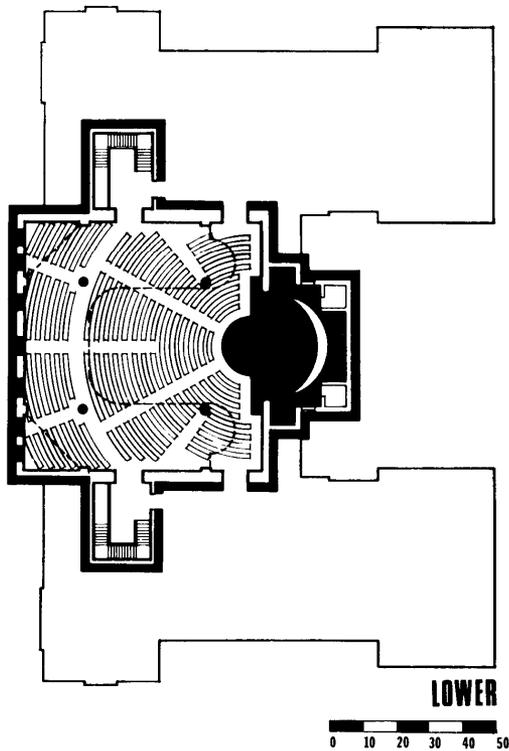
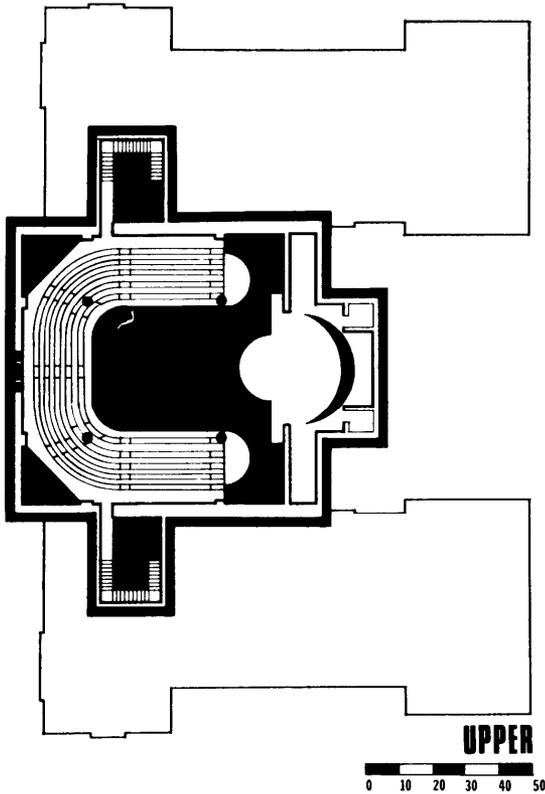
Gross Area:
(ArtPark Only) 34,000 GSF under cover
14,000 GSF amphitheater

5-11. A RECITAL HALL

Exeter Academy wanted to convert their 40-year-old, 400 seat flat-floor auditorium, Exeter Assembly Hall, into a space that could be a theater, a recital hall and an assembly hall and at the same time keep the renovation within the existing walls. They couldn't have it all and in the end, the recital hall won.

The old Room had character, but no direction. The audience is now seated on benches in a focused, slightly raked pattern around the redesigned platform. The bench seating, besides recalling the old assembly hall, reduces the absorptive value of the audience. A U-shaped balcony floats overhead, near the richly coffered and moulded plaster ceiling; the roof was raised slightly at the perimeter for headroom. In order to improve direct energy (and to discourage the hall's use as a theater) a permanent wood backdrop soundboard was built and the Stage reshaped for small groups. Modest concert lighting has been installed, and portrait lights cast a warm glow. The Room retains its dignity, but it has become intimate.





Project:
Exeter Assembly Hall

Location:
Exeter, New Hampshire

Date of Const:
1969

Owner:
Phillips Exeter Academy

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Music Recital and General Assembly

Capacity:
1100

Form:
Frontal

Adjusted Cost:
\$1,309,000

Gross Area:
13,000 GSF

Net Room Area:
10,000 sf

Room Volume:
195,000 cf

5-12. A TRADITIONAL CONCERT HALL

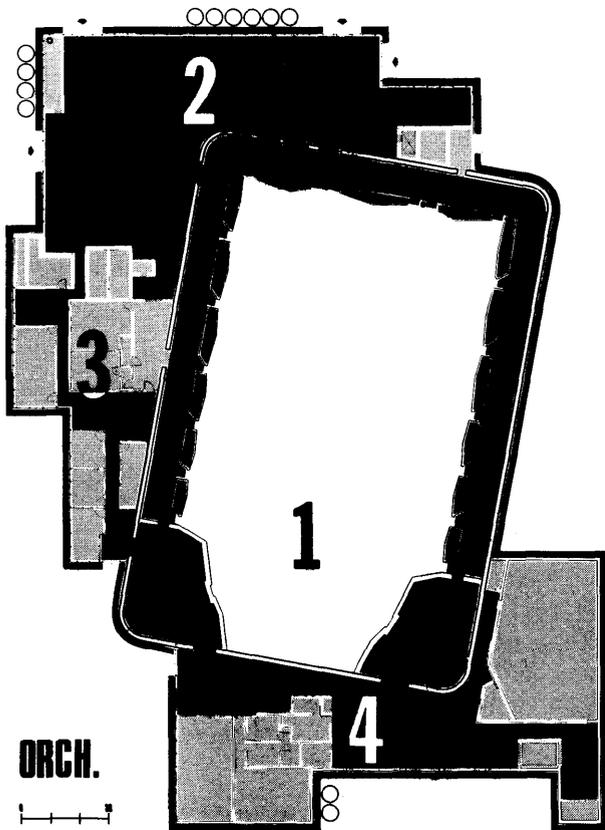
Orchestra Hall exemplifies the traditional approach to concert hall design. It is patterned after a succession of halls harking back to the Leipzig Gewandhaus and Musikvereinsaal in Vienna. The owners required acoustic excellence take precedence over all other considerations.

Traditional halls make use of boundary surfaces to realize acoustic criteria. The orchestra speaks directly into the Room from an unyielding reflective enclosure. Modelled surfaces throughout the hall help diffuse and distribute sound in certain predictable ways. Successive fine-tuning of each new hall has consequently resulted in a number of Rooms very similar in proportions and architectural character, visually grand rather than intimate. An attempt was made at Orchestra Hall to visually shorten the Room by bringing the ceiling pattern down behind the musicians and by segmenting the shallow side balconies.

Typical detail approaches employed here are massive box-within-box construction for noise exclusion, (the entire structure is separated from adjoining construction by a one-inch gap). The audience is urged to leave absorptive wraps in lockers lining the perimeter corridor, which in turn is surfaced on four sides with carpet. Every surface angle was tested in a large scale model to ensure even distribution, using mirrors and a light source. On-site supervision and daily testing during construction resulted in an acoustically acclaimed Hall.

The expense entailed for an excellent Hall curtailed budgets for public, administrative and performers facilities. But the resulting austerity is a lively contrast. The lobby became a large bright volume laced with gangways and stairs from which people could see and be seen during intermission. The musicians' quarters are small but comfortable. Most rehearsals take place in the hall, but there are backstage dressing rooms, lounge, Green Room and a sectional rehearsal space. Offices for the fund-raising and subscription auxiliaries are also accommodated.





Project:
Orchestra Hall

Location:
Minneapolis, Minnesota

Date of Const:
1974

Owner:
Minnesota Orchestral Association

Architect:
Hardy Holzman Pfeiffer Associates (design)
Hammer Green and Abrahamson, Inc. (construction)

Uses:
Orchestral Concerts, Resident Symphony

Capacity:
2540

Form:
Frontal

Adjusted Cost:
\$11,225,000

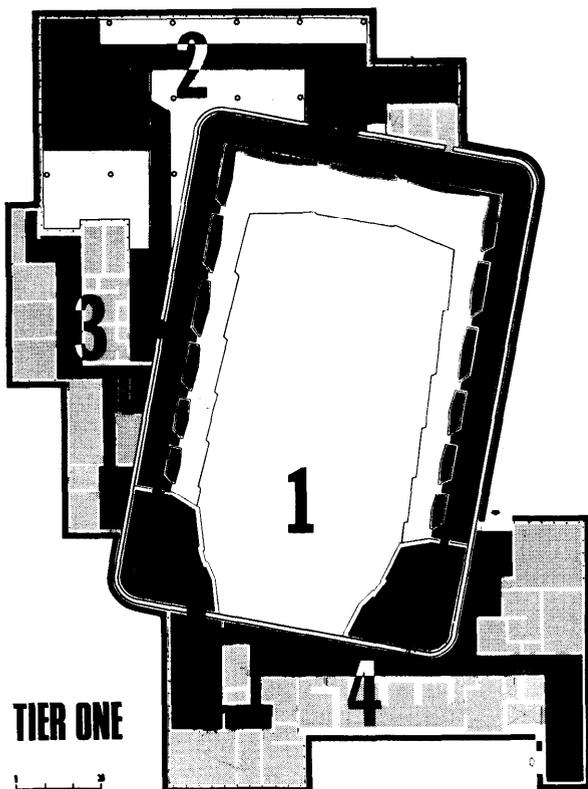
Gross Area:
108,700 GSF

Net Room Area:
22965 sf

Room Volume:
650,000 cf

Net Backstage:
18,800 sf

Net Front End:
39,850 sf



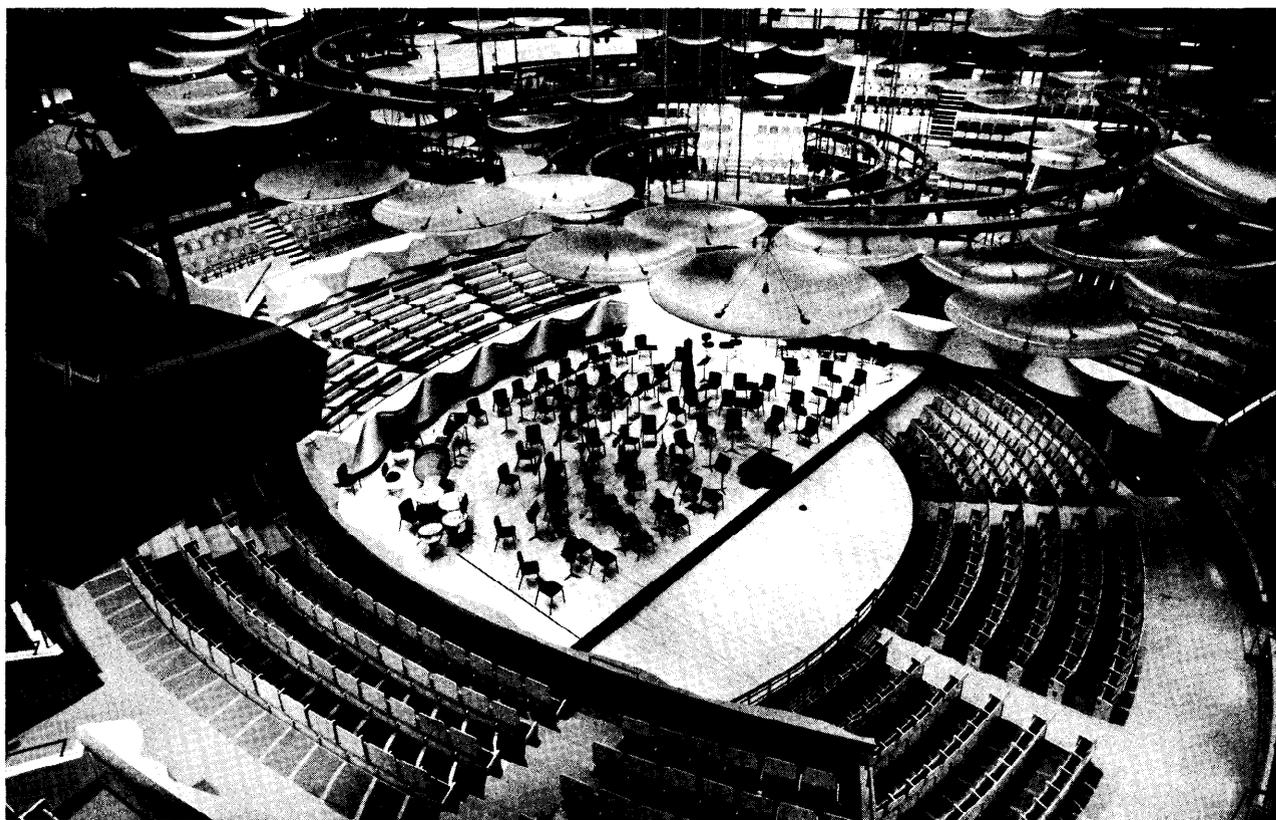
5-13. A SURROUND CONCERT HALL

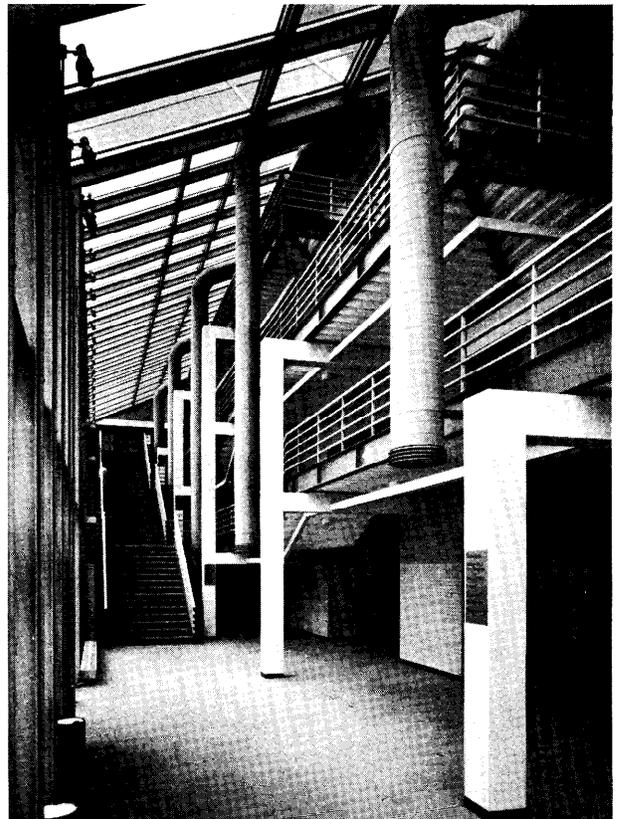
A Surround hall changes the relationship of performers to both the audience and the boundary enclosure, and must therefore realize acoustic criteria by different means. At Boettcher Concert Hall sound emanates from the orchestra in all directions, requiring a canopy over the orchestra to provide early reflections to the audience and balance and blend sound on Stage. The canopy reflectors must be relatively near the audience; some other means is needed to enhance reverberant contribution. Boettcher Concert Hall uses a coupled chamber under the stage to add to the reverberant field in the vicinity of the stage. The large volume overhead also compensates for the rapid dissipation and absorption of energy. Specially designed chairs shield the audience.

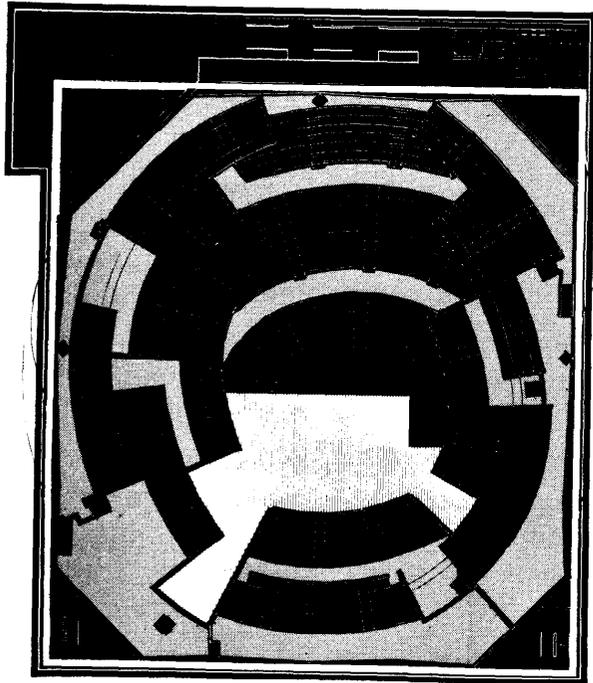
Boettcher is noteworthy for its visual intimacy, discussed in Section 5-3, and for the owner's

decision to lavish effort on making an exciting humane experience of the Room. Eighty percent of the audience is 65 feet or less from the musicians, and no seat more than 85 feet away. The design goal was informality; there is an abundance of open space and ways to move about within the Room. By contrast, the entry lobby is spare.

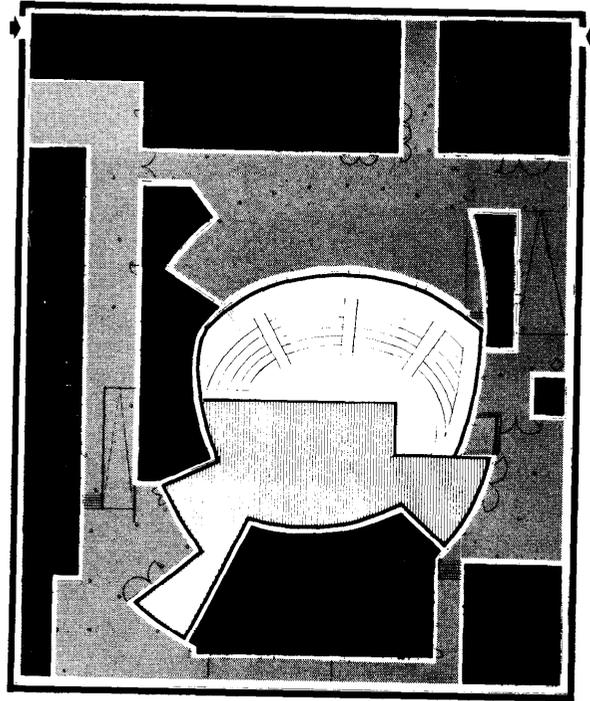
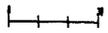
Performance support facilities, include a two-part elevator pit, choral seating, piano standby, technical control and broadcast booths all immediately related to the stage. The owners did not rule out new forms of presentation, popular shows and semi-theatrical events when they described the performance types anticipated. Below the terraced seating, a full complement of preparatory facilities has been furnished: musicians' dressing, showers and warm up, artists' lounge and stage door, conductor's and guest artists' suites, concert masters and stage manager's quarters, string, brass, and woodwind warmup rooms and, small practice rooms, score library, storage area, separate piano storage, general receiving and trunk storage, and visitors' dressing associated with a large rehearsal room.



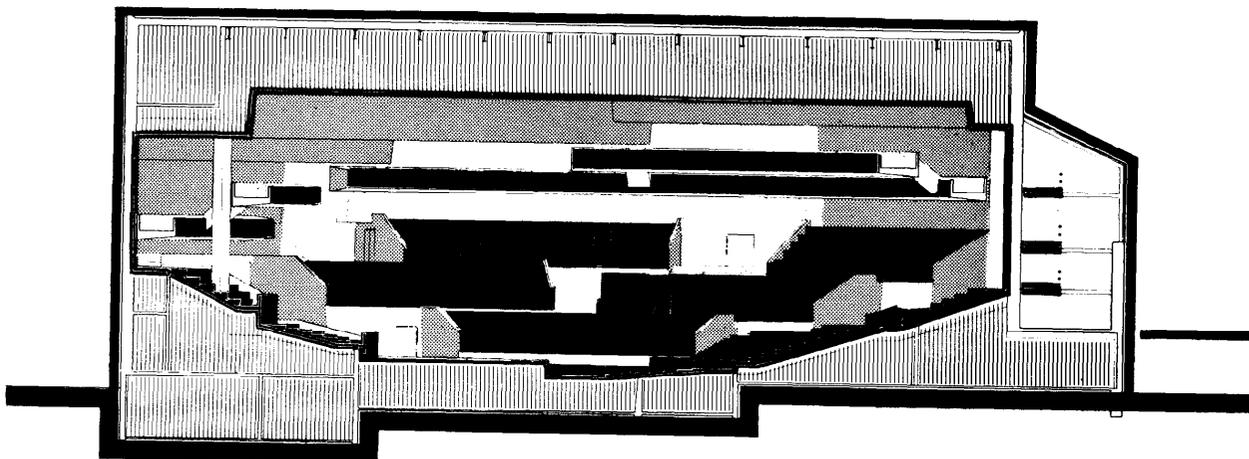
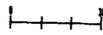




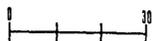
ORCH.



SUPPORT



SECTION



Project:
Boettcher Concert Hall

Location:
Denver, Colorado

Date of Const:
1978

Owner:
Denver Center for Performing Arts

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Orchestral Concert, Plus Opera Recital and Popular Entertainment, Resident Symphony and Touring Shows.

Capacity:
2750

Form:
Surround

Adjusted Cost:
\$12,400,000

Gross Area:
138,000 GSF

Net Room Area:
34,750 sf

Room Volume:
1,100,000 cf

Net Backstage:
21,000 sf

Net Front End:
33,500 sf

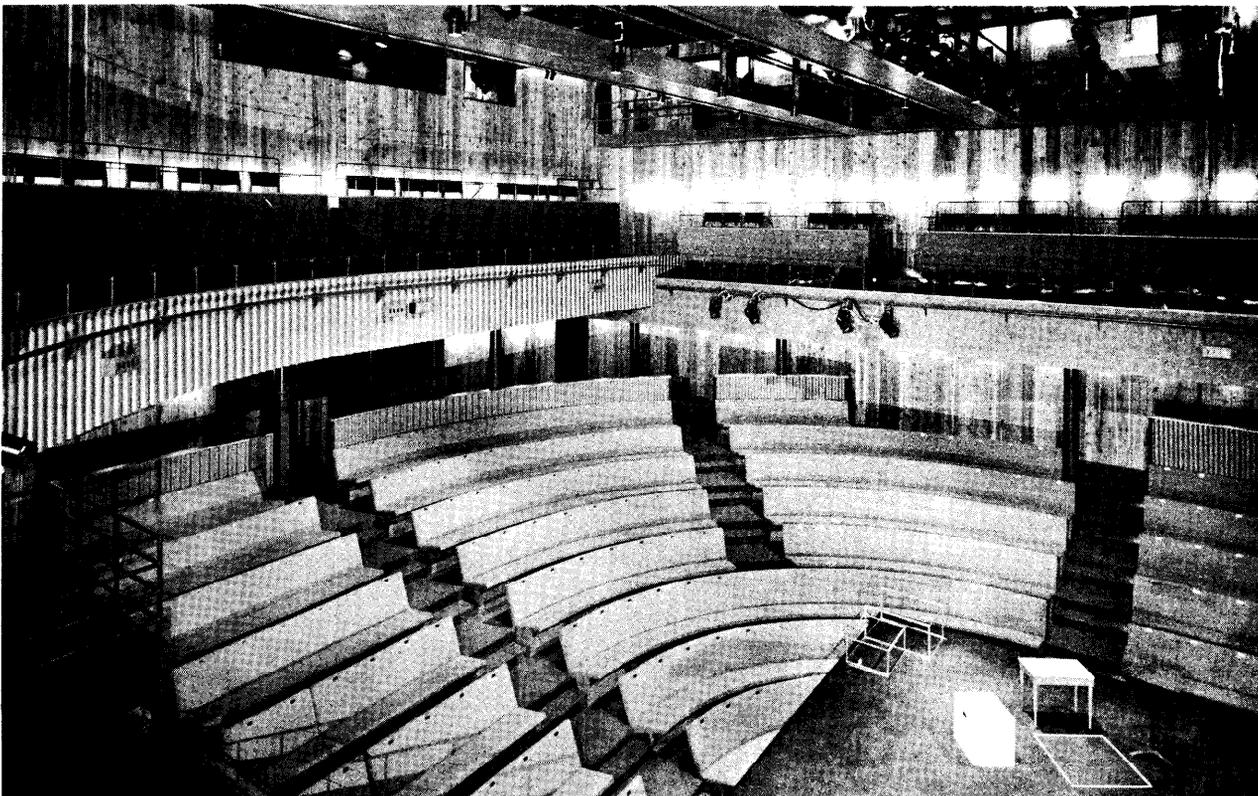
5-14. TWO DUAL FACILITIES

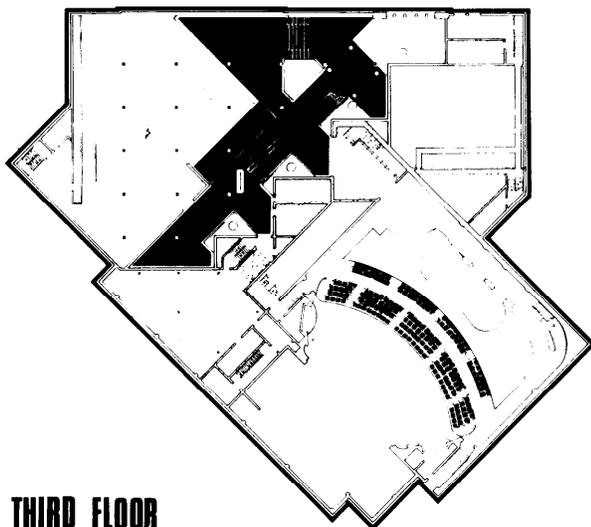
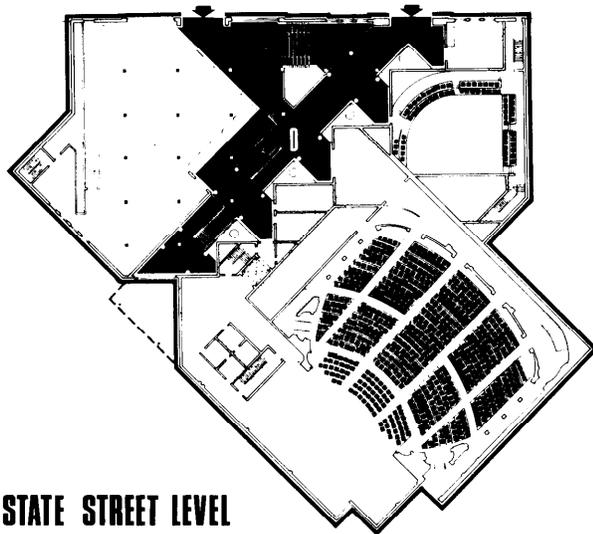
While symphony halls and civic centers have no direct relationship to probable Army Music and Drama Centers in scale, the architectural solutions illustrate program conditions and design tasks found over a broad range of endeavor. In these last examples, the programmers determined it was important to have two Rooms, large and small, to meet the demands of respective communities. For both, the large Room is a multi-use proscenium-and-flyloft space allied with a smaller open stage theater. The first example—the conversion of a complex of adjoining buildings—highlights some of the needs addressed by the second, all-new facility.

Madison Civic Center's downtown site consists of a 1920's movie palace, neighboring street front commercial shops (razed for new construction) and a 1941 Montgomery Ward department store. A multi-level lobby has been carved between the department store and the theater where skewed structural girds meet. The Ward store is now an Art Center; across the way are the two theaters.

On the house side the Capitol theater has been restored and refinished, including 3500 new seats that are wider and further apart back to back. The seating capacity is the same, shifted proportionately from orchestra to balconies for better drama sightlines. The major change occurred in the stagehouse, originally about 20 feet deep, with a shallow pit for 20 to 30 musicians. To create a drama theater, the backwall was pushed out 15 feet, and four rows of seating were removed to make way for a 20 x 56 foot hydraulic pit lift from the basement loading level: 1900 SF. of wing space were added stage left. Other additions include dressing rooms, rehearsal room, loading doors to the pit lift and backstage elevator, and 1900 S.F. of administrative offices. Space could not be found for construction shops and storage.

The 370 seat Thrust theater is located behind the rear wall of the large house, where it shares a service alley tunnel at basement level. The small Room accommodates productions ranging from children's theater and puppet shows to modern intimate drama lending diversity to the Civic Center's program offerings and audience profile.





Project:
*Oscar Meyer Theater and Isthmus Playhouse,
Madison Civic Center*

Location:
Madison, Wisconsin

Date of Const:
1980

Owner:
City of Madison

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
*Orchestra, Opera, Ballet and Popular
Entertainment (large room); Intimate Drama,
Music and Dance Recital (small room)*

Capacity:
*2100 (large room)
370 (small room)*

Form:
*Frontal with Flyloft and Pit (large room)
Thrust, Open Stage (small room)*

Adjusted Cost:
\$8,025,000

Gross Area:
142,000 GSF (includes 37,500 GSF Art Center)

Net Room Area:
*20,800 sf (large)
4000 sf (small)*

Room Volume:
No Data

Net Backstage:
21,500 sf

Net Front End:
37,300 sf

The Eugene Performing Arts Center started with a two-block downtown site consolidation which was leveled for construction of its theater center, convention center, hotel, commercial space and parking.

Fund-raising began in the early 60's. A feasibility study was conducted to evaluate population and income trends, needs and preferences, user groups, existing facilities and the economics of their operation. These investigations confirmed and supported the program directions.

Most local users wanted an intimate concert hall, but both the economics of income-producing touring events and the criteria for orchestral acoustics favored a 2400-2500 seat house. The goal was to create an intimate room of this capacity. Several alternative capacities and basic forms were evaluated for the 500-seats, multi-use drama theater. Versatility was desired, so a basically Frontal room of the most-valued capacity was chosen. However, its solution would have a demountable false proscenium and be capable of modified Thrust arrangement by decking over the first 100-150 seats.

Lobby and public space joining the two serves as the front door to the whole project and must reflect the regional character. Shared backstage and support facilities might serve other uses as well.

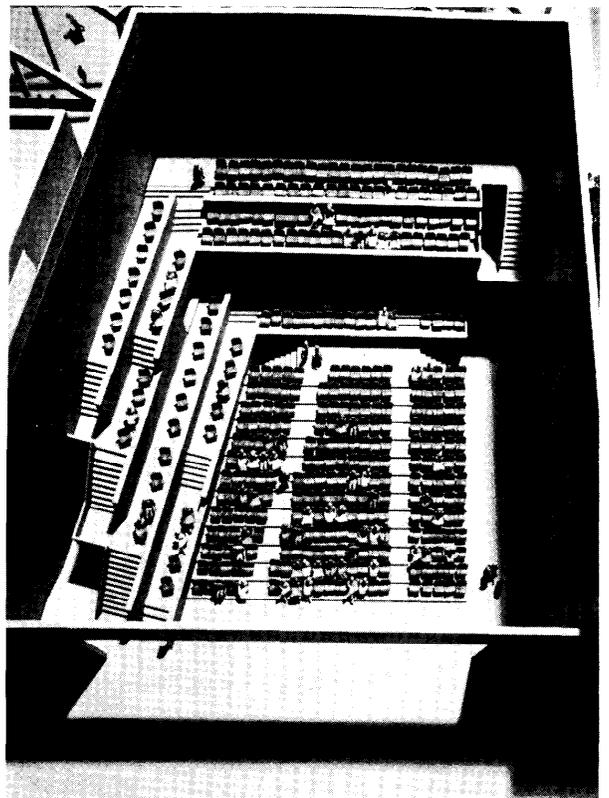
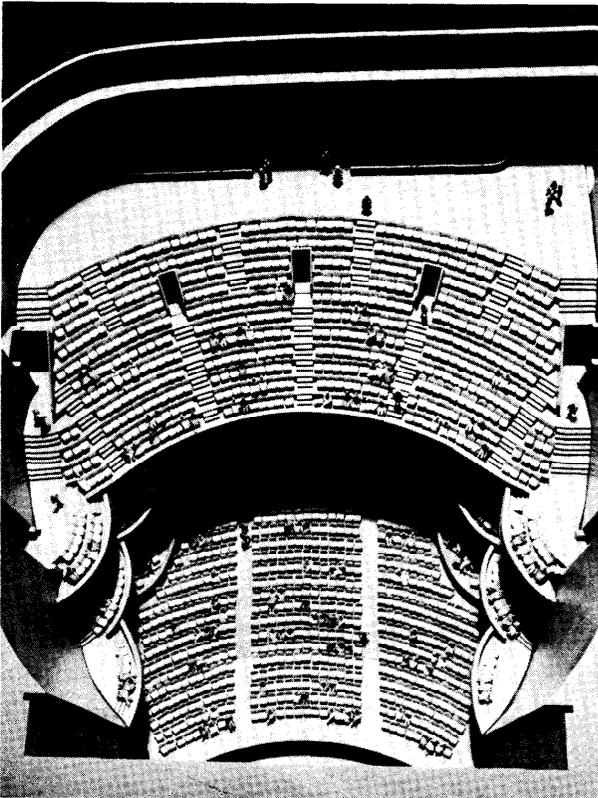
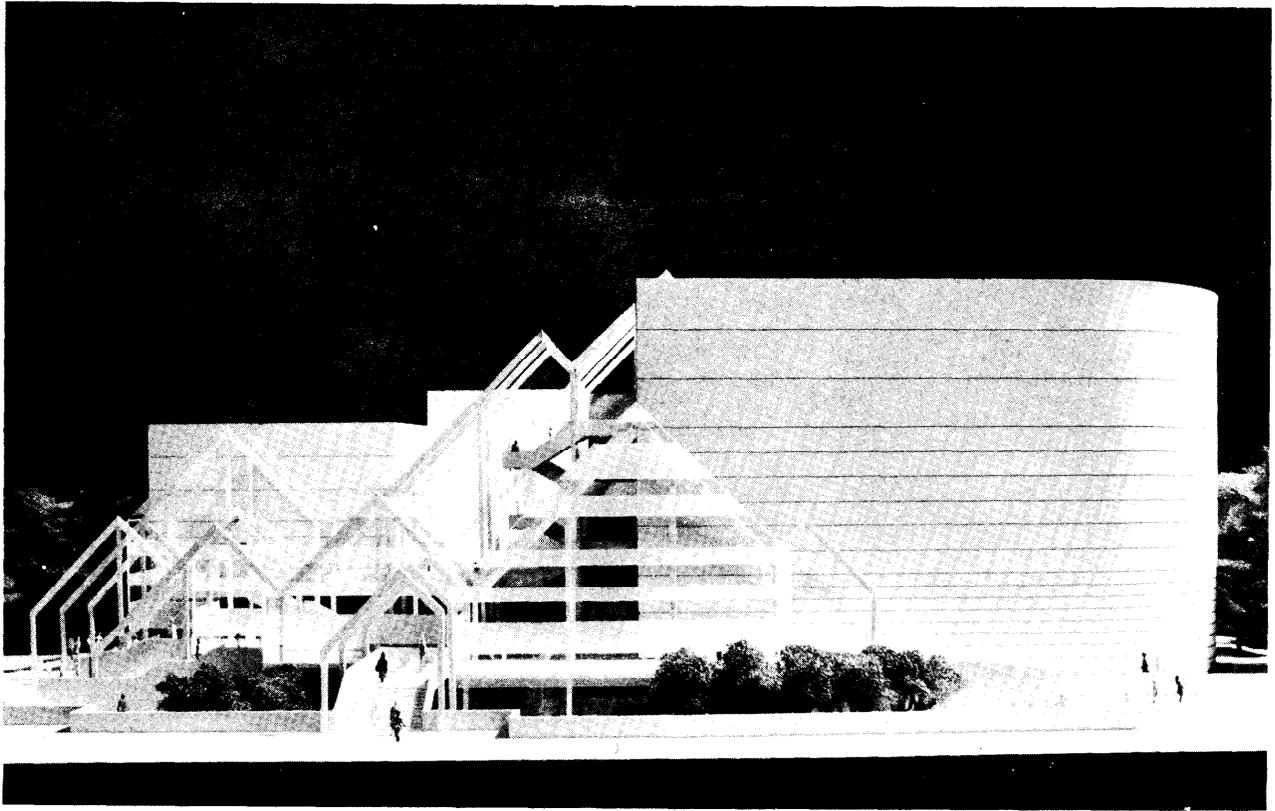
The concept of shared facilities was key to promoting community support and technical development while avoiding duplication of facilities. Sharing public spaces with the street has a healthy effect on local businesses and on the image of the Center. It was expected that rehearsal rooms might be shared by various kinds of performing groups and with the community as meeting rooms and small performance spaces. The spaces were designed to permit these performances in future, but the budget was not.

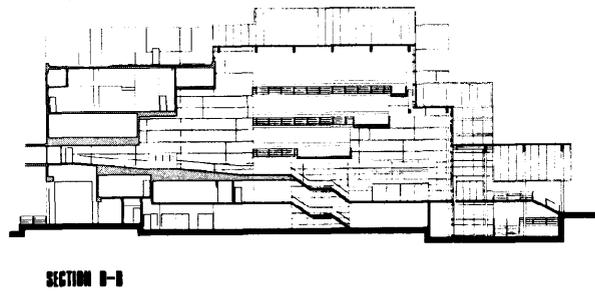
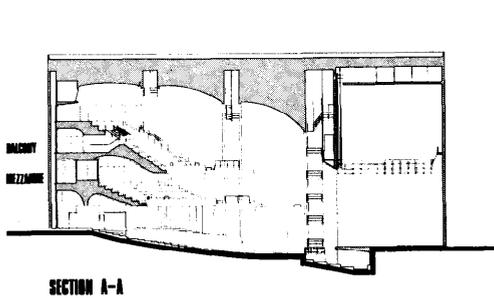
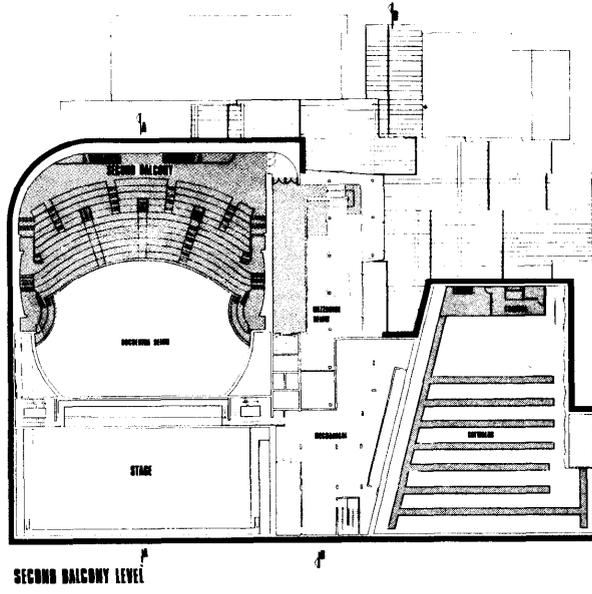
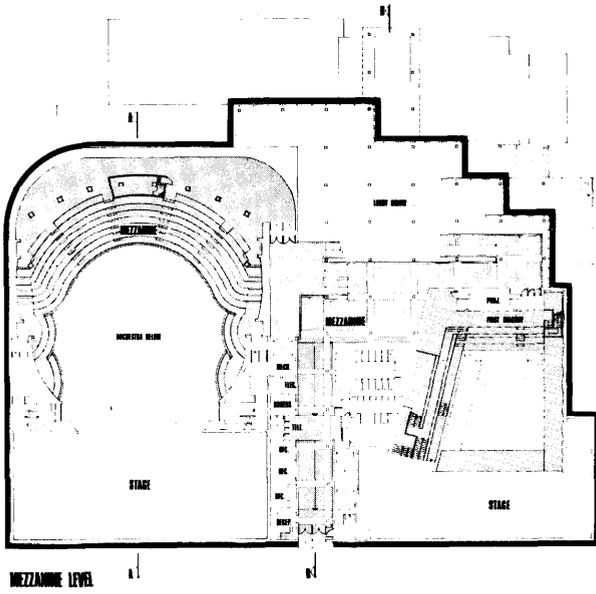
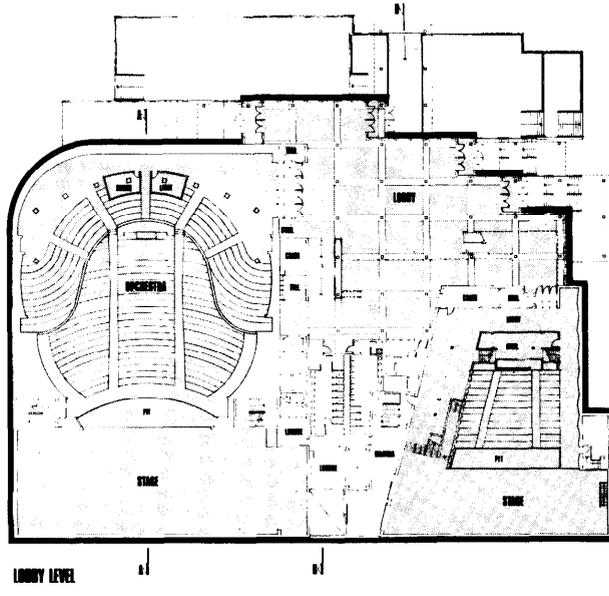
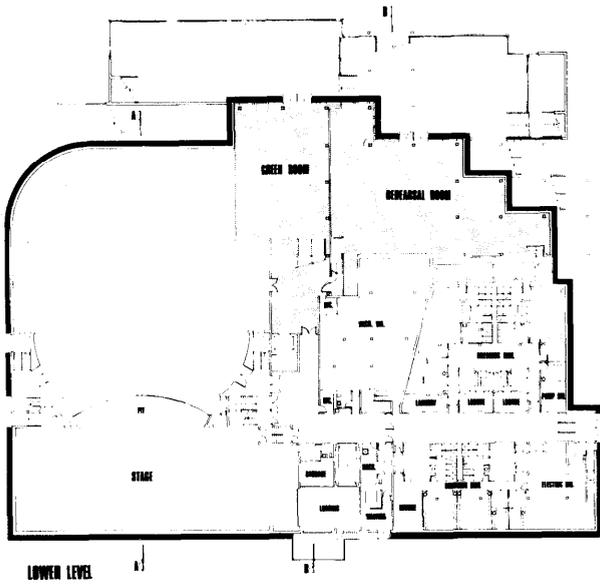
Backstage support is designed to be shared by the various performing groups to be expected in a multi-use facility. Several kinds of dressing facilities are available, some best suited to musicians' needs, some for actors'. Children can be separated from adults. There is a guest star's suite, five private dressing rooms and five rooms for 6-8 people in addition to musicians' warm-up and individual practice rooms. Large and small Green Rooms are associated with respective theaters, in addition to actors' and stage crew lounges.

A common receiving dock and stage door serves both theaters. However they do not share stage floor elevations. The loading dock is at the level of the larger stage, from which a large freight elevator services the higher stage of the small theater. Two 45-foot trailers are sheltered at the dock.

In the larger Room the stagehouse is equipped with 75-100 single purchase sets. Multi-use demands a demountable orchestra shell and motorized canopy, mechanized film projection screen and projection room in addition to sound, lighting and broadcast control booths. The stage will be fully trapped, operated by two moveable hydraulic lifts below stage.

Finally, the audience seating is dished at orchestra level, with wrap-around ledge of steeper rake at the rear. The mezzanine extends toward the stage in a series of descending boxes while the steepest balcony, in two stages of rise, overhangs the mezzanine. The sum effect is that of a short Room, hollowed out of the main volume above the orchestra. Unequal radii and reversing curves create a special, sinuous and intimate environment. The balconies do not project from the walls but through them. Perimeter circulation is within the room, just beyond a large-scale loggia of arches that embraces the total space, making its boundaries seem closer and of the same fabric as the proscenium arch.





Project:
Eugene Performing Arts Center

Location:
Eugene, Oregon

Date of Const:
1982

Owner:
City of Eugene, Oregon

Architect:
Hardy Holzman Pfeiffer Associates

Uses:
Music Concert (large room) Drama (small room), Plus Opera, Musical Theater, Dance and Popular Shows At All Scales.

Capacity:
2400 (large)
500 (small)

Form:
Frontal with Skylight and Pit (large)
Frontal, Open Stage (small)

Adjusted Cost:
\$16,350,000

Gross Area:
126,000 GSF

Net Room Area:
32,130 sf (large)
7665 sf (small)

Room Volume:
660,000 cf with shell (large room)

Net Backstage:
23,000 sf (both)

Net Front End:
24,000 sf (both)

United States Army

Office of the Adjutant General	
Program Manager for Music and Drama Centers	Margaret Lynn
Assistant Program Manager	Michael Ireland
Corps of Engineers	
Project Architect	Robert G. Shibley
Chief of Special Projects	Richard Cramer
Chief of Architectural Branch	Thomas M.A. Payne
Hardy Holzman Pfeiffer Associates	
Project Manager	Kurt Kucsma
Preliminary Research	Donald Raney
	Karen Ross
	Alexander Twining
Editing	Ann Benson
	Kathleen Thompson
Graphic Design	Stephen Saitas
Graphic Production	Henry Grabowski
	David Maisel