river run
performing arts
center

indianapolis, indiana

fj. frazier

may 19, 1981
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abstract
ARCHITECTURAL THESIS CONSISTS OF THREE QUARTERS OF DESIGN. THE FIRST QUARTER EMPHASIZES SCHEMATIC DESIGN AND RESEARCH. THE SECOND QUARTER ALLOWS FOR DESIGN DEVELOPMENT, AND THE THIRD QUARTER ALLOWS THE STUDENT TO COMPILE A THESIS BOOK, MODEL AND PRESENTATION BOARD WHICH EXPLAIN HIS OR HER PROJECT.

MY PARTICULAR PROJECT IS A PERFORMING ARTS CENTER FOR THE CITY OF INDIANAPOLIS. THE PROJECT INCLUDES A RESTAURANT, GALLERY AND AUDITORIUM WHICH MAY "OPEN-UP" DURING GOOD WEATHER TO ALLOW EXTERIOR SEATING.

THE SITE IS LOCATED ON THE EAST EDGE OF THE WHITE RIVER, AND IS INCLUDED IN THE PRESENT "WHITE RIVER STUDY."
There is an increasing demand for a performing arts center in Indianapolis. This demand, along with the present interest in utilizing the edge of White River which runs through the downtown creates a perfect opportunity for placing a cultural arts center on the river.

The thirty-four acre site is one mile west of Monument Circle. Bordered on the west by White River, the site will accommodate the cultural arts center and a new city park. The facility will house a 4,500 seat theater which will open up to allow spectators outside to view performances, a gallery which will be used for art shows and exhibits, and a 200 seat restaurant.

The purpose of this program is to supply the client and designer with information pertinent to the organization of the proposed Indianapolis performing arts center. Organizational data is supplied in this program to give the designer insight about the users of the facility and their intercommunications.

Site 34.4 acres
Theater 35,868 sq. ft.
Administrative 2,450
Restaurant 17,450
Gallery 10,000
Total 65,768 sq. ft.

Cost: @ $73/sf $9,266,053
introduction
2.0
2.1 Background & History:
As long as history has been recorded, many different forms of entertainment have been performed before audiences all over the world. In the beginning these ancient entertainers would perform wherever they could best gather an interested crowd. The “place” where these entertainers performed has gone through a very complex evolution since its simple beginnings. Today with advanced technology, performers are capable of giving their audiences the ultimate in entertainment, whether it is live or recorded.

Indianapolis has been served by many cultural arts facilities over the years. Today Clowes Hall on the Butler University campus is no doubt Indianapolis’ best and most versatile facility to house the performing arts. The superb design of Clowes allows its multi-purpose functions. The only major short-coming that Clowes has, is the omission of a restaurant from the original plans, due to zoning regulations.

There would be little need for a duplication of Clowes Hall in downtown Indianapolis. However this does not mean that there isn’t a great demand for the right kind of facility, because through research it has been found that the indoor-outdoor atmosphere, like that of Wolf Trap Farm in Virginia, would be very feasible even in downtown Indianapolis. Events like ‘Superfest’ held in Indy’s new tennis stadium proves that people...
2.2 Scope: The scope and primary purpose of this program is to supply the client and designer for the new cultural arts facility with better insight, and information pertinent to the organization of this type facility. This program will try to give the client and designer a better understanding of user activity needs and the flexibility that will be required in this type of facility. This information pertains specifically to environmental qualities a square footage necessary to sustain the various spaces involved in the facility. Analysis of each space will help provide information needed to give the client and designer a better understanding of how equipment, furniture, and their performance can be part of design.
2.3 Participants: Sources for Information were. Lewis A. Breiner—former producer of Avondale Playhouse, Mel Brown—Theater Owners of America, United Cinemas, The Indianapolis Star, Local 3 American Federation of Musicians, The Indiana State Library, Central Library, James G. Sarbinoff and Betty Lane of the Plainfield Library, Fritz Kumb-Mer of the Indianapolis Symphony Orchestra, John Williams—composer-conductor of Boston Pops, Izler Solomon—conductor of Indianapolis Symphony Orchestra, Dr. A.E. Jones President of Butler University.
goals

3.0
3. The main goals are to:

- Provide a facility that is pleasing to the senses.
- Design the facility & site to work together as one.
- Create an attractive contradiction to the hardness of downtown Indianapolis.
- To provide Indianapolis with a new and exciting reason to come to an unpopular downtown area.
- Increase public awareness in the cultural arts.
- To create a bold, dynamic design.
- Create a facility which is flexible enough to provide openness in the summer and closure in the winter.
- Create an operational and functional environment.
- Maintain a high level of safety standards.
- Provide a high degree of technology in the facility and equipment.
- To provide excellent lighting and acoustics.
- Provide good circulation.
- To get the best possible building for the least possible budget.
organizational data 4.0
4.1 **Organizational Data: For the Performing Arts Ctr.**

- **Manager**
  - **Assistant Mgr.**
    - **Secretary**
      - **Staff**
        - **Maintenance**
          - **Performers**
    - **Technicians**
    - **Stagehands**
  - **Audience**

4.2 **Organizational Data: For the Restaurant**

- **Manager**
  - **Assistant Mgr.**
    - **Hostess**
    - **Waiters**
  - **Chef Assistants**
  - **Dishwashers**
4.3 INTERCOMMUNICATIONS

Intercommunication system for a medium-sized well-equipped community theatre.
space
requirements
5.0
5.1 Lobby & Gallery

**Users:** 1000

**User Activities:** Since this is a common area to the Cultural Arts ctr. and the adjoining restaurant, the lobby & gallery will be used for waiting, socializing, and enjoying exhibits. They may enjoy these activities before entering the restaurant or auditorium, between dinner and a show, or just to see a special exhibit in the gallery. This space may also be rented out for special events.

**Space Needs:** 10,000 ft²

**Furniture & Equipment:** Seating for lounging is required. Drinking fountains and ashtrays. Public telephones should be easily accessible to auditorium and restaurant.

**Environmental Requirements:** Good lighting is necessary either natural or mechanical. Special spot lighting is required in the gallery area. Mechanical air conditioning is required. Users must be able to use this area freely without disturbing others in restaurant or auditorium.

5.2 Ticket Office

**Users:** 2

**User Activities:** Dispenses tickets, takes money, answers phone, gives information.

**Space Needs:** 50 ft²
Furniture & Equipment: Couterspace along with automatic ticket dispensing equipment is needed here along with 2 swivel chairs, 1 telephone.

Environmental Requirements: This area should command the entrance to the auditorium. Ticket office should be transparent if possible. Good lighting independent from lobby. HVAC required.

5.3 Checkroom

Users: ___________________ 2

User Activities: Staff personnel will check personal belongings such as coats and hats.

Space: Needs: _______________ 240sq'

Furniture & Equipment: Space requires shelves and hanging hardware for maximum storage.

Environmental Requirements: Good lighting and HVAC required.

5.4 Managers Office

Users: ___________________ 1

User Activities: General organizing, planning, producing, public relations, booking, advertising, staff supervision, entertaining visitors.
SPACE NEEDS: 350 sq.

FURNITURE & EQUIPMENT: CARPET, 1 DESK W/CHAIR(SWIVEL TYPE W/ROLLERS), 1 PLASTIC FLOOR GUARD (IF PLUSH TYPE CARPET IS USED), CREDENZA, BOOKCASE, COFFEE TABLE, 3 CUSHION CHAIRS.

ENVIRONMENTAL REQUIREMENTS: GOOD LIGHTING IS REQUIRED, NATURAL LIGHT IS DESIRABLE, HVAC IS NECESSARY.

5.5 ASSISTANT MANAGERS OFFICE

USER: 1

USER ACTIVITIES: This office should be near the secretary and the manager's office. He assists the manager with any or of his activities.

SPACE NEEDS: 250 sq.

FURNITURE & EQUIPMENT: CARPET, 1 DESK W/SWIVEL TYPE CHAIR, 1 BOOKCASE, CREDENZA, 2 CUSHION TYPE CHAIRS, 1 COFFEE TABLE, SEE FIG. 2

ENVIRONMENTAL REQUIREMENTS: GOOD LIGHTING IS REQUIRED, NATURAL LIGHT IS DESIRABLE, HVAC IS NECESSARY.

5.6 SECRETARY & RECEPTION

USERS: 1

USER ACTIVITIES: This area
SHOULD BE NEAR BOTH MANAGERS' OFFICES. SECRETARY ASSISTS MANAGER AND ASSISTANT MANAGER. GREET VISITORS, ANSWERS TELEPHONE. HANDLES BOOKKEEPING, TYPES, HANDLES PAYROLL & RECORDS.

SPACE NEEDS: 300 sq ft

FURNITURE & EQUIPMENT: 1 DESK W/ TYPING TRAY, 1 TYPEWRITER, 1 SWIVEL CHAIR, 4 FILE CABINETS, CREDENZA, 1 BOOKCASE, 2 CHAIRS W/ SMALL TABLE. 2 PLANTS.

ENVIRONMENTAL REQUIREMENTS: HVAC

REQUIRED. NATURAL LIGHT DESIRED. AREA SHOULD HAVE A PLEASANT ATMOSPHERE.

5.7 LOUNGE

USERS: 50 MAXIMUM

USER ACTIVITIES: EATING, TALKING, LOUNGING, REHEARSING.

SPACE NEEDS: 750 sq ft

FURNITURE & EQUIPMENT: TABLES AND CHAIRS TO SEAT 50. MICROWAVE OVEN, SINK W/ COUNTER, 1/2 REFRIGERATOR.

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Environmental Requirements: Good lighting natural & mechanical w/ dimmer. HVAC required. This area should be close to stage for easy moving of props when room is used for rehearsals. Kitchelette is required to have exhaust.

5.8 Auditorium

Users: 3000 maximum

User Activities: Audiences attend concerts, lectures, Broadway type shows, movies etc.

Space Needs: 25,000 sq ft

Furniture & Equipment: Seating for 3000 people. See building criteria for seating requirements.

Environmental Requirements: Lighting. The object of auditorium lighting is to concentrate attention upon the stage, even before the curtain goes up in most cases. Lights w/ reflectors in coves hidden from view, will prove most satisfactory. Fluorescent lighting, though efficient, is difficult to use because it can't be dimmed. The color of the light should be neutral though warm.

Acoustics: Effective acoustical planning depends on the correct placement of reflective surfaces for all sounds involved in the performance. Sound absorption is another major concern here. (Also see building criteria). Independent HVAC required here. Air velocity and duct size should be designed
To create as little noise as possible, the auditorium should have the unique flexibility of being able to open up in order to let spectators, on the specially landscaped areas around the structure, enjoy activities on the stage. The audience inside the structure should be able to feel the openness. This transformation of opening and closing should be done quickly and easily, and when auditorium is closed it should be well insulated. Due to size of audience area, sound amplification will be needed. For security, auditorium should be isolated from the rest of the facility with locking devices.

When auditorium is enclosed, patrons should be able to enter only through lobby. Floor in this area should be water resistant. All equipment should be vandal proof. See building criteria.

5.9 Stage

Users: Varies

User activities: Stagehands set stage up for theatrical productions. Technicians set up stage for concerts, movies, lectures. Actors rehearse and perform on stage.

Space needs: 4000 ft²

Furniture & equipment: No permanent furniture will be used here, although many different sets...
WILL BE USED ON STAGE. EQUIPMENT NEEDED: 1 CYCLORAMA, STEEL GRID SYSTEM, COUNTER WEIGHT PULLBY SYSTEM, OVERHEAD SPOT & FLOOD TRACK LIGHTING, FLOOR LIGHTING IN RECESSED CHANNEL AT BASE OF CYCLORAMA, FOOTLIGHTS FOR STAGE, FLOOR HOOK-UPS FOR MICROPHONES. SEE BUILDING CRITERIA FOR STAGE PLANNING.

ENVIRONMENTAL REQUIREMENTS:
HVAC IN CONJUNCTION WITH AUDITORIUM NECESSARY. NO OUTSIDE LIGHT. TOP OF STAGE HOUSE SHOULD BE LOUVERED. STAGE AREA SHOULD REFLECT SOUND TOWARD AUDIENCE FOR LIGHTING SEE BUILDING CRITERIA.

5.10 ORCHESTRA PIT

USERS: 50-60

USER ACTIVITIES: SINCE THE PIT IS AN ELEVATOR PLATFORM WHICH IS HYDRAULICALLY OPERATED, USER ACTIVITIES CHANGE ACCORDINGLY. THERE SHOULD BE FOUR LEVELS: 1, LOADING LEVEL, FOUR MUSICIANS IN A BASEMENT LEVEL; 2, NORMAL PLAYING LEVEL; 3, SEATING LEVEL WHICH WOULD ADD 70 TEMPORARY AUDIENCE SEATS; 4, STAGE LEVEL WHICH WOULD ADD 14' TO STAGE. STAGE HANDS SHOULD ALSO BE ABLE TO USE PIT FOR ACCESS TO STAGE AREA UNDER STAGE.

SPACE NEEDS: 728'

FURNITURE & EQUIPMENT: AUDIENCE SEATING ON LOCK BASE WAGONS.
LIGHT-WEIGHT CHAIRS FOR MUSICIANS, LIGHTED MUSIC STANDS. 1, 14'x 5.2'
HYDRAULICALLY OPERATED ELEVATOR PLATFORM.

ENVIRONMENTAL REQUIREMENTS:
WHEN PLATFORM IS USED AT LOWER LEVELS, SOME SORT OF BARRIER IS NECESSARY TO KEEP PEOPLE FROM FALLING IN PIT.

5.11 BACKSTAGE AREA

 USERS: VARIES

USER ACTIVITIES: ACTORS AND MUSICIANS MAY REHEARSE HERE. STAGE MAY WORK MECHANICAL STAGE EQUIPMENT FROM THIS AREA SUCH AS THE MECH. OR MANUAL PULLEY SYSTEM.

SPACE NEEDS: 2500 sq'

FURNITURE & EQUIPMENT: MOTORIZED AND MANUAL PULLEY SYSTEM USED TO RAKE AND LOWER SCENES ON STAGE.

ENVIRONMENTAL REQUIREMENTS: GOOD LIGHTING WHICH MAY BE DIMMED IS REQUIRED. HVAC SHOULD NOT BE THE SAME AS AUDITORIUM AND STAGE SYSTEM.

5.12 SPOTLIGHT AREA

 USERS: 2

USER ACTIVITIES: OPERATES SPOT LIGHTS.

SPACE NEEDS: 400 sq'
Furniture & Equipment: Lighting control system. A minimum of 85,000 to 100,000 watts will be required in any standard situation. See building criteria for additional information.

Environmental Requirements: This area should be away from view of the audience. Operator have full view of stage. He must also be able to hear cues from the stage. Light and sound from this area should not distract audience. Operators should have access to area without disturbing audience.

5.13 Control Room

User Activities: Technicians and announcers will use electronic equipment in this area to record, film, broadcast activities on stage. Technicians will monitor sound levels on stage and control sound amplification and special effects.

Space Needs: 250 sq ft

Furniture & Equipment: 2 swivel-type chairs on rollers, console which would house all sound control equipment needed to perform all audio needs. Console which will house all video control equipment required to perform all video needs. 2 stereo speakers, video monitor, 2 storage cabinets, 1 video camera.

Users: 1704
ENVIRONMENTAL REQUIREMENTS:
Control room should be sound insulated. Sound isolation is required. Low light condition which still allows users to see to work will be needed in addition to regular lighting. Quiet HVAC required. Quiet room will be required to eliminate sound infiltration.

5.14 DRESSING ROOMS

USER ACTIVITIES: DRESSES, APPLIES MAKE-UP, LOUNGES BEFORE AND AFTER PERFORMANCES.

SPACE NEEDS: 750 sq ft
This includes two “Stars” dressing rooms, and two larger dressing rooms that will be capable of taking care of large groups of men and women.

FURNITURE & EQUIPMENT: Lumine type mirrors w/ continuous counter space on the longest length of dressing room. Swivel stools spaced 1'-0" apart. 1 lavatory in each “Star” dressing room, and 2 in each of the larger dressing areas.
**Environmental Requirements:**

**Lighting:** Should be well luminated especially around mirrors. Provide lighting which will best allow entertainers to see when dressing and putting on make-up.

**Acoustics:** Dressing rooms should be sound insulated to keep sound from entering the audience area.

HVAC is required in each dressing room. Circulation should be a major consideration for access to utilities and movement of large groups. Dressing rooms may be used as green room by actors.

*Time-Saver Standards, DeChiara & Calleider 1973, pp.306*

**5.15 Workshop**
**Users:** 5 max.

**User Activities:** Builds and Paints Props used in Stage Performances. Activities are Manual and Mechanical.

**Space Needs:** 1000 ft²

**Environmental Requirements:** Some natural light. Good mechanical lighting. Sound from this area should not disturb others in other parts of the building. Good circulation is necessary in this area for safety.

5.16 **Prop & Costume Storage**

**User** Varies

**User Activities:** Stores props and takes props out of storage

**Space Needs:** 800 ft²

**Furniture & Equipment:** 1 Work Table, 1 Workbench w/tool storage cabinet, 1 Table Saw, 1 Drill Press, 2 Wood Storage Bins, 1 Canvassing Bench.

**Furniture & Equipment:** Shelving for one wall, Hanger rails
ENVIRONMENTAL REQUIREMENTS:
NO OUTSIDE LIGHT.

5.17 STAGE MANAGER'S OFFICE

USERS: 3 MAX.

USER ACTIVITIES: DISCUSSES PLANS WITH ACTORS AND OTHER STAGE MANAGERS.

SPACE NEEDS: 150 sq.

FURNITURE & EQUIPMENT: 1 DESK W/ CHAIR, 1 COFFEE TABLE, 2 VISITOR CHAIRS.

ENVIRONMENTAL REQUIREMENTS:
NATURAL LIGHT DESIRABLE BUT NOT NECESSARY. HVAC REQUIRED.

5.18 DISCUSSION ROOM

USERS: VARIES

USER ACTIVITIES: DISCUSS PLANS AND MAKES PLANS FOR FUTURE ACTIVITIES.

SPACE NEEDS: 800 sq.

FURNITURE & EQUIPMENT: CONFERENCE TABLE, W/ ADEQUATE SEATING, SMALL TABLE, CHALKBOARD, TACK SURFACE, PROJECTION SCREEN.
Environmental Requirements:
Natural light desirable. Good acoustics required. HVAC necessary.
5.19 Lobby

**Users:** 75 max.

**User Activities:** Customers will use this area to wait in before being seated in the restaurant. One part of this area will be used to hang coats & hats.

**Space Needs:** 850 sq.

**Furniture & Equipment:**

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5.20 Dining Area

**Users:** 400 max.

**User Activities:** Customers will use this area for dining and socializing. Waiters will take orders and serve food and drinks.

**Space Needs:** 10000 sq.

**Furniture & Equipment:** Tables & chairs for indoor dining to seat 400 (this includes seating for children. Outdoor tables &
SEATS FOR 100, ICE AND COLD STORAGE, COFFEE WARMING & MAKING EQUIPMENT, WATER DISPENSER. SALAD BAR EQUIPMENT.

ENVIRONMENTAL REQUIREMENTS:
LIGHTING: SHOULD BE ADJUSTABLE TO ALLOW FOR DIFFERENT LIGHTING CONDITIONS. LIGHTING SHOULD HELP CREATE A PLEASANT LUXURY ATMOSPHERE. EACH TABLE SHOULD BE SOFTLY ACCENTED. STRONG NATURAL LIGHT IS UNDESIRABLE, YET VIEWS TOWARD RIVER AND NATURAL AREAS ON SITE ARE MOST DESIRABLE.
ACOUSTICS: UNDESIRABLE SOUND TRAVELING FROM ONE TABLE TO ANOTHER SHOULD BE THE MAJOR CONSIDERATION HERE.

ODORS FROM KITCHEN SHOULD NOT FLOW INTO DINING AREA. DECOR IN DINING AREAS SHOULD CREATE AN ELEGANT ATMOSPHERE. OUTDOOR DINING AREA SHOULD BE BUG FREE. LOW VELOCITY MECHANICAL AIR FLOW REQUIRED IN OUTDOOR SPACE. OUTDOOR DINING AREA SHOULD BE EASILY ACCESSIBLE FROM INDOOR DINING AREA AND KITCHEN. FURNITURE & EQUIPMENT IN OUTDOOR DINING AREA SHOULD BE ABLE TO WITHSTAND THE ELEMENTS. OUTDOOR DINING AREA SHOULD BE PRIVATE YET OPEN.

5.2.7 Bar Area:

Users: 100

User Activities: Users have cocktails and socialize. Waiters
WILL TAKE ORDERS AND SERVE DRINKS
SPACE NEEDS 2500
FURNITURE & EQUIPMENT: BAR AND ACCESSORIES, BAR STOOLS TO SEAT MINIMUM OF 25, TABLES & CHAIRS TO SEAT 175, SPECIAL LIGHTING AND SOUND EQUIPMENT IN THE AREA PROVIDED FOR THE ENTERTAINMENT.

ENVIRONMENTAL REQUIREMENTS:
LIGHTING: LIGHTING SHOULD BE ADJUSTABLE AND PROMOTE A SEDUCTIVE ATMOSPHERE. LIGHT SHOULD BE USED TO ACCENT SPECIAL AREAS. BAR COUNTER AREA SHOULD HAVE ITS OWN LIGHTING EFFECT WHICH WOULD ALLOW GOOD LIGHTING TO MIX DRINKS, YET NOT FLOOD THE REST OF THE BAR WITH LIGHT. SPECIAL LIGHTING WILL BE NEEDED IN THE STAGE AREA.
ACOUSTICS: SOUND FROM THIS AREA SHOULD NOT BOTHER PEOPLE IN OTHER PARTS OF THE BUILDING. HVAC IS REQUIRED. GOOD VIEWS TO EXTERIOR IS DESIREABLE.

5.2.2 KITCHEN AREAS

USERS:

USER ACTIVITIES: USERS COOK AND PREPARE MEALS TO BE SERVED IN DINING AREA. WAITERS WILL PLACE AND PICK UP FOOD ORDERS AT A DESIGNATED PLACE. DISHWASHERS WILL DISPOSE OF WASTE AND OPERATE DISHWASHING EQUIP.
MENT, HE ALSO STORES ALL EATING AND COOKING UTENSILS.

**Space Needs:** 3500 sq. ft.

**Furniture & Equipment:** 2 Double Compartment Sink w/Disposal for Vegetable Preparation and Pot Washing, Boilers, Fryers, Steam Tables, Cook's Tables, Refrigerators, Freezer, Plate Warmers, Rolling Table Carts, Stoves w/Exhaust & Grease Screens, Sinks, Grilles, Ovens, Microwave, Shelves, Drawer Space & Cabinets.

**Environmental Requirements:** Good lighting is required. Each Cook Area must have adequate exhaust. Health Codes must be met. HVAC required, odors.

FROM KITCHEN MUST NOT ENTER DINING AREA. SEE BUILDING CRITERIA FOR ADDITIONAL KITCHEN INFORMATION.

**5.23 Receiving & Storage**

**Users:** Varies

**User Activities:** Delivers food & supplies to Restaurant also stores all supplies.

**Space Needs:** 300 sq. ft.

**Furniture & Equipment:**

[Diagram of shelves and kitchen layout]

Kit. ← Enter
ENVIRONMENTAL REQUIREMENTS:
GOOD LIGHTING. NO OUTSIDE LIGHT.
HVAC REQUIRED.

5.24 EMPLOYEE AREA

USERS: _______________ 12

USER ACTIVITIES: USERS MAY EAT
AND RELAX IN THIS AREA. EMPLOYEES
WILL ALSO CLOCK-IN TO WORK HERE.

SPACE NEEDS: _______________ 300sq'

FURNITURE & EQUIPMENT:

[Diagram of layout with:
- Lockers
- Coffee
- Magazine Rack
- Time Clock]
6.1 RESTAURANT

<table>
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<tr>
<td>Lobby</td>
<td>850*</td>
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<tr>
<td>Dining Area</td>
<td>10,000*</td>
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<tr>
<td>Bar</td>
<td>2,500*</td>
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<tr>
<td>Kitchen</td>
<td>3,500*</td>
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<tr>
<td>Receiving &amp; Storage</td>
<td>300*</td>
</tr>
<tr>
<td>Employee Area</td>
<td>300*</td>
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<td><strong>Total</strong></td>
<td><strong>17,450</strong>*</td>
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6.2 PERFORMING ARTS CTR.

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Lobby &amp; Gallery</td>
<td>10,000*</td>
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<td>Check Room</td>
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<td>Spot Light Area</td>
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<td>Stage</td>
<td>4000*</td>
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<td>Orchestra Pit</td>
<td>728*</td>
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<tr>
<td>Back Stage Area</td>
<td>2500*</td>
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<tr>
<td>Prop &amp; Costume Storage</td>
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<tr>
<td>Dressing Rooms</td>
<td>950*</td>
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<td>Stage Manager's Office</td>
<td>150*</td>
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<td>Work Shop</td>
<td>800*</td>
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<td>Discussion Room</td>
<td>800*</td>
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<td>Manager's Office</td>
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<td>Assistant Mgr's Office</td>
<td>250*</td>
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<tr>
<td>Secretary Space</td>
<td>300*</td>
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<tr>
<td>Lounge</td>
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space
relationships
7.0
| LOBBY & GALLERY |   |   |   |   |   |
| TICKET OFFICE |   |   |   |   |   |
| CHECK ROOM |   |   |   |   |   |
| MANAGER'S OFFICE |   |   |   |   |   |
| ASSIST. MGR'S OFFICE |   |   |   |   |   |
| SECRETARY & RECEPTION |   |   |   |   |   |
| LOUNGE |   |   |   |   |   |
| AUDITORIUM |   |   |   |   |   |
| STAGE |   |   |   |   |   |
| ORCHESTRA PIT |   |   |   |   |   |
| BACK STAGE |   |   |   |   |   |
| SPOTLIGHT AREA |   |   |   |   |   |
| CONTROL ROOM |   |   |   |   |   |
| DRESSING ROOMS' |   |   |   |   |   |
| WORK SHOP |   |   |   |   |   |
| PROP & COSTUME STORAGE |   |   |   |   |   |
| STAGE MGR'S OFFICE |   |   |   |   |   |
| DISCUSSION ROOM |   |   |   |   |   |
| RESTAURANT LOBBY |   |   |   |   |   |
| DINING AREA |   |   |   |   |   |
| BAR |   |   |   |   |   |
| KITCHEN |   |   |   |   |   |
| RECEIVING & STORAGE |   |   |   |   |   |
| EMPLOYEE AREA |   |   |   |   |   |

- STRONG RELATIONSHIP
- SOME RELATIONSHIP
- NO RELATIONSHIP
8.1 Function: The building has three functions - a theater, gallery, and restaurant.

8.2 Flexibility: There is little flexibility of space requirements. Interrelationships are strong and therefore somewhat definite. The auditorium should have the flexibility to allow it to be opened in the summer months so spectators may view performances while seated outdoors.

8.3 Circulation: Should be simple, logical, uncomplicated, with efficient egress routes. All doors should swing in direction of emergency routes. Double swing doors only between kitchen and dining rooms. Establish direct access routes to apparatus rooms.


8.5 Expansion capabilities: Site location and size able to accept building expansion.

8.7 Security: Since the facility has a restaurant, theater, a gallery space, the building must have the capability to lock these spaces relative to one another. Theater should provide security measures to allow patrons to enter only after tickets have been taken.

8.8 Design Criteria: The following information material is intended to act as a guide or reference point from which specific design solutions can be established. Absolutely no attempt is made in this program to present the final design solution, nor does it try to influence the final aesthetic expression.
TIME-SAVER STANDARDS
Heavy dotted line in section of encircling stage indicates variable position of forestage. Cyclorama shown in conventional stage must be flown when scenery is brought in from shop. Trepped space on conventional plan, and center position of scene wagon on encircling stage, indicate acting areas. Scene wagons travel on tracks whose positions must be carefully plotted so wagons will clear cyclorama and tormentors. Since one purpose of the encircling stage is to facilitate other productions than the usual "picture-framed" type, emphasis on proscenium as a frame should be reduced to a minimum.

* TIME-SAVER STANDARDS
* TIME SAVER STANDARDS

Fig. 18 (a) A sense of direct conflict loses its visual significance to spectators outside the angles $D_1-D_2$. One performer covers the other for spectators inside the angles $D_1-D_2$. (b) Scenes of direct conflict staged anywhere between $B$ and $C$ or on an extended stage retain visual significance for all spectators between lines $BB'$ and $CC'$. Straight radial aisles are better than aisles which curve or bend.
SEATING AND AISLE ARRANGEMENTS: Comparing visual positions in various systems.

- Center Aisle
- Continental
- Side Section
- Stadium Type

Fig. 26. Maximum tolerable downward drop for seated views. (a) Plan view of slope. (b) Basic dimensions for position loss from center.

Maximum tolerable downward drop for seated views.
LEVEL FLOOR
Dimensions to chair-size line

INCLINED FLOOR
Pitch 1° per ft.

STEPPED FLOOR
10° Risers

MINIMUM SPACINGS FOR VARYING FLOOR CONDITIONS
Based on stock sizes with 54° pitch back

STRAIGHT ROWS
Uncomfortable for spectators at side, unequal stress on seats and backs

STRAIGHT, CANTED SIDE-BANKS
Same defects as straight rows though to less degree. Note that rows do not line up. Steps if required in aisles will be unsafe

CURVED ROWS
Recommended for comfort, ease of vision and safety

TYPES OF ROWS

STRAIGHT
(poorest type)

COMPOUND

CURVED

FAN
(ideally best)

COMMON THREE-BANK LAYOUTS
see also 'Continental Seating' in text

PLAN
Row line

INCORRECT SECTION
Point 'b' being higher than 'a' and 'c' causes chair to slope

CORRECT SECTION
'b', 'b' and 'c' on same plane, chair level

Aisles cutting diagonally across rows produce dangerous 'pockets' and waste space

Aisles curving or straight radial aisles reduce number and size of 'pockets'
AT WALLS and RISERS

INCORRECT-
Standard set tight against wall, if at angle, causes seat back to scrape

CORRECT-
Set standard far enough from wall to allow 1" clearance at back

AISLE WIDTH is clear width

AISLES

Scale — 1/2" = 1'-0"  

CLEARANCES

SIDE ELEVATION
(End Standard shown Solid; Middle Standard Dotted)

SIZES AVAILABLE

<table>
<thead>
<tr>
<th>Width (W)</th>
<th>18&quot;</th>
<th>19&quot;</th>
<th>20&quot;</th>
<th>21&quot;</th>
<th>22&quot;</th>
<th>23&quot;</th>
<th>24&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (D)</td>
<td>26&quot;</td>
<td>27&quot;</td>
<td>27½</td>
<td>28&quot;</td>
<td>28½</td>
<td>29&quot;</td>
<td>29½</td>
</tr>
</tbody>
</table>

*18" width not recommended; 23" width recommended only for ends of rows; 20" to 22" sizes for all locations

PITCHES: measured either by angle or horizontal projection (see diagram): 8¾" (usual max.); 7½", 6¾" (standard); 5½" (usual min.) 4", 3" (special)

PLAN - Several types of Ventilators are available. Preferred kinds are those occupying least space

Scale — 3/4" = 1'-0"  

TYPICAL SEATS

Front Elevation

Note additional allowance of 1½" for each End Standard

Datum or Chair Size Line
### Table I - Depth Dimensions (Ft.-In.) for Various Spacings

<table>
<thead>
<tr>
<th>No. Rows</th>
<th>Overall Depth for Seat Spacing (Back-to-back) of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>32&quot;</td>
</tr>
<tr>
<td>1</td>
<td>2-8</td>
</tr>
<tr>
<td>2</td>
<td>5-4</td>
</tr>
<tr>
<td>3</td>
<td>8-0</td>
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<tr>
<td>4</td>
<td>10-8</td>
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<td>5</td>
<td>13-4</td>
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<td>6</td>
<td>16-0</td>
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<tr>
<td>7</td>
<td>18-8</td>
</tr>
<tr>
<td>8</td>
<td>21-4</td>
</tr>
<tr>
<td>9</td>
<td>24-0</td>
</tr>
<tr>
<td>10</td>
<td>25-8</td>
</tr>
<tr>
<td>11</td>
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<td>12</td>
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<td>14</td>
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</tr>
<tr>
<td>15</td>
<td>30-8</td>
</tr>
<tr>
<td>16</td>
<td>31-8</td>
</tr>
</tbody>
</table>

### Table II - Aisle Width Increase (in inches)

<table>
<thead>
<tr>
<th>No. of Rows</th>
<th>7 Seats</th>
<th>14 Seats</th>
<th>28 Seats</th>
<th>7 Seats</th>
<th>14 Seats</th>
<th>28 Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>32&quot;</td>
<td>0.67</td>
<td>0.80</td>
<td>0.76</td>
<td>0.67</td>
<td>0.80</td>
<td>0.76</td>
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<tr>
<td>33&quot;</td>
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<td>0.83</td>
<td>0.76</td>
<td>0.69</td>
<td>0.83</td>
<td>0.76</td>
</tr>
<tr>
<td>34&quot;</td>
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<td>0.86</td>
<td>0.76</td>
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<td>0.73</td>
<td>0.88</td>
<td>0.80</td>
<td>0.73</td>
<td>0.88</td>
<td>0.80</td>
</tr>
<tr>
<td>36&quot;</td>
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<td>0.90</td>
<td>0.80</td>
<td>0.75</td>
<td>0.90</td>
<td>0.80</td>
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<tr>
<td>37&quot;</td>
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<td>0.93</td>
<td>0.80</td>
<td>0.77</td>
<td>0.93</td>
<td>0.80</td>
</tr>
<tr>
<td>38&quot;</td>
<td>0.79</td>
<td>0.95</td>
<td>0.80</td>
<td>0.79</td>
<td>0.95</td>
<td>0.80</td>
</tr>
<tr>
<td>39&quot;</td>
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<td>0.98</td>
<td>0.80</td>
<td>0.81</td>
<td>0.98</td>
<td>0.80</td>
</tr>
<tr>
<td>40&quot;</td>
<td>0.83</td>
<td>1.00</td>
<td>0.80</td>
<td>0.83</td>
<td>1.00</td>
<td>0.80</td>
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<tr>
<td>41&quot;</td>
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<td>0.85</td>
<td>1.03</td>
<td>0.80</td>
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<tr>
<td>42&quot;</td>
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<td>1.05</td>
<td>0.80</td>
<td>0.88</td>
<td>1.05</td>
<td>0.80</td>
</tr>
</tbody>
</table>

### Table III - Seating Capacities, 1-32 Rows

<table>
<thead>
<tr>
<th>Table II - Aisle Width Increase (in inches) per Row of Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table III - Seating Capacities, 1-32 Rows</td>
</tr>
</tbody>
</table>

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**EXAMPLE A: Given auditorium area = 87'-0" x 54'-5" or 4,900 sq. ft., how many 20" seats, 36" back-to-back?**

1. **Rows:** In Table I, 36" col., at 87'-0" depth, No. rows = 29
   - less crossovers (1 row at front, 4 at rear) = 24
   - Rows available for seats = 24

2. **Aisles:** Table II, increase in aisle width per row = 0.75"; 0.75 x 24 = Total increase = 18"
   - Min. aisle = 3'-0"
   - Max. aisle = 4'-0"

3. **Seating Scheme:** Select tentative scheme; 2 aisles, 2 dead-end seat banks, center bank. From typical code, dead-end rows may be 7 seats long, center rows 14 seats. In Table IV, 14-20" seats = 23'-7"
   - 7-20" seats = 11'-11"
   - 7-20" seats = 11'-11"

From (2) above, 2 aisles = 9'-0"
   - Total width = 56'-5"

4. **Total No. of Seats:** (Table III) 472 seats
   - 28 x 24 = 472 seats

---

### Diagram

[Diagram showing seating arrangement and measurements]
Exterior Criteria 9.0
3.1 General: The outdoor spaces around the auditorium are very important since they will be used by portions of the audience as an extension of the interior seating space. Sight lines and acoustics (and, or sound amplification) must be considered. Well-planned landscaping is essential due to openness of facility and urban conditions such as noise. Views must convey the cityscape as well as the natural setting of the river. Since the restaurant and bar will each have an outdoor extension, these spaces will both need to be separated, by some kind of barriers, from audiences attending functions in the performing arts areas. Sunlight and shading should be considered here.

3.2 Lighting: Parking area and grounds should be well lighted for ease of circulation and security. Lighting should accent interesting parts of the site. Lighting should not interfere with performances.

3.3 Parking: Adequate parking should be provided in a way that would be harmonious to the site and building. Parking should be as convenient as possible. Parking should be integrated with landscaping in such a way that when entering the site a pleasant sequential experience may be enjoyed. Users should
Be able to make a speedy exit to parking area with as little congestion as possible. Easy access to major traffic routes must be considered. Parking surfaces must have good drainage. Traffic circulation must not interfere with performances.
Section b-b

Section a-a
## Cost Estimate

<table>
<thead>
<tr>
<th>Item</th>
<th>Calculation</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Cost</strong></td>
<td>(66,000 sq ft @ $73/sq ft)</td>
<td>$4,801,064</td>
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<tr>
<td><strong>Fixed Equipment</strong></td>
<td>(20% of Building Cost)</td>
<td>960,213</td>
</tr>
<tr>
<td><strong>Site Development</strong></td>
<td>(30% of Building Cost)</td>
<td>1,440,319</td>
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<tr>
<td><strong>Total Construction Cost</strong></td>
<td></td>
<td><strong>$7,201,596</strong></td>
</tr>
<tr>
<td><strong>Movable Equipment</strong></td>
<td>(10% of Building Cost)</td>
<td>480,000</td>
</tr>
<tr>
<td><strong>Professional Fees</strong></td>
<td>(10% of Construction Cost)</td>
<td>720,160</td>
</tr>
<tr>
<td><strong>Contingencies</strong></td>
<td>(10% of Construction Cost)</td>
<td>720,160</td>
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<tr>
<td><strong>Administrative Costs</strong></td>
<td>(2% of Construction Cost)</td>
<td>144,031</td>
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<tr>
<td><strong>Total Budget</strong></td>
<td></td>
<td><strong>$9,266,053</strong></td>
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