Flow chart for stage homes.

Flow chart for actors in the theatre.

SOLID LINES ——— PERSONNEL
BROKEN LINES ——— MATERIALS
Composite audience flow chart.
MAIN THEATRE (PROJECTION TYPE)

1. 10244
2. PROJECTOR BUMPS
3. 10244
4. THROTTLE VALVES

[Diagram with numbered sections and blocks]
LABORATORY THEATER

PROXIMITIES
1. PRODUCTION SUPPORT
2. PERFORMER SUPPORT
3. DANCE STUDIO #1

FILM FORUM

SUPPORT SPACE

SUPPORT SPACE
ILLUSTRATION SPACES

- SUPPORT SPACES
OFFICE SPACES

SUPPORT SPACE
PUBLIC SPACE (FLEXIBLE)
1. SITE
   - History
   - Site Issues (Derived from site analysis)

2. THEATRE HISTORY

3. ORGANIZATION STRATEGIES (Plan Type)

4. THEATRE AUDITORIUM PLAN/SECTION RELATIONSHIPS

5. SIZE RELATIONSHIP OF PROPOSED THEATER TO PRECEDENT

6. THEATER SPACE STUDY
PRECEDENT

1. SITE
   - History
   - Site Issues (Derived from site analysis)

2. THEATRE HISTORY

3. ORGANIZATION STRATEGIES (Plan Type)

4. THEATRE AUDITORIUM PLAN/SECTION RELATIONSHIPS

5. SIZE RELATIONSHIP OF PROPOSED THEATER TO PRECEDENT

6. THEATER SPACE STUDY
The site history shows the progress of the University from its opening.
SITE ISSUES

- GORCE
- GATEWAY
- PUBLIC CIRCULATION
- BRIDGE
- QUAD SPACE
Rhodes (Rhodes). View of cliff and temple, from west.
Entry hall, lecture theater, administration, library, temporary gallery (Kunsthalle), garden court
Main floor plan

Pedestrian sequence: entry, old town wall, circular garden, restaurant, and shops
Plan

NORTHRHINE-WESTFAHLIA ART MUSEUM
DUISSELDORF
JAMES STIRLING
Entrance hall elements
The space is formed by compressed internal landscaping.
Axonometric

Circulation elements: walls (solid and glass), objects (ramps, elevators, and porticoes), and volume (geometric and amorphous)
Axonometric
Site model
Existing museum on left

Entry hall, temporary exhibit, auditorium
Entry level plan

Galleries, sculpture court, chamber theater
Gallery level plan

STAATSSAMMLUNG EXTENSION AND
NEW CHAMBER THEATRE
STUTTGART

JAMES STIRLING
ALVAR AALTO
ARCHITECTS STUDIO
HELSDINKI, FINLAND

QUAD SPACE
THEATRE HISTORY

ANCIENT - (400 BC-400 AD)

A. GREEK

EPIDAURUS - (340 BC)

B. ROMAN

SABRATHA

ODEUM OF AGrippa (12 BC)
MODERN

1500-1600

PALLADIO (1585) - TEATRO OLYMPIC

SCAMOZZI (1590) - TEATRO SABBIONETA

ALEOTTI (1618) - TEATRO FARNESE
J.A. GABRIEL (1763-70) - OPERA VERSAILLES

E.L. BOULLEE (1781) - OPERA HOUSE
C.N. LEDOUX (1778-84) BESANCON THEATRE

RENAISSANCE SCENERY TYPES
K.F. SCHINKEL (1818-21)
SCHAUSPIELHAUS

BEAZLEY (1823) - THEATER ROYAL

BRUCKWALD (1876) - BAYREUTH FESTSPIELHAUS
6.66–69 Paris, Opéra, 1861–75, by Charles Garnier: staircase, plan, façade and longitudinal section
6.83 Comparative plans of major 18th-c. European theatres (Louis, Salle de spectacle de Bordeaux, 1782)
6.1 Major European theatres, 16th-18th c. (Durand, Reaumur, 1801)
This graphic reference table shows the basic ground plans of ancient and modern theaters. No scale is intended or implied, but the shifting of emphasis between shape and position among auditorium, prosenium, and stage is basic to understanding the historiography of theater design. To relate matters of principal Western theater form outline plans & chronology.

- **Classical** (BC-400 AD)
- **Greek Archaic** (Keria)
- **Greek Classical**
- **Greco-Hellenistic**
- **Roman**
- **Greco-Roman Odeum**

- **Late Renaissance** (1550-1650)
- **Horseshoe-shaped auditorium**
- **Proscenium stage**
- **Theater of the Restoration**
- **Baroque** (1650-1750)
- **Fan-shaped auditorium**
- **Proscenium, apron, caliper stage**
- **Contemporary** (1970-1975)

- **Theater of Shakespeare**
- **Grande Salle**

Legend:
- AUDITORIUM
- ORCHESTRA
- STAGE
- NO SCALE

Diagram 7-1: This graphic reference table shows the basic ground plans of ancient and modern theaters. No scale is intended or implied, but the shifting of emphasis between shape and position among auditorium, prosenium, and stage is basic to understanding the historiography of theater design. To relate matters of principal Western theater form outline plans & chronology. [G. C. Izemour Archive]
THEATER HISTORY

A. ANCIENT THEATER

EPIDaurus - Open air, carved out of hillside.
  - Audience focus on orchestra.
  - Countryside provides natural backdrop.
  - Periaktói used for scenery.

SABRATHA - Advanced construction materials and methods allowed theaters to be built on flat site.
  - Could be temporarily covered with velarium.
  - Acknowledgement of exterior aesthetic.
  - Skenae wall took on great importance.

ODEUM OF AGrippA - First type of permanently enclosed theater.
  - Spanned 70'-0" by large wooden trusses.
  - Used for more refined performances.
  - Day lighting from rear.
  - Three types of plays: Tragic, Comedy, Satyric.

B. MIDDLE AGES

- Had no formal theater building.
- Performances were held in streets, squares, markets and halls.

C. MODERN

TEATRO OLíMPICO - Classical theater reborn (based on Vitruvius).
  - Wide, shallow semi-circular seating with colonade at back set within rectilinear enclosure.
  - Flat ceiling painted like sky (alludes to open-air theater).
  - Scenery - perspective streets by Sa Mamozzi.
  - Day lighting from rear.
TEATRO SABBIONETA - Narrow, deep - semi-circular seating.
- Space between auditorium and stage.
- Single arch embraced the whole stage (approached notion of proscenium).

TEATRO FARNESE - Performance was now seen as an illusion, resulting in a greater dependence on scenery - which made a picture that needed a frame - proscenium.
- Scenery was on movable flats.
- Deep auditorium in shape of "U".

OPERA VERSAILLES - Simplicity, restraint and immediate grandeur.
- Galleries rise spreading back in widening circles.
- Flat ceiling.
- Effect combines a sense of enclosure with one of spaciousness.

OPERA HOUSE (BOULLEE) - Building was a domed peristyle.
- Interior was divided into stage and auditorium by a single, semi-circular arch.

BESANCON THEATRE - LeBoux bases his idea for theatre on the middle ages when a crowd of peasants watching a performance naturally forms a circle with the strongest in front and weaker further away.
- Proscenium space held the boxes and was meant to link auditorium and stage.
- Hot orchestra in a pit under stage.
- Hot-air heating system.

BERLIN SCHAUSPIELHAUS - Character of a building should express itself on exterior.
- Segmental seating.
- Advocated scenic illusion by darkened auditorium and front lighting.

THEATER ROYAL - Lighting by candles and chandeliers.
- Auditorium three quarters circle.
1. L'HOTEL de BEAUVIS - LE PAUTRE
2. FORUM BATHS, OSTIA
3. LA TOURETTE, LE CORBUSIER
4. PARIS OPERA, GARNIER
5. CULTURAL CENTER WOLFSBURG, AALTO
6. CULTURAL CENTER HELSINKI, AALTO
7. THEATER SEINAJOKI, AALTO
8. OPERA HOUSE ESSEN, AALTO
9. PEGAMON
10. LIBRARY ROVANIEMI, AALTO
11. LIBRARY SEINAJOKI, AALTO
12. CHURCH, AALTO
13. INSTITUTE OF TECHNOLOGY, AALTO
A. FIGURAL SPACE
B. FLEXIBLE SPACE
C. LINEAR/CLUSTERED SPACE

2.

A. REGULAR OBJECTS ATTACHED INSIDE
B. AMORPHIC OBJECT ATTACHED OUTSIDE
C. LARGE COURT SPACE BROKEN DOWN TO SMALLER QUAYS

3.
A. LINEAR/CLUSTERED SPACE
B. FIGURAL SPACE
C. FLEXIBLE SPACE

FIGURE/GROUND
A. LINEAR/CLUSTERED SPACE
B. FIGURAL SPACE
C. FLEXIBLE SPACE
JAMES STIRLING, MICHAEL WILKINSON

COMPETITION ENTRY: WISSENSCHAFTSZENTRUM KELN (1980)
THEATER AUDITORIUM PLAN - SECTION RELATIONSHIPS

1. ODEUM OF AGRIPPA
2. BOSTON SYMPHONY HALL
3. OPERA de VERSAILLES
4. TEATRO FARNESE
5. TEATRO ALLA SCALA
6. PHILADELPHIA ACADEMY OF MUSIC
7. VIENNA HOFOPERNAUS
8. METROPOLITAN OPERA HOUSE
9. BAYREUTH FESTSPIELHAUS
10. CHICAGO AUDITORIUM
11. PRINZREGENTEN THEATER
12. EASTMAN THEATER
THEATER SPACE STUDY

- FIXED
  - Fort Wayne Performing Arts Center
  - Eastman Theater
  - Boston Symphony Hall
  - Teatro Olimpico

- FLEXIBLE THEATRE
  - Robert G. Olmstead Theater
  - Pittsburgh Public Theater
  - No Name
  - Studio Theatre
  - Modular Theatre
  - Laboratory Theater

- COLLEGE THEATERS
  - Loeb Theaters
  - Hopkins Theater
  - General Comments
GENERAL

SPECIFIC

PROJECTION

LIGHTING
EASTMAN THEATER
ROCHESTER, NEW YORK (1922)
MCKIM, MEAD & WHITE
MULTIPLE-USE THEATER, OPERA HOUSE, CONCERT HALL
SEATS - 3,088  MAX. DIS. 138' 0"
BOSTON SYMPHONY HALL
BOSTON, MASS. (1900)
McKIM, MEAD, & WHITE
CONCERT HALL
SEATS - 2,631 MAX. DIS. 150'-0"
CONTEXT

MAJOR SPACE SHELL AS FIGURED 1971

ENTRY
LOBBY
CIRCULATION
SEATING TRADITIONAL (PARALLEL AISLES)
ACOUSTICS

SIGHTLINES
STRUCTURE - STEEL FRAME - ROOF STEEL TRUSS
- STONE INFILL - HUNG RASTER CEILING -
- SEATS ARE BUILT UP OFF FROM A HORIZONTAL FLOOR

STRUCTURE
TEATRO OLYMPIO
VICENZA, ITALY (1585)
ALDOREL PALADIO, VINCENZO SCAMOZZI
OPEN STAGE RENAISSANCE ACADEMY THEATER
SEATS - 752  MAX. DISTANCE - 55'-0"
CONTEXT

STRUCTURE - WOOD TRUSS FOR ROOF & CEILING. ON BEARING WALLS - COLONADE IS FREESTANDING. CEILING IS ATTACHED TO UNDERSIDE OF TRUSS.
PROSCENIUM

THEATER-IN-ROUND

THRUET

FLEXIBLE THEATER
ROBERT G. OLMSTEAD THEATER
N.H.P.A. ARCH.
SEATS-990
½"-1'0"
Photos: Lionel Friedman, Courtesy American Federation of Arts

FLEXIBLE THEATER
PITTSBURG PHYSIO THEATER
P. WEXLER, ARCH
SEATS - 250
- SQUARE SPACE W/ STAGE RECESSSED IN NORTH WALL
- SEATING IS MOVABLE & IS MOUNTED ON FOUR RETRACTING BLEACHER TYPE STANDS (GIVES GOOD SIGHTLINES)
- STAGE RECESS IS USED FOR SEATING- IN ARENA MODE
- SPACE IS AIR CONDITIONED BY EXPOSED CIRCULAR DUCTS
- NO LIGHT LOGIC ILLUMINANCE (UNFORTUNATE)

FLEXIBLE THEATER
SEATS-300
STUDIO THEATRE, BUDAPEST
1925  K. WEISER

MODULAR THEATRE
1972 LADD & KELSEY

LABORATORY THEATRE
1967 KAGANUS
Harvard’s new theater is such a mechanical marvel that many people who would otherwise care may not notice that it is first rate architecture first of all. When the curtain goes up this October for the theater’s opening performance, 600 spectators will sit around the three sides of a projecting Elizabethan apron type stage, watching Harvard’s extra-curricular drama group in a production of Shakespeare’s Troilus and Cressida. The audience’s position in relation to the stage, and the position and shape of the stage itself will be only one of three basic arrangements which are chosen in terms of their suitability to the play to be performed. Two stage hands can manipulate electrically driven components to transform the theater within fifteen minutes to the traditional proscenium type stage and seating of the Broadway theater, or to the theater-in-the-round arrangement frequently used in the off-Broadway experimental theater. There is much additional maneuverability within these three basic systems. This flexibility at Harvard’s new center should encourage a great development in the arts of the theater and lovers of the drama have every right to be excited, but those who also love architecture will be rewarded by a good look at the building itself.

To take its place politely in a setting of small scale, predominantly residential buildings, the Loeb Drama Center had to conceal its great bulk. The site itself was small, costs had to be kept down and therefore the building could not spread in small units. An adequate stage tower must be a high, wide and deep element, often difficult to compose, and the drama center required many square feet of auxiliary space for classrooms, offices, workrooms and a rehearsal and tryout room with the same floor area as the working stage space. A compact, skillfully or-
Conventional auditorium of the proscenium type seats 359 persons in 12 rows of fixed seats behind the center ambulatory. The front seven rows of 156 seats are set on platforms which can be raised and lowered to form stage levels (below).

Arena and theater-in-the-round auditoriums are formed by splitting the front seven rows into two banks of 78 seats each and pivoting these banks 90 degrees for the arena theater (above) and 180 degrees for the modified theater-in-the-round (below).
Theater designer George C. Izenour has devoted his career to developing the mechanical and electronic systems which make convertible theaters possible, but this is the first one to be constructed. The Harvard theater uses his electronically controlled winch system which moves along a grid in the flies, raising and lowering and positioning flats according to a pre-set
Campus Center Designed to Provide Creative Arts Context for Social Activities

Hopkins Center
Dartmouth College
Hanover, New Hampshire

Early in the planning stages of Hopkins Center, college president John S. Dickey called for a building which would provide "both a physical focus and a significant context for the social life of the college... (to) expose all of our students to painting, sculpture, architecture, music, poetry, print making, woodworking, the craft arts and the theater."

Both the program for Hopkins Center and its architectural solution by Wallace Harrison and project architect Walter Calvin are considered valuable prototypes for new campus fine arts centers being planned elsewhere in the country.

The center includes, in addition to spaces for social gathering: a 900-seat auditorium designed to accommodate an entire class for music, films and large lectures; a 450-seat theater for dramatic performances and lectures with generous supporting space; and a smaller arena theater. Facilities for art and architecture are included. All these areas are opened up as much as possible toward major circulation spaces so the undergraduate "sidewalk superintendents" may see others at work in the arts.

The theater director asked for and got a proscenium stage augmented by side stages and a forestage. The arena theater at the ground floor of the center can be used for theater-in-the-round or as a proscenium stage. The atrium, with its view into the center of the building, is a focal point.
The view of the college, its inclusion in the scheme made it unnecessary for the main theater to be a multi-form facility. Since both the main theater and the arena theater are part of a liberal arts rather than a professional drama curriculum, the college did not wish to invest in the mechanization a single truly flexible multi-form theater would require, on the theory that non-professional students should not be required to master the technology of the mechanized theater. Many theater specialists consider the Loeb Drama Center at Harvard overly mechanized for its purpose.

In the main theater horizontal and vertical sight lines are excellent as the plan and section respectively show. Theater side stages when not required by the type of performance are closed off by folding panels shown to the left and right of the forestage in the main floor plan. Two doorways at the rear of the stage house provide access to the outdoor theater in the courtyard beyond. In the theater as shown in section A-A note the short distance from the proscenium wall to the last balcony seat, a length of approximately 60 feet, which offers the quality of intimacy between audience and performer.

The acoustical panels shown in the photograph (opposite page bottom) are hung below the five barrel vaults over the auditorium which are shown in section A-A (above).

Total cost of the center was approximately $7,500,000.

Architects: Harrison & Abramovitz; consulting architects for the college: Campbell & Aldrich; structural engineer: Paul Weidlinger; mechanical and electrical engineers: Sypka & Hennessy; acoustical engineers: Bolt, Beranek & Newman, Inc.; thea-
BUILDING CODES AND STANDARDS
Building Code Requirements

The design of the theater facility is to comply with the New York State Building Construction Code applicable to general building construction.

The building is of group C5.1 occupancy - assembly building for not more than 600 persons.

Seating must be permanently fastened to the floor.

1. Aisles (minimum dimension):
   - Width when seats are on one side only 30"
   - Width when seats are on both sides 36"
   - Cross aisles and exit widths 44"
   - Distance between exits on a side aisle 75'
   - Aisles bordering an entrance (width) 4'

2. Railings: minimum of 26" above finished floor

3. Lobby area: one person per each 3 square feet of area

4. Handicap access is to be provided: ramps not to exceed a slope of 1 to 10

5. Dressing rooms: shall have an independent means of exit. Leading directly to the exterior. If located below the stage level, 2 means of exit are required.

6. Stage Level: at least 2 exits are required, on opposite sides of stage. (Proscenium opening does not constitute an exit.)

7. Minimum exit doors: (double doors) totaling 30"

8. Maximum travel distance to exits:

<table>
<thead>
<tr>
<th>C5 Occupancy</th>
<th>Unsprinkled</th>
<th>Sprinkled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade or first floor</td>
<td>150' - 0</td>
<td>200' - 0</td>
</tr>
<tr>
<td>Above and below grade</td>
<td>100' - 0</td>
<td>150' - 0</td>
</tr>
</tbody>
</table>
9. Floor area per person:

<table>
<thead>
<tr>
<th>Area</th>
<th>Grade Story</th>
<th>Above or Below Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditorium</td>
<td>6 sq. ft.</td>
<td>6 sq. ft.</td>
</tr>
<tr>
<td>Lobby</td>
<td>3 sq. ft.</td>
<td>3 sq. ft.</td>
</tr>
<tr>
<td>Restaurant</td>
<td>15 sq. ft.</td>
<td>15 sq. ft.</td>
</tr>
</tbody>
</table>

10. Capacity of stairways and doors to stairways:
    (in number of persons per 22 inch unit of exit width)

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>Stairways</th>
<th>Doors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>60</td>
<td>90</td>
</tr>
</tbody>
</table>

11. Minimum number of exits:

<table>
<thead>
<tr>
<th>Area</th>
<th>No. of People</th>
<th>Exits Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main floor</td>
<td>300 - 600</td>
<td>3</td>
</tr>
<tr>
<td>Mezzanine/Balcony</td>
<td>50 - 300</td>
<td>2</td>
</tr>
</tbody>
</table>

12. Minimum toilet facilities: (400 - 600 people)
    Drinking fountains - one per 100 persons

<table>
<thead>
<tr>
<th>Area</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water closets</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Urinals</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Lavatories</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The facility must be economical as well as functional.

Extremely high standards of thermal insulation should be utilized.

1. Outside walls and roof - $U = 0.03$
2. Below grade walls and floors - on or below grade - $U = 0.05$
3. All large glazed areas to receive triple glazing.
4. All mechanical systems to be energy efficient.
**Table 1.2** Average dimensions of the seated human figure in plan (after Dreyfuss). [G. C. Izenour Archive]

- **60° Maximum Head Rotation**
- **45° Easy Head Movement**
- **0° Standard Sightline**
- **15° Normal Sightline**
- **30° Maximum Eye Rotation**

**Theater Seat Widths:**
- **Maximum** 22" - 55.9 cm
- **Average** 20" - 50.8 cm
- **Minimum** 18" - 45.7 cm

---

**Diagram:**
- **0° Easy Head Movement**
- **30° Maximum Eye Rotation**
- **0° Standard Sightline**
- **Normal Sightline**

**Dimensions:**
- **Mean Dimension:**
  - Eye to Top of Head: 5" - 12.7 cm
  - Eye Height from Floor: 44" - 111.1 cm
- **Average Dimensions:**
  - Floor to Theater Chair Top of Back: 34" - 86.4 cm
  - Floor to Top of Theater Chair Arm Rest: 23" - 58.4 cm
  - Floor to Top of Theater Chair Seat: 16" - 40.6 cm

---

*Average dimensions of the seated human figure in elevation (after Dreyfuss). [G. C. Izenour]*

INTRODUCTION.
**Design Considerations**

Area: allow min. 6 to generous 8 sq. ft. per seat floor area in conventional seating layout – allow min. 8 to generous 10 sq. ft. per seat floor area in continental seating layout. Area includes all aisles, side wall areas for duct work and acoustical baffles and forestage to curtain line – for preliminary assumptions only.

Aisles: consult local code: begin with usual min. widths shown and increase at rate of 1/4" per ft. (B.C. and B.O.C.A.), 1/8" per 9"-0" (N.F.P.A., U.B.C. and S.S.B.C.) or 22" per 100 persons (N.B.C.) to determine "a".

Exits: consult local code: generally 100 ft. max. from any point on floor to nearest exit: often increased to 133 or 150 ft. if sprinklers provided, or principal entry at grade, or aisle exit route assumed. Number of exits based on occupancy requirements per local code. Codes specify seating as back to back.

Max. floor slope – see page on Theater Sightlines.

**Continental Plan**

Note: Many codes do not permit continental seating.

---

**Typical Seat Dimensions**

<table>
<thead>
<tr>
<th>W</th>
<th>D (Nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19&quot;</td>
<td>26 1/2&quot;</td>
</tr>
<tr>
<td>20&quot;</td>
<td>27 1/4&quot;</td>
</tr>
<tr>
<td>21&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>22&quot;</td>
<td>28 3/4&quot;</td>
</tr>
<tr>
<td>23&quot;</td>
<td>29 1/2&quot;</td>
</tr>
</tbody>
</table>

18" width not recommended – 19" width recommended only for ends of rows – 20" to 22" usual for all locations.

Optional finishes: fully upholstered, and molded plywood.

Optional equipment: folding tablet arms, folding writing shelf, riser mounted standards, pedestal mounting using continuous beam support or cantilevered standards – verify row spacing with mfr. Folding and portable seating usually not allowed in theater work.

Pitch: measured either by angle or horizon, projection. 8 1/4" usual max. - 6 1/4", 7 1/2" standard - 5 1/4" usual min.
DETERMINING THE MAIN FLOOR SLOPE DIAGRAM

Balcony sight lines similar but start from rear row forward, maintaining uniform terrace heights from front of balcony or cross aisle.

Stagger seats in plan to allow unobstructed view between alternate rows of spectators so that min. 1/3 width of screen acting area is in view.

Center of Row Curvature (approximately 30' behind screen)

Screen Widths (W)

W = 0' for small move-

8x18 to 20'-0'' optimum

20'-0'' reasonable, maximum (no absolute maximum)

Screen Center

Approx. Height of

Screen: \( \frac{1}{8} \) of W

Optional line of reverse floor slope (reduces house cubage, height of balcony and structure) never use for live \( S-2W \) or concert halls.

Plan

Projection Room

Section

Screen shows

Total net volume = 125 - 150 cu. ft. per seat

PROSCENIUM WIDTH (W):
30" to 40" for Drama
40" to 50" for Musical
60" to 62" for Opera
*25' sometimes used
for Intimate Theater

ON BACK LINE
OF ACTING
AREA

SAME DISTANCE
FROM FIRST ROW
AS LAST ROW IS
FROM FIRST ROW

ACTING AREA:
30'-0" Usual
MIN. RADIUS

80' MIN

SPRAY

LAST ROW (FROM SIDE OF PROSCENIUM)
18'-1" MAX. FOR DRAMA
20'-2" MAX. FOR MUSICAL & OPERA

APRON: 2'-0" MIN. TO
15'-0" MAX. (N.Y.C. CODE)

GOOD SEEING & HEARING AREA
INTERMEDIATE AISLES &
CROSSEOVERS NOT SHOWN

BACK WALL SHOULD NOT
FOLLOW CURVATURE

DEPT. OF STAGE: W to 1/2 W

PLAN

SOUNDBOARD FOR CONCERT HALL. PLATFORM
IN ROOM INSTEAD OF STAGE BEHIND PROSCENIUM.
SIGHT LINES SAME AS OTHER LIVE SHOWS.

WORKING HEIGHT OF CURTAIN
(PROSCENIUM USUALLY HIGHER)
15' TO 20' FOR DRAMA
20' TO 30' FOR MUSICAL & OPERA

SECTION

LIVE SHOWS (DRAMA, MUSICAL, OPERA, BALLET)
TOTAL NET VOLUME (EXCLUDING STAGE): 150 - 200 CU. FT. PER SEAT

<table>
<thead>
<tr>
<th>Style</th>
<th>Back-to-back minimum spacing, in.*</th>
<th>Average seats per 256 ft.²†</th>
<th>Total no. of seats</th>
<th>No. of rows</th>
<th>Maximum distance from stage, ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial aisle</td>
<td>36</td>
<td>42</td>
<td>605</td>
<td>18</td>
<td>54</td>
</tr>
<tr>
<td>Parallel aisle</td>
<td>36</td>
<td>40</td>
<td>617</td>
<td>18</td>
<td>54</td>
</tr>
<tr>
<td>Continental side aisle</td>
<td>39</td>
<td>48</td>
<td>756</td>
<td>16</td>
<td>52</td>
</tr>
</tbody>
</table>

*For comfort.
† Shaded area in plans.
Figure 3
Single Pit Configurations

- Do Not Use A Fixed Railing. It Limits Flexibility.
- Do Use A Removable Solid Railing.
- Extended Seating
- Forestage

Aisle Spacing (Min.)
SPECULATION
STREET EDGE
- Main entry off gorge
- Major outdoor spaces oriented to gorge
- Lesates change of
civic administration/
instructive space oriented

to gorge

- Main entry off street
- Central lobby - serves all pier,
spaces
- Is oriented to gorge
- Activates gorge faces
- Stage house is in non-strategic location
- Can be serviced easily
- Strike conditions for Cascapilla
- Go over budget can continue
- Trophy is right on street
CLESS FOR CRANE THEATRE
VIEW 04 CORE - PRODUCTION
Pergamon
- Stage house on corner likely to bridge
- Stairs public edge along gorge
- Entry difficult
- Hard to service

- Stage house acts like a bastion for bridges, helps to turn corner
- Stage house can be opened up to become a gallerie theater (view of gorge's natural backdrop)
- Good conditions for Cascadilla

- Opportunity for large court parallel with street in pedes-tri movement across
* Must resourc differ axis if you put
- LOBBY TO CORTÉS
- WHAT IS PUBLIC NOW?
- DOESN'T ACKNOWLEDGE BRIDGE
- ARTICULATES ALL THEATRES
- LOBBY SPACE PRINTS ALL THEATRES
- NO QUAD SPACE

2
- STAGE TOWERS PUBLIC CORNER
- STAGE HOUSE BENDS WALL
- LOOK AT FORUM BATHS, OSTIA

THEATRES IN A BOX
- COMMON LOBBY

3

QUAD SPACE CONNECTED TO CORTÉS

BUILDING BECOMES FILTER
- STAGE HOUSE PROVIDES PLINTH
- NO LARGE SCALE HIERARCHY OF SECONDARY THEATRE FINE AS
- DON'T ALLOW FLOOR TO CONTINUE
- (ROAD, HOUSE OUT OF STUFFED IN Z LOCATION) - CORTÉS WALL P REGION OR QUEEN'S WALL
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