



Gateway Playhouse, NY

Scenery and Technician Packages Stored in Trailers - Ready to Ship

Ads by Goooooogle

Beautiful Renderings

Photo-Real "Looks like a photo" Quick Turnaround and Affordable

Advertise on this site

BUILDING

- [Backstage Matters](#)
- [Metal Stud Precast](#)

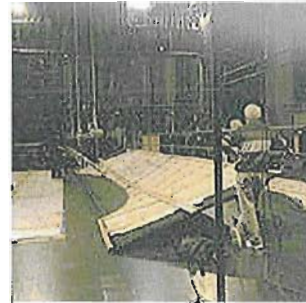
Backstage Matters

by Keith Gerchak, AIA

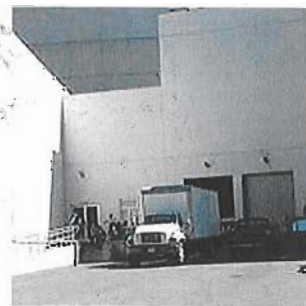
I have noticed as a professional actor — an observation reinforced in my work as a registered architect, specializing in theater design consulting — that the same shortcomings in backstage design occur time and again. Creating inefficient and sometimes barely workable spaces, these chronic problems in layout and provisions may be attributed in large part to design efforts that disproportionately concentrate on the lobby and the auditorium.

This is understandable, because these public spaces are used by many more people — the people a theatre aims to attract and entertain — even if for shorter periods of time, and the public spaces may also be more familiar to architects, donors, and patrons. Public spaces also provide the most prominent opportunities for creative architectural expression.

In contrast, back-of-house design serves fewer, often more dedicated building users — though up to hundreds of people may be involved backstage. And the design process may



Carpenters hang scenery drops and flats from the rigging line sets on stage, so distribution of equipment should not cross the stage unnecessarily. Photo: Keith Gerchak



At a backstage loading dock, the grade slopes down to the street. Dock levelers accommodate varying truck bed heights. Note the

AND MORE

- [Current Contents](#)
- [People & Places](#)
- [New Products](#)
- [Classic Home Competitions](#)
- [Conferences](#)
- [Events & Exhibits](#)
- [Architecture Forum](#)
- [Architects Directory](#)
- [Architecture Books](#)
- [Library & Archive](#)
- [Web Directory Marketplace](#)
- [About ArchWeek](#)

[Search](#)
[Subscribe & Contribute](#)
[Newsletter Free](#)

be challenged by a lack of appreciation for operational needs among the decision-makers and building designers.

*separate "man door" and a wheelchair-accessible ramp to the stage door that can double as a load-in ramp.
Photo: Keith Gerchak*

POPQUIZ

The building program is often filtered through a design process challenged by cost escalation, competing donor interests, ever-changing landlord decisions, community opposition, and site constraints. When faced with difficult decisions about where to compromise, basic back-of-house functions are often the first suggested for the chopping block. >>>

Click on thumbnail images to view full-size pictures.

[Discuss this article in the Architecture Forum...](#)

[Continue...](#)

[◀ Page](#) [Page ▶](#)

[Send this to a friend](#)

[Subscribe](#)

[Contribute](#)

[Media Kit](#)

[Privacy](#)

[Comments](#)

[ARCHWEEK](#) | [GREAT BUILDINGS](#) | [DISCUSSION](#) | [NEW BOOKS](#) | [FREE 3D](#)
| [SEARCH](#)

ArchitectureWeek.com

© 2006 [Artifice, Inc.](#) - All Rights Reserved



Download eBooks - 50,000+ eBooks available for instant download at Blish. www.blish.com

Ads by Google

Advertise on this site

BUILDING

- [Backstage Matters](#)
- [Metal Stud Precast](#)

Backstage Matters

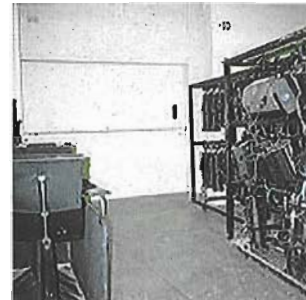
continued

Unless the design team understands appropriate adjacencies, proportions, height clearances, and service accommodations critical to the inner workings of the theater, crucial support spaces may be shoehorned into a prescribed geometry. Although site constraints may require stacking support spaces on multiple floors, it is the way they are distributed that determines their ultimate usefulness and the long-term effect on staffing and operational efficiency.

Equipment Handling

Just as patron circulation — approach to the building, movement within public spaces — is key to front-of-house theater planning, the "load-in" and distribution of equipment to the stage and other destination points is key to backstage planning.

Is it a roadhouse or producing theater? Is there on- or off-site scenery and costume construction? These and similar operational considerations determine the backstage program spaces to be accommodated, prioritize



SUBSCRIPTION
SAMPLE

*Music stand and lighting equipment racks staged in front of a freight elevator can obstruct the unloading of trucks if located immediately adjacent to the overhead dock door.
Photo: Keith Gerchak*



*Elevator adjacent to the load-in door.
Photo: Keith Gerchak*

Dear Amy,
What's new in
the AutoCAD
for architects
2007 release?

-Determined Drafter

Watch Amy's
webcast!

> Register now



Autodesk

AND MORE

[Current Contents](#)
[People & Places](#)
[New Products](#)
[Classic Home](#)
[Competitions](#)
[Conferences](#)
[Events & Exhibits](#)

their adjacency to the loading dock, and dictate the minimum number of dock bays.

The loading dock should have clearly resolved turning radii for trucks to back into the bays, and grading should always slope down from the dock to avoid endangering staff while unloading equipment that has shifted during transport. Efficient load-in at truck bed height means fewer people are required, reducing labor time and costs.

The loading dock ideally leads directly to the scene dock, the depth, height, and layout of which should facilitate the flow of equipment from the truck. Wide, direct, level circulation paths with a minimum number of turns are best for transporting scenery to the stage, costume racks to wardrobe and dressing rooms, lighting and sound equipment to the stage and front-of-house, and musical instruments and stands to the orchestra pit.

Circulation paths should allow this movement without crossing the stage or interfering with work being done there. These equipment items all have minimum dimensions, and backstage planning should take into account that they will be pushed around corners, under pendant-mounted exit signs, and through door openings between projecting panic hardware. Safe, quick passage must be maintained past emptied road boxes and costume racks that typically line backstage corridors, for which durable wall materials are best.



The freight elevator at the opposite end of the scene dock is located so that the flow of traffic to the stage and other program spaces on this level remains unobstructed. Depending on wing space, the scene dock serves as storage for set pieces as well as road boxes.

Photo: Keith Gerchak



Oversized, acoustically-rated swing doors immediately off of the scene dock allow scenery to be loaded directly onto the stage. A storage loft, behind the pair of doors overlooking the scene dock, takes advantage of the double-height

[Architecture
Forum](#)

[Architects
Directory](#)

[Architecture
Books](#)

[Library &
Archive](#)

[Web Directory](#)

[Marketplace](#)

[About](#)

[ArchWeek](#)

[Search](#)

[Subscribe &](#)

[Contribute](#)

[Newsletter Free](#)

POPQUIZ

A clear separation of backstage and front-of-house circulation should be maintained, ideally with wide, direct, level, controlled-access connections on both stage left and right. These connections should accommodate various operational needs such as load-in of front-of-house sound equipment, moving a grand piano to the lobby for a reception, and staff access both during and outside of performances.

Where site constraints require distribution of backstage program spaces on multiple floor levels, a freight elevator should be provided that is adequately sized to accommodate the type of equipment transported to other floor levels. This elevator should be clearly visible and accessible to the scene dock but located to allow a staging area that does not disrupt the flow of equipment onto the stage or down corridors at that level.

Accommodating Personnel

Backstage design should also accommodate the complex overlapping use patterns by personnel before, during, between, and after performances.

Any stairs leading to support spaces on other levels should be easy for personnel to find. The stairs should have direct access to both stage left and right, with a crossover corridor that connects sound and light-lock entrances convenient to the four corners of the stage. Ideally, restrooms are provided on both sides of the stage, as well as electric water coolers and full-length

space.

Photo: Keith Gerchak



Backstage corridors should be finished in durable materials to withstand abuse. The niches created by structural columns provide places to store emptied workboxes while maintaining clear circulation paths. Pairs of doors accommodate wide theatrical equipment.

Photo: Keith Gerchak



Lighting and electrical equipment workshop.

Photo: Keith Gerchak

mirrors for costume checks.

A theater production staff is divided into departments — carpentry, "electrics," sound, props, hair and makeup, wardrobe, stage management, and company management — each with its own requirements for office, storage, and workshop space.

All departments have their own responsibilities, which must be conducted simultaneously and coordinated in order to finish preparations in time. For operational efficiency, consolidation of each department is critical, as is careful attention to optimal adjacencies, proportions, spatial configurations, minimum height clearances, and service accommodations for electrical power, plumbing, ventilation, and cooling.

Roadhouses should provide storage for visiting companies as well as for the resident departments. Additional stage-accessible storage needs could include accommodation for musical instruments, sheet music, choral risers, orchestra shell towers, and theatrical rigging.

Crew and musicians should be provided with breakout lounges and changing rooms with locker, restroom, and kitchenette facilities. Similarly, a "green room" with kitchenette convenient to the stage and stage door allows it to function as the performer's lounge before, during, and between performances.

A security desk and waiting area at the



*Wig artists work in a daylit dressing room wide enough to accommodate costume gondolas down the center.
Photo: Keith Gerchak*



*Makeup stations are fitted with shelves for wig heads, power outlets, personal lockable storage, pin-up space, and incandescent caged lamps above and along the sides of the mirrors.
Photo: Keith Gerchak*

Click on thumbnail images to view full-size pictures.

stage door provides a backstage personnel entrance to greet visitors, receive package deliveries, pick up mail, and accommodate a callboard for sign-in and announcements.

Preparing for Show Time

Dressing rooms should be convenient to the green room as well as the stage, wardrobe, and laundry facilities. In addition to accommodating production costume racks, dressing rooms should have space for hanging street clothes and securing personal belongings.

The makeup station — the performer's workstation — is for detailed makeup application, with pin-up space for notes and incandescent caged lighting above and to the sides of the mirror to approximate stage lighting conditions. The factors that go into determining the optimum width and depth of the station are too numerous to explain here.

Sinks with mirrors should be immediately accessible within the dressing area as well as in attached restrooms, with fixture counts adequate for the number of performers. Convenient warm-up space is imperative to avoid injuries, allowing dancers to stretch and singers to vocalize before a performance.

Introducing daylight within backstage spaces, located where it will not spill onto the stage, provides basic psychological benefits. Forget the windowless brick box; if patrons are provided windows in the lobby for their visit, certainly the theater artists who work long hours backstage are entitled

to the same.

Circuitous corridors, dispersion of related program spaces, low ceiling heights, pie-shaped rooms, inaccessible storage, undersized openings, and inadequate toilet facilities are too-frequent symptoms of neglected backstage planning.

With attention to back-of-house needs, the design team can ensure logical layouts that ease rather than hinder navigation, that support the efforts of mounting a production, and that provide a comfortable work environment.

[Discuss this article in the Architecture Forum...](#)

Keith Gerchak is a New York City-based professional actor, registered architect, and senior design consultant with Theatre Projects Consultants, Inc. He is published regularly on the subject of backstage design, including a chapter in the book [Building Type Basics for Performing Arts Facilities](#) published by John Wiley & Sons.



[Send this to a friend](#)

[Subscribe](#)

[Contribute](#)

[Media Kit](#)

[Privacy](#)

[Comments](#)

[ARCHWEEK](#) | [GREAT BUILDINGS](#) | [DISCUSSION](#) | [NEW BOOKS](#) | [FREE 3D](#)
| [SEARCH](#)

ArchitectureWeek.com

© 2006 [Artifice, Inc.](#) - All Rights Reserved