

CLOSER LOOK: BUILDING A NEW FACILITY

Newspapers & Technology recently sent out a fax survey to newspapers in the United States, inquiring about plans for building a new facility. Those responding to the survey were asked to write questions to our panel of experts. The panel consists of Dario

Currently considering a new facility?

33% Yes

67% No

All results are from a non-scientific N&T fax survey.

DiMare of Dario Designs Inc. [508-877-4444], Curt Miller and Bill Brister from The Austin Company [216-291-6680], and Mike Pusich of the Blevins Harding Group [303-443-2535].

Question 1: Is computer process modeling prevalent in planning new newspaper production facilities?

Executive vice president, New Jersey

Austin: Computer process modeling is used extensively in developing a space program and integrating different equipment layouts into the building. Varying the production facility size and layout to different newsprint, press and packaging options is a strength of CADD applications. Insuring the best solution is developed for the unique requirements of each client is of critical importance. The computer process modeling is one tool to attain this goal.

Blevins: Computer process modeling has a fairly broad definition. Equipment vendors have used process simulation modeling to effectively market integrated systems, but this is not prevalent in early planning stages. Blevins Harding Group has integrated the computer as a tool throughout the planning and design process. We create product plans and operating models, then use these to develop equipment models. Using these models,

we use computers to prepare building options, phasing plans, cost models and schedules. The computer allows us to prepare and manipulate alternative building concepts quickly and with reliable results.

DiMare: It is not prevalent if one considers all of the production facility projects being built today. Most of the small newspapers are not doing computer modeling. Of the large newspapers, only the one considering highly automated systems will consider computer modeling to verify that the proposed solution is viable. Many large newspapers with low labor costs prefer a more manual operation which can be properly designed without it. The more sophisticated a production facility gets, the more it will lend itself to computer modeling. The advertisers demands for smaller and smaller zones seem to be pushing us in this direction.

Question 2: Can an average square foot cost for production be determined before construction bid?

Production director, Florida.

Austin: Yes, in fact The Austin Company provides a detailed estimate at the end of preliminary design, before engineering

Blevins: BHG prepares building cost budgets as a part of capital planning. For this purpose, we use unit costs that are based upon experience, and adjust these using national building cost indexes that vary by locality and region. We then work closely with local architects and engineers, familiar with local building conditions, to prepare more detailed cost estimates.

DiMare: Yes. As a matter of fact, exact costs can be determined before construction, and even before the architecture and engineering documents are complete. If one chooses "Design-Build" as the method of doing the architecture, engineering and construction, the price is determined, and guaranteed if wanted, prior to the completion of the A&E documents. This can be done with in-house estimating and pre-bidding certain large components of the job.

Question 3: What types of building designs allow modular expansion (especially press & distribution)?

Operations manager, California.

Austin: Virtually any type of building will allow modular expansion to be easily and

that any area can back-up another area, and the shipping and handling can take place with minimal equipment and docks. E) Pour slabs which can handle the worst case, (usually the newsprint storage) so that any area can be used to back up any other area.

F) Design the ceiling system to the worst case, (usually the mailroom) so that a press or inserter can be added without having to add or reinforce the structure to carry the conveyors and support services. G) Foundations, columns, exterior wall details, mechanical, electrical, plumbing, fire protection, parking, shipping and receiving can all be designed and detailed to allow for future growth and flexibility.

Question 4: Any ideas on how to plan for "emergency operations" (earthquake, flood, blizzard, power outage, riots) in building design?

Operations manager, California.

Austin: Some items to plan for in the case of emergencies are:

- Design criteria (site location, grading, retention or detention ponds, enlarged underground storm systems, seismic, building orientation on site, window location, building entrances, sufficient redundancy in mechanical equipment).

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drawing, bidding or construction has started. This detailed estimate, developed prior to money spent on A&E detailed construction documents, allows the client to set the budget before significant money is spent. This estimate is considerably more accurate than an average square foot cost. This detailed cost estimate is one of the cost control documents used throughout the design and construction phases to guarantee the original budgets are met.

economically accomplished if designed from the beginning to do so. Architectural systems, structural framing, foundation, HVAC, electrical systems are all planned for a reasonable and logical expansion in the most cost-effective manner.

Blevins: Any project developed by BHG includes consideration for future expansion based upon long-term strategic and product needs of the newspaper. Long-term expansion for the building may involve break-out walls and dedicated areas of the site. But there is also a need for internal expansion based upon equipment modules needed to support product changes and growth — such as press units, inserter heads, strip assist stations and related building support elements.

DiMare: A) A facility that is well planned and designed by a company that understands a newspapers operations, as well as the future trends in the industry. This company should also have the ability to produce the working drawings. This will insure one that the major concepts, as well as the details, are properly documented for growth and flexibility.

B) The building should have wide consistent bay spacing allowing various operations to take place in unobstructed areas. Usually the wider one builds, the higher the costs.

C) The height of the areas should also be consistent where financially possible to allow for maximum flexibility.

D) Keep the newsprint storage, reel room and mailroom on the same level so

- Placement of equipment
- Power generators or two or more power sources
- Security systems.

If yes, will it be a new building, renovation?

15% Building new

15% Renovating

6% Other (lease, expansion)

3% Purchase existing bldg.

Blevins: Plans for emergency provisions are determined largely by location, budget, and owner philosophy. The checklist for planning is rather involved for these elements. Some interesting provisions may include:

- Cots and blankets for overnight stay and staff.
- Daycare during acute emergencies.
- Alternative methods of communicating with outside workers during power outages.
- Plug-in generator stations.
- Strategy for identifying street names when signs are gone.
- Emergency supplies of process and



I believe if we make our decisions based on what is in the best interest of our clients, it will prove to be in our best interest in the long run.
Dario D. D. DiMare, AIA

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What's important in choosing a site?

- 42% Future needs
- 27% Location
- 6% Price
- 3% Other (increased staff)

potable water.

This is just a sampling of items. The key ingredient is an Emergency Action Plan, which should be in place at every newspaper.

DiMare: Absolutely. The amount of "redundancy" or "prevention" is primarily based on a newspaper's budget. The most dependable and most costly "disaster plan" is to have two separate

- 1) Product flow/efficiency
- 2) Cost
- 3) Adequate space for current and future requirements
- 4) Ease of expandability
- 5) Schedule

Blevins: The primary concerns for any building project is that the approach taken meets the near- and long-term business goals of the newspaper. Five "concerns" that stand out for today's newspaper are:

1) In the office areas, complex electronic communication has changed the information flow and organization of the newspaper's front end. Proper planning is needed to optimize information flow using modern office organization, furnishings and equipment systems.

2) In the press area, environmental quality has become a significant issue. Noise control, air quality, lighting, finishes and communication can all be

DiMare: One should have their marketing plans in order prior to starting a project because:

- Market drives Product
- Product drives equipment
- Equipment drives facility
- Facility drives site

In other words, do not buy a site until you know what has to go in it, both now and in the future.

2) Consider the delivery method of architecture, engineering and construction services that best meets your goals and business philosophy.

- Design (A&E) - Build
- Architecture (A&E) - Bid - Build
- Design (A&E) - Construction Management
- Architecture (A&E) - Bid - Construction Management
- Consultant - Architecture (A&E) - Bid - Build

3) Have all of your labor negotiations complete or understood before considering automation to reduce staff or time.

4) Have a well determined quality level of materials and finishes in mind prior to the start of

sary the expertise is applied to all levels of the design.

Blevins: BHG provides planning and design services for newspaper and printing facilities. Our methodology is based on a team approach, which involves the newspaper, vendors and local building experts to ensure project success.

DiMare: An architect with newspaper experience should design your project. There are many engineers with newspaper experience that will do a good job. However, if all things were equal, an architect is the only professional which is trained in all disciplines of building. The architect is the individual responsible for tying all of the building systems (architecture, civil, structural, mechanical, electrical, plumbing, fire protection) process together. Hiring an architect without newspaper experience is like hiring a family doctor to do heart surgery; he may have read the book, but ...

includes growth trends, the needs for FSI storage can be identified. Based on these needs, alternative methods of storage can be suggested and evaluated. Rack storage is certainly an option, but may take the form of conventional racks, push-back racks, narrow-aisle rack systems, or automated storage/retrieval systems. Planning will establish an appropriate approach for a specific project. Once this is done, the right system integrator or vendor can be selected to implement the project.

DiMare: This totally depends upon your individual operations and needs. But, so as not to avoid the question, listed below are some advantages and disadvantages inherent in rack storage systems.

Advantages:

Racks require less building floor space, not volume.

Racks force a more organized storage and retrieval operation.

Racks can reduce damage if people are storing too high without them.

Racks are relatively inexpensive.

Totally automated systems using racks can reduce manning.

Disadvantages:

Racks require permanent locations which can reduce flexibility.

Racks if high, can require special trucks or handling systems.

Loaded racks can't be unloaded manually if the retrieval equipment brakes.

The racks can get damaged and require replacement or repair.

Totally automated storage and retrieval systems can be costly.

Improper loading can damage the inserts.

Most racks have depth restrictions resulting in additional aisle space.

High racks may require special supports, lighting and fire protection.

High racks create safety issues regarding falling objects or people.

Suppliers:

Webb Triax (Division of Jervis B. Webb Co.), Chardon, OH 216-285-4630

FMC Corp., Chalfont, PA 215-822-4300

Interlake Material Handling Division, Lisle, IL 708-852-8800

Frazier Industrial Co., Long Valley, NJ 908-876-3001

Ridg-U-Rak Inc., North East, PA 814-725-8751

Unarco Material Handling, Springfield, TN 615-384-3531
HSI Company Inc., Lancaster, PA 717-393-9377.▲

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facilities. The most common plan is to have a mutual disaster agreement with a nearby newspaper. A building can be designed to withstand any of the above situations except a "direct hit" by an earthquake or bomb. Existing facilities can often be renovated to minimize the effects of a disaster. Flood damage can be minimized by waterproofing a facility and fitting the lower doors and openings with gasketed inserts to prevent water infiltration (boat design). Electrical redundancy can be achieved by battery back-up, emergency generators (gas/oil), co-generation, dual electrical grid service, or some combination of these. The amount of power needed during a disaster also varies from enough to produce negatives or plates, to enough to run a single unit or press. The electrical can also be switched so that the newspaper can run its operations sequentially. This would minimize the amount of redundant power required to print a newspaper during a disaster.

Question 5: Please list five main concerns with new building construction projects.

Director of operations, Tennessee.

Austin: Five concerns with new construction projects are:

enhanced through good planning and design.

3) Packaging remains the most complex area for planning. With operating options available today, it is essential to develop a product plan and operating model that can be used to make informed process and equipment decisions.

4) In building, it is important to develop phasing and transition plans that will allow operations to continue during construction and throughout the transition to new equipment and/or facilities. These plans can also be used to enhance employee safety during transitions by defining work areas, construction zones and safe routes for people and material flow.

5) And finally, one must consider future provisions that differentiate between near- and long-term goals. We are currently working on a project for which the previous architect identified an access panel for future press delivery. Unfortunately, it does not work for that purpose and the owner will incur significant costs to make preparations for press component delivery. The original idea was good, but was never executed properly.

the project. Also have a total budget in mind.

5) Choose a firm with newspaper experience, and make sure the individual within that firm, assigned to your project, also has experience with newspaper projects.

Main reason for needing new facility?

- 36% More equipment
- 12% Other (cost benefits, growth, office space, etc.)
- 9% Market changes
- 9% Storage

Question 6: Who designs the project?

Production director, New Jersey.

Austin: The entire project team design and implement the project. Complexity and specialization of each discipline (newspaper process planning, architectural, structural, mechanical and electrical) makes it neces-

Finally, you must be comfortable with the designer, because this type of service works best with someone you trust.

Question 7: What is opinion of rack storage for incoming advertising inserts? Pluses/minuses of decision to consider. List of suppliers to consider.

Vice president/production director, Louisiana.

Austin: Rack storage considerations: (for newspaper that have a large number of pallets to store)

Pluses:

Uses less floor space.

Prevents double or triple stacking pallets on floor.

Does not cover or hide pallets.

Easy storage and retrieval.

Does not require special storage location for any particular pallet.

Minuses

Requires lift truck or high ASRS machine, depending on height of racks.

Requires good method of storage and retrieval, such as bar code, etc.

May be more expensive than floor space.

Blevins: A key element of newspaper process flow is freestanding insert (FSI) storage. By preparing a product plan that