THE RIGHT SITE

Weighing cost, design, and the environment

At Newspaper Agency Corp.'s greenfield plant outside Salt Lake City, the appearance of the site's hills, distant mountains and sky is designed into its roof line and exterior panel color and placement.

BY JIM ROSENBERG

ALL ASPECTS OF NEWSPAPER OPERATIONS HAVE SOME environmental impact, but perhaps none larger, longer-lasting, or more obvious than the property or structure that contains them. Planning and design determine for a generation or more how a newspaper affects and is affected by its environment. More convenient concepts than physical places, natural, built, working, and social environments are essentially inseparable. Site planning and workplace design take into account those purposes to make the most of those environments while minimizing negative impacts and maximizing potential — often by recycling an enterprise's sites and structures.

Once page file transmission could physically separate film- or platesetting from the rest of prepress, newspapers were free to move plants to larger outlying parcels. Highways carried newsprint in and newspapers out; fast electronic links moved pages in and production reports back — assuming a headquarters didn't also relocate.

Opportunity for remote production meant moving out of crowded shops. Tractor trailers with newsprint and tankers with ink would not tie up traffic. There was no shortage of reasons for relocating, not least of them the lower cost of land.

Newspapers have long made environmentally sensitive choices: reducing printed waste; recycling ink, paper, and plates; using low-energy lighting and variable-speed drives; operating low-emission and alternative-fuel vehicles. Production has removed unwanted residuum — first lead, then silver from prepress, petroleum-based ink from many pressrooms, plastic strapping and wood pallets from some mailrooms.

Most changes that lightened the impact on the environment carried to the bottom line: Cleaner choices were smarter business decisions that usually lowered costs and improved production quality and efficiency. Smart, maybe, but the one environmentally conscious choice that will not necessarily benefit the bottom line happens to be the biggest: land, and the building occupying it.

While the other choices may seem to have little bearing on building size, shape, or location, all go into the programming that underlies planning and design. Removing filmsetters and tyers reduces space needs, add to equipment, and change dock use.

Programming lays out needs by examining current and planned products and processes, from receipt of consumables through deliveries of printed copies. While processes for each paper differ, says Cleveland-based Forum Architects Newspapers Services Principal Paul Martin (former Thomson Newspapers production chief), each needs to know, for example, if it will process Sunday packages while the daily is going out the dock. Dario DiMare, president of Dario Designs in Marlboro, Mass., once explained, "The product defines the equipment and people needed to produce it"; they in turn determine the required facility, which "tells us if the site's adequate."

Or, as Forum Newspaper Services Principal Steve Barber says, "Buildings are going to take the shape of the process." Some obvious determinants: tower presses, high-bay storage and retrieval systems, reelstands below, in-line, or at a right angle to a press.

Recycling real estate

That brings the process through masterplanning. Once prepared for site selection, trade-offs may enter the picture. From a standpoint of cold calculation, the ideal is a greenfield site – whether an undeveloped stand-alone parcel or part of a new industrial park. A publisher can locate land suitable for a structure that conforms to the programming and planning. But a site that offers the desired geology and geometry often lacks the right geography. Proximity to a local artery is important but not the same as being near a paper's offices and center of its coverage or circulation area.

That center is ordinarily within a city or town. If land is available, its size is usually smaller, cost higher, traffic heavier, and concerns of neighbors and municipal officials greater. A building may already occupy the site. Contaminants may lurk below.

Then again, a brownfield may be no closer in time or distance to those centers than a greenfield. Austin Aecom Vice President and Media Planning Director Mike Pusich says he's never worked on a greenfield project more than eight miles from a newspaper's downtown offices. Logistics software can help analyze how various locations affect business, says Austin Aecom Senior Vice President Don Mills.

Between the two, a brownfield is the greener choice, especially a remediable site with a reusable building. Site selection "is the biggest thing," says DiMare. "If you truly care about the environment, you'll start by looking for an existing site in a downtown where there already is infrastructure."

He and others cite the same benefits, which vary according to whether the land alone or a building is used. Some major examples: savings on excavating, building and paving machinery and materials, the fuels going into their manufacture and transport, and the emissions coming out; pipes and cables; preservation of undeveloped land; public rather than private transportation (fuel and lubricant conservation, cleaner air and water, longer vehicle life).

"We're seeing more and more adaptive reuse of facilities," says Pusich. Exactly the reverse of a greenfield project, reuse forces the process to suit the structure, he adds, "which is a real compromise." DiMare advises either gutting a structure or doing a "patch and paint" job that preserves "as much as you can possibly use," while sacrificing "perfect" design and workflow. Anything in the middle, he warns, "gets really, really difficult and cumbersome. It's just a nightmare for

The *Bristol* (Va.) *Herald-Courier's* new production plant goes up a few miles south at a Tennessee greenfield site with better subsoil than in the initially closer Virginia location.

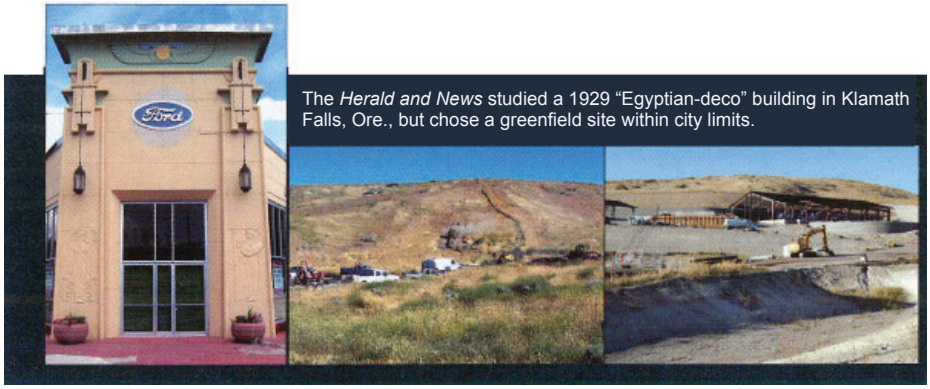
a compromised building."

Just being able to use a large percentage of an existing structure is an advantage, says Scot Sherick, Denver-based newspaper/print media director of The Facility Group, headquartered in Smyrna, Ga.

Warehouses, for instance, won't have press foundations but in most respects are suitable. Brownfield design work, he adds, often can incorporate much that would go into a greenfield site, down to the furniture.

Often in older, blighted areas, a brownfield as preferred premises is as much about what it doesn't need as what it does. But whatever advantages accrue to redevelopment, unavoidable trade-offs may call for changes to such things as size and workflow.

Building or lot reuse is very difficult for newspapers, says DiMare. "Usually the next thing is to move into an industrial park … or an industrial part of town." New business parks may offer essentially greenfield sites.



The *Herald and News* studied a 1929 "Egyptian-deco" building in Klamath Falls, Ore., but chose a greenfield site within city limits.

In any event, no one ever gets exactly the process flow desired or a perfect greenfield site, Sherick says. After inspecting greenfield and brownfield sites for potential to meet objectives, newspapers may be willing to make compromises for economic or environmental reasons.

That not all brownfields will be central to core coverage areas won't always matter, especially for consolidated production. Gannett's three central New York dailies are produced outside Binghamton at an old factory site big enough for the needed plant and with highway access to all the markets.

Greenfield pros and cons

In almost all ways that matter most, a greenfield site is the superior choice for making and moving newspapers. Its biggest advantage, says Ted Beers, Media Facilities Group principal at Burns & McDonnell, is that with more and cheaper land, "you can go single-story and spread out" in order to devise the most efficient operation.

"Unless you drag utilities" a great distance, says DiMare, construction costs are generally lower – largely, Beers notes, because demolition and debris removal are unneeded. A bonus, says DiMare, is that excavation rarely turns up nasty surprises.

For those and other reasons, including uninterrupted operations, building a greenfield plant "is much easier from an architectural perspective, " Martin adds. But for all the greenfield projects he's seen in recent years, he says there is a frequent realization that "when you leave that downtown, there's a void left unfilled."

Besides cheap, clean land, greenfields:

- accommodate most building sizes and shapes, with few materials restrictions;
- offer highway access and more room, for easier paper and ink deliveries and timely newspaper deliveries;
- may be nearer to other papers in a cluster for production considerations;
- have fewer possibly unhappy neighbors.

Always a consideration "is where the employee base lives," Forum founder and Principle Charles A. Rosati says of one possible drawback to greenfield siting. Is public transportation available? If so, can it add a stop? It not, can a line be extended?

Other considerations include distance from off-site employee needs' adjacent or on-site wetlands or other sensitive natural areas; landscaping; extending infrastructure (all those cables and pipes, maybe even lighted access roads).

Brownfield alternatives

Working with clients and keeping cost and creative possibilities in mind, Rosati says, "we're always weighing whether we stay or move." One of the first questions: Can an existing plant expand without disrupting operations? A publisher also must ask: Will staying downtown improve a paper's civic image? Will it help hold onto employees? And whether building or expanding on a new site, adds Barber, "you always have to look at what you have to clean up," its cost, and "what you may find later."

Building an addition or redeveloping a brownfield has the benefit of leaving greenfield acreage untouched while preserving or enhancing a newspaper's image by occupying rather than abandoning a downtown, where a big plant stays in the public eye. In some markets, Rosati adds, staying in town makes it easier for customers who prefer to pay in person for subscriptions and ads.

Newspaper employees also support other local businesses and can use public transportation, thereby also decreasing their automobiles' personal cost, traffic, pollution, and parking needs.

A brownfield may contain a usable building and can easily connect to existing utilities. Nevertheless, age and vulnerability of systems such as sewers must be assessed.

While straight-line workflow usually is the best choice, with materials in one end and product out the other, property costs can make that simpler path unaffordable. An L-shaped may be required, but going to multiple stories multiplies

inefficiencies.

Sometimes there is no practical alternative to a brownfield site. Looking for land about six years ago and with scarcely any San Francisco Bay Area greenfield sites of suitable size and location, one newspaper considered a large, empty grassy area within a "sprawling" interstate highway intersection. "Due diligence didn't go very far, because the capital project didn't get approval," Mills recalls, But the site's unusual characteristics, he says, would have made development possible and, according to officials consulted, permissible.

Land may be bought from a city or from what are usually several private owners, often with holdouts. Pusich urges resisting recourse to a city's powers of eminent domain in a redevelopment zone. Property must possess the right size, shape, and location with respect to neighbors, suitable streets, and, if for a plant, the newspaper's offices.

Brownfield are "a little more difficult for us," says Pusich. Local review boards want a certain look. Many areas permit no metal siding, for example. Projects must balance budgets, building codes, energy needs and local requirements. "Most cities are more than willing to review what limitations they might put on you," Pusich says.

"Parking becomes atrocious," and "public transportation isn't really an option " for many small to midsize papers, Martin says. Still, he's never had parking's cost kill a project. Where zoning controls parking, a newspaper typically needs fewer spaces than required for its building's size. So projects must seek a variance, Barber says.

Another headache, the biggest in some downtowns, according to Martin, is truck access and on-site room to maneuver.

"Many cities try to accommodate you as best they can," he says. But it can still be a huge issue – as much for a plants' construction as its operation, Pusich says. Tight space can prevent those sites from accommodating everyone at once. So sequencing and staging, he adds, are critical to keep a project and a city's traffic moving: It affects everything from tradesmen's trailers and suppliers' trucks to portable toilets.

Also in Oregon, *The Bulletin* and parent company Western Communications erected a headquarters on a 10 acre greenfield site annexed by the city of Bend.

Pollution solution

Brownfields' big drawbacks are cost of clean land and coping with contamination. But in most cases, government incentives (tax relief, pollution remediation aid) for renovating or building, Mill says, help make the choice compelling. "It's a huge consideration, one that has to be looked at on a case-by-case basis," says Pusich.

Government help "is all part of the equation," says Barber. But whatever the incentives, adds Pusich, total costs are never less than building at a greenfield site.

No company wants to pay for another's pollution or put employees in a toxic environment that hurts them, their productivity, the company's image, or its treasury. But stepping up to reclaim a contaminated site can be a public relations win. Tony Bandy-Zalatoris, Forum senior associate architect, LEED (Leadership in Energy and Environmental Design; see "Benign Design," E&P Online) says local governments often help buyers to encourage occupation of such sites, and there are "lots of federal and state programs in moving to a brownfield."

Common considerations

Whether farmland or factory site, water management is a universal responsibility. Though Barber recalls a major metro that sought a second source of piped water, his firm knows few places where supply was an issue. Rosati stresses that all sites need at least sufficient pressure for fire suppression.

A secondary supply or pump for sprinklers adds greatly to cost, and code-driven filtering of retention-pond water for that purpose is expensive, though 15 years ago it was a more-reasonable option, he says.

"In an urban environment, where you have a fixed supply of water," he continues, demand grows with new building, affecting adequacy and requiring some research. For water as well as other concerns, notes Barber, insurers may well impose more-stringent conditions than local codes.

Outside, measures must be adopted to control stormwater and protect the quality of water leaving a site. "As cities develop," Pusich says, "flood maps change." So brownfield sites need forecasts based on current development patterns – and most cities can help with that, he says.

Instead of spending to channel rainwater to storm sewers, says Bandy-Zalatoris, Paddock Publications collects water from its Schaumburg, Ill., plant's roof and directs it to recharge the property's wetland.

Knowledge of water tables and flood risk is essential at any location. Some papers, says Beers, "have a lot of problems because of groundwater" – for example, reelroom seepage and flooding. For others, he adds, "The cost of preventing that was pretty high."

"Two of the biggest things are soil and subsoil characteristics," which must be identified very early in any project, Barber says. Some soils, says Beers, simply are "not cost-effective to build on, and must be excavated and replaced with engineered fill." From ordinary construction excavation and paving needs to landscape design, simple topography also comes into play. In the end, planners must ask "how much dirt you have to move" to make a site usable, says Sherick.

After earth and water, appearance must be considered. Quite frequently, a greenfield site will have height restrictions that require a variance for plants housing tower presses or vertical storage systems, says Pusich. Height is less often a problem in a city center, but may be an issues for a brownfield site, he adds. It's not a simple specification. Measures of height employ no standard ground-level starting points (or averages) or roof-level end points.

Height is just one attribute governed by surroundings. "You're really impacted quite seriously by the nature of the area you're building in," says Pusich, noting differences among existing industrial areas, zones designated for redevelopment, and greenfield sites where a purely utilitarian industrial structure is likely to meet approval.

The natural environment, he continues, determines how a design copes with or exploits such things as prevailing winds and sunlight. It may require a safe room in areas vulnerable to hurricanes – which also dictate limitations in construction materials, both to protect windows or other areas from flying debris and to prevent materials such as roof gravel from becoming high-speed projectiles. Very dry or very humid areas need to compensate to protect stored paper, and to ensure proper printing and static-free post-press operation. "There are design considerations for every region of the country," says Pusich.

Shared concerns also include how noise, illumination, vehicle-exhaust, or other near-ambient outputs affect neighbors. Often, it is a matter of planting tree screens or planning for prevailing winds. Brewers' malt processors, for example, needed assurance that the *Milwaukee Journal Sentinel* printing's very minimal emissions would not harm their products' quality, says Pusich.

A greenfield project may as easily be on the receiving end — say, of a nearby hog farm. Sometimes a paper is its own problem. In the early 1980s, exhaust from trucks at Newsday, Melville, NY, was sucked into the editorial department's air intakes. The problem, identified when the masterplan was redone, "was an easy fix," Pusich says.

For safety and efficiency, newspapers often want to separate employees' cars from delivery trucks, which also affects parking and paving — all part of a site's process flow.

Martin asks, will carriers get copies from the plant or at distribution centers? The latter prevent all trucks from showing up at one place at the same time. Beers maintains that neither greenfield nor brownfield siting necessarily guarantees efficient distribution.

Incoming or outgoing, trucks have "a major impact on site choices [and how] architects design," says Rosati. At the outset, says Barber, expected vehicles must be identified to plan staging, with adequate turning radius, to get trucks off the street. Docks need concrete aprons (asphalt deteriorates fast under the heaviest use) and may need levelers or seals. Space to handle paperwork should be set aside, and decisions should be made about where and how to alert personnel to deliveries. If products go out by carts, distribution must plan for cart loading and trucks able to carry carts. If they go by pallet, storage is required, wrapping may be desired, and loading/unloading procedures devised. Both require the right spaces in the right places.

As small and midsize papers try to avoid vehicle ownership, Martin suggests looking into fleet leasing. "Very few plants any more are housing their own fuel," he notes.

As inventories have declined, so has interest in on-site rail spurs for newsprint delivery. "Rail is not a make-or-break proposition," Barber says of site selection.

With delivery problems and legs of some lines shut down, Martin calls rail "much less an issue than it was 10 or 15 years ago." Pusich agrees, but notes it was preserved at two of three very big in-city projects in recent years, and that the third can off-load paper to trucks from nearby rail.

Keeping one eye on the future

Just as programming is prospective with regard to products and processes, planning for neighborly concerns requires more than a snapshot to see the bigger picture over time — the changing character of cities' districts, for better or worse.

Forum has clients that years ago sited in light-manufacturing/commercial areas that in recent years have experienced residential growth. One now seeing that growth "creeping closer and closer." says Rosati, may buy buffer property, install fencing, add security, or re-route trucks.

But whether it's greenfield or brownfield, during the project planning, Sherick says, newspapers should consider how a building may be later modified for the newspaper's or next occupant's use rather than requiring demolition and new construction.

If economic utility and environmental sensitivity aren't to be mutually exclusive aims, then newspapers, he adds, "need to look at facilities they're building as future brownfields. ■