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## **2012 - A look ahead at civil/site design: the more things change, the more they stay the same**

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One safe prediction to make is that things will eventually be different than they are now. Saying when that will happen, of course, is the hard part. In the meantime, however, we have seen a few trends in real estate development over the past couple years that are worth paying some closer attention to:

One such trend has been towards more renovation than new building. One obvious reason is that these days existing buildings can be bought for a lot less than the construction cost of a new one. But few existing buildings can be converted for new users exactly as-is. Invariably there will be a need for at least some degree of interior fitup and exterior facelift.

One drawback of renovation versus new construction is the need to look for hazardous materials - asbestos, lead paint, etc. Although good for the hazmat industry, these costs - sometimes substantial - chip away at the savings of renovating old space, particularly if there is continued occupancy during demolition. These costs are notoriously difficult to pin down, but a good, experienced abatement consultant is a good place to start.

The condition of existing utilities can be a source of other unpleasant surprises. Unfortunately, many old shopping centers simply buried their mistakes during original construction, so that even seemingly minor changes can turn into major headaches. Like hazmat, these costs are seldom fully anticipated; a little advance spending on camera surveys of old sewer and drainage lines will often rule out some layouts and suggest others instead.

Another big trend is the movement towards more energy-efficiency. A major disadvantage of re-using older buildings is their excessive energy consumption. The good news is that the payback period of energy efficiency improvements is growing shorter, now often 6 years or less.

It is usually not enough to install new, more efficient mechanical equipment however; oftentimes upgrades to building shell insulation, new doors and windows are also required to obtain the full savings. In addition, structural reinforcing may be needed to support new rooftop equipment (or solar panels). So energy efficiency improvements can often mean something for nearly everyone in the building trades.

A good energy auditing firm can help put a handle on these costs and paybacks, sometimes for free or at reduced rates as part of utility rebate programs or as grants under various governmental energy-efficiency programs.

Another trend is the increasingly strict regulation of stormwater runoff, especially during construction. Over the past few years, EPA stormwater regulations have caused many states and local authorities to issue their own new regulations to limit the amount of contaminants leaving a construction site, and requiring more frequent inspections and certifications by general and sitework contractors.

Even renovation projects will often involve some degree of construction of new parking lots and access ways. Every site that disturbs more than one acre has to be registered with the EPA or equivalent state program, and must have a SWPPP (Stormwater Pollution Prevention Plan) prepared by a professional engineer. After the plan is in place, the site operator must conduct frequent inspections to ensure that all the necessary stormwater controls are in place, and functioning as intended during rain events.

In addition to these construction controls, new stormwater regulations place increasingly strict limits on stormwater discharges from the completed facility. To meet these challenges, engineers are turning to manufactured stormwater treatment systems such as porous pavements, underground storage chambers, mechanical filtration units, and similar technologies.

Along with installation costs, these systems also present long-term maintenance costs that can be substantial. It would be a good idea during the design process to get information on expected maintenance costs from the site designers to avoid unpleasant surprises later.

Another more subtle trend is an emerging difference in regulatory approvals between the redevelopment and building on undisturbed "greenfield" sites. Actually there are conflicting trends here; the more obvious trend is towards stricter regulation and more environmental controls overall, but there is a converse trend too; many regulatory agencies are considering ways to make permitting easier for redevelopment sites, at least compared to undisturbed sites. Consider the prospect of faster approvals and less costly infrastructure when looking for sites or deciding whether to renovate or build new.

So what do we expect for 2012? Continued popularity of renovations. More energy-efficiency projects with shorter paybacks and attractive subsidies. Stricter environmental controls on land development, with (hopefully) some regulatory encouragement of redevelopment. In all these areas, a little advance planning from professionals can go a long way. The more things change, the more they stay the same.

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