

BY MAURA KELLER

# The Dawn Of Economic RECOVERY

In the first of a two-part economic report, we assess the state of the economy as it affects the nation's engineering firms. Do industry analysts believe we've turned the corner?

**I**t's official. The U.S. economy has experienced one of the slowest economic periods in recent history. Businesses are worried, consumers are cautious, and investors are downright jittery. What does this mean for the engineering community? The consensus is that although we may not return to the boom of the 1990s, the marketplace is on the road to recovery.

While the U.S. economy as a whole is in recovery, the first quarter of 2002 still showed a continued slowdown for the design industry. As Art Rolnick, senior vice president and director of research at the Minneapolis Federal Reserve Bank explains, design and construction cycles tend to belatedly mirror economic cycles.

"Because of the recent dramatic shift in the stock market's performance, combined with the events of September 11, many public and private entities are slowing their growth estimates, modifying their business strategies, and reducing their labor forces to meet anticipated shifts in

demand," Rolnick says. Commercial properties, for example, derive their value from the businesses that use them, so when the economy doesn't perform well, the A/E/C markets for that sector usually follow suit.

According to the Dodge division of McGraw-Hill Construction, the value of new construction dropped 11 percent in March 2002 to a seasonally adjusted annual rate of \$468.9 billion. While the beginning of 2002 saw strong construction funding trends for public works, private nonresidential buildings and single-family housing, those entities slipped back in March.

"The economic slowdown is

still having an impact on certain segments of the industry," says Robert Murray, vice president of economic affairs for McGraw-Hill Construction.

## On the road again

State-funded transportation and infrastructure projects are prime examples of how economic slowdowns and budgetary constraints negatively impact design projects. No legislator likes to deal with a budgetary shortfall. It means confronting several options, all of which are unappealing: raising taxes to (hopefully) produce more revenue to make up for shortfalls, cutting popular spending programs, or operating the state at a deficit and increasing the state's debt load, an option that is not even open in certain states because of requirements in their constitutions that budgets be balanced.

Unfortunately, among the first programs to be considered for spending cuts are those calling for investment in infrastructure. In fact, according to the National Conference of State Legislatures, four states—Colorado, Maryland, New Jersey, and Virginia—recently canceled or postponed capital projects in response to economic problems.



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On the other hand, at the federal level, infrastructure funding doesn't make for such an easy target, and this sector is largely immune to economic downturns. As Rolnick points out, most federal legislators recognize that the nation cannot afford to put off much-needed improvements in critical highway projects. An efficient, safe transportation system is vital to our economy and our way of life.

Enter the Transportation Equity Act for the 21st Century (TEA-21). Since its passage in 1998, TEA-21 has spurred increased federal funding for surface trans-

portation programs, particularly highways and mass transit. The appropriations bill for the U.S. Department of Transportation for F.Y. 2002 continues this trend by providing record funding levels for transportation, thereby increasing opportunities for civil engineers.

Signed by President Bush on Dec. 18, 2001, the Department of Transportation and Related Agencies Appropriations Act provides an overall total of \$59.5 billion. In particular, the legislation allocates a record \$32.5 billion for the core highway program (an increase of \$1.9 billion over F.Y.

2001), \$6.7 billion for mass transit programs, and \$3.3 billion for airport construction (via the Aviation Investment and Reform Act for the 21st Century).

During F.Y. 2002, states have received roughly \$28.6 billion of the \$32.5 billion slated for highway expenditures. According to the American Road & Transportation Builders Association (ARTBA), of Washington, D.C., approximately 15 percent of the federal highway money spent each year by the states goes for engineering services. Therefore, engineering services funded by TEA-21 can be expected to total approximately \$4.1

billion, not including state and local matching funds. This amount includes work on highways as well as bridges.

Spurred by these continued increases in federal funding, the highway construction market should grow 3 to 6 percent in 2002, according to an economic forecast issued by ARTBA.

Although McGraw-Hill's numbers are slightly lower, they too predict a gain in 2002. "For the public works market, after a 7 percent increase in 2001, we are now expecting to see a 1 percent gain," Murray says. "Federal funding, for the moment, remains supportive on the basis of fiscal year 2002 appropriations, but there is evidence that some state projects have been put on hold."

Experts agree that transportation continues to be the market sector least affected by an economic recession. "Most other segments of this industry are expected to be down in 2002 as a result of the recession," Rolnick says. "However, the guaranteed increase in federal funding for highway, bridge, and transit projects provides a solid and growing base for transportation investment next year."

Unfortunately the same cannot be said for the airport market. With airline traffic still struggling to get back on steady feet and most major U.S. carriers swimming in

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## WHAT THE ANALYSTS SAY



Art Rolnick

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red ink, the airport construction market remains much softer than it was a year ago. In March, the Federal Aviation Administration forecast that volume is expected to decline 12 percent in fiscal 2002, but rise 14 percent in 2003. In the wake of Sept. 11 and the subsequent economic slowdown, many airports scrapped—either permanently or temporarily—multi-billion-dollar construction plans.

"Airport boards of commissioners across the country are deferring and/or trimming airport capital programs at record levels," Rolnick says.

Although airport construction has been reduced, new design and construction projects are stemming from new federal airport security requirements, including baggage-screening equipment and airport parking facility and runway security initiatives.

"September 11 had a profound effect on the aviation industry, and subsequently on the construction industry as a whole," Rolnick says. "Whether expectations will be met entirely depends on the

local, state, and federal governments ensuring that infrastructure developments are identified and funds appropriately allocated."

### The state of construction

Forecasts for the economy as a whole, and for the construction industry in particular, can be strong indicators for the design industry as well. After allowing for restarts of stalled projects—those previously designed but never constructed—projected recovery in the various public and private construction segments is a valuable predictor of the size and scope of recovery in the design market as well.

According to the Dodge division report, total construction during the first quarter of 2002 proceeded at an annual rate of \$501 billion, a 2 percent gain over both the previous quarter and the average for all of 2001. However, residential building in March 2002 fell 11 percent to \$222.1 billion. Single family housing in March was down 12 percent, while multifamily

## A EUROPEAN PERSPECTIVE

Across the Atlantic, engineers are facing economic conditions as difficult as our own.



Design professionals from the United States to Ukraine are struggling in the economic slowdown, and the conditions in Europe prove no exception. As the economy continues to slowly rebound here at home, developed countries in Europe are facing a variety of economic conditions.

The European construction market has been on a roller coaster ride for the past few years, as evidenced by the latest statistics. According to

FIEC, the European Construction Industry Federation, construction activity fell 0.3 percent in 2001, instead of increasing the projected 1.7 percent that had been predicted by the FIEC in October 2000.

The FIEC states that a 0.8 percent recovery in construction activity in the EU can be expected for the year 2002, but with significant variations between one country and another. Germany, for instance, is expected to have a 2.5 percent decrease in construction activity, while the United

Kingdom is expected to experience a 3.7 percent gain. Germany also has come closest to a full-blown recession, with GDP growth at practically zero during the past 12 months. This has significantly impacted the office market, with Berlin rents expected to fall by nearly 7 percent in 2003. However, slow recovery is expected from 2003 onward.

Progress in the housing and construction sector is fundamental to economic growth and stability in Central and Eastern Europe. As these countries emerge from decades

of centralized control, they must cope with a wide range of problems in this area, including severe housing shortages, poorly constructed and maintained housing stock, and lack of adequate financing.

Experts agree that although the recession is global, the recovery will be, most likely, individual in nature. Some countries have been hit harder than others, and those that were experiencing economic troubles prior to the recession will have to dig out of a deeper hole. — M.K.

housing dropped 8 percent.

The commercial real estate market has been impacted as well, to varying degrees. The Dodge report indicates that there was a 23 percent decline for stores and a 20 percent decline for hotels

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during March 2002, while office construction remained relatively stagnant and warehouse construction increased by 10 percent. The institutional side of the nonresidential market for the first quarter of 2002 was mixed. School construction fell 11 percent, following very strong contracting at the beginning of the year. Church con-

struction was down 10 percent, while public building construction (courthouses and detention facilities) was down 37 percent.

On the plus side, both healthcare facilities and amusement-related projects experienced 7 percent gains. The transportation terminal category jumped 71 percent, thanks to the groundbreaking of a \$283 million reconstruction of the PATH train terminal in lower Manhattan, N.Y., plus the start of a \$77 million airline terminal expansion in Anchorage, Alaska.

Non-building construction experienced a downfall, dropping 11 percent in March to \$96.2 billion. Most of the public works categories saw reduced contracting compared to February, including highways, sewer systems, water supply systems, and bridges. However, there was a 42 percent increase for river/harbor development work, boosted by the start of a \$169 million flood control project in Illinois. Electric power plant construction was also up in March, posting a slight 3 percent gain.

Overall the trend seems to be a shift in the client base for design and construction projects, from private to public. "The ability to raise money in this environment is challenging," Rolnick says.

#### Value of Construction Put in Place in the United States, Seasonally Adjusted Annual Rate.

Type of construction	April 2001	April 2002
<b>Private construction</b>	<b>677.4</b>	<b>665.5</b>
Residential buildings	392.2	425.5
Nonresidential buildings	220.6	185.6
<b>Public construction</b>	<b>193.4</b>	<b>206.5</b>
Highways and streets	57.7	56.8
Sewer systems	11.0	10.6
<b>Total construction</b>	<b>870.8</b>	<b>871.9</b>

Billions of 2002 dollars. Detail is excerpted and will not add to total.

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As the pros see it, the construction market is in recovery, and they classify the current slowdown as mild compared to the late 1980s and early 1990s, when building development and vacancy rates soared hand-in-hand, resulting in vacancy rates as high as 30 percent and new development at a near standstill.

"Although this is a difficult time for the construction industry in general, we are seeing the light at the end of the tunnel," Rolnick says.

According to the May 2002 ACEC *Market Watch*, the General Services Administration's Public Buildings Service (PBS), which oversees construction for federal buildings, expects a 20 percent increase—to \$986 million—in repair and alteration funds in 2003. Virtually every stage of the GSA project cycle holds business opportunities for design firms, from the earliest feasibility study through Post Occupancy Evaluation. GSA relies on A/E firms as quality assurance advocates and construction managers as well as designers.

#### What the future holds

Today, the engineering industry

seems to be regaining some confidence. It is hard-won confidence, coming in the trough of the recession. But it is a hint, at least, that there may be some light at the end of the tunnel.

"These days government and non-government entities are clearly prepared to take tough action to survive, and are firmer about the direction in which they need to head," Rolnick says. A recent survey by the Federal Reserve Bank shows a strong majority of manufacturers believe their operations have stabilized. There are also increasing signs that the global slowdown is coming to pass.

But economists are divided about exactly when, or how rapidly, the economy will recover. Construction industry forecasts for 2002 range from a 2.0 percent increase to a 6.3 percent decline. "No one can really predict at this point," Murray says.

Rolnick and others hope that the second half of 2002 will prove to be the turning point for the industry. "Although we are seeing improvements," Rolnick says, "it seems less of a case of extremes and more one of wait-and-see for our economy."