FMI

2014

FMI's Construction Outlook

1st Quarter Report

Potential sellers want to fulfil your desire, ***for a price***.

The economy is all about supply and demand seeking equilibrium. That's what one learns in economics 101. After 101, it gets complicated. However, even a basic understanding of the concept of supply and demand curves can provide remarkable explanatory powers. Even if one does not understand much about economics, we are all participants moving the supply and demand curves one way or the other every time we make a purchasing decision or work to make goods and services for sale. We might want a new computer system, but we really need to spend our money on a new truck. Potential sellers want to fulfil your desire, *for a price*.

Once we add price to the demand curve, things start to get more complicated. We can then start to consider alternative goods and consumer decisions. Maybe if we purchased the computer for much less than the new truck, we could work at home and not need to drive to work. These personal decisions that we make every day — microeconomics — are subsets of the larger economic business decisions made each day on a macroeconomic scale.

The goal here is not to provide a primer on supply and demand curves, but to shed a little light on what seems to be a tumultuous, uncertain economy and the often over-simplified approach to supply and demand, such as "I build grocery stores (supply); you want to start a grocery business (demand); and, I will build this for a fair price (equilibrium)." For example, supply and demand concepts help us to understand what is going on in the oil and gas industry with the upswing in mining of shale oil and gas deposits. The boom has spawned a rapidly changing economic and geographical landscape leading to lower prices for natural gas, which in turn affects other fuel choices for power generation, manufacturing and home heating. If the market can supply more natural gas at a lower price, demand rises. Demand for alternative fuels is likely to go lower. That causes upheaval in the market. For instance, mining shale deposits has taken off right at the time when we were beginning to see more investment from alternative energy sources like wind and solar. The result is a dimmer outlook for solar and wind power in the long run — unless the providers of wind and solar power can provide energy at a lower price or with the help of subsidies. Supply and demand in one commodity, or a group of commodities, also affects others like the demand for workers, technicians and engineers. Labor shortages usually lead to higher salaries. Suddenly, it seems we cannot graduate enough engineers and technicians to meet demand. Equilibrium is a theoretical or short-lived point on a graph. It only happens in a perfect world. Supply and demand is a dynamic phenomenon. For instance, if the price of natural gas goes down too far, suppliers might not want to bring as much of it out of the ground. Supply and demand is about competing goods.

Supply and demand is everywhere and all those supplies and demands interrelate in some fashion. If we could tune up our Google glasses to display supply and demand curves as we walk around town, we would soon get a headache trying to absorb all that information flowing into our brains. That's what makes forecasting as much an art as it is a science. The complexity of things has helped to spawn demand for supercomputers and quants to study markets and complex weather patterns. However, it is difficult to calculate the actions and interactions of people's emotions and the effect on local, na-

tional and global politics. So, we need to throw a little crowd psychology into our supply and demand calculations. Like the paparazzi, when a star is sighted, they all run with their flashing cameras and stumble over each other to get the juicy photo of Justin or anything Gaga. The same sort of phenomenon happens in construction markets, although most companies are not near as fast to react as the paparazzi. When the government was on its recent spending spree, a wave of contractors looking for work started chasing government contracts. Now, more contractors are looking for ways to enter the oil and gas markets. The real trick of market timing is to be there ahead of the pack and to find the rising star before the frenzied paparazzi do. That is the ingredient for finding an exclusive market, but such finds don't remain exclusive for long in the information age. Nonetheless, the "shale gale" is still in a boom stage and seeking equilibrium of some sort.

So, how do you plan for your business in an economy that can turn on a tweet? Not long ago, what would have been considered short-term planning — about a year for most — is now long-term planning. Short-term planning is becoming more like a weekly work plan. For the construction industry and the economy as a whole, this means it is more difficult to consider projects that may take years to unfold. For instance, a commercial venture may be able to put together a website in a few weeks, but planning and building a store takes a year or more. It seems that the constant drive to do everything faster has not only decreased our attention span, but has degraded our ability to solve larger problems and provide long-range solutions. In other words, all the quantification that has been done to reduce risk seems to be a cause of more risk.

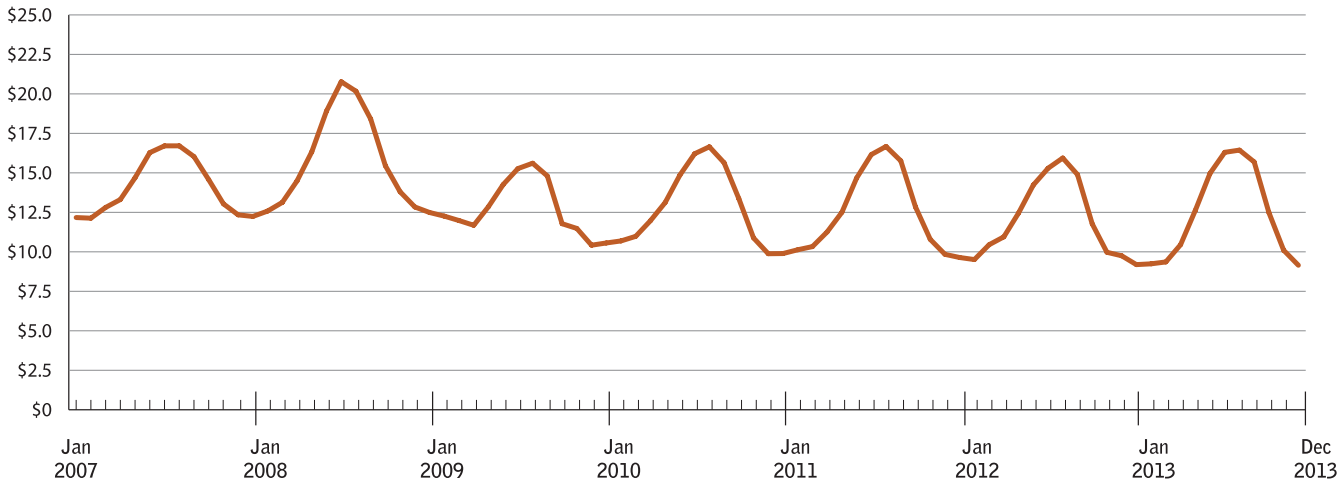
The issues of rapid change affecting supply and demand are reflected in our construction forecast. Commercial construction is beginning to lift itself out of the slump because investors are beginning to take some more risk as it becomes "grow or perish" for retailers trying to stay ahead of the consumer. Office construction still faces uncertainty in job growth in the service sector in no small part due to technology replacing workers (alternative goods). Public sector construction is stagnating due to lack of funding as states build up tax coffers. The federal government wrestles with the deficit, making the economic choice between directly helping people get out of a state of joblessness and growing poverty and back to contributing to the wealth of the nation, or paying down the deficit and hoping that lower debt will spur investors to expand or start up new businesses and hire more. Health care construction is being pulled in many directions, from political questions to technological advancements to finding some sort of equilibrium between growing demand and high-priced supply.

These days, it seems every strategic plan is a contingency plan in a rapidly changing world. One way to deal with an economy that turns on a tweet is to become really effective at reacting to or answering the "tweeted" sentiments of the crowd. If a message like, "Saw this really nice little home today. Runs on solar power for $995" is suddenly re-tweeted a million times, then you crank up your 3D printers, turn out a solar home for $989 and go to market next week.

Another approach to planning in a world "all-a-twitter" is to sift through the noise and focus on market fundamentals. For instance, despite the changing economy, the nation will still need schools, health care facilities, homes, factories, bridges and roads, etc. How can the industry or a given firm better understand and offer what the consumer demands? This economy has twisted many supply and demand curves. Nonetheless, it is the fundamentals that shine through and the foundation industries that are making a comeback. However, the fundamentals are not without change. For instance, more pipes and wires are going underground, and more communication is being conducted over airwaves than wires. "Net zero" has entered our construction lexicon and is becoming a reality in some areas. Construction and manufacturing are morphing into new approaches. After what is only a short time, BIM has become a recognizable acronym for most in the industry, even if many are still struggling to "get with the program."

The outlook is good for those who can get out ahead of the crowd or those who can stand out in the crowd, but it will be a long struggle for those who are stuck behind the pack looking for leftovers. Inaction or non-participation is still a supply and demand decision. Even if the theory that the goal of supply and demand is to reach equilibrium, the goal for individuals and businesses is to find their advantage — in an ethical, legal and moral way. That is what makes markets so dynamic and often uncertain. In a perfect world, supply and demand decisions would be made with access to all the information needed about the market. This is not a perfect world, yet. Forecasters and business people must strive for the best information they can get and take action based on informed decisions, or wait for others to take action and follow the bread crumbs.

United States Price of Natural Gas Delivered to Residential Consumers
(Dollars Per Thousand Cubic Feet)



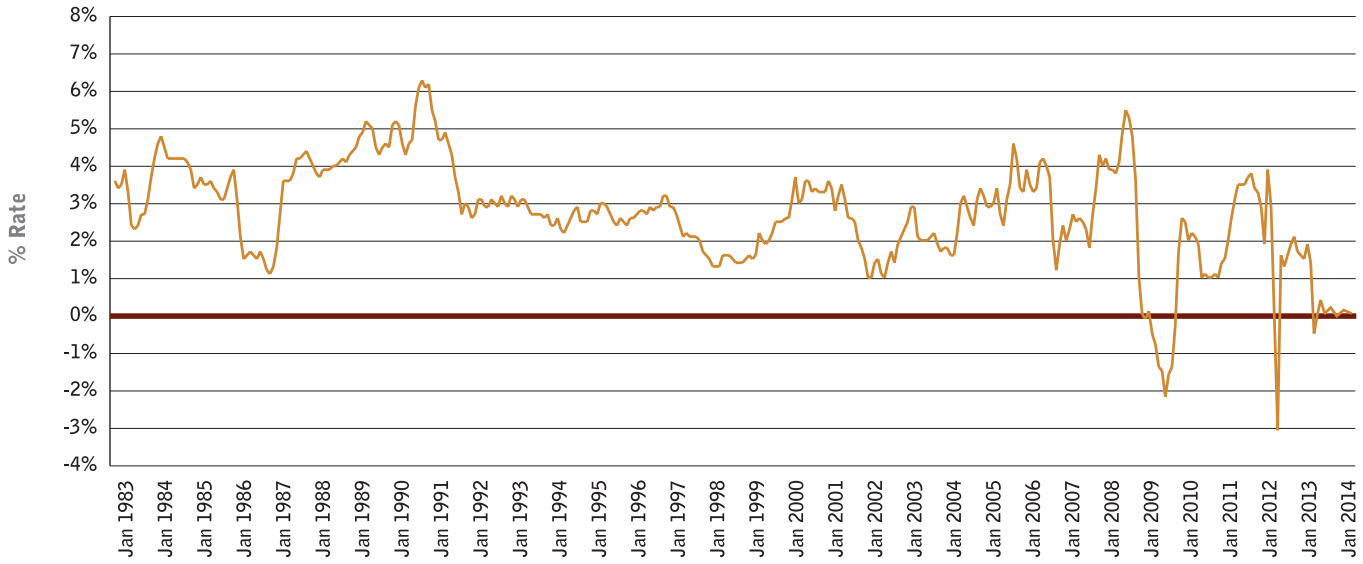
Source: U.S. Energy Information Administration

Weekly U.S. Regular Conventional Retail Gasoline Prices
(Dollars Per Gallon)

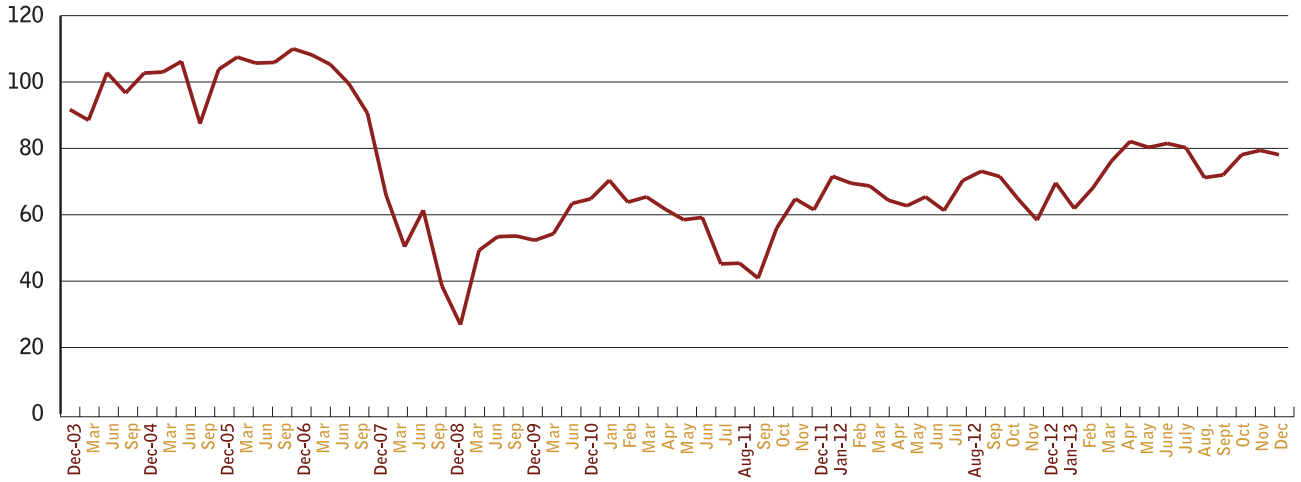
Source: hppt://www.eia.gov/petroleum/gasdiesel/

Consumer Price Index

Inflation Remains Under Control

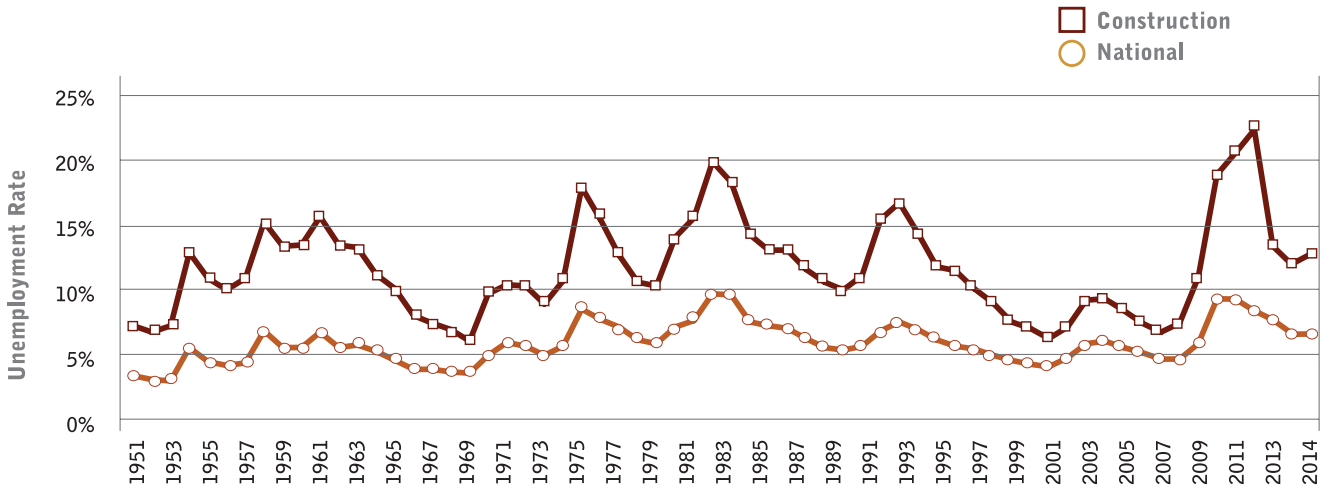


Conference Board Consumer Confidence Index



Source: The Conference Board

Construction Unemployment Rates



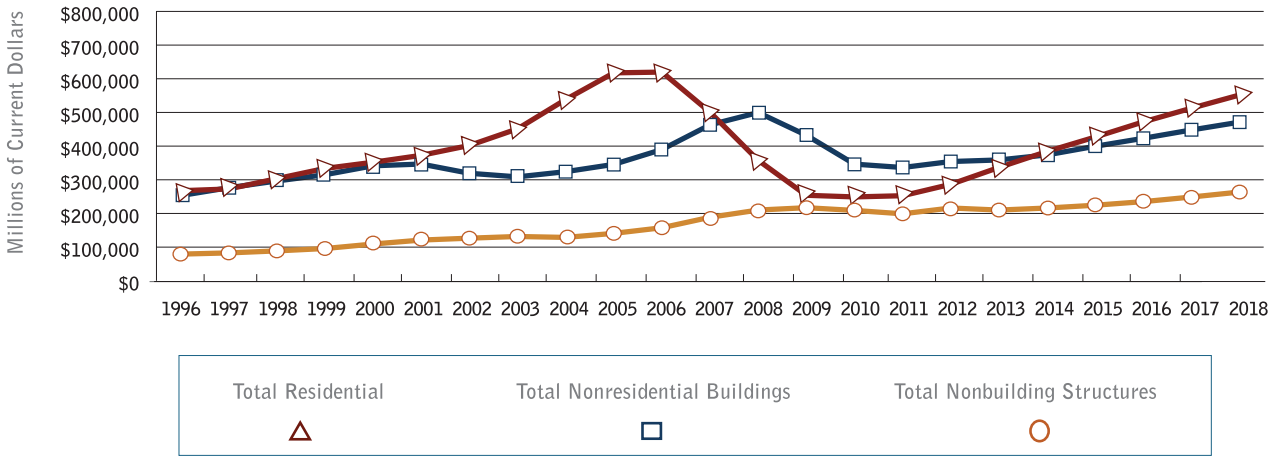
"Construction employment gained 7,000 jobs in May." (BLS)

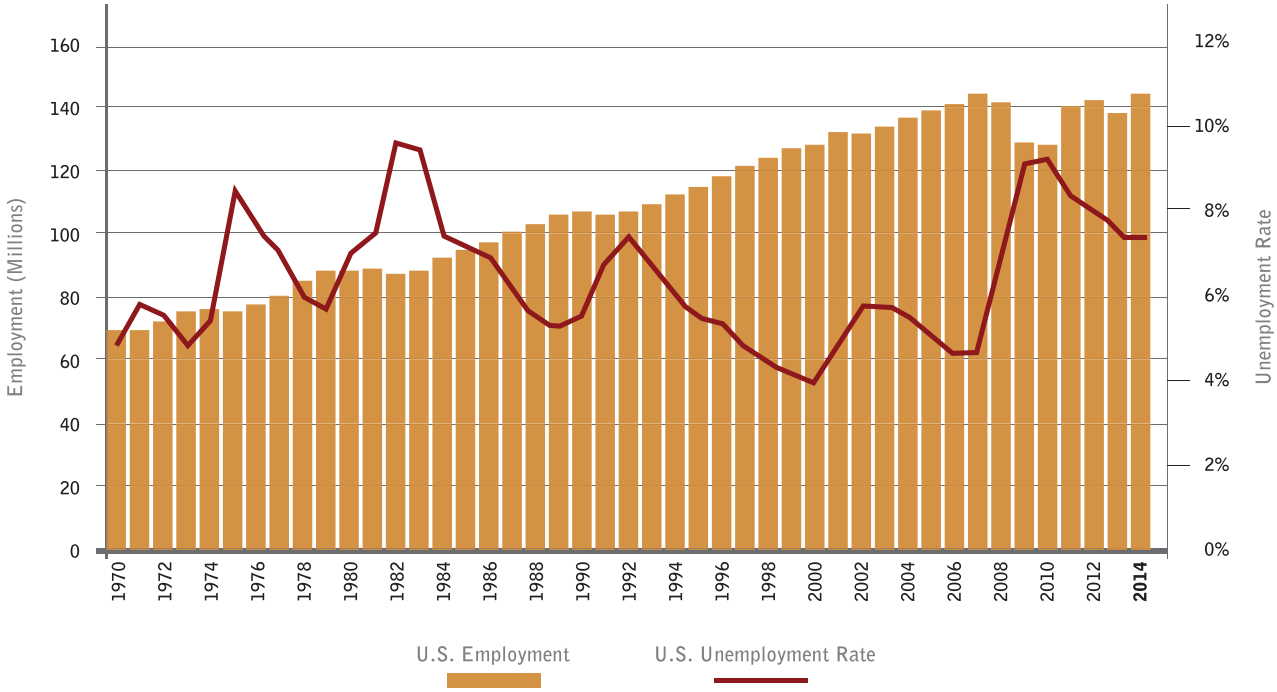
Construction Forecast

Overall, our construction forecast remains in the cautiously optimistic zone. As always, the blanket statement hides the detail for individual market sectors. Residential construction is expected to remain a high-growth market, but we have pulled back on the outlook for multifamily construction. Multifamily is still a fast-growing market, but the rate of growth is slowing. Home improvements are improving. The interplay between these three residential categories is dynamic and heavily influenced by job growth, wage growth and interest rates among other factors. Assuming more people won't have to live out on the streets, housing choice, especially for new construction, can change relatively fast. For instance, if interest rates or prices take a large jump up, more people will stay where they are and invest in home improvements.

There is a sense that nonresidential construction is on the verge of breaking out of its long slumber. However, like the groundhog, nonresidential construction has come out of its burrow and seen its shadow. In this case, it means it looks like there will be six more months of slow growth. In fact, one of the reasons for that slow growth is that the nation has had a long and difficult winter. However, if we think the weather is uncertain, the economy is even more flighty these days. All that said, we expect total construction put in place to grow at the rate of 8% this year and for the next few years. Just like the spring, despite all odds and nasty economic weather, the nation needs to grow and that means more construction projects.

FMI Construction Put in Place, Estimated for the United States



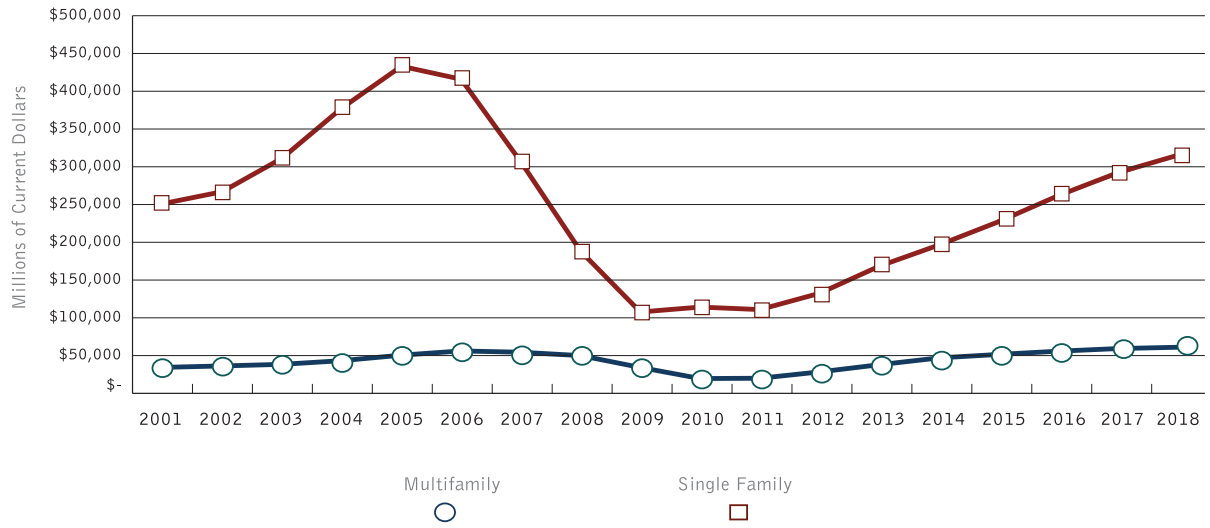


RESIDENTIAL

Most signs point to continued solid improvement in the growth of residential construction; however, the market will grow at a slower pace than it did in 2013. Our current forecast calls for 18% growth in single-family construction and a sharper drop in the growth rate for multifamily from 44% in 2013 to a still strong 27% in 2014, with continued tapering in the longer-range forecast. Although mortgage rates are still low by historical standards, housing affordability is slipping somewhat, mostly due to increasing prices for existing homes. Employment figures are slightly better, but new jobs and pay scales aren't rising as fast as costs. This will keep the growth rate down for most of the country.

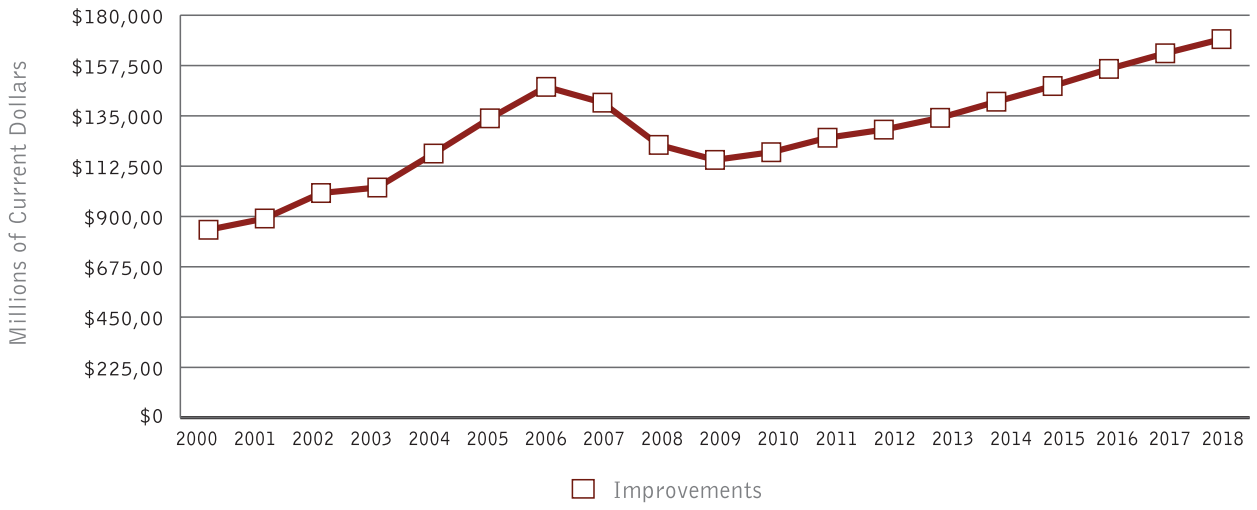
Trends worth watching in the residential markets include more scrutiny by investors looking to buy low and sell high, or rent distressed properties left over from the recession. Another related trend that could affect the market for years to come is the growing wealth gap, making high-end markets in major metro areas continuously more expensive while low-end markets become less affordable to the largest sector of the population. A recent report, "A Tale of 2000 Cities," published by the Demand Institute (February 2014) details this phenomenon and predicts what appears to be an inevitable future for the American dream.

Residential Construction Put in Place



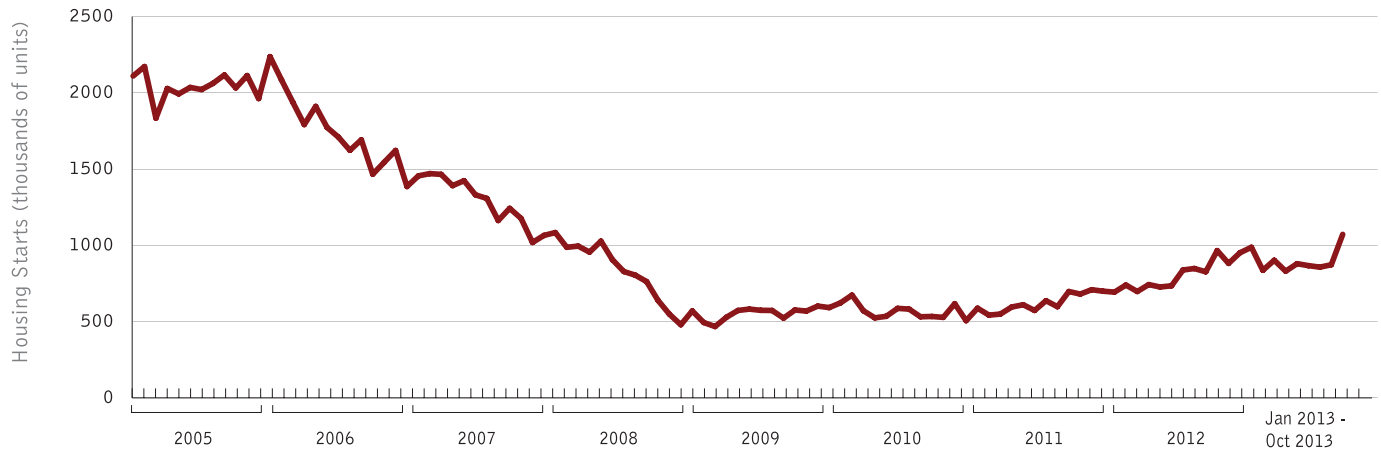
Residential Construction Improvements Put in Place

Forecast as of Q1 2014



New Privately Owned Housing Units Started

(Thousands of Units, Monthly, Seasonally Adjusted Annual Rate)



TRENDS:

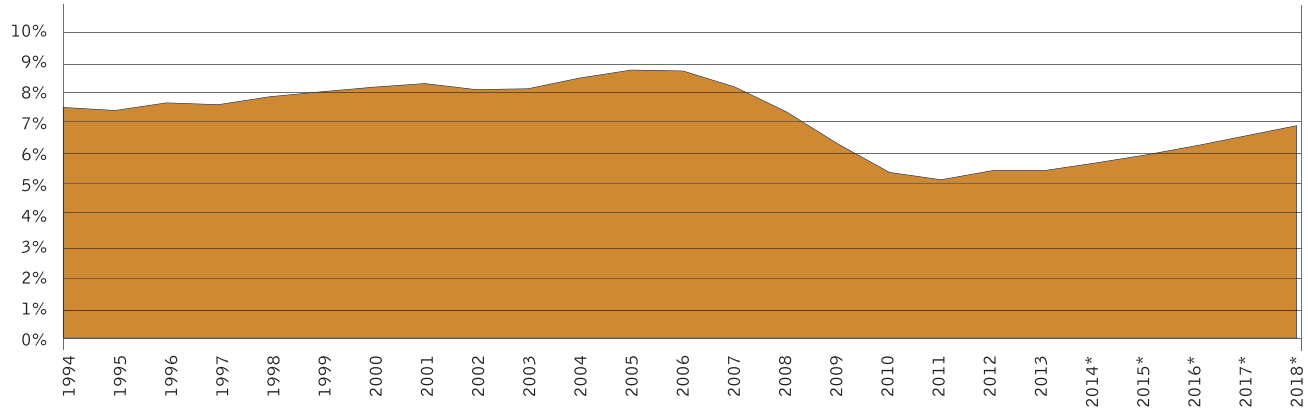
- According to CoreLogic, completed foreclosures were down 19 percent from January 2013 to January 2014, and "the seriously delinquent rate is just under 5 percent for the first time since November 2008."
- The February 2014 report, S&P Dow Jones Indices for its S&P/Case-Shiller Home Price Indices, slipped .08% from January rates for the 20-city composite.
- According to the U.S. Census Bureau, "Privately-owned housing units authorized by building permits in January were at a seasonally adjusted annual rate of 937,000. This is 5.4 percent (±0.7%) below the revised December rate of 991,000, but is 2.4 percent (±1.0%) above the January 2013 estimate of 915,000." Also, "Privately-owned housing completions in January were at a seasonally adjusted annual rate of 814,000. This is 4.6 percent (±8.3%) above the revised December estimate of 778,000 and is 13.1 percent (±12.8%) above the January 2013 rate of 720,000." (January 2014)

DRIVERS:

- Unemployment
- Core CPI
- Income
- Mortgage rates
- Home prices
- Housing starts
- Housing permits

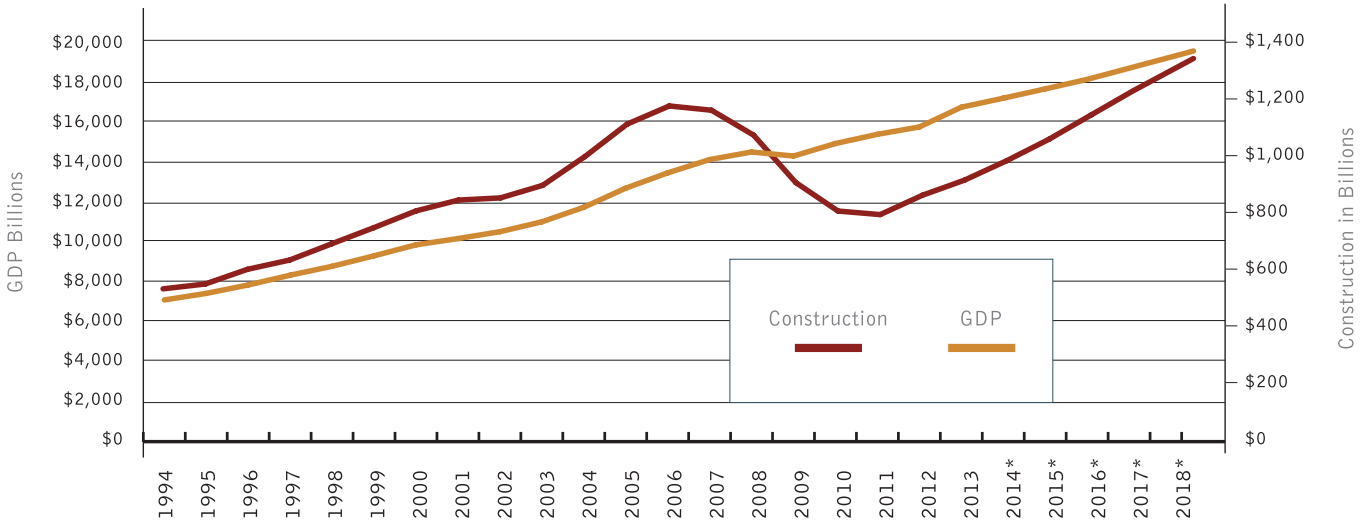
NONRESIDENTIAL BUILDINGS

Construction as a Percentage of GDP



*FMI Forecast

Construction Spending and Nominal GDP



*FMI Forecast

Value of Public Construction Put in Place (Seasonally Adjusted Annual Rate)

Millions of dollars. Details may not add up to totals due to rounding.

Value of Construction Put in Place — Seasonally Adjusted Annual Rate (Millions of Dollars) As of November 2013	Total Construction Put in Place (Dec 2012)	% of Total Construction Put in Place (Q4 2012)	Total Construction Put in Place (Dec 2013)	% of Total Construction Put in Place (Q3 2013)
*Public Construction	$268,540	31%	$266,567	29%
*State and Local	$241,954	28%	$243,235	27%
*Federal	$26,586	3%	$23,332	3%
FMI Forecast: Private Construction Put in Place	$588,413	69%	$638,916	71%
FMI Forecast: Construction Put in Place	$856,953	100%	$905,483	100%

* Source: U.S. Census Bureau Construction Spending

Lodging

On a percentage basis, growth in lodging construction was a top performer in the past two years. We expect that double-digit growth to slow to 13% for 2014 to $16.1 billion and not exceed 2006 levels until 2016. Supporting this growth are continuing brighter forecasts for occupancy levels and RevPar. In part, the improving economics in the lodging sector is due to the reduced rates of new hotel openings in the past few years. However, Lodging Econometrics forecasts 591 hotels openings for 2014 compared with 500 in 2013 and just 407 in 2012. The outlook is for fewer luxury, casino-type hotels and more upper middle and upscale national brands to expand.

TRENDS:

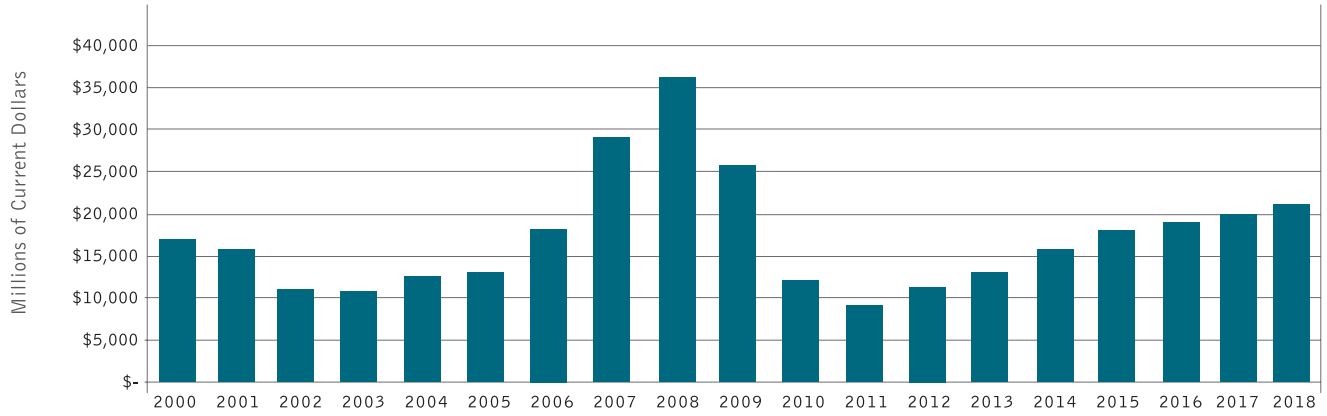
- According to a report by PriceWaterhouseCoopers (PwC), RevPar growth should end up at 5.5% for 2013, with expected growth of 5.9% for 2014. (PwC "Hospitality Directions U.S.," November 2013)
- The increase in average daily rates per room will continue to be modest as business and vacation travelers shop for the best buy.
- According to Lodging Econometrics' forecast, the pipeline for new openings will improve 18.2% in 2014.
- Green building is more commonplace in remodels and retrofits.

DRIVERS:

- Occupancy rate
- RevPar
- Average daily rate
- Room starts

Lodging Construction Put in Place

Forecast as of Q1 2014



Office

It appears office construction is finally getting some traction, and we expect 2% growth for 2014, rising to 5% to 6% through 2017. Our forecast for $39.3 billion in construction put in place for 2014 is still just 57% of the total construction at the height of the market in 2008. Nonetheless, the fundamentals are slowly improving with supply and demand turning in favor of the property owners in most major metropolitan areas. That means vacancy rates are down slightly, rents are up and there are fewer concessions for leases.

TRENDS:

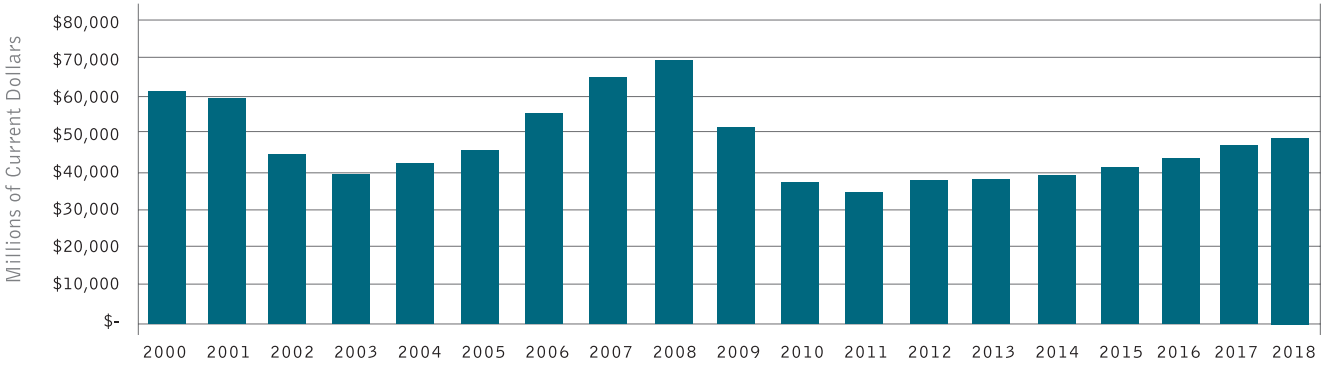
- According to the National Association of Realtors, "Vacancy rates in the office sector are expected to decline from a projected 15.6 percent in the fourth quarter to 15.4 percent in the fourth quarter of 2014."
- Net absorption of new office space should improve to 46.1 million square feet in 2014 compared with just 33.2 million in 2013. Rents are increasing in major metros like New York City and Chicago, but are flat around most of the country, according to NAR. The trend toward new construction will focus on areas of high job growth in technical fields.

DRIVERS:

- Office vacancy rate
- Unemployment rate

Office Construction Put in Place

Forecast as of Q1 2014



Commercial

We expect commercial construction will grow another 7% in 2014 to $52.6 billion — the highest mark seen since 2008. Consumer spending is up, but wage increases aren't keeping up with spending, so it is not expected that we will have a boom at the mall anytime soon. However, nonstore sales continue to rise faster than traditional purchasing sites. For contractors working in the commercial sector, pricing will continue to be a challenge even while owners want more amenities such as green building methods. The challenges may have some benefits as contractors learn to work leaner and use new building methods like prefabrication and modular construction.

TRENDS:

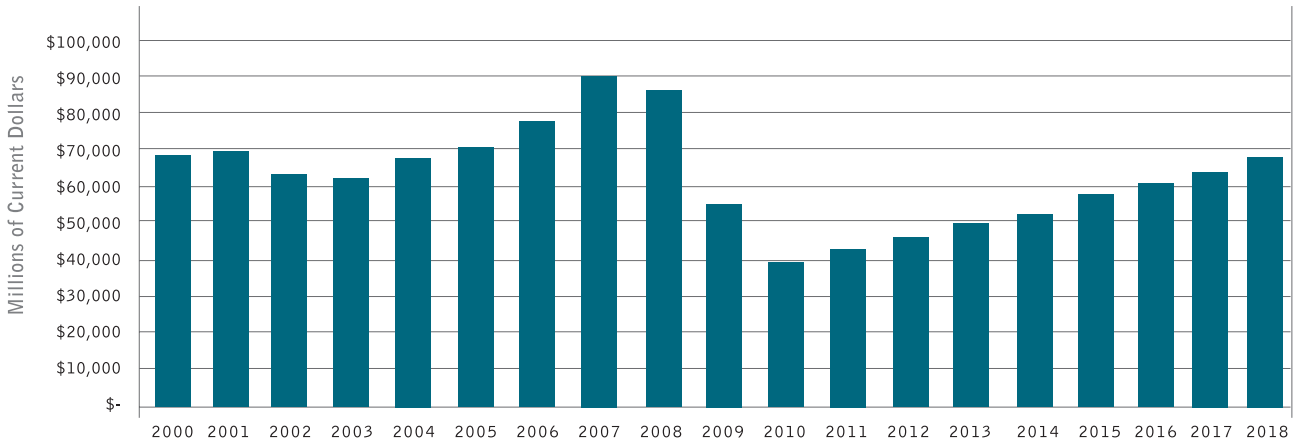
- According to the Department of Commerce, "retail and food services sales for February, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were $427.2 billion, an increase of 0.3 percent (±0.5%) from the previous month, and 1.5 percent (±0.9%) above February 2013. Total sales for the December 2013 through February 2014 period were up 2.3 percent (±0.5%) from the same period a year ago. The December 2013 to January 2014 percent change was revised from -0.4 percent (±0.5%) to -0.6 percent (±0.2%)."
- The Department of Commerce also reported "Nonstore retailers were up 6.3 percent (±2.5%) from February 2013 and health and personal care stores were up 5.5 percent (±1.9%) from last year."
- Consumer confidence fell from 79.4% in January to 78.1% in February, the same score as December 2013. (The Conference Board)
- Increased store remodeling could stall new construction.
- Look for increasing multiuse projects.

DRIVERS:

- Retail sales
- CPI
- Unemployment rate
- Income
- Housing starts
- Building permits

Commercial Construction Put in Place

Forecast as of Q1 2014



Health Care

Health care construction will continue to grow at a slow pace of 2% for 2014 and is expected to improve to 6% in 2015. While hospital beds may be trending downward, nursing homes and assisted-living facilities will continue to grow due to the demographics of retiring baby boomers. The growing bifurcation of wealth in the nation, along with a growing scarcity of physicians, will also affect how health care is delivered in the future. However, due to uncertainty as to the direction of new health care insurance and other new regulations, the industry has put many plans on hold and gone back to the drawing board. In 2014, the expectation is that there will be more clarity as to the direction of the industry, and one direction is to build more ambulatory care centers. With new laws and scrutiny of costs, the goal is to be more efficient and less extravagant by using greater technology for record keeping and care. Hospital stays have been decreasing; so many regions require fewer beds even if more people become eligible for medical care. Excluding the posh facilities for the wealthy, new designs will be more lean, green and filled with technologies to keep the added labor requirements to a minimum.

TRENDS:

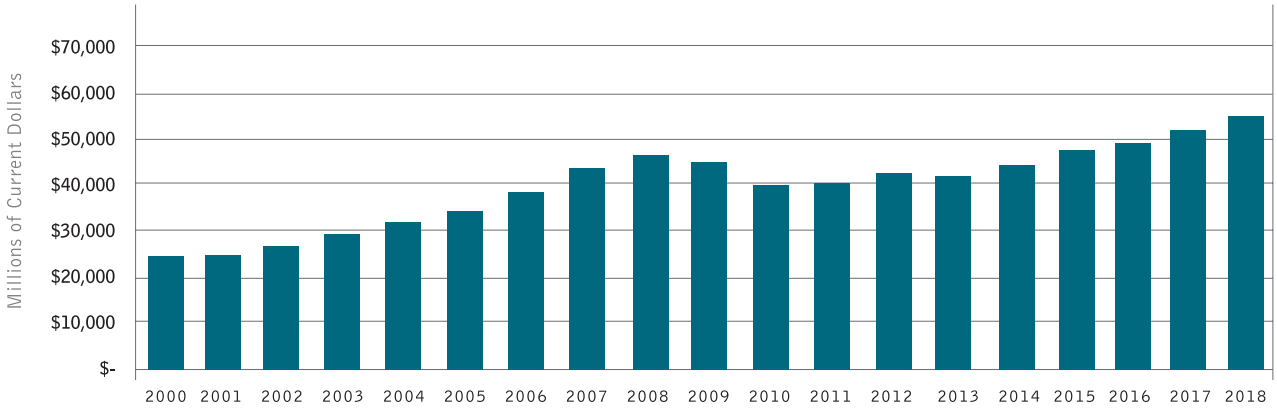
- The Affordable Health Care Act (ACA) implementation is highly flawed due to poor software implementation and continued political hurdles causing uncertainty in the market for health care
- Hospital beds per 1,000 people trending downward
- Shorter patient stays
- Increasing use of growing number of ambulatory-care facilities
- Heath care industry still not prepared for increased number of insured
- Trend toward rebuilding existing facilities to use modern hospital design and allow for greater use of technology
- Nontraditional funding sources for private nonprofit facilities
  - Private development and equity
  - Government or government-backed
  - Pension and life insurance companies

DRIVERS:

- ↑ Population change younger than age 18
- ↑ Population change ages 18-24
- ↑ Stock market
- ↓ Government spending
- ↑ Nonresidential structure investment

Health Care Construction Put in Place

Forecast as of Q1 2014



Educational

Educational construction put in place will improve 3% in 2014 to $83.0 billion. Improving state and local budgets will help move educational construction back into growth mode; however, for most states in the union, funding, especially for higher education, will continue to decrease while tuitions increase. Higher tuition and fewer job opportunities have led to growing student debt levels. Students ready to enter college may look to other means of education than traditional brick and mortar schools or may skip college altogether.

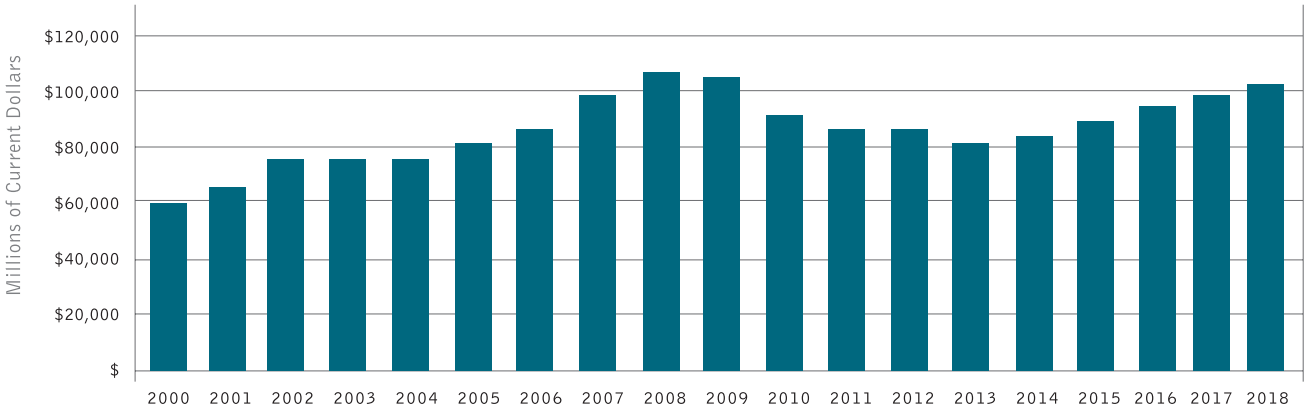
TRENDS:

- Significantly less funding from states for K-12 schools
- Enrollment growth of 2.5 million in the next four years
- New school designs more flexible for changing classrooms and greater use of natural light
- Greater attention to reducing energy use and employing green building technologies
- Renovation and additions to current school buildings will continue to grow in comparison to new school projects
- Greater focus on safe schools as the threat of shootings on campus continues to rise

DRIVERS:

- ↑ Population change younger than age 18
- ↑ Population change ages 18-24
- ↑ Stock market
- ↓ Government spending
- ↑ Nonresidential structure investment

Educational Construction Put in Place
Forecast as of Q1 2014



Religious

After a drop of 8% in religious construction in 2013, we expect 1% growth in 2014. What growth we see will likely be renovation, as newly formed congregations move into vacated retail space or reoccupy church buildings abandoned by other faiths. As the housing market slowly continues a growth trend in the coming years, we may also see more expendable income for contributing to new community-based houses of worship. However, like retail, it is possible that more religious congregations will meet online or use other forms of communication.

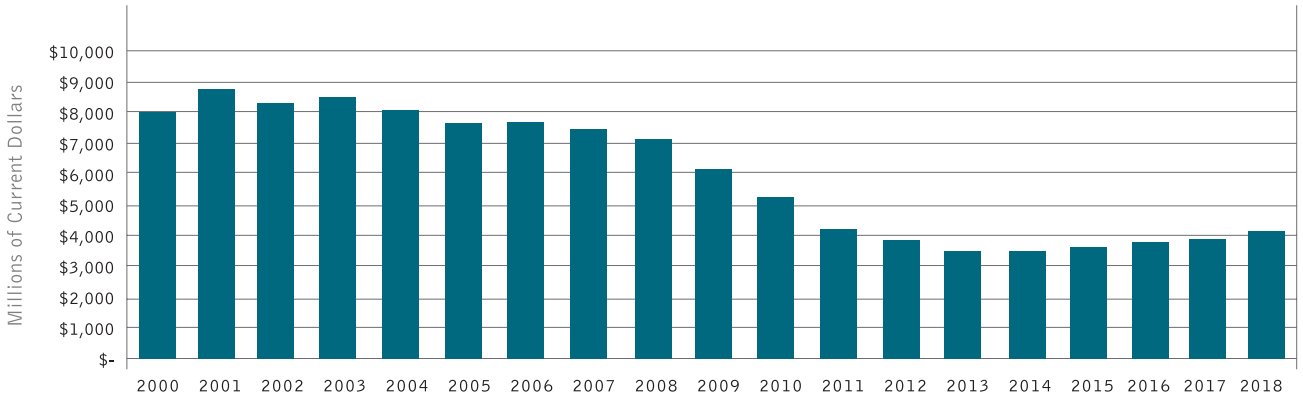
TRENDS:

- The lending environment continues to be a challenge for many congregations.
- Establishing a capital campaign is becoming increasingly common.
- Many churches are seeing tremendous declines in contributions and tithes.
- More parishioners are relying on their houses of worship to provide guidance and assistance, further stretching thin resources.
- New methods for charitable giving, including online giving and donation collections, are empowering religious organizations.
- Churches are becoming smarter about attracting parishioners who are drawn in by facilities and the church building itself.
- Energy efficiency, green sustainability and long-lasting quality are becoming top features many congregations want in worship houses.

DRIVERS:

- GDP
- Population
- Income
- Personal savings rate

Religious Construction Put in Place
Forecast as of Q1 2014



Public Safety

Public safety construction is expected to rise a modest 1% in 2014. According to the U.S. Department of Justice Federal Prison System FY 2014 Congressional Budget report, "Inmate overcrowding continues to be a major concern and challenge for the BOP. Thus far in FY 2013, the federal inmate population totals 217,929, and systemwide crowding is at 37 percent over rated capacity, with 54 percent and 44 percent at high and medium security institutions, respectively (data as of March 21, 2013)." Although we expect spending to increase, the rate of increase will be attenuated by the public's abhorrence of new taxes.

TRENDS:

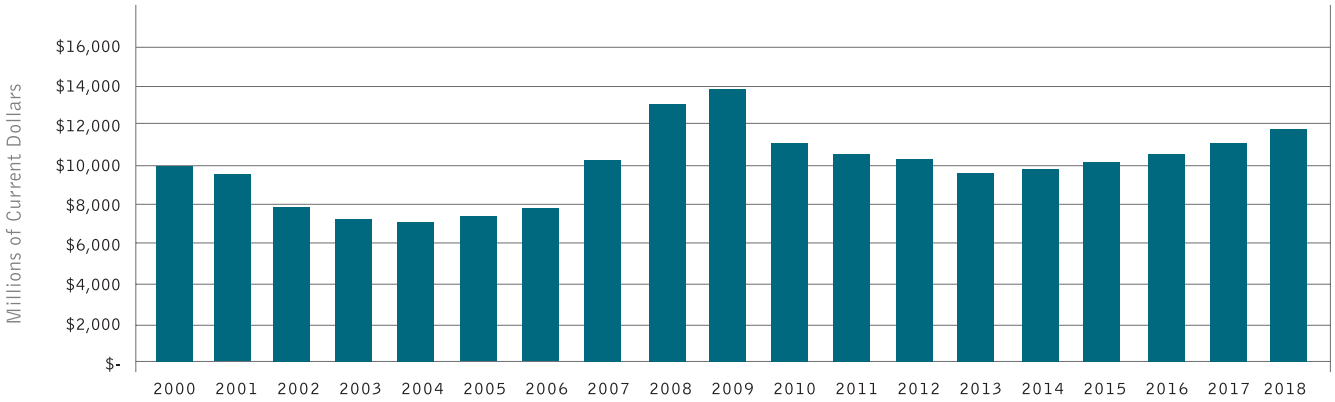
- "About 1 in every 35 adult residents in the United States was under some form of correctional supervision at year-end 2012, the lowest rate observed since 1997." (Bureau of Justice Statistics, December 2013)
- "At year-end 2012, the combined U.S. adult correctional systems supervised about 6,937,600 offenders, down by about 51,000 offenders during the year." (Ibid.)
- The President denied a request by the Pentagon seeking to overhaul the U.S. detention facility at Guantanamo Bay, Cuba.
- Privately managed secure facilities are increasing.
- Private corporations now operate 5% of the 5,000 prisons and jails in the U.S. The private prison-industry is growing at a rate of 30% per year.
- CM-at-risk or design-build arrangements will increase.
- P3s overcome shortfalls in public financing.

DRIVERS:

- ↑ Population
- ↓ Government spending
- ↓ Incarceration rate
- ↑ Nonresidential structure investment

Public Safety Construction Put in Place

Forecast as of Q1 2014



Amusement and Recreation

Construction for amusement and recreation markets should improve 2% in 2014 to $15.4 billion. New stadiums are increasingly more like new towns as the development includes mixed-use venues, in addition to baseball or football or whatever the anchor sport is in the stadium. This approach can often revitalize a decaying part of town, but also offers more ongoing work and growth. That is the approach that is required these days to get the public to support the new arena both with their allegiance to the team and with its tax dollars. In the case of the Atlanta Braves, there will be a significant input of funds from the team, which helps demonstrate its long-term commitment as well. While large projects dominate the news, smaller projects for amusement and recreation may include baseball fields in towns and smaller venues as part of school projects, especially for higher education.

TRENDS:

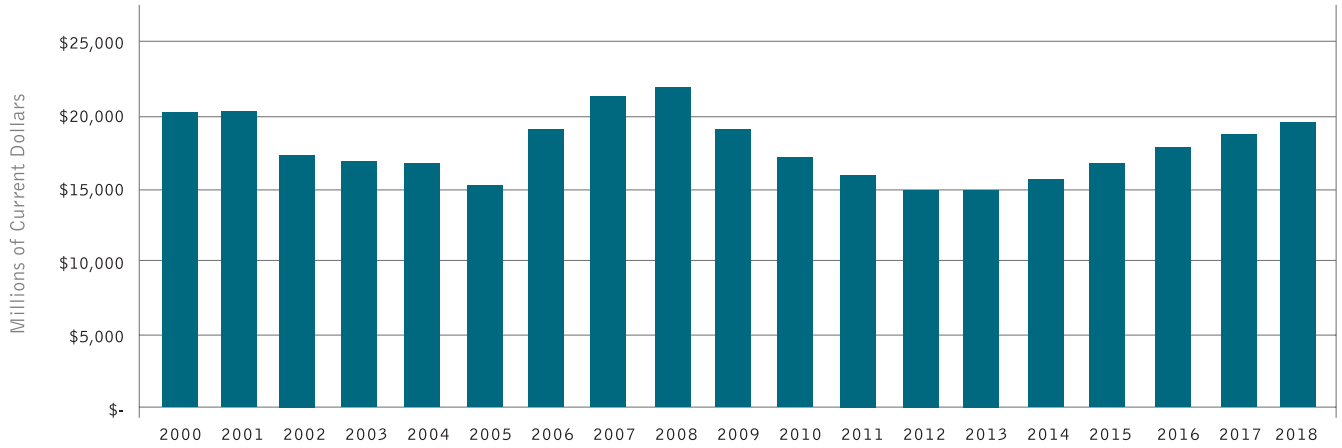
- The Atlanta Braves have announced they will build a new stadium using a public/private partnership.
- The San Francisco 49ers have recently broken ground on their new $850 million stadium expected to be completed in 2014 in time for the new season.
- The Minnesota Vikings $1.1 billion project has been approved by the state senate.
- Casino plans are underway in a number of states, including New York, Pennsylvania, Maryland, Florida and Ohio, with some investors coming from offshore.
- A public/private venture planned for the campus of UNLV includes a 50,000-seat, domed stadium but is still awaiting approvals and taxpayer votes on plan to allow the project to be tax-free.
- Competition in the gaming sector will draw business away from some existing gambling centers such as Atlantic City, as well as other public arenas.

DRIVERS:

- Income
- Personal savings rate
- Unemployment rate

Amusement and Recreation Construction Put in Place

Forecast as of Q1 2014



Transportation

Transportation construction will improve 7% in 2014 to $4.4 billion. While reauthorization or a replacement of MAP-21 is still uncertain, the president's 2015 budget proposes $73.61 billion for surface transportation spending in fiscal year 2015; most of the proposed funds are directed at highway programs. A sign of the need for updated transportation made the news recently when Vice President Biden compared LaGuardia airport to a "third world country." According to a report from CNN, the Port Authority responded with an announcement that it proposed to spend $27 billion on a "10-year capital plan." (CNN, February 6, 2014)

TRENDS:

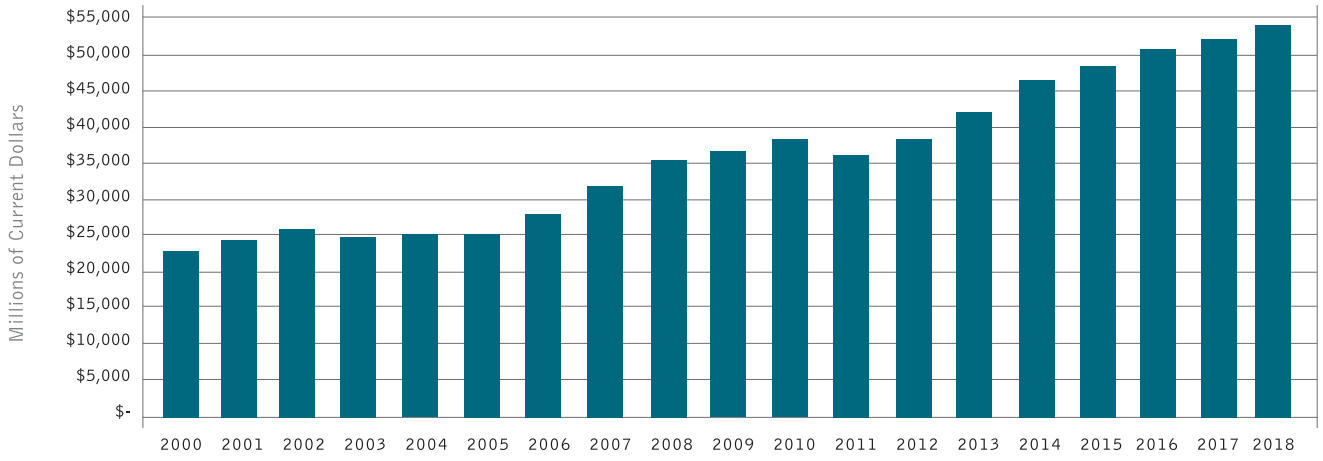
- On February 26, 2014, the President announced, "the U.S. Department of Transportation is making available $600 million in TIGER competitive grants to fund transportation projects." (White House Press Release)
- According to the American Association of Railroads in February 2014, carload volume decreased and intermodal volume increased compared with February 2013. "Intermodal traffic in February totaled 993,807 containers and trailers, up 1.1 percent (10,729 units) compared with February 2013, which represents the 51st-consecutive year-over-year monthly increase for intermodal volume. U.S. carload originations totaled 1,100,858 in February 2014, down 1.1% (12,061 carloads) from February 2013. (AAR February 2014)
- The FAA Modernization and Reform Act will provide $63.6 billion for the agency's programs between 2012 and 2015.
- The 2013 FAA forecast calls for U.S. carrier passenger growth over the next 20 years to average 2.2 percent per year, compared to last year's forecast growth of 2.6 percent per year.
- High-speed rail is slow to get projects off the ground due to state funding and political resistance.
- Growth in container ports is recovering from the recession.
- Intermodal transportation will be the focus of new projects.

DRIVERS:

- ↑ Population
- ↓ Government spending
- ↓ Transportation funding

Transportation Construction Put in Place

Forecast as of Q1 2014



Communication

Communication construction dropped 10% in 2013, but is expected to recover 1% in 2014 and modestly in the coming forecast years. While the rate of cell tower installations may decrease due to most major service providers completing their service expansion, a recent report from Chessiecap notes that there is an increasing demand for small cell networks to cover "dead" areas and provide improved service in areas where cell towers are prohibited. Chessiecap estimates that this will be a primary driver for engineering and construction in the sector in the next two years. (Chessiecap "A Middle Market M&A Update—January 2014") The growth in wireless devices is sure to keep demand high in the coming years.

TRENDS:

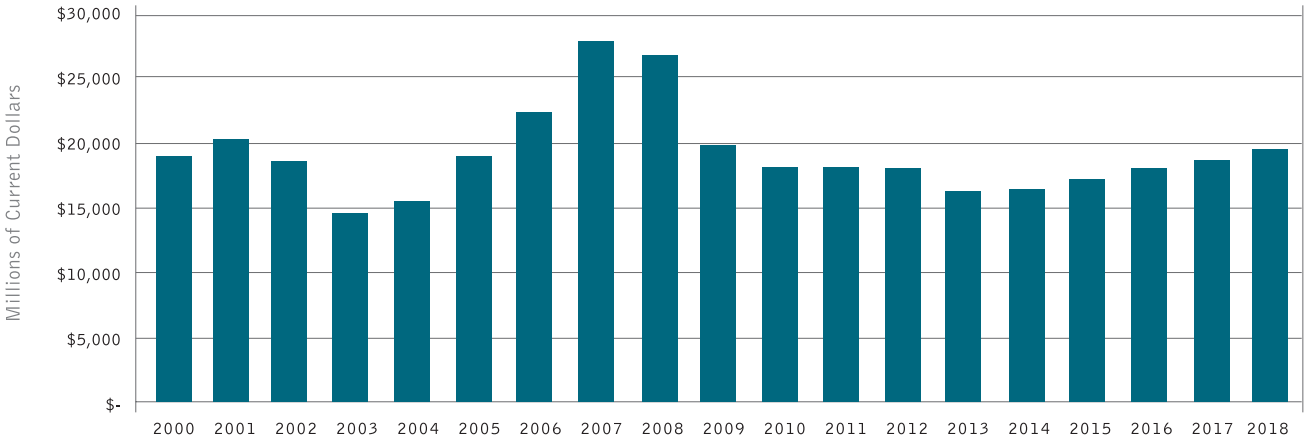
- "Mini towers" for increasing coverage and spectrum will proliferate rapidly in the next five years.
- Wireless technology is the fastest-growing area, as telecoms roll out more 4G technologies with smartphones and tablets.
- Data security is critical for large businesses and governments in the face of potential disasters and threats from hackers and foreign enemies.

DRIVERS:

- Innovation/technology
- Global mobility
- Population
- Security/regulatory standards
- Private investment

Communication Construction Put in Place

Forecast as of Q1 2014



Manufacturing

Manufacturing construction is showing signs of sustainable growth with an expected 5% increase for 2014 to $45.2 billion and adding another 8% for 2015 to $56.4 billion. While the outlook for continued steady growth is good, improvements in the economic outlook for durable goods has had difficulty sustaining a rally as new orders fell $2.2 billion in January to $225 billion. Nonetheless, global economic factors like the cost of energy and transportation, as well as political unrest and the need for trained workers in high tech areas, will continue to tip the balance for locating or relocating to the U.S.

TRENDS:

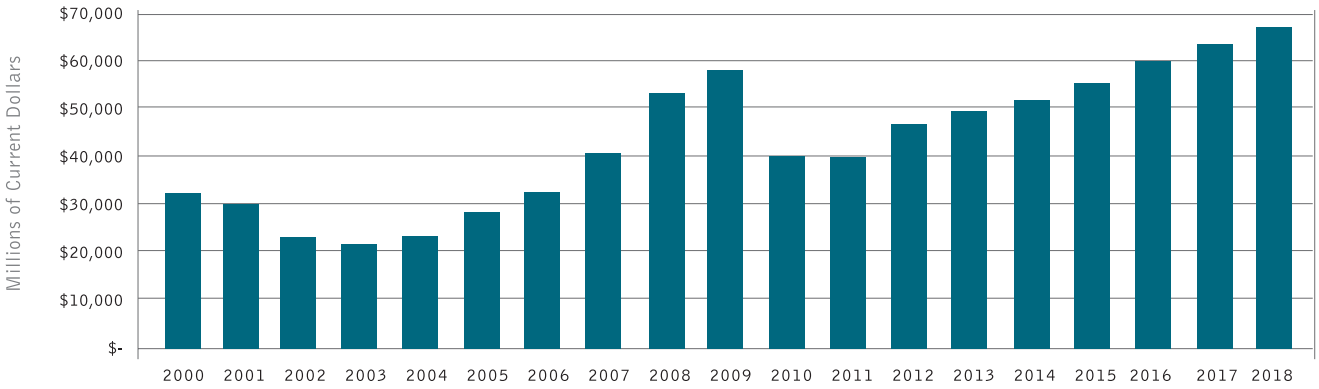
- The Federal Reserve reports that manufacturing capacity fell slightly in January to 76.0%, but increased 1.9% over January 2013. "Industrial production decreased 0.3 percent in January after having risen 0.3 percent in December. In January, manufacturing output fell 0.8 percent, partly because of the severe weather that curtailed production in some regions of the country. Additionally, manufacturing production is now reported to have been lower in the fourth quarter; the index is now estimated to have advanced at an annual rate of 4.6 percent in the fourth quarter rather than 6.2 percent."
- "Reshoring of manufacturing" is happening slowly, in part due to availability of lower energy costs.
- The U.S. Census Bureau Department of Commerce reports that, "New orders for manufactured durable goods in January decreased $2.2 billion or 1.0 percent to $225.0 billion, . . . This decrease, down three of the last four months, followed a 5.3 percent December decrease. Excluding transportation, new orders increased 1.1 percent. Excluding defense, new orders decreased 1.8 percent."

DRIVERS:

- ISM
- Industrial production
- Capacity utilization
- Factory orders
- Durable goods orders
- Manufacturing inventories

Manufacturing Construction Put in Place

Forecast as of Q1 2014



NONBUILDING STRUCTURES

Power

Construction for the power industry will increase 5% in 2014 with slow growth to 9% in 2017 and 2018. Our forecast calls for $91.2 billion in construction put in place for the power industry in 2014. With the expiration of the production tax credits (PTC), wind power construction will pick up from projects making it under the line, then lose momentum due to financing concerns. Alternative energy sources will continue to be explored, but the new shale gas boom will continue to provide an alternative and elbow out coal-fired plants for new construction. The cost of new nuclear power will continue to be prohibitive even before regulatory concerns are considered.

TRENDS:

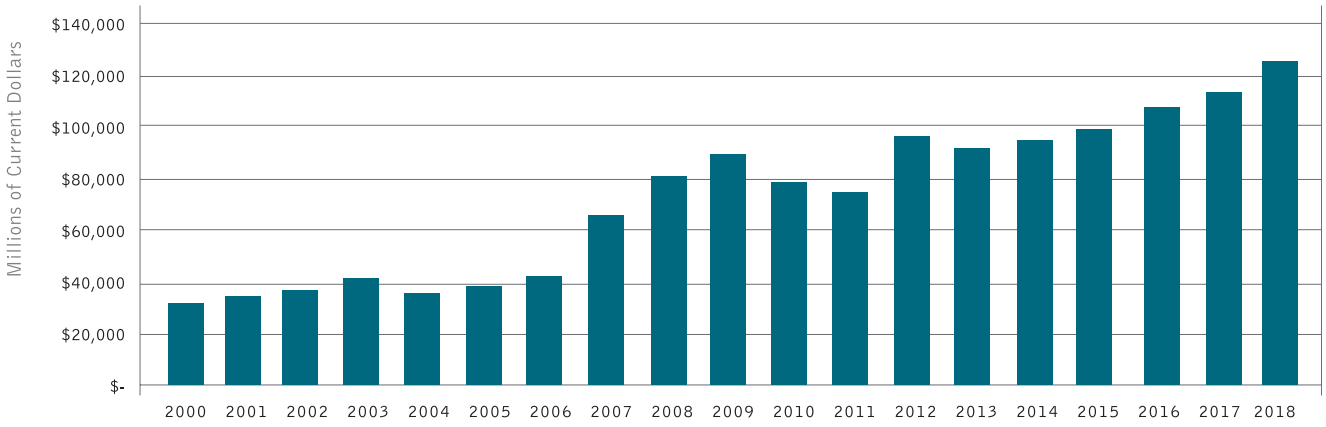
- Since 2008, the refinement of hydraulic fracturing technology has allowed the United States to go from an increasingly dependent buyer of foreign oil to being the second-leading producer of oil in the world." (FMI research paper, "Skills Shortages in a Booming Market: The Big Oil and Gas Challenge," 2014)
- "In 2008, just 3.8 percent of the total construction workforce was engaged in direct oil and gas construction. By 2012, 6.4 percent – nearly double the number from 2008 – of that workforce was engaged in direct oil and gas construction." (Ibid.)
- According to the "Annual Energy Outlook 2014," energy consumption, "including both purchases from electric power producers and on-site generation," will grow "from 3,826 billion kWh in 2012 to 4,954 billion kWh in 2040, an average annual rate of 0.9%." Due to increased manufacturing activity, most growth will come from the industrial sector.
- U.S. Army Corps of Engineers has a proposal out for $7 billion in locally generated renewable energy through power purchase agreements. The $7 billion capacity would be expended for the purchase of energy over a period of 30 years or less from renewable energy plants that are constructed and operated by contractors using private-sector financing. (Renewablesbiz.com, Bill Opalka, Aug. 15, 2012)
- Consumer electricity demand is slowing due to more efficient appliances.
- Growth in renewable energy sources is expected to slow as production tax credits expire. Also, the competitive costs will be more difficult to overcome as shale sources continue to be exploited.

DRIVERS:

- Industrial production
- Population
- Nonresidential structure investment

Power Construction Put in Place

Forecast as of Q1 2014



Highway and Street

President Obama is attempting to garner support to pass a four-year, $302 billion surface transportation reauthorization bill. If passed, the bill would help achieve some certainty in highway funding in addition to funds in the proposed 2016 budget. Passage of the bill is not at all certain. At this time, our forecast is for a modest 1% increase in highway and street construction for 2014 to $82.2 billion. Public-private-partnerships still hold out hope for projects that can generate revenue from usage fees, but funding from more private investors will not approach the needed amount of infrastructure the country needs to make.

TRENDS:

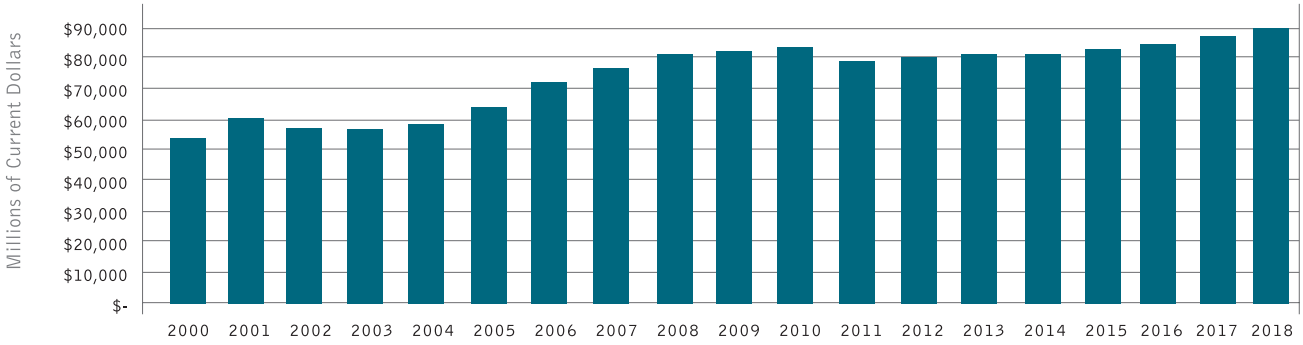
- President Obama's 2015 budget calls for "$199 billion over four years to continue critical investments in highways and includes the creation of a new freight program as well as a new "Fix-it-First" program, which is aimed at repairing structurally deficient bridges."
- According to ARTBA (American Road & Transportation Builders), "Taking into account changes in wages, materials and inflation, state and local governments awarded $54.3 billion in real highway and bridge contracts between February 2012 and January 2013, compared to $55.8 billion in the same 2011-2012 time period".
- State budgets will continue to be strained, and it will be difficult to get larger projects off the ground due to uncertainty of long-term government funding and highway program renewal.
- The ACEC (American Council of Engineers) reports that, "According to the Congressional Budget Office, the balance of the HTF will be depleted in fiscal year 2015, necessitating dramatic cuts in highway and transit spending unless new revenues are provided. Absent congressional action, highway program funding would fall from $40 billion to approximately $4 billion, while funding for transit projects would fall from $11 billion to $7 billion."

DRIVERS:

- Population
- Government spending
- Nonresidential structure investment

Highway and Street Construction Put in Place

Forecast as of Q1 2014



Sewage and Waste Disposal

Construction for sewage and waste disposal is forecast to be up 2% in 2014 to around $21.6 billion and increase to $25.9 billion by 2018. The ability to fund necessary water infrastructure improvements is central to the decline in construction as many municipal water systems still depend on the tax base for funding. Environmentally friendly approaches, using new technologies and planning, offer greener solutions that attract business and people who want to live near the city rather than dealing with constant leaks and repairs. Unfortunately, one of the primary drivers of water and wastewater projects appears to be court ordered consent decrees issued under the Clean Water Act (CWA).

TRENDS:

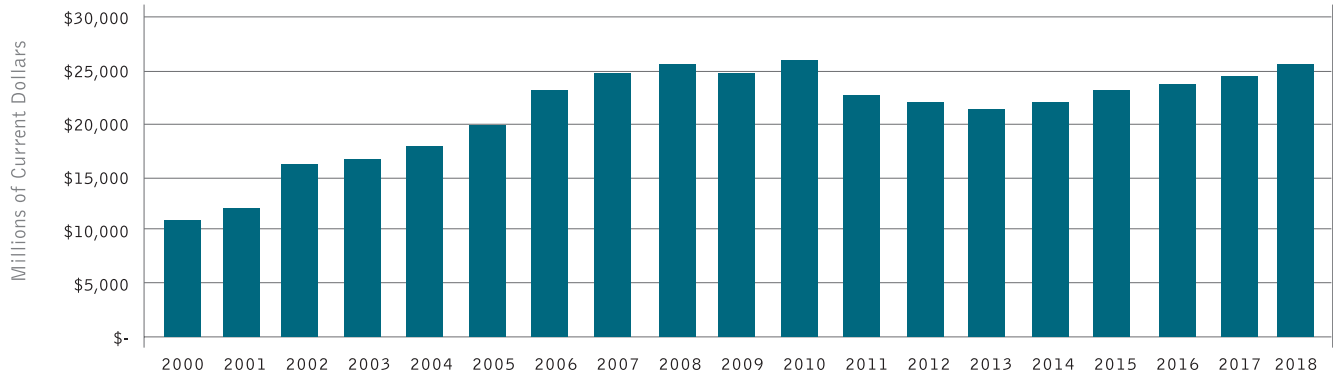
- Growth, driven by aging infrastructure and regulation, is on the horizon, but the length of the horizon is still unknown. Slow water infrastructure markets in the aftermath of the recession continue to build the backlog of necessary work as existing infrastructure ages.
- In need of replacement and upgrades, the 16,000 wastewater systems nationwide discharge more than 850 billion gallons of untreated sewage into surface waters each year.
- Combined sewer systems (storm water and sewage) serve roughly 950 communities with about 40 million people. Most communities with CSOs are located in the Northeast and Great Lakes regions.
- The Clean Water State Revolving Fund (CWSRF) programs have provided more than $5 billion annually in recent years to fund water-quality protection projects.

DRIVERS:

- ↑ Population
- ↑ Industrial production
- ↓ Government spending

Sewage and Waste Construction Put in Place

Forecast as of Q1 2014



Water Supply

Construction for water supply projects will improve 4% in 2014 and grow another 3% in 2015. Experts agree that the nation's infrastructure is not getting enough attention and, more importantly, funding. According to a "fact sheet" released by the American Council of Engineering Companies (ACEC), "the Clean Water Act State Revolving Fund (SRF) program (funded at $1.45 billion in FY'13) and the Drinking Water SRF program (funded at $908 million)—has failed to keep up with system needs, putting the quality, safety and security of the nation's water resources at risk." (ACEC "Meeting America's Water Needs")

TRENDS:

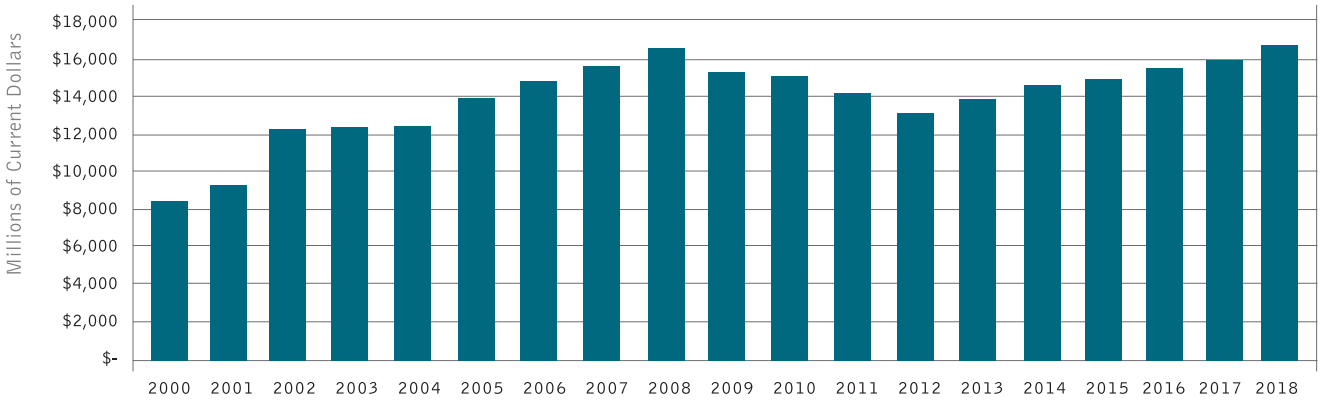
- Recent research from the EPA reports, "$72.5 billion is needed to prevent contamination of 73,400 water systems across the country, as well as water systems in American Indian communities, Alaska Native Villages and other U.S. territories." (Wengian Zhu, CNN Money, June 5, 2013)
- Strength in the mining sector creates a tremendous amount of water infrastructure work throughout North America and abroad. Strength in commodity markets continues to drive increased levels of mining activity through the development of new mines and redevelopment of existing mining assets. Heightened mining activity leads to increased demand for related infrastructure, including water.
- Federal assistance for the safe drinking water State Revolving Fund (SRF) in the 11-year period between 1997 and 2008 totaled $9.5 billion, just slightly more than the investment gap for each of those years.
- Green construction practices, such as controlling runoff to help increase groundwater, will become the norm for improvements and new construction.
- Water for shale oil and gas mining will increase demand in selected areas of the country.

DRIVERS:

- Population
- Industrial Production
- Government Spending

Water Supply Construction Put in Place

Forecast as of Q1 2014



Conservation and Development

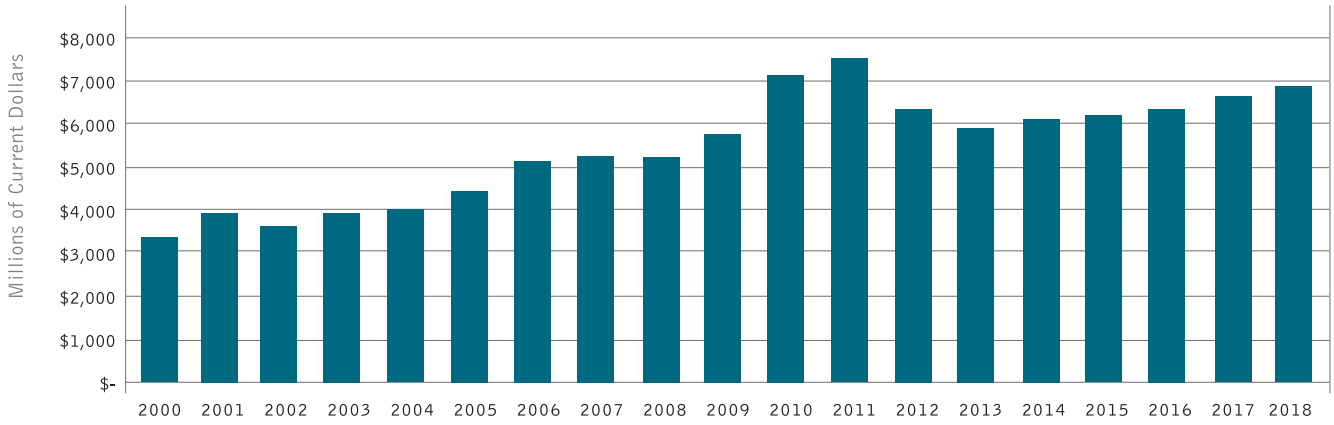
Conservation and development construction will improve slowly from 2% to 3% over the next four years. The environmental market continued to be a tale of two markets in 2013. The industrial market continues to flourish behind the strength in the natural resource sector. In addition, the low cost of energy is driving an onshoring phenomenon in other industrial sectors, such as chemical and automotive. Conversely, DOD and DOE markets continue to struggle against the headwinds of budget constraints. Industrial market strength should increase the size of the overall environmental market, albeit much more slowly as public markets contract.

DRIVERS:

- Population
- Government spending

Conservation and Development Construction Put in Place

Forecast as of Q1 2014



Construction Put in Place

Millions of Current Dollars

1st Quarter 2014 Forecast (Based on 4th Quarter 2013 Actuals)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
RESIDENTIAL BUILDINGS														
Single-Family	434,912	417,518	306,990	187,648	106,398	112,965	109,620	131,380	164,641	194,815	225,089	257,320	287,431	316,368
Multifamily	48,699	54,324	52,570	48,083	32,231	17,405	17,821	26,293	37,819	47,857	53,438	58,652	62,182	66,140
Improvements*	133,896	147,973	140,909	122,015	115,301	118,744	125,217	128,850	134,123	141,340	148,339	156,010	162,984	169,328
Total Residential	617,507	619,814	500,468	357,746	253,930	249,113	252,658	286,523	336,582	384,013	426,866	471,982	512,596	551,836
NONRESIDENTIAL BUILDINGS														
Lodging	12,840	18,139	28,706	35,806	25,499	11,635	9,129	11,423	14,212	16,110	17,771	18,872	19,819	20,561
Office	45,763	54,187	65,259	68,563	51,908	37,850	36,011	38,433	38,498	39,252	41,119	43,709	45,823	47,553
Commercial	70,242	76,713	89,684	86,212	54,069	39,450	43,386	46,303	49,350	52,622	57,186	60,967	64,650	67,836
Health Care	34,430	38,472	43,766	46,902	44,845	39,344	40,204	41,797	41,194	41,822	44,532	47,277	50,622	53,849
Educational	79,687	84,928	96,758	104,890	103,202	88,405	84,985	84,618	80,804	83,058	88,086	92,420	98,337	104,491
Religious	7,735	7,749	7,540	7,225	6,192	5,288	4,239	3,768	3,448	3,480	3,601	3,758	3,891	4,065
Public Safety	7,314	7,768	10,201	13,083	13,787	11,153	10,407	10,295	9,613	9,721	10,130	10,500	10,916	11,416
Amusement and Recreation	15,236	19,033	21,212	21,829	19,404	16,943	15,995	14,977	15,016	15,371	16,248	17,221	18,408	19,336
Transportation	25,052	27,964	31,877	35,471	36,701	38,340	34,737	38,210	41,557	44,357	47,895	50,922	53,349	55,794
Communication	18,906	22,219	27,580	26,487	19,753	17,730	17,685	17,528	15,810	16,018	16,559	17,368	18,255	19,227
Manufacturing	28,568	32,677	40,633	53,234	56,836	40,350	39,660	46,850	49,357	52,057	56,353	60,180	63,919	67,071
Total Nonresidential Buildings	345,773	389,849	463,216	499,702	432,196	346,488	336,438	354,202	358,858	373,869	399,481	423,195	447,989	471,198
NONBUILDING STRUCTURES														
Power	38,371	42,244	66,055	81,075	88,861	77,945	75,185	94,068	87,298	91,237	96,541	103,844	113,579	123,814
Highway and Street	64,139	72,040	76,682	81,361	82,166	82,529	79,322	80,517	81,284	82,234	84,031	85,917	88,171	90,541
Sewage and Waste Disposal	19,867	23,186	24,872	25,696	24,830	25,991	22,710	22,066	21,678	22,162	22,786	23,611	24,640	25,961
Water Supply	14,028	14,960	15,798	16,752	15,471	15,322	14,163	13,227	13,836	14,418	14,901	15,406	15,963	16,565
Conservation and Development	4,453	5,130	5,260	5,234	5,750	7,172	7,538	6,350	5,947	6,063	6,178	6,307	6,466	6,670
Total Nonbuilding Structures	140,858	157,560	188,667	210,118	217,078	208,959	198,918	216,228	210,043	216,114	224,436	235,084	248,820	263,551
Total Put in Place	1,104,138	1,167,223	1,152,351	1,067,566	903,204	804,560	788,014	856,953	905,483	973,996	1,050,783	1,130,261	1,209,405	1,286,586

*Improvements include additions, alterations and major replacements. It does not include maintenance and repairs.

Change From Prior Year - Current Dollar Basis

1st Quarter 2014 Forecast (Based on 4th Quarter 2013 Actuals)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
RESIDENTIAL BUILDINGS														
Single-Family	15%	-4%	-26%	-39%	-43%	6%	-3%	20%	25%	18%	16%	14%	12%	10%
Multifamily	18%	12%	-3%	-9%	-33%	-46%	2%	48%	44%	27%	12%	10%	6%	6%
Improvements*	13%	11%	-5%	-13%	-6%	3%	5%	3%	4%	5%	5%	5%	4%	4%
Total Residential	15%	0%	-19%	-29%	-29%	-2%	1%	13%	17%	14%	11%	11%	9%	8%
NONRESIDENTIAL BUILDINGS														
Lodging	4%	41%	58%	25%	-29%	-54%	-22%	25%	24%	13%	10%	6%	5%	4%
Office	8%	18%	20%	5%	-24%	-27%	-5%	7%	0%	2%	5%	6%	5%	4%
Commercial	5%	9%	17%	-4%	-37%	-27%	10%	7%	7%	7%	9%	7%	6%	5%
Health Care	7%	12%	14%	7%	-4%	-12%	2%	4%	-1%	2%	6%	6%	7%	6%
Educational	7%	7%	14%	8%	-2%	-14%	-4%	0%	-5%	3%	6%	5%	6%	6%
Religious	-5%	0%	-3%	-4%	-14%	-15%	-20%	-11%	-8%	1%	3%	4%	4%	4%
Public Safety	4%	6%	31%	28%	5%	-19%	-7%	-1%	-7%	1%	4%	4%	4%	5%
Amusement and Recreation	-9%	25%	11%	3%	-11%	-13%	-6%	-6%	0%	2%	6%	6%	7%	5%
Transportation	0%	12%	14%	11%	3%	4%	-9%	10%	9%	7%	8%	6%	5%	5%
Communication	22%	18%	24%	-4%	-25%	-10%	0%	-1%	-10%	1%	3%	5%	5%	5%
Manufacturing	22%	14%	24%	31%	7%	-29%	-2%	18%	5%	5%	8%	7%	6%	5%
Total Nonresidential Buildings	7%	13%	19%	8%	-14%	-20%	-3%	5%	1%	4%	7%	6%	6%	5%
NONBUILDING STRUCTURES														
Power	8%	10%	56%	23%	10%	-12%	-4%	25%	-7%	5%	6%	8%	9%	9%
Highway and Street	9%	12%	6%	6%	1%	0%	-4%	2%	1%	1%	2%	2%	3%	3%
Sewage and Waste Disposal	11%	17%	7%	3%	-3%	5%	-13%	-3%	-2%	2%	3%	4%	4%	5%
Water Supply	11%	7%	6%	6%	-8%	-1%	-8%	-7%	5%	4%	3%	3%	4%	4%
Conservation and Development	10%	15%	3%	0%	10%	25%	5%	-16%	-6%	2%	2%	2%	3%	3%
Total Nonbuilding Structures	9%	12%	20%	11%	3%	-4%	-5%	9%	-3%	3%	4%	5%	6%	6%
Total Put in Place	11%	6%	-1%	-7%	-15%	-11%	-2%	9%	6%	8%	8%	8%	7%	6%

*Improvements include additions, alterations and major replacements. It does not include maintenance and repairs.

Benefits

A Construction Market Forecast from FMI's Research Services Group can:

- Supply the market-oriented, economy-driven dimension essential for preparing, implementing and monitoring strategic plans.
- Be a significant aid in defining, targeting, implementing and monitoring other critical corporate decisions, such as long- and short-term sales goals, or redirecting resources (i.e., on a geographic or a product-line basis).
- Provide the basis for estimating submarkets.
- Provide the basis for comparing performance among markets.
- Provide the basis for identifying activities that are beneficial or detrimental to performance.

Features

Each Standard Construction Market Forecast:

- Details construction put in place in three residential building, 11 nonresidential building and five nonbuilding structure categories. It covers the current year, eight previous years and five forecast years. It is available for any county in the U.S. or any combination of counties, metropolitan statistical areas, states, regions, etc.
- Includes both construction values and annual percentage changes. Delivery time depends on the size of the request but is usually only a few days. It can be delivered in printed or electronic form and in most major text or spreadsheet formats. Graphs can be provided at additional cost.

Basis

- Historical information in FMI's standard Construction Market Forecast is based on building permits and construction put in place data as provided by the U.S. Commerce Department. Forecasts are based on econometric and demographic relationships developed by FMI, on information from specific projects gathered from trade sources, and on FMI's analysis and interpretation of current and expected social and economic conditions.

Other Reports

- Reports on state and federally financed highway construction are available for most counties or combinations of counties.
- Custom reports on a wide variety of construction-related topics can be prepared by FMI.
- Reports are based on multiple sources and are appropriate for preliminary analytical and planning purposes but contain little or no direct observation of the area described and are not guaranteed by FMI to be accurate.

For more information, call 919.785.9268.

About FMI's Research Services Group

As the construction industry becomes increasingly competitive, market intelligence becomes an important tool for the building industry. A more complete understanding of the market, market trends, customer perceptions, buying practices, competitor profiles and other market influencers will enhance craft labor studies.

Since 1953, FMI has provided consulting and training services specialized for the construction industry. FMI's market research includes both secondary and primary research designed to meet clients' specific needs. Both types of research are used to provide accurate assessments in a timely, efficient and concise manner for clients.

Typical project work performed includes customer buying practices, competitive analyses, market-size modeling, market forecasts and trends, channel performance analyses, customer satisfaction surveys and sales performance evaluations.

J. Randall (Randy) Giggard

Managing Director

Research Services

Randy Giggard is responsible for design, management and performance of primary and secondary market research projects and related research activities, including economic analysis and modeling, construction market forecasting and database management. Randy's particular expertise is in the areas of market sizing and modeling, competitive analysis, sales and market performance evaluations, buying practices and trends analysis.

Randy holds undergraduate degrees in mechanical engineering from Southern Illinois University and English from Illinois State University and a master's of marketing and management policy from Northwestern University.

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About FMI

FMI is a leading provider of management consulting, investment banking† and research to the engineering and construction industry. We work in all segments of the industry providing clients with value-added business solutions, including:

- Strategic Advisory
- Market Research and Business Development
- Leadership and Talent Development
- Project and Process Improvement
- Mergers, Acquisitions and Financial Consulting†
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