JLL®

Construction

United States | H1 2017

Despite uncertainty, construction continues towards sustainable growth.

JLL Research

Contents

National *outlook*

Throughout the first half of 2017 the construction industry demonstrated stability in the face of adversity, with private construction investment leading the way. Amidst political and economic uncertainty and widespread fear of overbuilding, all indicators in the industry point towards continued sustainable growth.

Six months into the new presidency, many are surprised to find not much has changed in the construction world under the new administration. Discord and gridlock within political parties and shifting priorities on Capitol Hill have led to significantly less progress on public and government spending than many expected. The much anticipated trillion dollar infrastructure spending budget (primarily funded through public-private partnerships) wasn't addressed in recent budget discussions and many believe progress will be tabled until 2018.

However, President Trump has made progress on labor– dedicating time and funds towards combatting the labor shortage affecting the nation. In the last few months, Trump has set up two councils tasked with assisting those in the construction industry to navigate federal and local red tape. And using a recent executive order, he's directed the Department of Labor to focus more resources towards skilled trades training.

While spending on construction is up a sizeable 5.7 percent year over year, spending growth in the last three months remained relatively flat. The recent minimal growth is being driven by both the continued lack of qualified construction workers as well as a decline in infrastructure spending. Yet privately funded construction projects continue to be the outlier – increasing by nine percent since May 2016, with the office and commercial/retail sectors each carrying substantial growth.

Materials costs packed a few surprises of their own in 2017, with second quarter costs increasing by 4.4 percent over second quarter costs last year. While construction pipelines across the U.S. continue to drive steady demand for materials, cost increases in the first half of 2017 have largely been driven by political rhetoric around changing trade policy. Dialogue from the White House around ending or renegotiating various trade agreements such as North American Free Trade Agreement (NAFTA), Central America Free Trade Agreement (CAFTA) and additional international tariffs with China and other Asian countries has had profound impacts on the accessibility of materials. This is directly affecting the pricing we're seeing today.

The U.S. economy as a whole continues to maintain measured and steady growth, with the gross domestic product (GDP) increasing at an annual rate of 1.4 percent in the first quarter of 2017 compared to an increase of 2.1 percent in Q4 2016. The construction industry has benefited from the continued economic growth, evident by sustainable pipelines in every region in the U.S., and nearly universal increases across property types.

During the second half of 2017, we can expect to feel a continued impact of political and policy decisions, specifically around trade and imports. We will also see developers start to take a harder look at construction pipelines and pause new groundbreakings as concern around overbuilding begins to take precedence in specific markets. We expect monetary policy and access to loans to respond accordingly.

Q2 2017 *indicators & values*

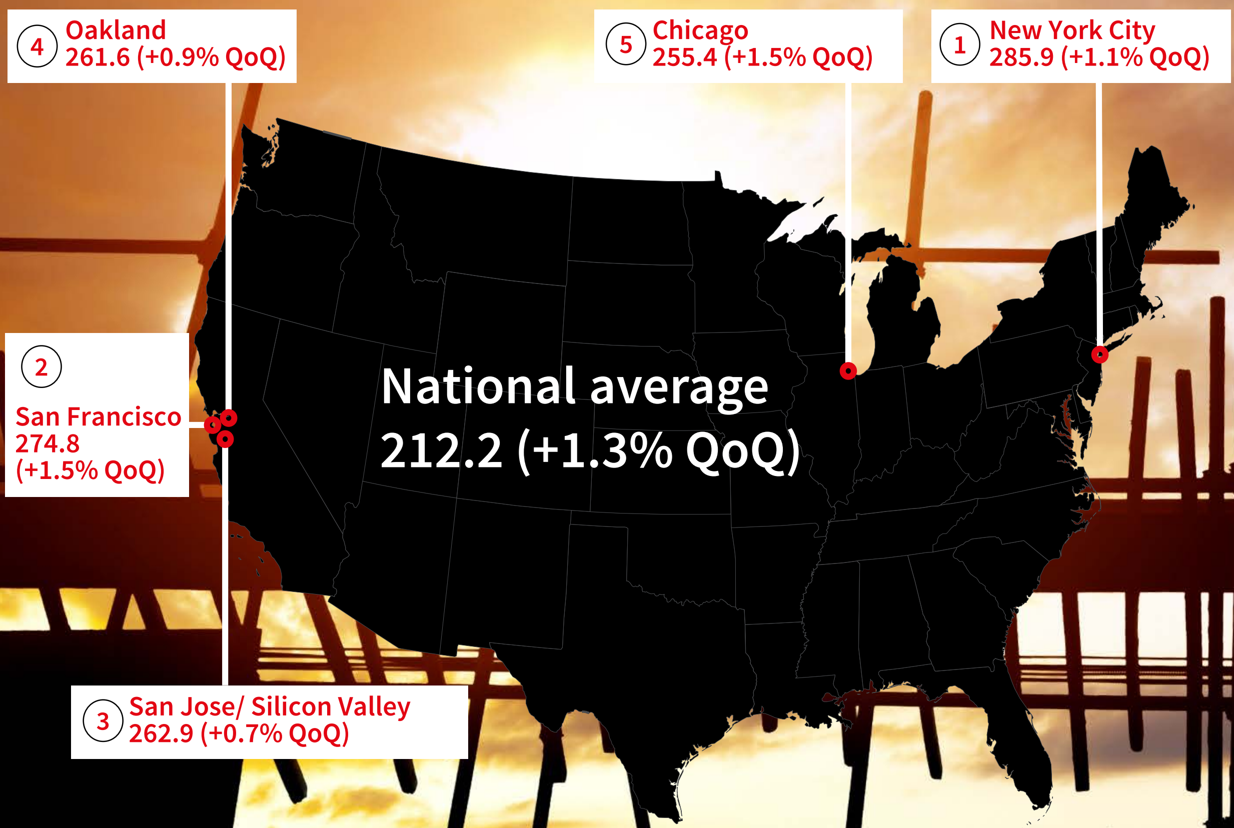
Seasonal construction spending[1]
$300 B *+5.7% YoY*

National building cost index[2]
+0.9% QoQ *+3.2% YoY*

Materials cost index[2]
+0.6% QoQ *+4.4% YoY*

Construction Costs—Top Markets[3]

Units=Cost Index



Materials cost changes

Cement
+4.0% QoQ

Steel
+4.3% QoQ

Lumber
+5.3% QoQ

Construction Backlog Indicator [5]

The CBI depicts how many months of work contractors currently have on the books—higher numbers show higher demand.

National construction backlog (CBI)

9.0 months

+4.0% YoY

+8.1% QoQ

Region with the highest growth

West (7.78 months)

+0.9 months

+13.0% YoY

Construction Labor Indicators [4]

Unemployment (construction)

5.3% in May 2017 *5.2% in May 2016*

Number of construction workers

1.53m in May 2017 *+2.9% YoY*

Average hourly wage

$30.63/hr in May 2017 *+2.6% YoY*

1. U.S. Census Bureau
2. Engineering News Record
3. R.S. Means
4. Bureau of Labor Statistics
5. Associated Builders and Contractors

The 3 biggest challenges facing the construction industry, and the hidden opportunities they present:

1 Challenge: The ongoing labor shortage

The construction labor shortage is nothing new to industry insiders with the lack of skilled workers in the U.S. taking its toll on project budgets, timelines (and contractors' sanity). Reaching historic lows, unemployment in the construction industry sits at 5.3 percent while hourly wages continue to grow and outpace inflation.

Opportunity: Increase productivity, embrace tech and rethink how the industry operates

To combat the continued labor shortage, developers and contractors have several options. None are quick and easy, but the rewards can be generous. To put the situation in perspective, productivity in the construction industry has been stagnant for the last 25 years, where in the same time frame, manufacturing productivity has nearly doubled. Several factors contribute to the lack of productivity innovations, but a large component is the contract and paper passing nature of the industry. Streamlining communications, workflows and document transfer between architects, engineers, project managers and others can help stakeholders do more with less manpower and quicker. Technology solutions have taken great strides in recent years and offer great options for the here-and-now, but the largest gains will be seen in rethinking how the industry is structured, contracts are written, and how teams share and bid on work.

2 Challenge: The rising cost of materials

Over the last 12 years, materials costs have grown by nearly 30 percent. As an example, $500,000 worth of materials in 2005 would cost almost $650,000 today, and ten percent of those costs have grown in the last five years. In the second quarter of 2017; cement, steel and lumber all had cost increases greater than four percent which begs the question, when will cost increases slow? With continued construction demand for materials and unknowns surrounding potential tariffs and international import changes, we can only wait and see.

Opportunity: Adopt technology and make more with less

Great strides have been made in technology in the last handful of years as it applies to the construction world. With the advent of building information modeling (BIM), artificial intelligence (AI), modular construction and other technologies, developers and general contractors today can build with incredible efficiency. BIM has the largest industry adoption and has been making profound impacts on construction sites. This technology allows both architects and developers to efficiently use materials and building processes and limit the waste produced. AI and big data are the newest additions, but carry the most promise for results. Today, some cutting-edge developers are leveraging AI and big data to optimize worker movement and materials distribution, maximizing product and results. Modular construction is also a hot conversation topic that could make a permanent impact. Amongst other benefits, it greatly reduces materials waste via recycling, controlled inventory, sheltered protection of materials and stronger quality control. While rising materials costs can be seen as a negative – thought leaders in the construction industry are treating the circumstances as an opportunity to innovate and build faster, cheaper and with higher quality product.

3 Challenge: The worries of overbuilding

Coming out of the great recession, the U.S. has seen steady quarter-over-quarter economic growth for the last several years. The commercial real estate and development industry has seen growth of its own, with construction pipelines continuing to expand today. But after years of positive growth, many are beginning to wonder—when's the next slowdown, and what should companies do about it?

Opportunity: It's time to start planning

While no one has a crystal ball to tell you when the economy will start slowing, JLL's Chief Economist, Ryan Severino, believes we won't see any slowdown until at least 2019. The steady but slow growth we've seen coming out of the recession has been the perfect mix to lead the United States through the long economic expansion we've been experiencing. That same slow growth is also anticipated to lessen the decline we'll see if and when any level of downturn comes around, minimizing recession effects. So what can be done today? The construction industry needs to create a contingency plan to be prepared if the economy begins to slow. While the plan shouldn't go in to effect today, having it close by is a necessity. Banks and construction lenders have already started their planning, tightening standards on loans and decreasing volumes of money they're approving today (especially in the multi-family sector). Construction firms can set a game plan by taking long term goals in to account. Buy materials early for large projects. Build a solid pipeline of future work, potentially at a lower profit. Consider risk carefully when opening a new multi-year development. All of these concepts and more can help firms move through the upcoming years with confidence and stability.

Revisiting expectations

In our Q4 2016 Construction Outlook, we featured six themes to watch for; presidential policies, the labor struggle and regional slowdowns. Let's pause to see where each theme stands.

Q4 2016 prediction	Midyear 2017 update
Presidential polices affecting the construction industry will be passed but won't have concrete impacts until late 2017.	Progress on the hill has been slower than expected, with more time dedicated towards conversation rather than tangible results. The spotlight has also been focused on healthcare changes and foreign policy rather than issues directly affecting the construction industry. Decisions around the infrastructure spending budget (pushed to 2018 at the earliest) and trade policies are still pending, but we don't expect construction specific policy conversation to pick up again until late in 2017.
Construction labor will still be a pain point for the industry at large.	The labor struggle continues in the industry today. While labor cost increases remained relatively in check with the historical average, the number of construction workers is still below demand in the industry. Good news may be on the way as early stage government policy has devoted increased spending on skilled labor training programs within the U.S., with many hoping that some of the additional resources will make its way to the construction industry.
Larger lenders will weigh risk carefully amid lagging demand for construction loans.	Lenders universally continue to tighten loan standards for new construction and land development loans, with multifamily properties seeing considerable tightening over the last six months. Based on a survey of senior loan officers within large U.S. banks, over 40 percent of lenders are tightening construction loans, paired with 21 percent reporting a slowing demand. Expect this trend to continue for the next several quarters as lenders become increasingly concerned about the length of our economic expansion.

Q4 2016 prediction

Midyear 2017 update

Regional slowdowns will begin to weigh on the national construction industry as a whole in the last half of 2017

Contrary to forecasts and expectations within the industry, national construction levels continue to depict slow but steady growth in the face of adversity. Original anxieties around the Northeast and West regions still remain, but have been delayed another six or more months as both areas haven't shown noticeable upwards or downwards momentum. The Midwest and South remain strong as several indicators point towards meaningful growth.

Business dynamics in the construction industry will transform as labor and materials costs continue to rise and firms struggle to maintain sustainable profits.

Six months into 2017, this year-end expectation is already quickly becoming a reality. Tech adoption and innovation within construction companies continues to accelerate as the value-add becomes increasingly more evident to firms. As materials and labor costs are continuing to grow, industry heavyweights are implementing inventive solutions to do more work with less resources, and at a cheaper cost. We fully expect this trend to continue over the next six months, and at a faster rate of adoption.

Full effects of Washington's shifting policies will be felt across the nation, as trade deals and import tariffs could drive up costs faster.

In the first six months of 2017 we saw noticeable political rhetoric around starting or ending various international trade agreements. Notably, in May the administration announced new tariffs of up to 24 percent on imported Canadian lumber. This has caused the price of framing lumber to spike, making it more difficult to build profitably, with sizeable cost increases already being seen in various markets across the U.S. In addition, the market expects more tariffs on imported building materials to be announced in the coming months, potentially around China and other Asia Pacific countries. Expect ongoing conversation around international relations to have probable impacts on steel, lumber and other traditionally imported materials.

Construction costs

Building costs

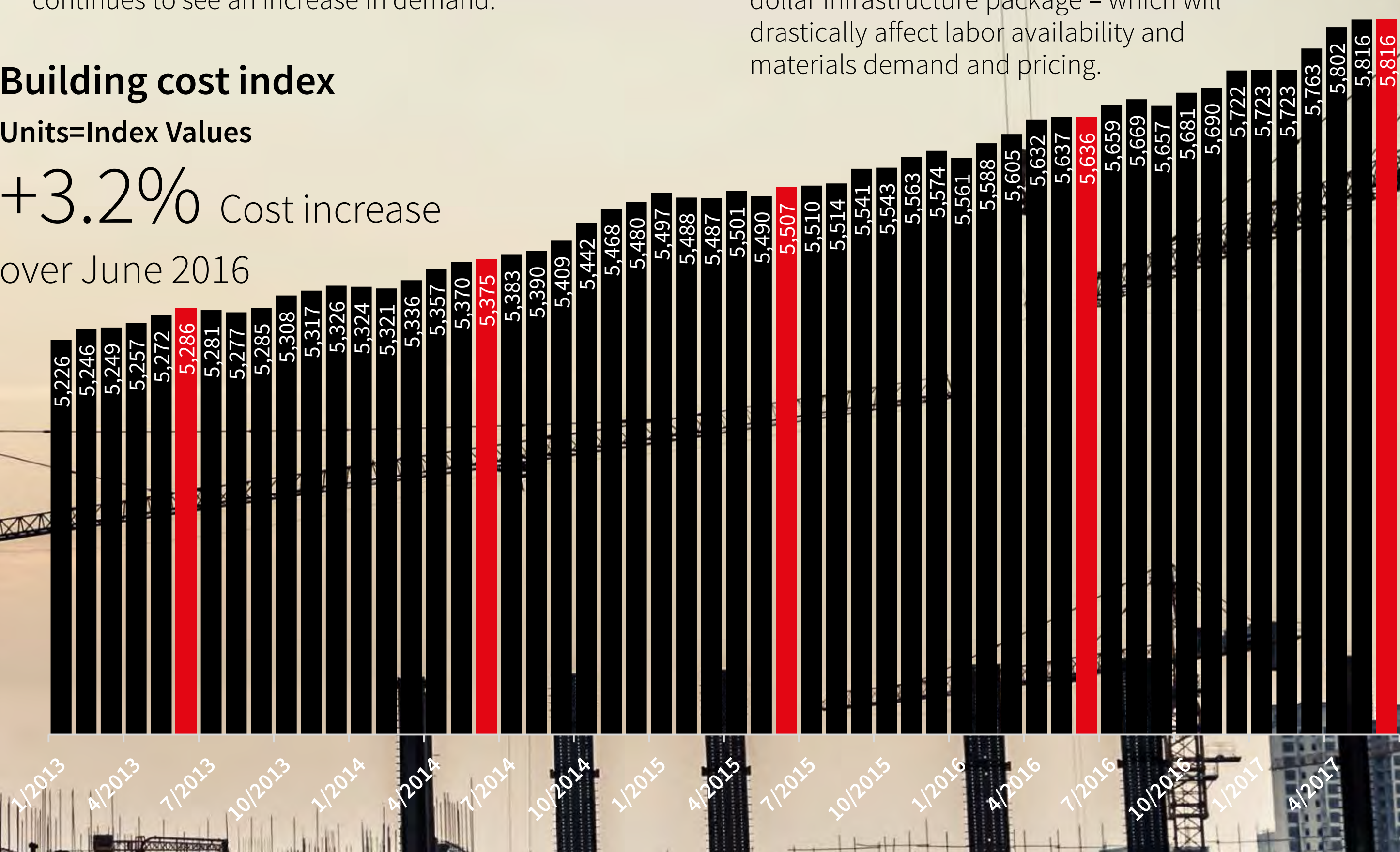
All-in building costs across the nation (inclusive of labor, materials and equipment) **grew by a sizeable 1.6 percent** in the first half of 2017, primarily **driven by unseasonable upward movement on labor wages and materials costs.** Surprisingly, these costs grew by 3.2 percent from June 2016 – the highest year-over-year increase in the last five years. Expect building cost indexes to increase steadily over the next two quarters as policy implications and increased demand continue to play out.

- Uncertainty and speculation around the state of international trade, tariffs and treaties drove higher materials costs, all while the construction industry continues to see an increase in demand.
- The skilled labor shortage continued through the first half of 2017 as the pool of workers expanded by only 2.9 percent since last year. Unemployment in the industry remains tight, hitting near historic lows of 5.3 percent.
- The construction industry continues to wait for the unveiling and outcome of President Trump's trillion dollar infrastructure package – which will drastically affect labor availability and materials demand and pricing.

Building cost index

Units=Index Values

+3.2% Cost increase over June 2016



Source: JLL Research, Engineering News Record

Materials costs

Through the first half of 2017 we saw the materials cost index increase by 1.8 percent as demand for materials grew and U.S. construction spending picked up by 5.7 percent year-over-year. This uptick accounts for sizeable increases in steel, lumber and cement costs, but minimal growth in other materials helped keep the index in line with historic averages. Expect to see materials prices significantly fluctuate over the next two quarters based on what plays out in international trade and policy. This has the potential to drive drastic upswings based on the specific country and tariff in question. In terms of process, the administration sets trade policy, often with little to no oversight from Congress. That enables the administration to easily set trade policy that is politically beneficial, but possibly damaging to the economy and markets.

Steel: Steel prices remained level heading in to the second quarter of 2017 – hovering just shy of $50 / hundredweight. But as spring construction work heated up, so did pricing – jumping 4.3 percent over the course of Q2 2017. Expect the new trade policy with China to have a potentially sizable impact on future steel prices over the next few quarters. U.S. steel companies are also ramping up production, which may level out supply and demand.

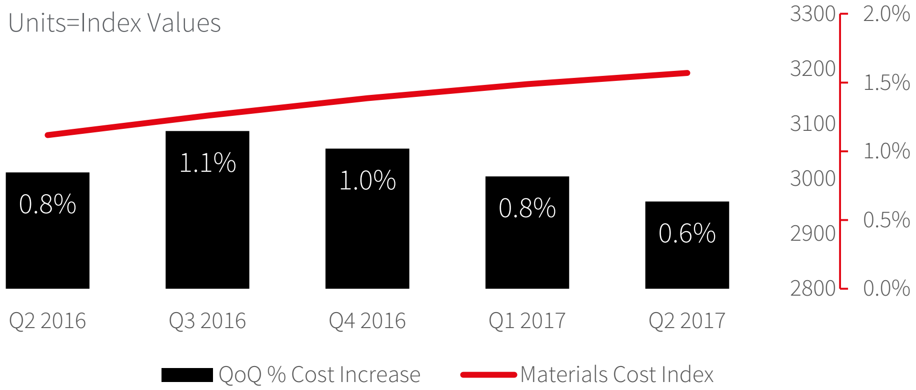
Cement: Cement prices have maintained a consistent increase over the last four quarters, coming in at an average of a 4.3 percent increase every three months. The price increases closely mirror the strong demand we're seeing in the construction industry as a whole, lining up with the steady march upwards. Expect constant 3-4 percent bumps over the next two quarters, but keep an eye out for Trump's infrastructure package – when large scale infrastructure projects begin in 2018, we can expect demand for cement to skyrocket.

Lumber: Lumber prices have already seen a sizeable uptick in the first half of 2017, increasing by 7.9 percent nationally. Significant demand from residential construction combined with the challenges facing the U.S. and Canadian softwood trade dispute have led to painful price hikes. Expect continued lumber price escalations to hit over the next two quarters, but to be subdued by the start of the 2018.

Materials cost index

+1.8% Cost increase since January 2017

Units=Index Values

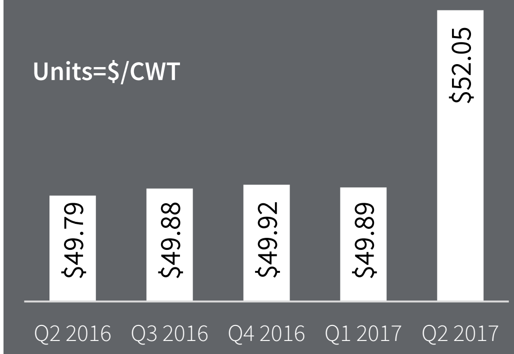


Source: JLL Research, Engineering News Record

Steel

+4.5% Cost increase over June 2016

Units=$/CWT

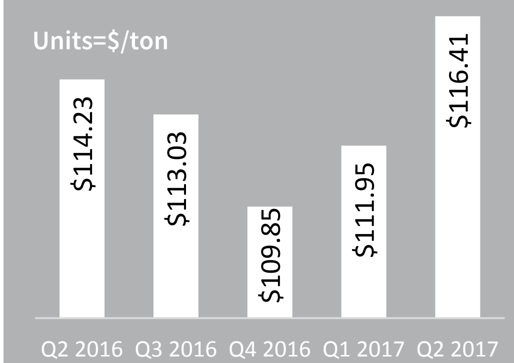


Source: JLL Research, Engineering News Record

Cement

+1.9% Cost increase over June 2016

Units=$/ton

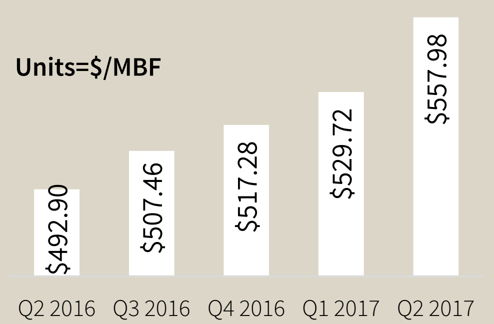


Source: JLL Research, Engineering News Record

Lumber

+13.2% Cost increase over June 2016

Units=$/MBF



Source: JLL Research, Engineering News Record

Labor costs

The labor situation in U.S. construction remains consistent, with a lack of skilled and qualified workers constraining a good portion of the industry – but the conversation has begun to shift. As of May 2017, the construction workforce increased by 2.9 percent year-over-year, achieving a continued cycle max – with **wages increasing year-over-year by 2.4 percent to $30.63 per hour**.

The supply of construction laborers still remains below demand, evident in the near historic low unemployment rate of 5.3 percent in May 2017. Industry insiders are becoming increasingly aware of under-skilled workers threatening to decrease construction productivity. To combat the labor shortage over the past few years, contractors and developers have been forced to relax worker requirements and qualifications to keep their crew staffed. While this filled job sites and open positions, many believe it has started to take its toll on productivity in the industry, and negatively affected output by the workers. While long term effects remain to be seen, we can surely expect to see productivity increase slowly as under-skilled workers gain experience.

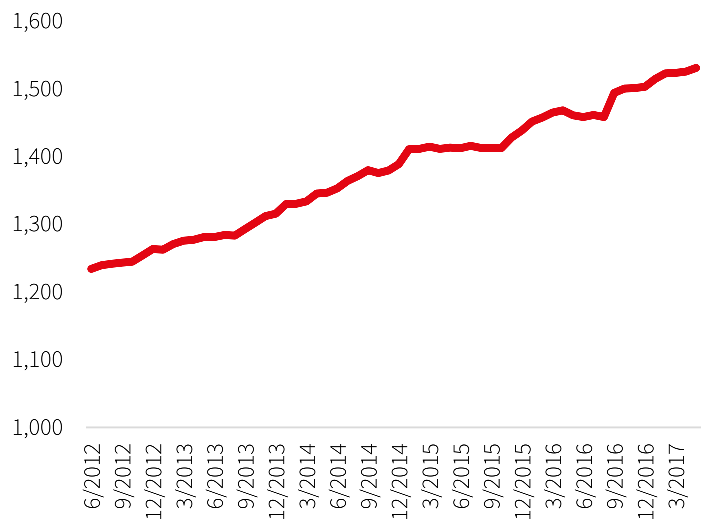
President Trump, the Department of Labor and various trade organizations have begun to cast a spotlight on the labor crisis, discussing methods to increase applicants entering the engineering and project management trade. While some government funding via the Department of Labor has been allocated towards trade and skills training, many are calling for further spending on construction specific roles. While the policy and full rollout of the plan is still up in the air, we expect any sort of movement on the labor front to be a positive change for the construction industry.

Construction workforce grew by

2.9% since May 2016

Construction employment moves steadily forward

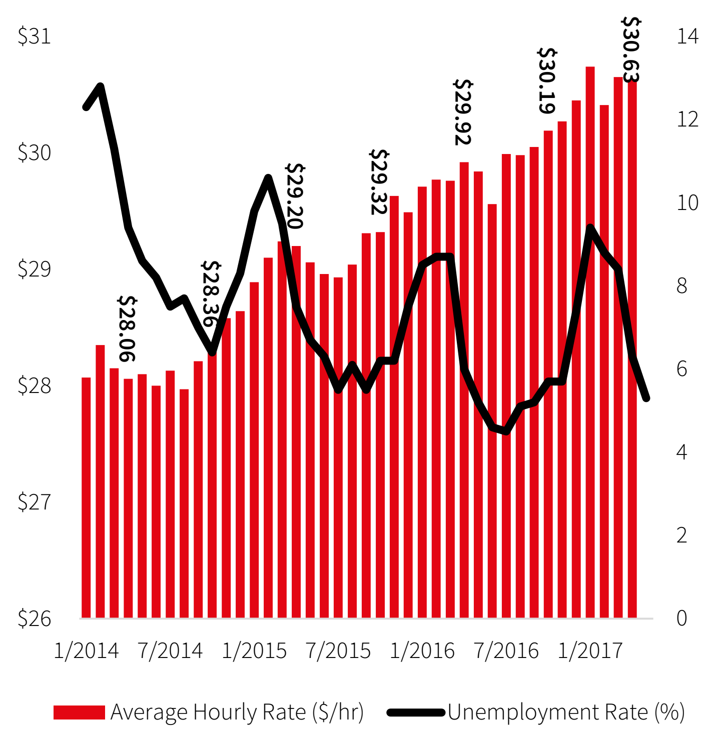
Thousands of workers (seasonally adjusted)



Source: JLL Research, Bureau of Labor Statistics

Unemployment eases while wages grow

Hourly Wages vs. Unemployment in Construction



Source: JLL Research, Bureau of Labor Statistics

National development profile

Overview

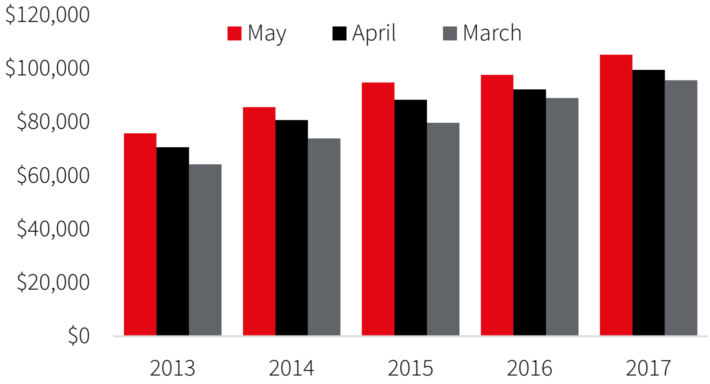
When looking at development in the construction industry over the first half of 2017 every indicator showed measured and sustainable growth over the last six months. Strong financial markets through the first half of 2017 has had positive impacts on nearly all property types and geographies. Spending on office (+16.9 percent YoY) and commercial/retail (+15.2 percent YoY) projects continue to lead the industry, demonstrating significant year-over-year growth. The South and Northeast regions continue to uphold the largest backlogs, but the Midwest and West demonstrate the largest increases in work.

National construction spending

Construction spending for Q2 2017 increased by 5.7 percent over 2016 to $300B year-to-date, illustrating the continued strength of the industry. This comes at a time when private funding continues to boost spending, despite a downward trajectory in public work. This closely mirrors the low unemployment and high project backlog in the construction industry. Private spending has had significant fluctuations coming out of the recession, and May found limited growth in the sector, indicating more owners are taking a 'wait and see' philosophy.

Seasonal construction spending

Millions of $U.S.



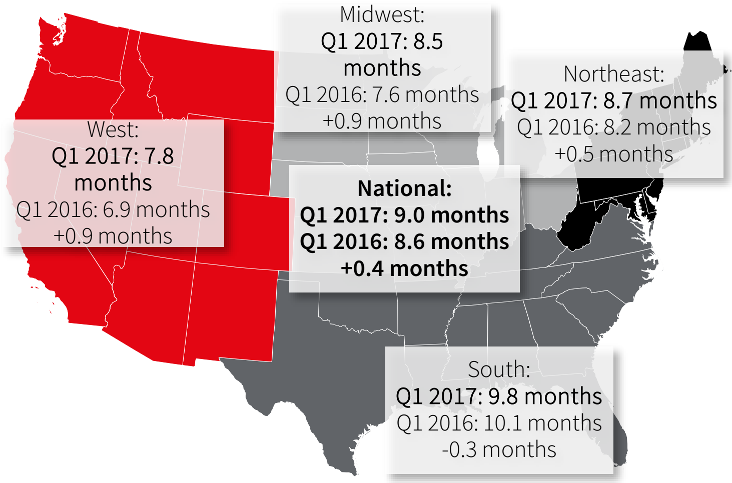
JLL Research, U.S. Census Bureau

Construction backlog indicator

Nationally, the construction and contractor backlog sits at **nine months of future work** across the board, up 4 percent from the same time last year. Significant growth was seen in both the West and Middle States, each with nearly a full month of work more than 2016 statistics. **For the first time in the CBI's history, every category – firm size, industry and region – all recorded quarterly positive growth**, but is undermined by concerns in the industry around the extended length of the economic recovery and tightening monetary conditions.

Construction backlog indicator

Units = Months of Backlog



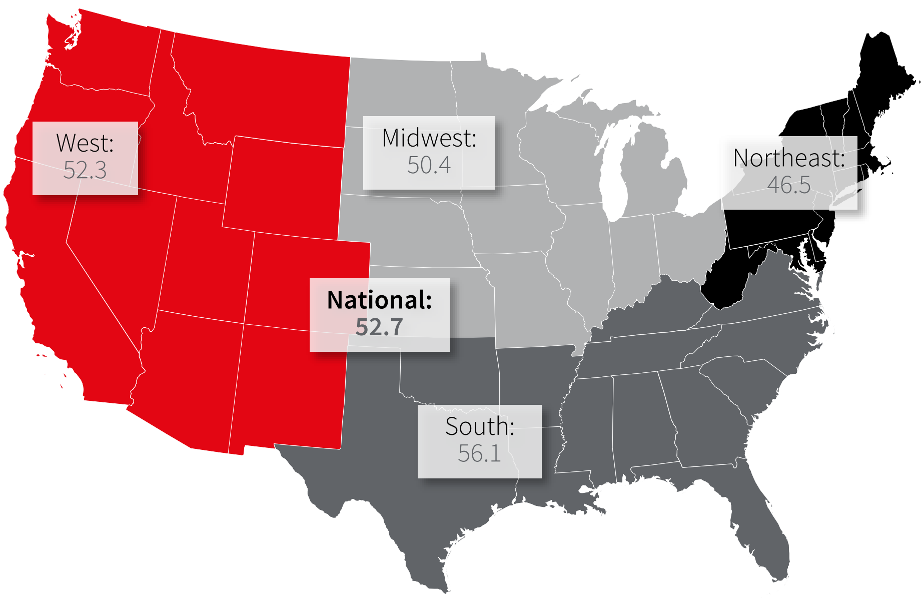
The CBI is a forward-looking indicator that reflects the amount of work that will be performed by contractors in the months ahead

JLL Research, Associated Builders and Contractors

Architecture billings index

The Architecture Billings Index (ABI), a construction indicator depicting billings growth for architecture firms, **grew for the fourth straight month** in May 2017 based on work-on-the-books surveys. This growth, hitting an average index of 52.7 for the last three months, reflects a steady increase in design services for firms and can be seen as a good omen for project demand heading in to the pipeline. However, seen through the eyes of architects, **this demand to build is being inhibited by universal labor shortages and escalating costs.** The scarcity of good subcontractors and materials cost increases has also begun to reduce actual project starts.

Architecture billings index – trailing 3 months
Units = Diffusion Index Values



Index < 50
Firms reporting decrease in billings
Index = 50 –
Firms reporting no change in billings
Index > 50 –
Firms reporting increase in billings

The further the ABI is from 50, the larger the number of firms reporting the change.

JLL Research, Associated Builders and Contractors

About these indicators
The Construction Spending Indicator (U.S. Census) is the leading indicator on current construction levels and details how much money is spent in the construction industry (building materials, labor, fees, etc.) each month. Both the Construction Backlog Indicator (CBI) and Architecture Billings Index (ABI) are tools that can be used to anticipate strength and growth in the construction industry in coming quarters. The CBI depicts how many months of work contractors currently have on the books—higher numbers show higher demand. The ABI portrays the growth (or decline) of billings in architecture firms for the current quarter—and is an indicator leading construction activity by approximately 9–12 months.

Office development profile

Key trends affecting the Office sector

1

Concession packages are rising as landlords entice tenants to new developments and repositioned assets.
Tenant improvement allowances have jumped 10.5 percent since 2014 as landlords face a more competitive leasing environment. Increased concessions are helping reduce the pain tenants are feeling as a result of rising face rents.

2

Vacancy rising slightly as a result of speculative construction.
With 11.7 million square feet of new deliveries in Q2, total vacancy rose for the third consecutive quarter to 14.8 percent. Increases were found across asset types and geographies, particularly within the Class B segment, as tenants opted for newer product.

3

Absorption is up, but will remain subdued over the near term.
After a slow Q1, net absorption rose to a healthier 8.4 million square feet during Q2. This is still below levels seen in 2014, 2015 and 2016. Growth is expected to remain muted as relocations to new supply and give-backs of second-generation space occur.

Read about how the cost of building out an office space stacks up in cities across the U.S.

Significant U.S. indicators | Q2 2017:

Under construction pipeline: **108.8 m.s.f.**
Year to date completions and deliveries: **27.7 m.s.f.**
Year to date total net absorption: **9.9 ms.f.**
Total vacancy: **14.8%**

Top 5 Markets with the largest percent of inventory under construction

1. Silicon Valley – **12.8%**
2. San Francisco – **8.6%**
3. Nashville – **7.2%**
4. San Francisco Peninsula – **6.2%**
5. Seattle – Bellevue – **6.1%**

Source: JLL Research

By: Tim Kay, Managing Director, JLL Midwest Project and Development Services market leader and Scott Homa, JLL's Director of U.S. Office Research
Read more about the state of the office industry.

Industrial development profile

Key trends affecting the Industrial sector

1

Growing importance of sustainability in industrial facilities. The industrial sector, a business heavily focused on cost savings in operations, continues to put an emphasis on sustainability in both new and renovated builds. Technological advances in solar power, energy use and facilities management continue to benefit bottom lines.

2

New ground breakings spread out across all markets in the U.S. The construction pipeline expanded in more than half of the U.S. markets compared to the first quarter of 2017. The overall construction pipeline increased by 7.0 percent quarter-over-quarter.

3

E-commerce and logistics distribution continue to dominate leasing activity in new construction. E-commerce and logistics distribution companies sign more leases in buildings under construction (including proposed projects), an indication of a growing sector with a need for new and functional warehouse space.

Significant U.S. indicators | Q2 2017:

Under construction pipeline: **225.4 m.s.f.**
- Warehouse & Distribution: **208.5 m.s.f.**
- Manufacturing: **16.9 m.s.f.**
- Special purpose: **73,000 s.f.**

Year to date completions and deliveries: **98.5 m.s.f.**
Year to date total net absorption: **101.1 ms.f.**
Total vacancy: **5.2%**

Top U.S. Markets for new spec ground breakings

1. Inland Empire – **21.5%**
2. Philadelphia – **20.1%**
3. Los Angeles – **11.2%**
4. Memphis – **10.1%**
5. Atlanta – **6.8%**

Source: JLL Research

By: Rick Steger, Senior Vice President, JLL industrial Project and Development Services and Aaron Ahlburn, Managing Director, JLL's Director of Industrial & Logistics Research

Read more about the state of the industrial industry.

Retail development profile

Key trends affecting the Retail sector

1

The push to build a great brand experience. Retailers today are creating strong brand and customer experiences for all shoppers, using the change as an opportunity to differentiate from online shops. Physical stores have also tightened their branding strategy to fit a specific customer and story. For instance, CVS is focusing on health, while Walgreens, has shifted towards beauty.

2

Consumer buying habits are changing. The rise of online retailing has changed the way shoppers interact with brands and the products they buy. But today, retailers have begun to capture the big data behind behaviors. This influx of new data on consumer buying patterns is being leveraged by savvy retailers looking to adapt to consumers' shifting habits.

3

Retail renovation has picked up alongside the economy, spurring innovation in the industry. Renovation projects within retail have picked up as retailers aim to capture the increased consumer spending that has come with a recovering economy. Some retailers are also taking innovative approaches to expand their market share. Many online retailers are going to brick & mortar stores while several big box retailers are investing in last mile delivery efforts.

Significant U.S. indicators | Q2 2017:

Under construction pipeline: **71.2 m.s.f.**
Year to date completions and deliveries: **34.1 m.s.f.**
Year to date total net absorption: **30.1 m.s.f.**
Total vacancy: **4.9%**

Top U.S. Markets by square footage under construction

1. Dallas – **6.6 m.s.f.**
2. Houston – **3.8 m.s.f.**
3. New York City – **3.0 m.s.f.**
4. Philadelphia – **2.8 m.s.f.**
5. Atlanta – **2.5 m.s.f.**

Source: JLL Research

By: Steve Jones, Managing Director, JLL retail Project and Development Services and James Cook, JLL's Director of Retail Research
Read more about the state of the retail industry.

Hospitality development profile

Key trends affecting the Hospitality sector

1

Busy construction pipeline is shaking up the industry.
Development in hotels markets across the U.S. continues to move at full speed, driving demand for resources and affecting every aspect of the sector. To combat shortages and keep project timelines moving, developers have turned to innovative solutions like modular construction and unique partnerships to guarantee success.

2

Rise of the globalized supply chain. When it comes to shipping and trade, today it's easier than ever to go global – and that's exactly what leading brands are doing. The hotel industry is benefiting from globalized supply chains to the tune of cheaper case goods and easier access to customized design from foreign manufacturers.

3

Diversification of brands and standards. The hotel sector has been steadily growing the last several years. During this time, land prices have grown, competition has become stronger and barriers to entry have risen. Innovative hotels have adapted by adding new brand options to their product lineups with the introduction of 'soft brands'. These additions have lighter design standards allowing flexibility for developers to better fit the geography and circumstances at hand.

Significant U.S. indicators | Q2 2017:

Under construction pipeline: **186,945 rooms**
Year to date 2017 openings: **54,871 rooms across 472 hotels**

Top U.S. Markets for hotel rooms under construction

1. New York, NY – **14,900 rooms**
2. Dallas, TX – **7,600 rooms**
3. Houston, TX – **5,200 rooms**
4. Nashville, TN – **4,900 rooms**
5. Los Angeles, CA – **4,800 rooms**

Percent of under construction inventory by hotel luxury scale

1. Upper Midscale Chains – **33%**
2. Upscale Chains – **31%**
3. Upper Upscale Chains – **14%**
4. Independents – **10%**
5. Midscale – **5%**

Source: JLL Research, Smith Travel Research

By: David Black Managing Director, JLL's hotel Project and Development Services
Read more about the state of the hotels industry.

Healthcare development profile

Key trends affecting the Healthcare sector

1

Focus on finances. In anticipation of declining or capped reimbursements, healthcare organizations today are focused on improving their financial performance. Groups are taking a few common approaches towards achieving the end goal; recent M&A activity will drive scale, monetization of existing assets will improve cash flows and renovations will extend the life of existing facilities.

2

Policy and potential impact. Healthcare policy is currently in flux, with the industry waiting with baited breath for any changes coming from Capitol Hill. While full implications remain to be seen, many organizations are orienting their operations to better prepare for whatever changes may happen.

3

The push for outpatient and ambulatory care. Stemming from lowering costs, the healthcare industry has recently been expanding their ambulatory and outpatient network to provide healthcare to patients in the lowest cost facility settings. We've seen this push realized in significant jumps in new construction in the outpatient field, as well as innovations in tele-medicine and at-home-care.

Significant U.S. indicators | Q2 2017:

National construction investment – new construction: **$40.0 B**
National construction investment – renovation: **$22.9 B**

Percentage of hospital capital budgets allocated to construction projects:

- New construction – **25%**
- Facility renovation – **24%**
- Facility infrastructure – **15%**

Top U.S. states by healthcare construction

1. California
2. Texas
3. New York
4. Ohio
5. Minnesota

Source: JLL Research, HFM

By Roger Herritz, Senior Vice President, JLL healthcare Project Development Services

Sports facilities development profile

Key trends affecting the Sports Facility sector

1

Stadiums' role is changing, no longer "seat 'em and feed 'em". The original purpose of a sports stadium was simple, give fans a spot to sit for the game and the option to buy some food. Today, the marching orders have changed as teams aim to provide a multi-faceted experience. The introduction of diverse amenities, 'seating zones', play areas and vendors aim to up fans' entertainment.

2

Budget for technology in new stadiums continues to grow. Technology products in sports facilities continue to grow, in both number and size. Complete Wi-Fi and flat screen TV coverage is the new norm. The tech budgets for stadiums a few years ago edged towards $1 million in a new build. In current under construction facilities, tech spending can be expected to be well north of $50 million.

3

Premium product is shifting away from box suites. Box seats used to be where all big spenders enjoyed attending a sporting event. Today, as fans continue to demand an authentic experience that can't be felt in the air-conditioned box 200 feet above the field, premium seats with access to VIP amenities like a dedicated bar, buffet and covered viewing are becoming increasingly popular in new stadiums.

Significant U.S. indicators | Q2 2017:

U.S. construction spending YTD – Sports Facilities: **$2.31 B**
Change from 2016 YTD: **+33.3% (private funding)**

Top U.S. Stadiums under construction:

1. Mercedes-Benz Stadium, Atlanta
   71,000 seats - $1.6 B (projected)
2. Los Angeles Stadium at Hollywood Park, Los Angeles
   70,000 seats $2.6 B (projected)

Major upcoming ground breakings:

1. Las Vegas Stadium, Las Vegas
   65,000 seats - $1.9 B (projected)
2. Texas Rangers Stadium, Arlington, TX
   42,000 seats - $1.0 B (projected)

Source: JLL Research, U.S. Census

By Don Loudermilk, Senior Vice President, JLL sports facilities Project and Development Services

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About JLL PDS

JLL Project and Development Services is a leader in the development, design, construction and branding of commercial real estate projects for the world's most prominent corporations, educational institutions, public jurisdictions, healthcare organizations, industrial facilities, retailers, hotels and real estate owners. Ranked No. 4 in Building Design + Construction's 2017 Construction Management Giants survey and No. 5 on Engineering News Record's 2017 list of Top 100 Construction Management-for-Fee Firms, JLL's project management team comprises 4,895 project managers across 51 countries and is actively managing $31.1 billion under construction."

About JLL Research

JLL's research team delivers intelligence, analysis and insight through market-leading reports and services that illuminate today's commercial real estate dynamics and identify tomorrow's challenges and opportunities. Our more than 400 global research professionals track and analyze economic and property trends and forecast future conditions in over 60 countries, producing unrivalled local and global perspectives. Our research and expertise, fueled by real-time information and innovative thinking around the world, creates a competitive advantage for our clients and drives successful strategies and optimal real estate decisions.