

NORTH AMERICA

QUARTERLY CONSTRUCTION COST REPORT

SECOND QUARTER 2018





ON THE COVER

BEVERLY REGIONAL AIRPORT BEVERLY, MASSACHUSETTS

As the third-busiest small airport in the state, Beverly Regional Airport welcomed a new and improved 4,500 SF administration building. This project is part of the Massachusetts DOT statewide master planning effort to improve the quality of general aviation airports across Massachusetts. The building is based off a prototype, each customized to its airport's location, micro climate, and building operations.

The Beverly Airport now features a variety of upgraded facilities including improved office and meeting room for airport staff, interior and exterior space for the public to engage with airport activities, and quiet rooms for pilots.

RLB provided cost estimating services for this project to Fennick McCredie Architects Ltd.

NORTH AMERICA

“ “ What a difference a year makes. Or does it? To put this Rider Levett Bucknall Quarterly Cost Report in perspective, let’s revisit the topics we touched on in this column 12 months ago, and take stock of two key issues in the construction industry that were on the RLB radar then—and now.

The labor market. A year ago, a presidential executive order expanded federally funded apprenticeship programs by redirecting \$100 million to industry groups to develop retraining programs for trade workers. In March 2018, an omnibus appropriations bill included a 53% increase above the fiscal year 2017 funding level for apprenticeship programs.

A recent interesting development suggests that the private sector may be taking matters into its own hands. The Home Depot Foundation has invested \$50 million into the Home Builders Institute apprenticeship program, which operates apprenticeship programs in military bases and high schools. The goal is to train 20,000 workers over the next ten years.

A year later, the construction sector has grown 286,000 jobs, led by gains in specialty trade contractors (+206,000) and residential building (+44,000). Still, the industry—continuing its upward activity trend—remains beset by a shortage of qualified workers. The Bureau of Labor Statistics cites more than 196,000 construction jobs are currently unfilled.

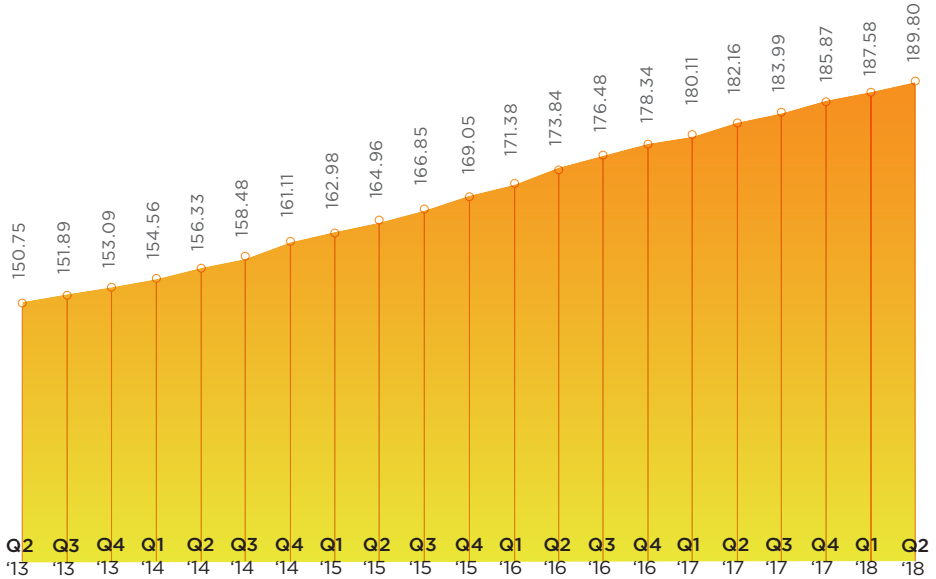
Infrastructure development. In July 2017, the administration’s proposed national infrastructure program was just that: a proposal. Over the intervening year, not many measurable commitments have been made beyond identifying financing models—ranging from federal grant programs to revising toll structures to removing caps on private activity bonds—for municipalities to adopt. Called out in a 2018 federal infrastructure fact sheet are initiatives that target environmental review and permitting processes for reform.

It’s said that hindsight is 20/20. While that may be, at Rider Levett Bucknall we remain focused on the future. As always, we thank you for your business and, more importantly, for your trust.

” “

Julian Anderson FRICS
President,
North America

NATIONAL CONSTRUCTION COST INDEX



Welcome to the second quarter 2018 issue of the Rider Levett Bucknall Quarterly Cost Report! This issue contains data current to April 1, 2018.

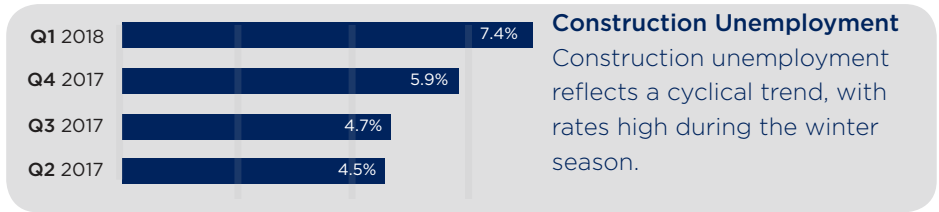
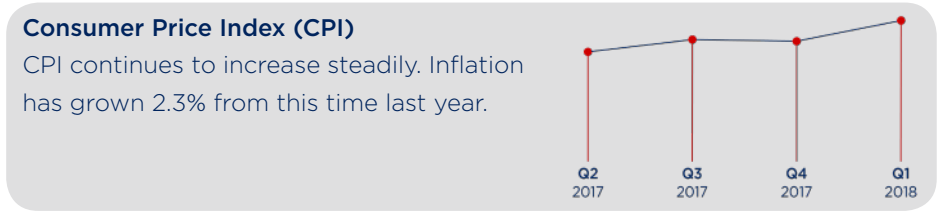
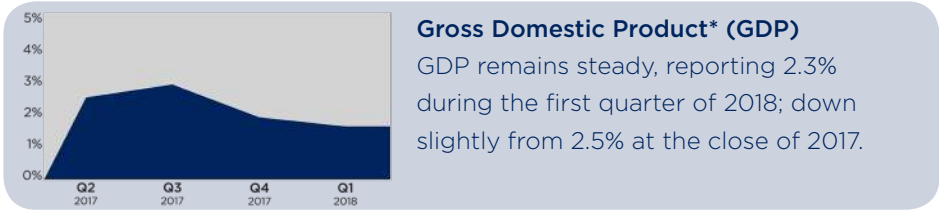
\$1,310.4 Billion According to the U.S. Department of Commerce, construction-put-in-place during April 2018 was estimated at a seasonally adjusted annual rate of \$1,310.4 billion, which is

1.8% above the revised March 2017 estimate of \$1,286.8 billion, and

7.6% above the April 2017 estimate of \$1,217.7 billion.

The National Construction Cost Index shows the changing cost of construction between April 2013 and April 2018, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.

KEY UNITED STATES STATISTICS



GDP represented in percent change from the preceding quarter, seasonally adjusted at annual rates. CPI quarterly figures represent the monthly value at the end of the quarter. Inflation rates represent the total price of inflation from the previous quarter, based on the change in the Consumer Price Index. ABI is derived from a monthly American Institute of Architects survey of architectural firms of their work on the boards, reported at the end of the period. Construction Put-in-Place figures represent total value of construction dollars in billions spent at a seasonally adjusted annual rate taken at the end of each quarter. General Unemployment rates are based on the total population 16 years and older. Construction Unemployment rates represent only the percent of experienced private wage and salary workers in the construction industry 16 years and older. Unemployment rates are seasonally adjusted, reported at the end of the period.

* Adjustments made to GDP based on amended changes from the Bureau of Economic Analysis.
Sources: U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, American Institute of Architects.

INDICATIVE CONSTRUCTION COSTS

The data in the chart below represents estimates of current building costs in each respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions, etc. Values of U.S. locations represent hard construction costs based on U.S. dollars per square foot of gross floor area, while values of Canadian locations represent hard construction costs based on Canadian dollars per square foot.

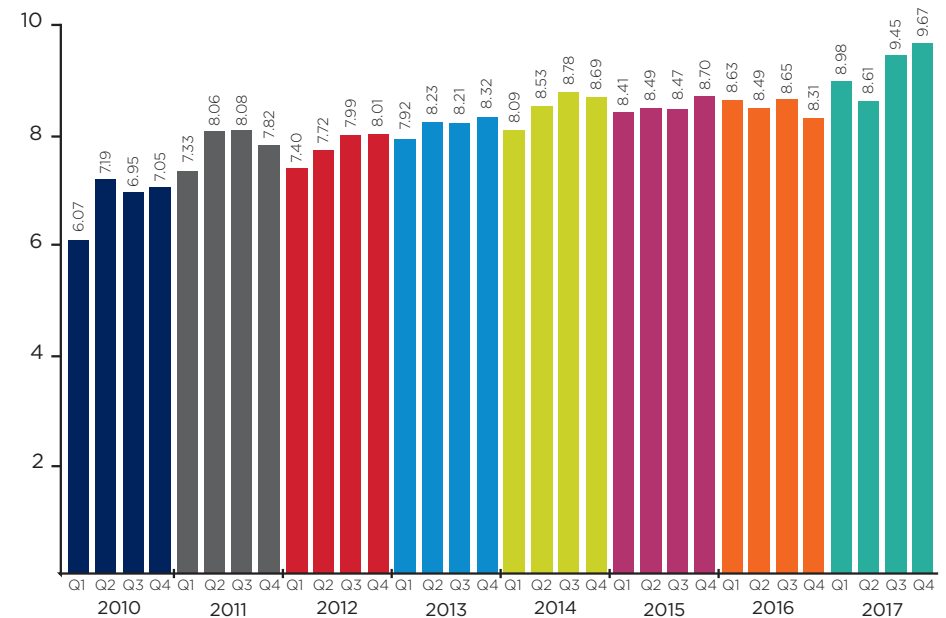
LOCATION	OFFICES				RETAIL SHOPPING				HOTELS				HOSPITAL		INDUSTRIAL		PARKING				RESIDENTIAL				EDUCATION						
	PRIME		SECONDARY		CENTER		STRIP		5 STAR		3 STAR		GENERAL		WAREHOUSE		GROUND		BASEMENT		MULTI-FAMILY		SINGLE-FAMILY		ELEMENTARY		HIGH SCHOOL		UNIVERSITY		
	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
USA																															
Boston	300	475	200	300	175	275	125	200	375	550	250	375	400	650	100	175	75	125	90	150	175	300	250	350	280	380	290	405	330	480	
Chicago	280	450	175	280	185	290	135	220	400	660	290	410	380	720	110	185	80	125	125	170	165	400	220	420	265	380	300	405	350	600	
Denver	165	255	120	185	90	145	80	175	275	360	160	240	380	470	90	150	55	75	90	120	90	200	90	410	250	300	260	315	305	415	
Honolulu	280	520	240	395	205	485	175	425	505	730	320	535	465	745	140	225	100	140	140	260	195	435	280	745	330	465	400	600	435	705	
Las Vegas	140	295	105	190	115	480	65	145	350	500	150	300	285	455	50	100	50	85	60	150	90	405	90	350	180	315	200	455	235	455	
Los Angeles	230	350	170	255	155	340	125	185	365	530	275	355	520	780	115	180	105	125	130	175	200	315	190	335	360	470	380	495	410	575	
New York	375	575	300	400	275	425	175	300	400	600	300	400	475	700	115	200	95	175	125	200	200	375	275	400	295	405	305	455	330	480	
Phoenix	170	275	120	175	120	200	80	150	300	520	150	250	375	500	55	100	45	70	60	110	90	210	100	450	170	250	220	340	300	420	
Portland	180	250	130	180	140	240	120	180	230	330	150	190	380	525	90	150	85	105	110	150	150	240	125	280	270	335	285	350	310	440	
San Francisco	210	330	190	300	225	350	225	325	400	600	350	500	450	650	140	190	110	145	175	215	340	450	200	400	320	400	315	400	250	375	
Seattle	215	260	140	200	135	305	110	155	245	360	225	240	380	530	95	125	90	105	135	160	160	270	170	290	250	305	275	465	320	465	
Washington	275	425	200	300	150	275	125	175	350	525	250	350	400	650	90	150	70	125	80	125	175	300	250	350	280	355	280	380	330	480	
CANADA																															
Calgary	235	295	190	285	220	310	110	160	300	450	190	245	550	720	85	145	75	90	75	120	140	215	125	315	185	260	220	310	300	450	
Toronto	195	260	175	250	200	250	105	160	300	355	195	260	500	645	115	150	70	90	115	150	130	205	190	330	170	195	200	230	200	295	

ABC CONSTRUCTION BACKLOG INDICATOR

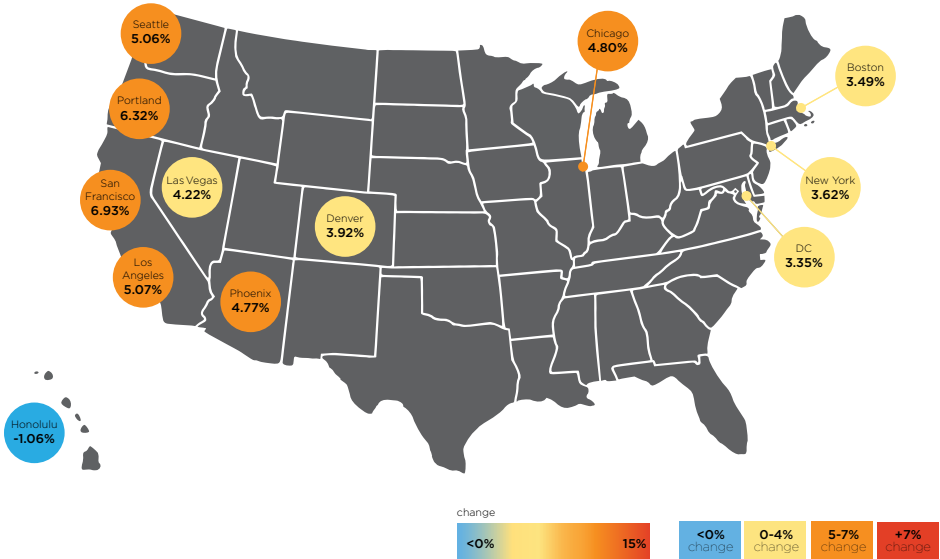
The chart on the adjacent page relates the average construction backlog, by quarter, to backlog duration in months, as represented by the Associated Builders and Contractors, Inc. Construction Backlog Indicator (CBI).

The CBI is a forward-looking national economic indicator that reflects the amount of work that will be performed by commercial and industrial contractors in the months ahead. This national economic data set is a reliable leading economic indicator offering this level of specificity focused on the U.S. commercial and institutional, industrial and infrastructure construction industries.

The average backlog up from an 8.5-month average in 2016 to 9.2-month average in 2017, demonstrating an 8% increase in average monthly backlog across the United States. The average monthly duration of the construction backlog is now the highest in a decade.

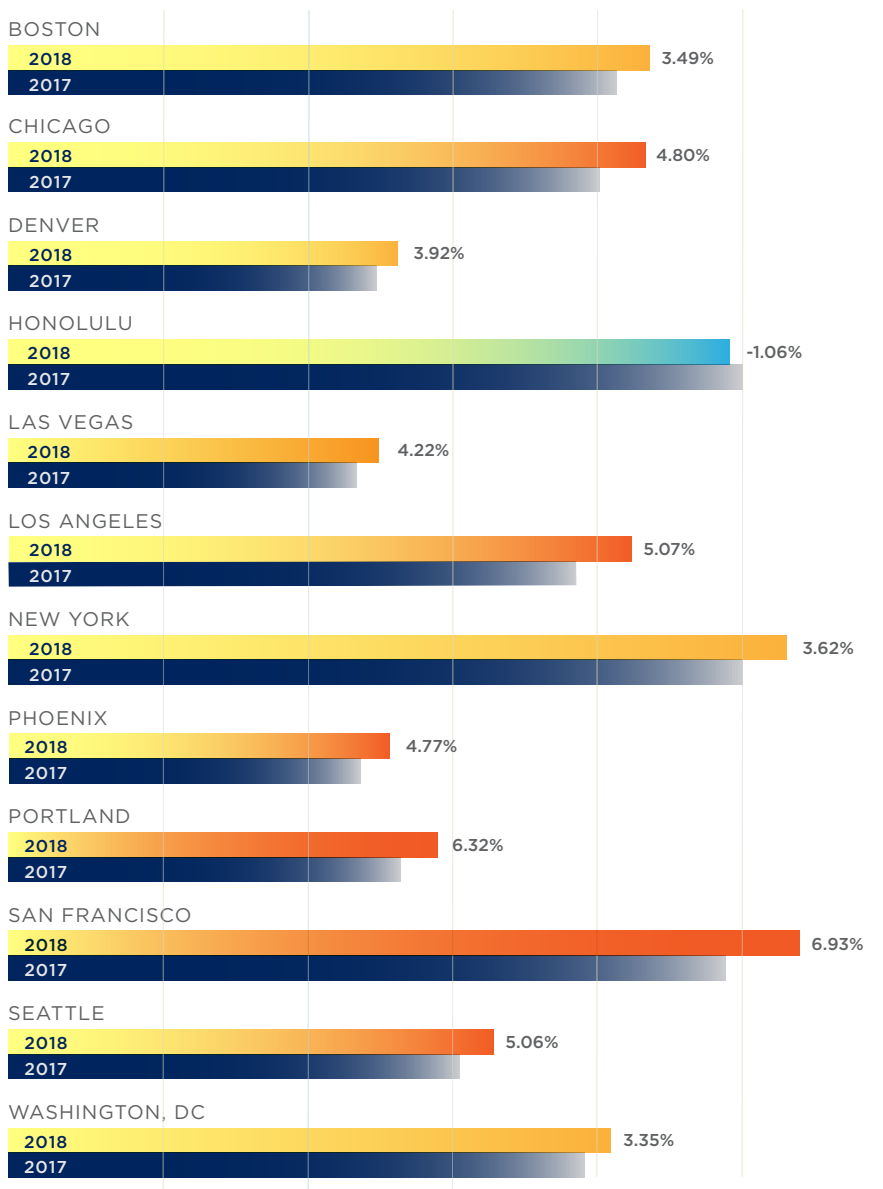


COMPARATIVE COST INDEX



City	April 2017	July 2017	October 2017	January 2018	April 2018	Annual % Change
• Boston	20,835	20,989	21,176	21,325	21,563	3.49%
• Chicago	20,414	20,652	20,905	21,177	21,394	4.80%
• Denver	14,097	14,187	14,337	14,513	14,649	3.92%
• Honolulu	24,060	24,050	24,058	23,663	23,804	-1.06%
• Las Vegas	13,510	13,614	13,777	13,922	14,081	4.22%
• Los Angeles	19,997	20,326	20,586	20,874	21,010	5.07%
• New York	24,499	24,698	24,927	25,104	25,387	3.62%
• Phoenix	13,785	13,900	14,080	14,248	14,442	4.77%
• Portland	14,830	15,044	15,302	15,524	15,768	6.32%
• San Francisco	24,039	24,546	24,760	25,151	25,704	6.93%
• Seattle	16,419	16,654	16,804	17,017	17,250	5.06%
• Washington, DC	19,774	19,884	20,054	20,212	20,437	3.35%


Comparative Cost Map and Bar Graph Indicate percentage change between April 2017 and April 2018.



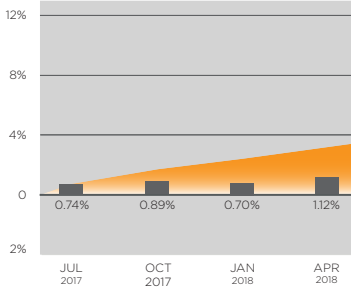
Each quarter we look at the comparative cost of construction in 12 US cities, indexing them to show how costs are changing in each city in particular, and against the costs in the other 11 locations. You will be able to find this information in the graph titled *Comparative Cost Index (above)* and in the *Cost and Change Summary (right)*.

Our Comparative Cost Index tracks the 'true' bid cost of construction, which includes, in addition to costs of labor and materials, general contractor and sub-contractor overhead costs and fees (profit). The index also includes applicable sales/use taxes that 'standard' construction contracts attract. In a 'boom,' construction costs typically increase more rapidly than the net cost of labor and materials. This happens as the overhead levels and profit margins are increased in response to the increasing demand. Similarly, in a 'bust,' construction cost increases are dampened (or may even be reversed) due to reductions in overheads and profit margins.

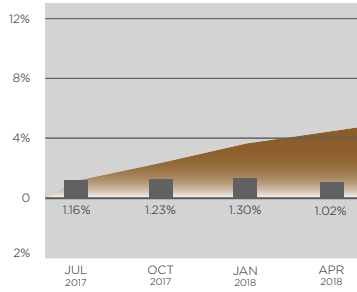
The following escalation charts track changes in the cost of construction each quarter in many of the cities where RLB offices are located. Each chart illustrates the percentage change per period and the cumulative percentage change throughout the charted timeline.

 Percentage change per quarter  Cumulative percentage change for the period shown

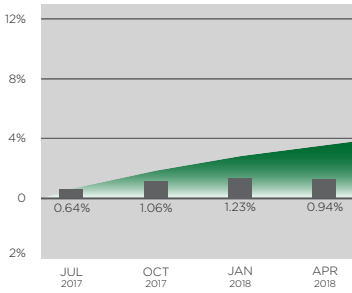
COST INDEX Boston



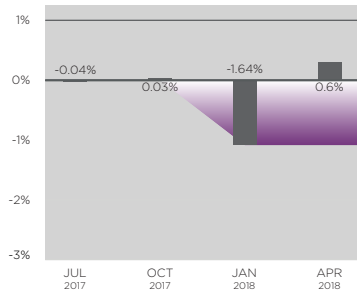
COST INDEX Chicago



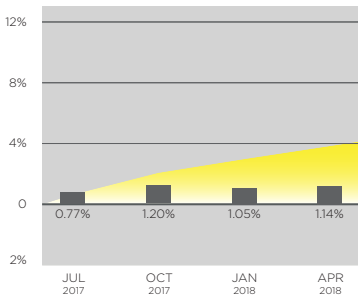
COST INDEX Denver



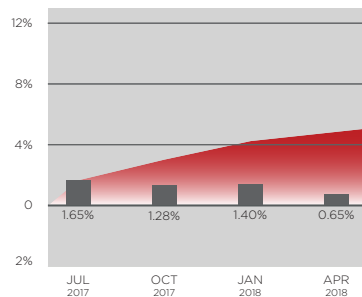
COST INDEX Honolulu



COST INDEX Las Vegas

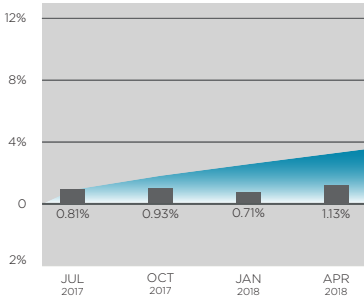


COST INDEX Los Angeles

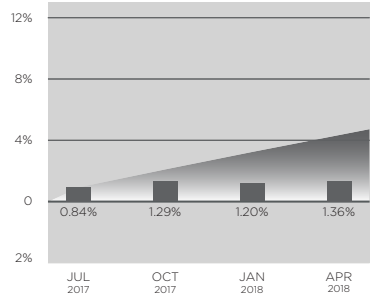


Our research suggests that between January 1, 2018 and April 1, 2018 the national average increase in construction cost was approximately 1.18%. Phoenix, Portland, San Francisco, and Seattle all experienced increases above the national average during the second quarter. Other locations have had more modest gains, including Honolulu which experienced a slight increase of 0.6%.

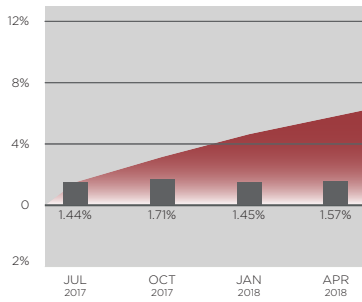
COST INDEX New York



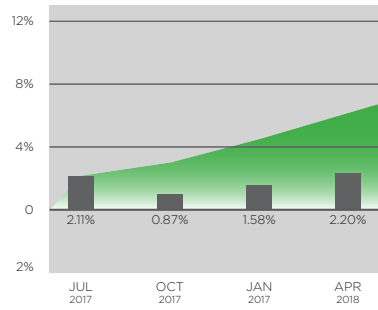
COST INDEX Phoenix



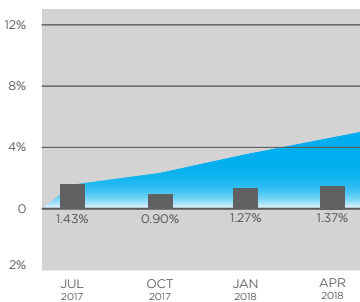
COST INDEX Portland



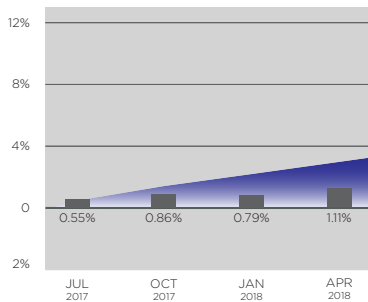
COST INDEX San Francisco



COST INDEX Seattle

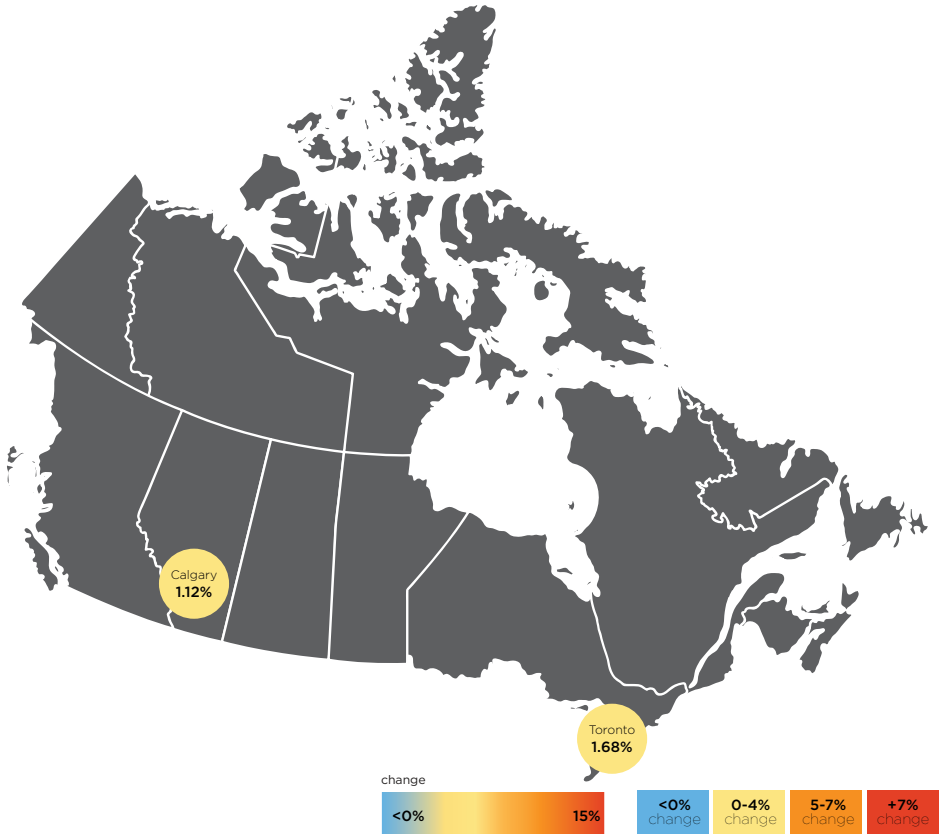


COST INDEX Washington DC





COMPARATIVE COST INDEX

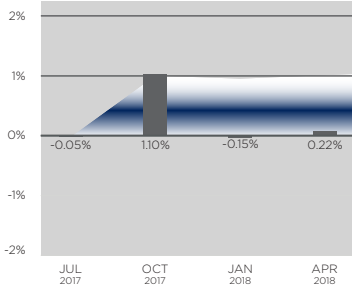


City	April 2017	July 2017	October 2017	January 2018	April 2018	Annual % Change
• Calgary	18,089	18,080	18,279	18,252	18,292	1.12%
• Toronto	18,664	18,569	18,956	18,999	18,978	1.68%

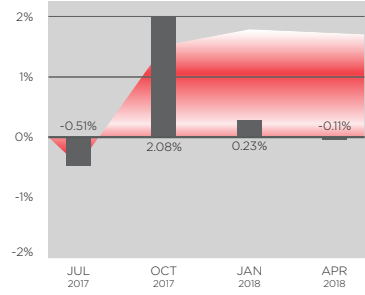
Canada's economy is expected to grow moderately in 2018. Despite economic slack and slower pace in most provinces relative to rapid growth rates in 2017, the provinces of Alberta, British Columbia, Saskatchewan, and Ontario are projected to be above the 2% growth for 2018.

The oil sector has been a key player in the Canadian economy. Having weathered the oil price slump over the past couple of years, Canada is poised to have positive economic activities with oil prices forecasted to rise above the \$50 range, per barrel, and likely maintain that range throughout the year. Provincial pipeline disputes between Alberta and British Columbia will delay the economic benefits that were anticipated.

COST INDEX Calgary



COST INDEX Toronto



KEY CANADIAN STATISTICS

Gross Domestic Product (GDP)

GDP continues a slight downward trend, reaching 0.33% in Q1, slightly down from the rate of 0.42% in Q4 of last year.



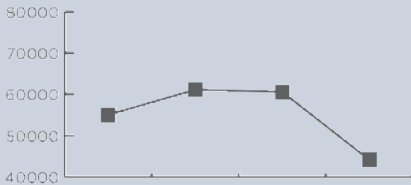
Consumer Price Index (CPI)

Canada's CPI grows steadily every quarter, with a variance of 1.9% from this time last year.



Housing Starts

Housing starts in Canada are down for the second consecutive quarter; down 27% from the fourth quarter of last year.



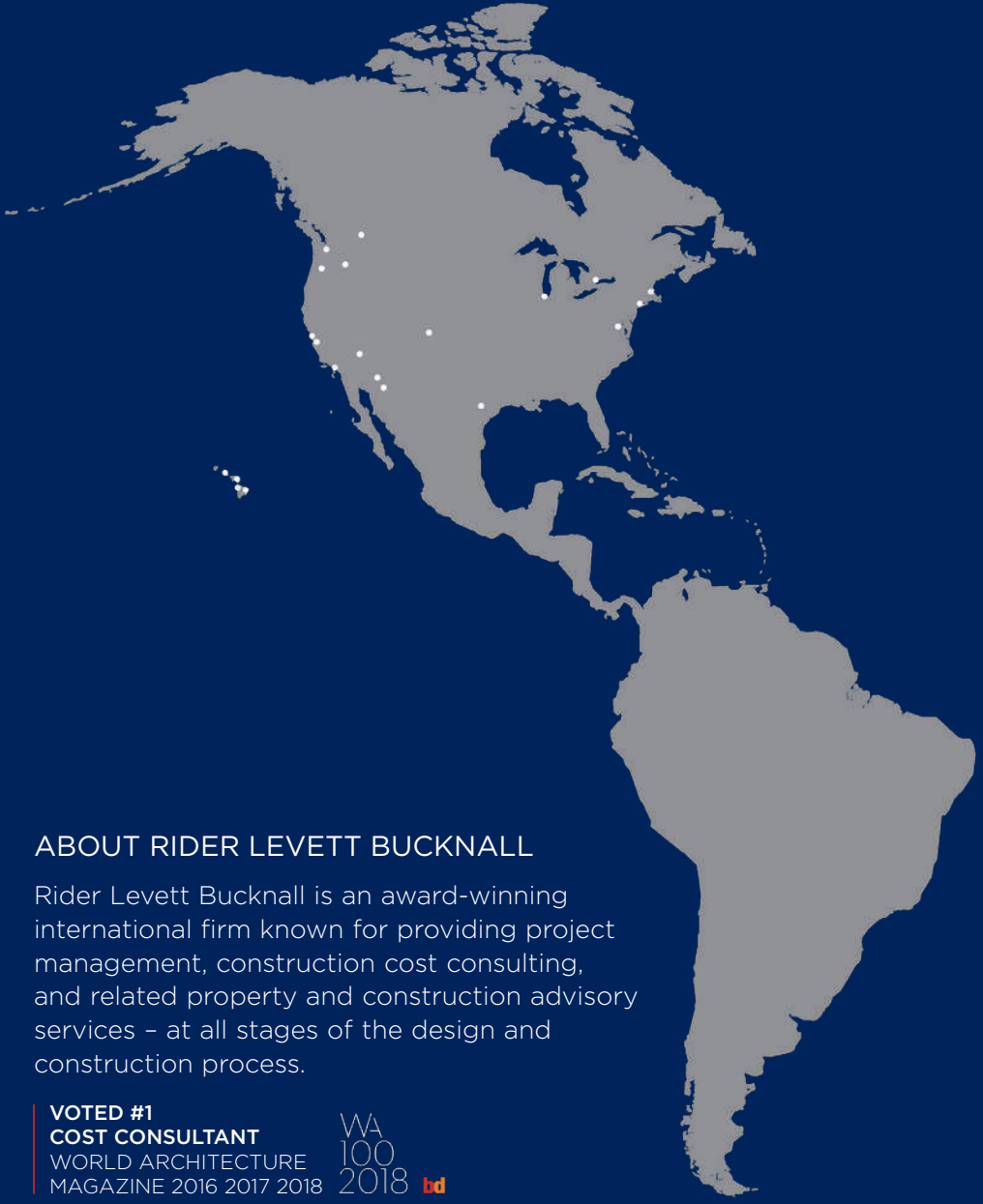
Unemployment

Canada's unemployment holds steady at 5.8% this quarter, down from 6.7% this time last year.



GDP represented in percent change from the preceding quarter, seasonally adjusted at annual rates. CPI quarterly figures represent the monthly value at the end of the quarter. Inflation rates represent the total price of inflation from the previous quarter, based on the change in the Consumer Price Index. General Unemployment rates are based on the total population 16 years and older. Construction Unemployment rates represent only the percent of experienced private wage and salary workers in the construction industry 15 years and older. Unemployment rates are seasonally adjusted, reported at the end of the period.

Sources: Statistics Canada



ABOUT RIDER LEVETT BUCKNALL

Rider Levett Bucknall is an award-winning international firm known for providing project management, construction cost consulting, and related property and construction advisory services – at all stages of the design and construction process.

**VOTED #1
COST CONSULTANT**
WORLD ARCHITECTURE
MAGAZINE 2016 2017 2018

WA
100
2018 **bd**

While the information in this publication is believed to be correct, no responsibility is accepted for its accuracy. Persons desiring to utilize any information appearing in this publication should verify its applicability to their specific circumstances.

This issue was compiled by Taryn Harbert with contributions from Evans Pomegas, Grant Owen, Edd Hamzanlui, Peter Knowles, Paul Brussow, Maelyn Uyehara, Cassie Idehara, Simon James, Philip Mathur, Michael Moynihan, Scott Macpherson, Graham Roy, Daniel Junge, George Bergeron, Catherine Stoupas, Joe Pendlebury, and Robin Kankerwal.

© July 2017 by Rider Levett Bucknall Ltd.

If you have questions or for more information, please contact us.

AUSTIN

Phone: +1 512 704 3026
E-mail: ward.simpson@us.rlb.com
Contact: Ward Simpson

BOSTON

Phone: +1 617 737 9339
E-mail: BOS@us.rlb.com
Contact: Grant Owen

CALGARY

Phone: +1 403 571 0505
E-mail: YYC@ca.rlb.com
Contact: Joe Pendlebury

CHICAGO

Phone: +1 312 819 4250
E-mail: chris.harris@us.rlb.com
Contact: Chris Harris

DENVER

Phone: +1 720 904 1480
E-mail: DEN@us.rlb.com
Contact: Peter Knowles

HILO

Phone: +1 808 934 7953
E-mail: ITO@us.rlb.com
Contact: Kevin Mitchell

HONOLULU

Phone: +1 808 521 2641
E-mail: HNL@us.rlb.com
Contact: Paul Brussow
Maelyn Uyehara
Erin Kiriara

LAS VEGAS

Phone: +1 702 227 8818
E-mail: LAS@us.rlb.com
Contact: Simon James

LOS ANGELES

Phone: +1 213 689 1103
E-mail: LAX@us.rlb.com
Contact: Philip Mathur
Brian Lowder

MAUI

Phone: +1 808 875 1945
E-mail: OGG@us.rlb.com
Contact: Kevin Mitchell

NEW YORK

Phone: +1 212 952 1300
E-mail: NYC@us.rlb.com
Contact: Michael Moynihan

PHOENIX

Phone: +1 602 443 4848
E-mail: PHX@us.rlb.com
Contact: Julian Anderson
Scott Macpherson
John Jozwick

PORTLAND

Phone: +1 503 226 2730
E-mail: PDX@us.rlb.com
Contact: Graham Roy

SAN FRANCISCO

Phone: +1 415 362 2613
E-mail: SFO@us.rlb.com
Contact: Catherine Stoupas

SAN JOSE

Phone: +1 650 943 2317
E-mail: joel.brown@us.rlb.com
Contact: Joel Brown

SEATTLE

Phone: +1 206 223 2055
E-mail: emile.leroux@us.rlb.com
Contact: Emile Le Roux

ST. LUCIA

Phone: +1 758 452 2125
E-mail: mark.williamson@lc.rlb.com
Contact: Mark Williamson

TORONTO

Phone: +1 905 827 8218
E-mail: YYZ@us.rlb.com
Contact: Joe Pendlebury

TUCSON

Phone: +1 520 777 7581
E-mail: TUS@us.rlb.com
Contact: Joel Brown

WAIKOLOA

Phone: +1 808 883 3379
E-mail: KOA@us.rlb.com
Contact: Kevin Mitchell

WASHINGTON, DC

Phone: +1 202 457 1450
E-mail: DCA@us.rlb.com
Contact: Grant Owen

rlb.com

