

A photograph of a modern AC Hotels Marriott building at dusk. The building features a prominent sign with the AC Hotels logo and the Marriott name. The facade is illuminated with warm, yellow lights, and the sky is a deep blue. The building has a mix of dark and light panels, with a large section of vertical slats on the lower part of the facade. A traffic light and power lines are visible in the foreground.

AC  
HOTELS  
MARRIOTT

# NORTH AMERICA

## QUARTERLY CONSTRUCTION COST REPORT

FOURTH QUARTER 2017



## ON THE COVER

### AC HOTEL TUCSON BY MARRIOTT TUCSON, AZ

The AC Hotel Tucson by Marriott is the first hotel built in Downtown Tucson, AZ in over 40 years. The project includes an 8-story building with hotel lobby and new commercial space on the 1st floor, a 200-space parking garage on floors 2-5, and a 136-room boutique hotel on floors 6-8.

RLB provided Project Management and Cost Management services. This urban site posed a number design and construction challenges in which RLB worked with the Owner and Design-Build Team to resolve proactively. With AC being a new Marriott brand, RLB has helped streamline the incorporation of the brand's design requirements, and has exercised expertise in project controls to hold Owner expectations regarding schedule and budget.

# NORTH AMERICA

As we welcome 2018, we're pleased to bring you the latest edition of the Rider Levett Bucknall Quarterly Construction Cost Report.

Largely based on the rapid completion of projects and the continued availability of favorable-term financing which fuels development, the industry outlook through the end of this year remains positive. But there are a few hurdles, particularly on the horizon, on which we are keeping a watchful eye.

The serious and widespread damage inflicted by the 2017 hurricanes in Texas and the Caribbean, along with the record-setting wildfires throughout California (and, subsequently, the mudslides just north of Los Angeles) exacerbated the still-tight labor market in the United States.

An underlying factor is compounding the shortage. If the construction labor force is generally unable to afford living in the places where their services are most in demand, employers will eventually increase wages to attract workers—but at this point in time, this has not yet been fully realized.

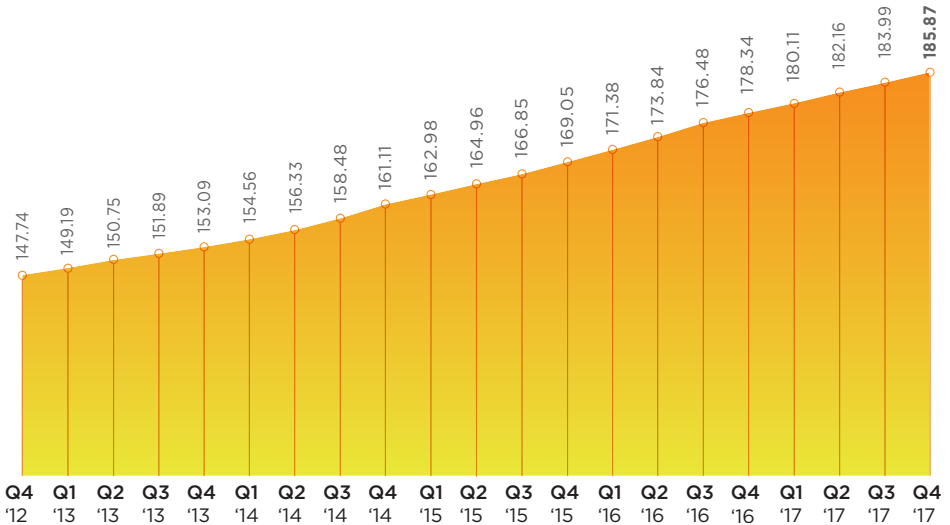
Additionally, slow processing of insurance claims and federal emergency relief funds have not only prolonged the recovery process, but, as on-the-ground conditions deteriorate over time, the costs of undertaking repairs creep upward. Coupled with steep and expected increases in the price of construction-materials staples such as gypsum board, lumber and plywood, and PVC products, the rebuilding looks to be drawn out and costly.

Surveys show that long-term industry confidence is slipping, for reasons that are largely rooted in Washington D.C. The long-promised infrastructure initiative seems to have slipped off the federal agenda, and may be headed to the individual states to implement. Legislation on immigration and resident aliens, while not yet law, threatens to destabilize and/or reduce the construction workforce at a time when the need for labor is peaking.



**Julian Anderson** FRICS  
**President, North America**  
**Chairman of the Global Board**

# NATIONAL CONSTRUCTION COST INDEX



Welcome to the fourth quarter 2017 issue of the Rider Levett Bucknall Quarterly Cost Report! This issue contains data current to October 1, 2017.

**\$1,241.5  
Billion**

According to the U.S. Department of Commerce, construction-put-in-place during October 2017 was estimated at a seasonally adjusted annual rate of \$1,241.5 billion, which is

**1.4%  
above**

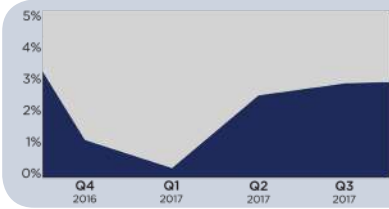
the revised September estimate of \$1,224.6 billion, and

**2.9%  
above**

above the October 2016 estimate of \$1,206.6 billion.

The National Construction Cost Index shows the changing cost of construction between October 2012 and October 2017, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.

# KEY UNITED STATES STATISTICS



## Gross Domestic Product\* (GDP)

GDP recovers from a dip in Q1, and was sitting at 3.3% during Q3.

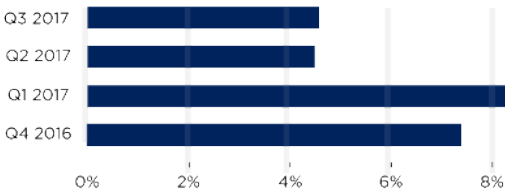
## Consumer Price Index (CPI)

CPI experiences a nominal but steady increase. Inflation has grown 2.2% from this time last year.



## Architectural Billings Index (ABI)

ABI experiences its first dip since this time last year. It is yet to be determined if this dip is in response to impacts from recent hurricanes or from other factors.

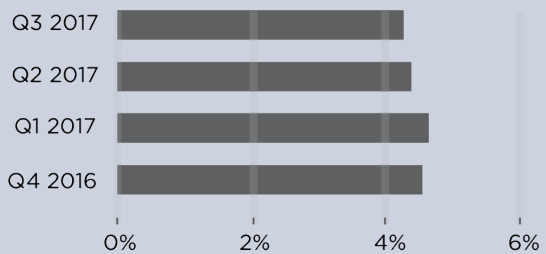


## Construction Unemployment

Construction unemployment evens out after a drop during the second quarter, currently at 4.7%.

## National Unemployment

National unemployment experiences nominal variance from 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. 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

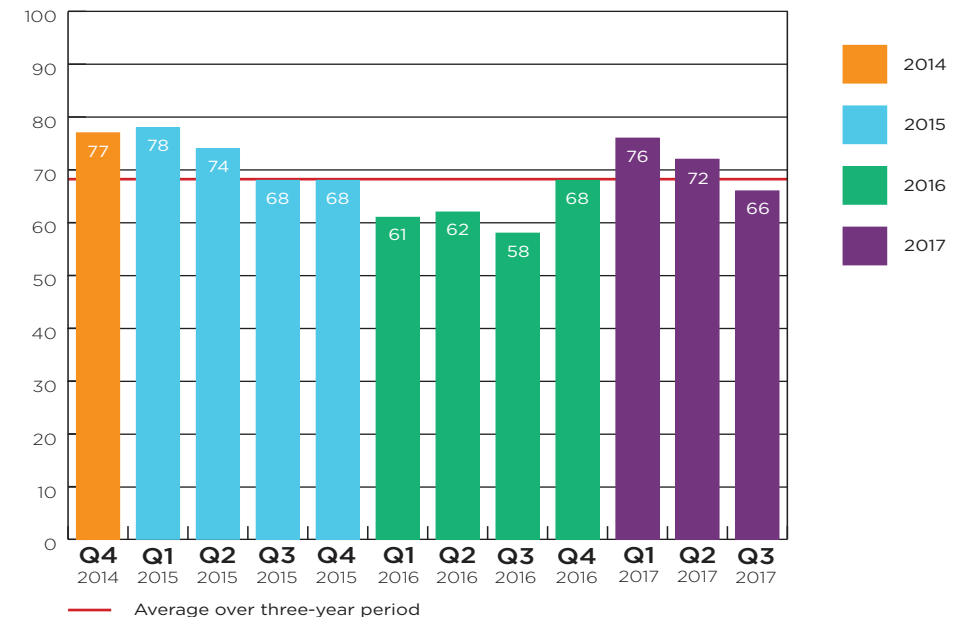
The data in the chart below represents estimates of current building costs in each respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions, etc. Values of U.S. locations represent hard construction costs 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
<b>USA</b>																															
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	280	135	220	390	650	270	390	360	700	110	185	80	125	120	155	160	340	220	420	250	380	300	400	350	600	
Denver	165	255	120	185	90	145	75	140	215	325	155	190	380	470	90	150	50	75	90	120	90	200	90	410	250	300	260	315	305	415	
Honolulu	285	525	245	400	210	490	175	430	515	740	325	545	475	755	145	225	100	145	140	265	195	440	280	755	340	475	405	605	440	715	
Las Vegas	140	295	105	190	115	480	65	145	350	500	150	300	285	455	50	100	50	85	60	150	70	405	90	350	180	315	200	455	235	455	
Los Angeles	225	340	165	250	150	330	120	185	355	520	255	330	475	705	110	175	105	125	130	175	185	295	190	335	340	450	360	485	390	555	
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	160	275	120	175	120	200	80	140	300	500	150	250	350	500	55	100	45	70	60	110	90	185	100	400	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	325	190	300	225	350	225	325	400	600	350	500	450	650	140	190	110	145	175	215	320	430	200	400	340	450	315	400	250	375	
Seattle	205	250	150	205	135	305	110	155	245	340	225	240	390	540	100	125	95	120	140	165	165	260	170	300	275	320	325	480	315	475	
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	
<b>CANADA</b>																															
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	174	250	200	250	105	160	300	355	195	260	500	645	115	150	70	90	70	90	130	205	190	330	175	195	200	230	200	295	

## CONSTRUCTION INDUSTRY CONFIDENCE INDEX

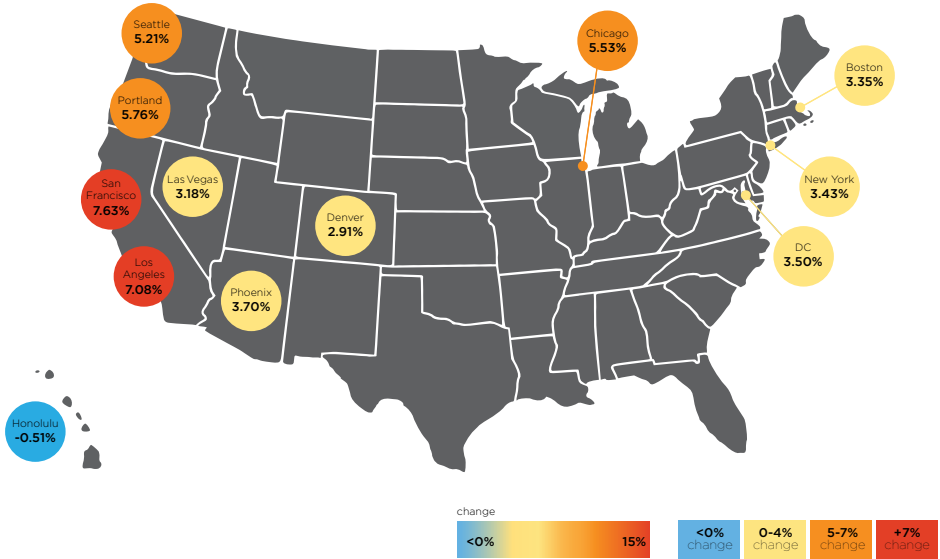
The North American construction market continues to recover from the crash in 2009; and is now the third-longest market recovery period in U.S. history. ENR's Construction Industry Confidence Index (CICI), launched in 2009, is a survey of different types of firms (Design Professionals, General Contractors and Subcontractors) and represents their overall view of the current and future construction market. The index is 66 in the third quarter of 2017, reflecting a drop of six points since the previous quarter. Despite the drop, industry confidence remains high, as an index above 50 reflects sentiment for market growth.

While it is expected that construction will continue to prosper through the end of 2018, long-term market concerns are what have led to a downturn in industry confidence.



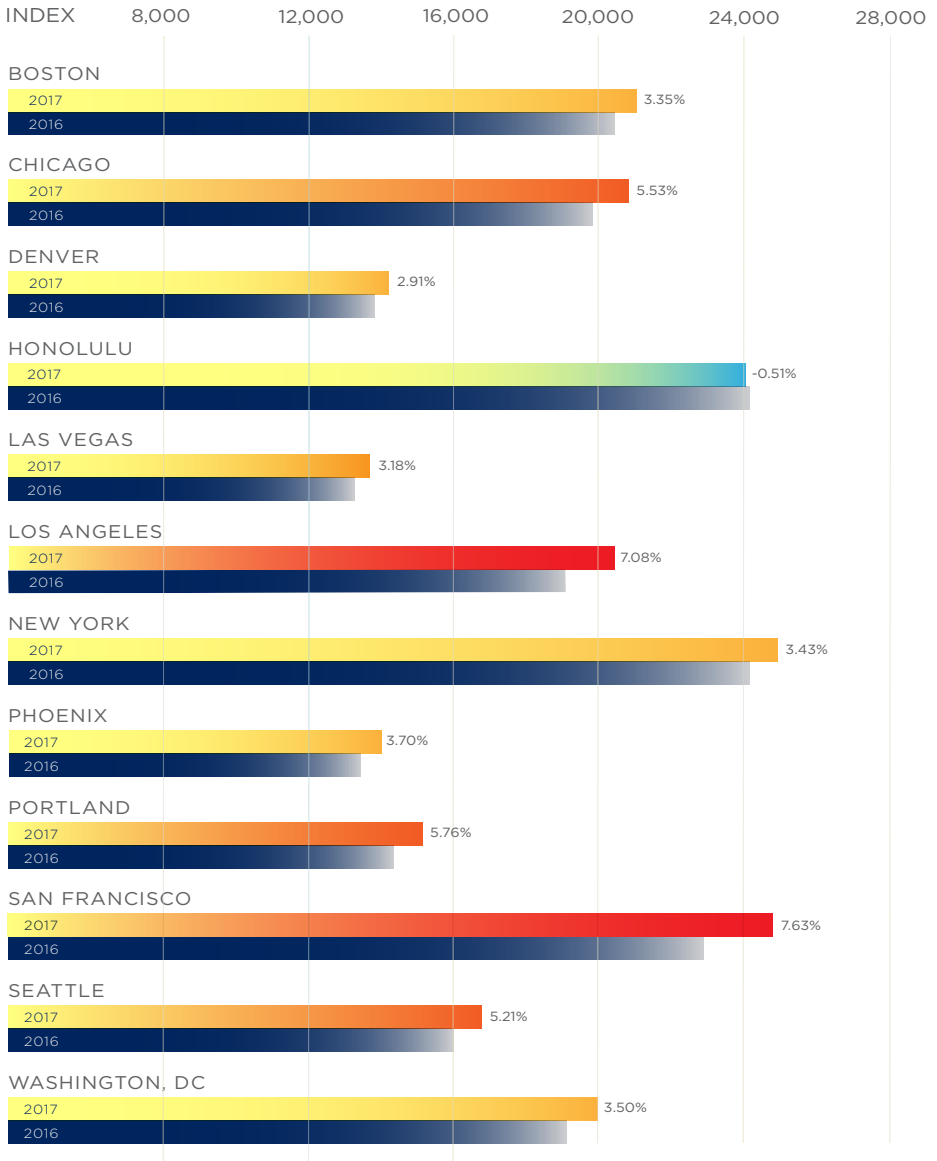
Source: 2017 3Q Engineering News Record Confidence Survey

## COMPARATIVE COST INDEX



City	October 2016	January 2017	April 2017	July 2017	October 2017	Annual % Change
• Boston	20,489	20,671	20,835	20,989	21,176	3.35%
• Chicago	19,809	20,103	20,414	20,652	20,905	5.53%
• Denver	13,932	13,987	14,097	14,187	14,337	2.91%
• Honolulu	24,181	24,082	24,060	24,050	24,058	-0.51%
• Las Vegas	13,342	13,435	13,510	13,614	13,766	3.18%
• Los Angeles	19,225	19,401	19,997	20,326	20,586	7.08%
• New York	24,101	24,303	24,499	24,698	24,927	3.43%
• Phoenix	13,578	13,659	13,785	13,900	14,080	3.70%
• Portland	14,469	14,638	14,830	15,044	15,302	5.76%
• San Francisco	23,005	23,677	24,039	24,546	24,760	7.63%
• Seattle	15,972	16,190	16,419	16,654	16,804	5.21%
• Washington, DC	19,376	19,586	19,774	19,884	20,054	3.50%

Comparative Cost Map and Bar Graph Indicate percentage change between October 2016 and October 2017.



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)*.

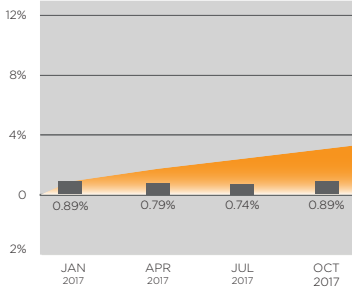
Our Comparative Cost Index tracks the 'true' bid cost of construction, which includes, in addition to costs of labor and materials, general contractor and sub-contractor overhead costs and fees (profit). The index also includes applicable sales/use taxes that 'standard' construction contracts attract. 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.



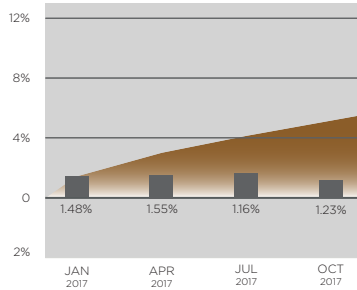
The following escalation charts track changes in the cost of construction each quarter in many of the cities where RLB offices are located. Each chart illustrates the percentage change per period and the cumulative percentage change throughout the charted timeline.

 Percentage change per quarter     Cumulative percentage change for the period shown

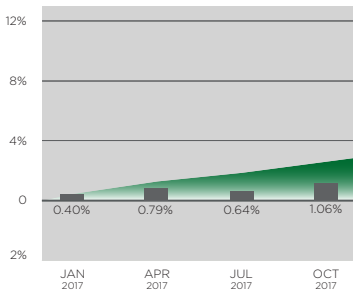
## COST INDEX Boston



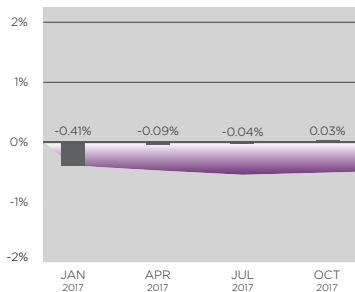
## COST INDEX Chicago



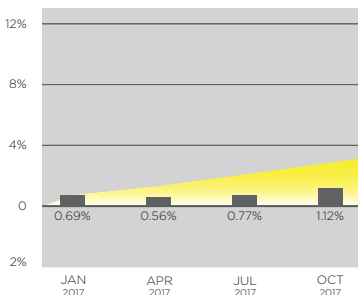
## COST INDEX Denver



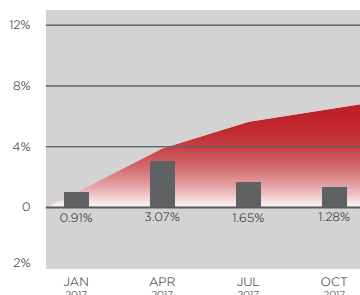
## COST INDEX Honolulu



## COST INDEX Las Vegas

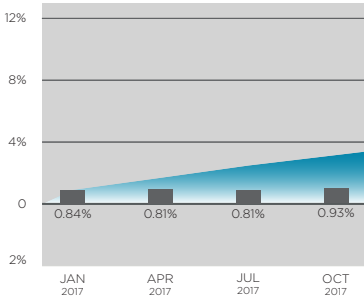


## COST INDEX Los Angeles

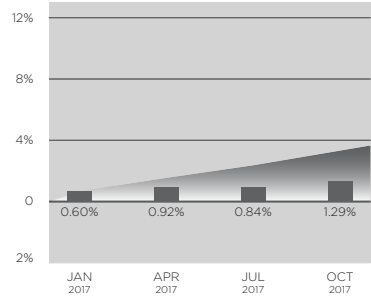


Our research suggests that between July 1, 2017 and October 1, 2017 the national average increase in construction cost was approximately 1.0%. Several locations saw increases over 1%, including Chicago, Denver, Las Vegas, Los Angeles, Phoenix, and Portland. However, Boston, Honolulu, New York, San Francisco, Seattle, and Washington DC all experienced increases less than 1%.

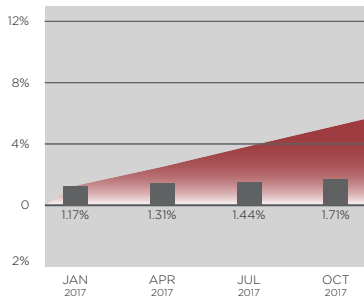
COST INDEX New York



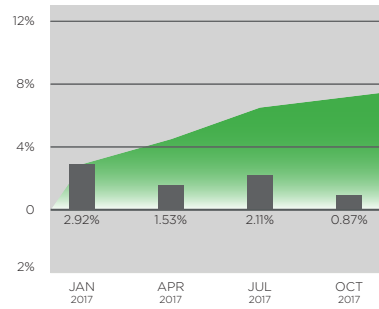
COST INDEX Phoenix



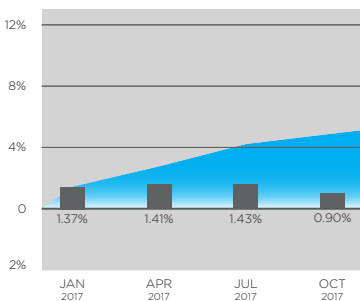
COST INDEX Portland



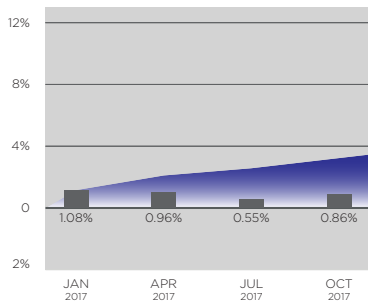
COST INDEX San Francisco



COST INDEX Seattle

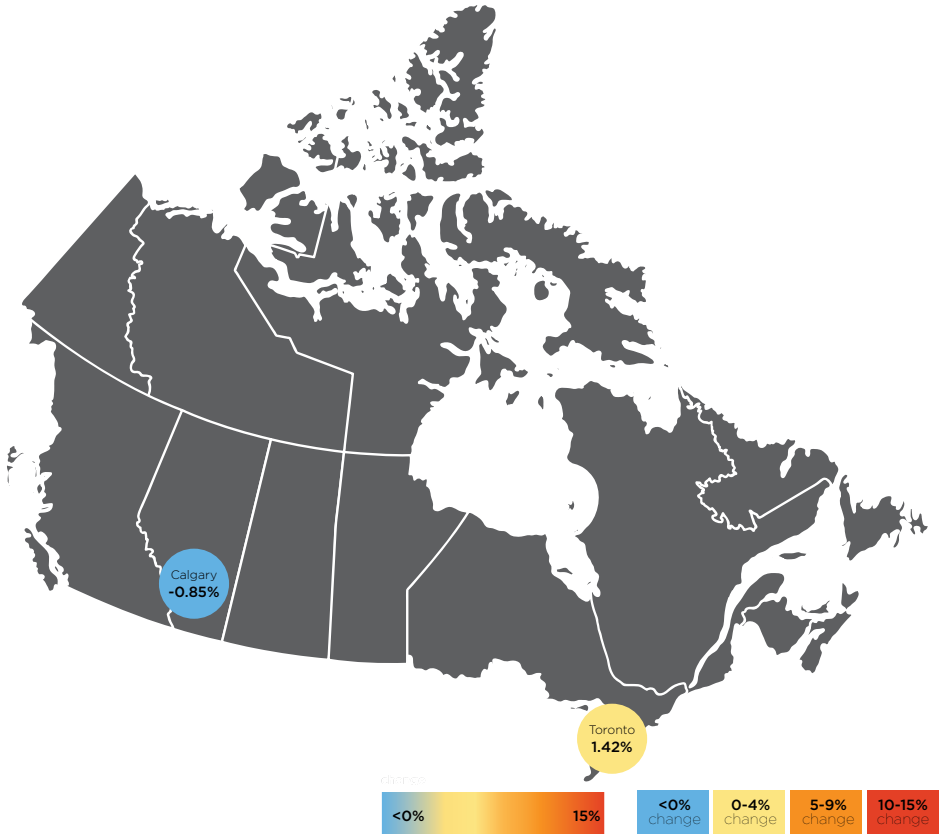


COST INDEX Washington DC





## COMPARATIVE COST INDEX



City	October 2016	January 2017	April 2017	July 2017	October 2017	Annual % Change
• Calgary	18,435	18,190	18,089	18,080	18,279	-0.85%
• Toronto	18,690	18,800	18,664	18,569	18,956	1.42%

Nationally, construction activities gained some momentum as the value of building permits rose 3.5% in the first month of Q4 2017 (October). Main contributor to this rise relate to higher construction intentions for building component in Quebec and Ontario, as well as factories and plants in Alberta. Seasonally adjusted year-to-date value of permits increased 1% for the same period in 2016. Commercial and industrial building component push the non-residential sector higher in Ontario municipalities and Quebec. Other active sectors include multi-family dwellings in Quebec with 78% of permit value coming from the census metropolitan area (CMA) of Montreal. During October 2017, multiple high-value permits for apartment condominiums in Montreal CMA accounted for Quebec’s provincial increase..

# KEY CANADIAN STATISTICS

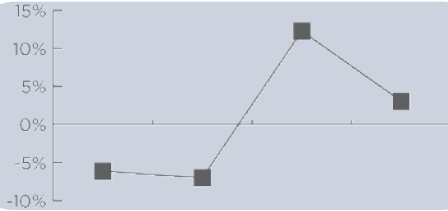
## Gross Domestic Product

Experiencing a 0.42% change from last quarter, GDP shows minimal fluctuation, indicating a nominal 3.32% variance from this time last year.



## Consumer Price Index

Canada's Consumer Price Index grows steadily every quarter, with a variance of 1.47% from this time last year.

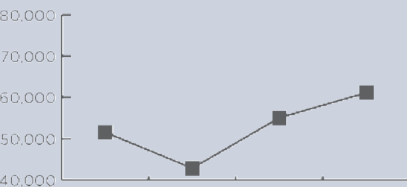


## Value of Building Permits

The seasonally adjusted value of building permits continues to fluctuate quarter-to-quarter. Permits have increased 1% from the same period in 2016.

## Unemployment

Canada's unemployment continues to decrease steady, down 0.8% from this time last year.



## Housing Starts

Housing Starts are up 42% from Q1 2017; 11.43% higher than 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. The firm was voted #1 Cost Consultant for 2016, 2017, and 2018 by World Architecture Magazine.

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, Paul Brussow, Maelyn Uyehara, Cassie Idehara, Simon James, Philip Mathur, Scott Macpherson, Graham Roy, Daniel Junge, George Bergeron, Peter Knowles, Catherine Stoupas, Joe Pendlebury, Edward Traore, and Robin Kankerwal.

© December 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: Edward Traore

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: EWR@us.rlb.com  
Contact: Grant Owen

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](http://rlb.com)

