

Construction Industry Snapshot

Issued: September 2019
(based on August 2019 Starts Stats)

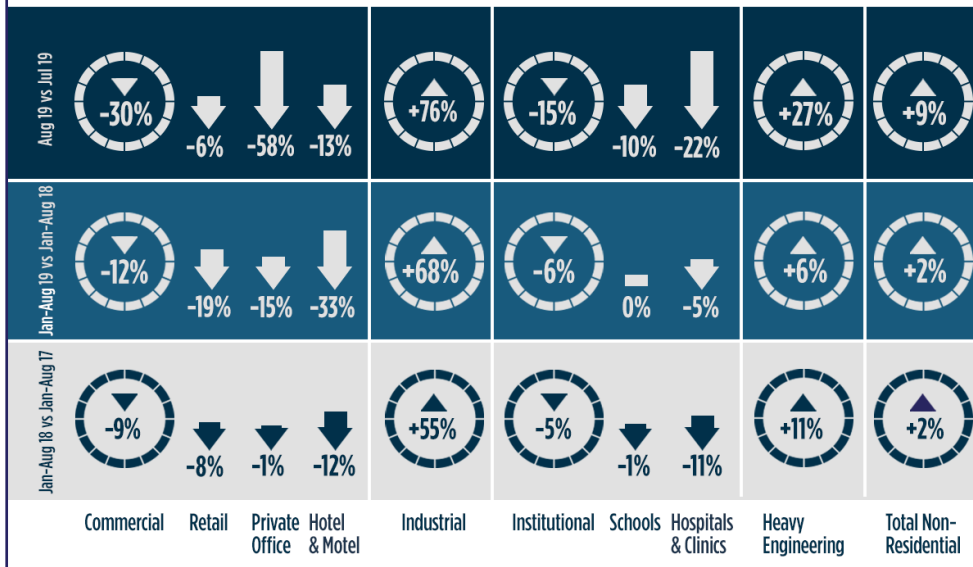


Marketing Analytics Team

Industrial and Civil Work Raised August Nonresidential Starts +9% vs July

ConstructConnect announced today that the latest month's volume of construction starts, excluding residential work, was \$50.2 billion, +8.9% compared with July's upwardly revised figure of \$46.1 billion (originally reported as \$45.4 billion).

While July featured a wealth of mega project starts (four for more than \$1 billion each, totaling \$8.7 billion), August's record was even better (five such projects adding to \$18.7 billion).



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August's Notable Points

- The big jump in total nonresidential starts of +34.4% in August 2019 versus August 2018 (y/y) was a matter of impressive strength in industrial (+155.8%) and heavy engineering (+64.9%) that overwhelmed weakness in institutional (-13.2%) and commercial (-9.6%).
- The pattern also repeated with respect to year-to-date (ytd) total nonresidential starts. In August, the +2.2% figure overall was mainly thanks to industrial (+68.1%), with a minor assist from civil (+5.7%), as there was no help coming from commercial (-11.7%) or institutional (-5.9%).

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Industrial and Civil Work Raised August Nonresidential Starts +9% vs July

Another Outstanding Mega Project Month

ConstructConnect announced today that the latest month's volume of construction starts, excluding residential work, was \$50.2 billion (*green shaded box, Table 5, page 8*), +8.9% compared with July's upwardly revised figure of \$46.1 billion (originally reported as \$45.4 billion). While July featured a wealth of mega project starts (four for more than \$1 billion each, totaling \$8.7 billion), August's record was even better (five such projects adding to \$18.7 billion). August's largest groundbreaking was a \$10 billion ExxonMobil ethane cracker in Texas.

On a year-over-year basis, nonresidential starts in August 2019 compared with August 2018 were ahead by more than one-third, +34.4%. With respect to year to date, nonresidential starts so far in 2019 have been +2.2% compared with the same January-to-August time frame of last year.

'SMOOTHED' SERIES

Since large project groundbreakings can often introduce notable volatility in the monthly 'starts' numbers and their period-to-period percentage changes, it is informative to also study 'smoothed' series, such as are set out in the middle columns of Table 5 on page 8.

On a 12-month moving average basis, August 2019's total nonresidential starts were +0.5% versus the previous 12 months (i.e., September-2018-to-August-2019 vs September-2017-to-August-2018). Type-of-structure sub-category starts on the same 12-month-over-prior-12-month terms in August 2019 were: commercial, -8.8%; industrial, +16.2%; institutional, -0.3%; and heavy engineering/civil, +5.1%. Industrial and civil work have provided the spark for total starts.

'Smoothed' grand total starts, which include residential activity, were -3.6% in August. Residential activity has been -10.1% on a 12-month moving average basis, with multi-family starts (-17.2%) leading the descent more precipitously than the single-family (-6.8%) market.

'Starts' as a Leading Indicator

The 'starts' figures appearing in this report's tables and graphs are not seasonally adjusted (NSA). Nor are they altered for inflation. They are expressed in what are termed 'current' as opposed to 'constant' dollars.

'Nonresidential building' plus 'engineering/civil' work accounts for a larger share of total construction than residential activity. The former's combined proportion of total put-in-place construction in the Census Bureau's latest report, for July, was 59%; the latter's was 41%.

ConstructConnect's construction starts are leading indicators for the Census Bureau's capital investment or put-in-place series. Also, the reporting period for starts (August 2019) is one month ahead of the reporting period for the investment series (July 2019).

Construction Overview

The jobs count in the U.S. construction sector in August climbed by the same amount as the monthly average increase to date in 2019, +14,000. 2019's monthly average gain, however, is off by more than half (-53.3%) versus 2018's January-to-August average of +31,000. The NSA unemployment rate among 'hard hat' workers tightened a shade in the latest month to 3.6% from 3.8% in July, but it wasn't quite as low as in August 2018, 3.4%. Construction's unemployment rate is still below the headline all-jobs rates of 3.7% SA and 3.8% NSA. As for year-over-year employment change, construction (+2.4%) is still outperforming every other major sector except health care and social assistance (+2.6%) and is setting a pace well ahead of all-jobs (+1.4%).

August's year-over-year staffing changes in sub-segments of the economy with close ties to construction were: 'machinery and equipment rental', +11.8%; 'oil and gas extraction', +9.0%; 'real estate sales activity', +3.1%; 'architectural

**TABLE 1: VALUE OF UNITED STATES
CONSTRUCTION STARTS — AUGUST 2019
(ConstructConnect®)**

	Jan-Aug 2019 (\$ billions)	% Change Jan-Aug 19 vs Jan-Aug 18	% Change Aug 19 vs Aug 18	% Change Aug 19 vs Jul 19
Hotel/Motel	12.175	-32.9%	-27.2%	-13.1%
Retail/Shopping	10.622	-19.2%	-29.3%	-6.4%
Parking Garage	2.092	15.6%	-8.7%	-61.2%
Amusement	4.398	-15.1%	2.9%	-57.2%
Private Office	18.246	-14.6%	-31.6%	-58.3%
Government Office	7.774	12.6%	1.6%	-26.7%
Laboratory	1.333	-35.2%	56.1%	122.3%
Warehouse	13.127	-11.1%	-3.9%	58.2%
Miscellaneous Commercial *	12.727	27.2%	136.3%	-59.1%
COMMERCIAL (big subset)	82.494	-11.7%	-9.6%	-30.2%
INDUSTRIAL (Manufacturing)	43.400	68.1%	155.8%	75.6%
Religious	1.086	-25.9%	-26.0%	54.6%
Hospital/Clinic	10.842	-5.0%	21.8%	-22.4%
Nursing/Assisted Living	5.706	-18.7%	-52.2%	-65.2%
Library/Museum	2.313	34.1%	-50.5%	-81.3%
Fire/Police/Courthouse/Prison	4.232	-19.4%	-26.4%	28.1%
Military	2.618	-7.2%	-14.8%	15.3%
School/College	53.064	0.4%	-12.7%	-9.9%
Miscellaneous Medical	5.018	-34.0%	-32.6%	12.6%
INSTITUTIONAL	84.878	-5.9%	-13.2%	-15.4%
Miscellaneous Non-residential	4.246	-15.3%	7.3%	0.9%
NONRESIDENTIAL BUILDING	215.018	0.3%	19.8%	-0.5%
Airport	4.807	-2.1%	5.3%	-24.5%
Road/Highway	46.103	-1.9%	-18.3%	-29.4%
Bridge	18.113	13.4%	52.4%	4.3%
Dam/Marine	5.565	48.7%	-27.0%	-16.8%
Water/Sewage	21.155	0.4%	7.0%	-27.3%
Miscellaneous Civil (power, pipelines, etc.)	26.117	15.7%	1020.7%	489.6%
HEAVY ENGINEERING (Civil)	121.859	5.7%	64.9%	27.4%
TOTAL NONRESIDENTIAL	336.877	2.2%	34.4%	8.9%

* Includes transportation terminals and sports arenas.

Source: ConstructConnect Research Group/Table: ConstructConnect.

and engineering services', +2.6%; 'cement and concrete product manufacturing', +1.9%; and 'building material and supplies dealers', 0.0%.

M/M, Y/Y and YTD Results — Boosts from Transport and Power Projects

August's +8.9% climb in total nonresidential starts month-over-month (m/m) was driven by industrial (+75.6%) and heavy engineering/civil (+27.4%) work, as commercial (-30.2%) and institutional (-15.4%) dropped back. As set out in the Top 10 list on page 5, projects initiated by ExxonMobil and Fiat Chrysler boosted industrial work in the latest month and engineering was lifted by railroad and rapid transit work, as well as electric power projects to utilize wind and natural gas.

The big jump in total nonresidential starts of +34.4% in August 2019 versus August 2018 (y/y) was again a matter of impressive strength in industrial (+155.8%) and heavy engineering (+64.9%) that overwhelmed weakness in institutional (-13.2%) and commercial (-9.6%).

The pattern also repeated with respect to year-to-date (ytd) total nonresidential starts. In August, the +2.2% figure overall was mainly thanks to industrial (+68.1%), with a minor assist from civil (+5.7%), as there was no help coming from commercial (-11.7%) or institutional (-5.9%).

To Date in 2019, Engineering the Star Performer

'Road/highway' work has accounted for the biggest share (38%) of heavy engineering/civil groundbreakings so far this year. Nevertheless, in August, street starts were uniformly negative according to the three major metrics: -29.4% m/m; -18.3% y/y; and -1.9% ytd. In second place for share (21%) within engineering to date in 2019 has been the 'miscellaneous' sub-category (transit, RRs, power plants) and it has been outstanding: +489.6% m/m; +1020.7% y/y; and +15.7% ytd. Bridge work has also been a winner: +4.3% m/m; +52.4% y/y; and +13.4% ytd.

Continued on page 3

Continued from page 2

Institutional starts to date in 2019 have been nearly two-thirds (63%) comprised of school/college work. Such educational facility starts in August were -9.9% m/m and -12.7% y/y, but +0.4% ytd. Medical facility starts, — i.e., as the combination of ‘hospitals/clinics’, ‘nursing/assisted living’ facilities and ‘miscellaneous medical’ projects, — have contributed one-quarter (a 25% slice) to the total for institutional so far this year. In August, health care facility starts were down across the board: -26.9% m/m; -6.6% y/y; and -17.1% ytd.

Despite its first-place ranking among sub-categories for share (22%) within commercial during this year’s first eight months, ‘private office building’ starts in August were: -58.3% m/m; -31.6% y/y; and -14.6% ytd. Three other sub-categories have recorded nearly tied shares — ‘warehouses’, 16%; ‘hotels/motels’, 15%; and ‘retail/shopping’, 13%. In August, ‘warehouse’ starts were -3.9% y/y and -11.1% ytd, but +58.2% ytd; ‘hotels/motels’ were -13.1% m/m, -27.2% y/y, and -32.9% ytd; and ‘retail/shopping’, -6.4% m/m, -29.3% y/y, and -19.2% ytd.

A Pause in JOLTS and a Slight Upwards Bias in the Trend Graphs

Levels and rates of job openings in the construction sector continue to be extraordinarily high (Graph 1), but the three-month moving averages of both have declined a bit in the past two months. The individual month of July’s figures for level and rate, at 373,000 and 4.7%, were no match for April’s peak readings of 434,000 and 5.5%. As for hires (Graph 2), they’re also demonstrating some hesitancy, although that may be due to a shortage of available workers.

Among the 12-month moving average trend graphs on page 6, the heavy engineering curve continues to trend higher, while the nonresidential buildings line has stabilized at \$25.0 billion, which is way up from less than \$15.0 billion in the aftermath of the recession (Graph 3). Graph 4 shows institutional and commercial starts tailing off slightly of late. Retail is in steep decline, but private office buildings are maintaining momentum (Graph 5). The schools/colleges trend line in Graph 6 has managed more upwards movement than the hospitals/clinics curve. The roads/highways and water/sewage curves have both been upbeat in Graph 7. The bridges curve in Graph 8 is on a quite positive track, but no more so than ‘miscellaneous civil’ (rapid transit lines, railroad work and electricity projects), which draws its strength from mega projects.

Construction Workers Lagging in Wage Gains

Tables B-3 and B-8 of the monthly *Employment Situation* report record average hourly and average weekly wages for industry sectors. B-3 is for all employees (i.e., including bosses) on non-farm payrolls. B-8 is for ‘production and non-supervisory personnel’ only (i.e., it excludes bosses). For ‘all jobs’ and construction, there are eight relevant percentage changes to consider.

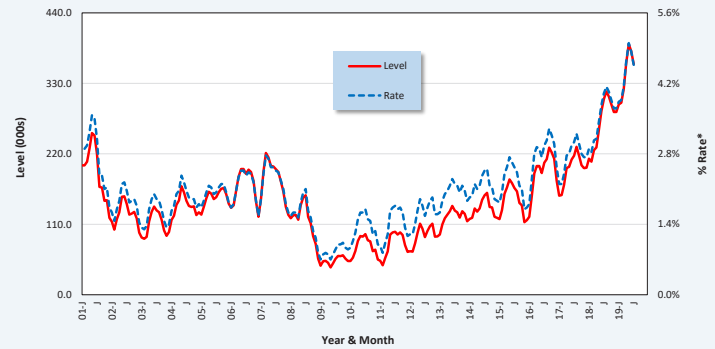
From August’s BLS Table B-3 (including supervisory personnel), the ‘all-jobs’ earnings increases were +3.2% hourly and +2.9% weekly. Construction workers as a subset of ‘all-jobs’ fell behind hourly, +2.7%, but were better rewarded weekly, +3.3%. From the latest Table B-8 (excluding bosses), the all-jobs compensation gains were +3.5% hourly and +2.9% weekly. At +2.5% both hourly and weekly, non-supervisory construction workers failed to keep up.

Some Signs of Easing in Construction Costing

Further on costing, August 2019’s y/y results for three BLS Producer Price Index (PPI) series were: ‘construction materials special index’, -2.0% (more negative than -1.5% in July); ‘inputs to new construction index, excluding capital investment, labor and imports’, +0.4% (up from +0.2% in July); and ‘final demand construction’, +5.4% (slight easing from July’s +5.5%).

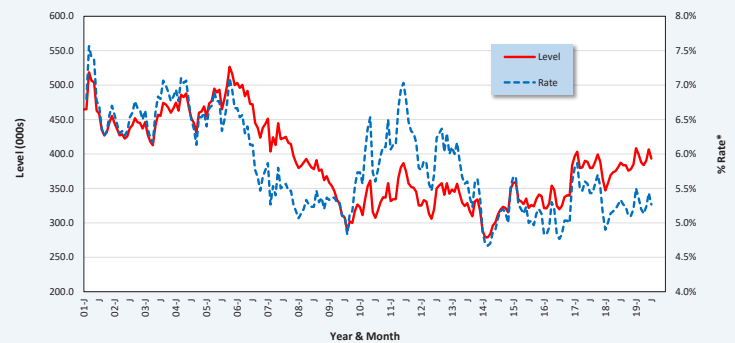
The value of construction starts each month is summarized from ConstructConnect’s database of all active construction projects in the U.S. Missing project values are estimated with the help of RSMeans’ building cost models.

**GRAPH 1: U.S. CONSTRUCTION JOB OPENINGS (FROM JOLTS REPORT)
(3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)**



*Rate is number of job openings end-of-month as % of ‘construction employment plus number of job openings’. JOLTS – Job Openings and Labor Turnover Survey. Latest seasonally adjusted (SA) data points are for July, 2019.

**GRAPH 2: U.S. CONSTRUCTION JOB HIRES (FROM JOLTS REPORT)
(3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)**



*Rate is number of hires during month as % of construction employment. JOLTS – Job Openings and Labor Turnover Survey. Latest seasonally adjusted (SA) data points are for July, 2019.

Data source: Bureau of Labor Statistics/Charts: ConstructConnect.

ConstructConnect’s non-residential construction starts series, because it is comprised of total-value estimates for individual projects, some of which are ultra-large, has a history of being more volatile than many other leading indicators for the economy.

ConstructConnect’s total residential starts (i.e., single-family plus multi-family starts) in the latest month were -2.7% m/m, -16.1% y/y and -12.1% ytd. To date in 2019, the multi-family component of residential (-22.5%) has struggled more than the single-family (-7.6%) side. ‘Grand total’ construction starts in August were +5.1% m/m, +13.6% y/y and -3.3% ytd. ♦

Alex Carrick

ConstructConnect has moved to a better-targeted and research-assigned ‘start’ date. (Prior to January 2017, the ‘start’ date was recorded as occurring within 30 to 60 days of the announced bid date.) In concept, a ‘start’ is equivalent to ground being broken for a project to proceed. If work is abandoned or re-bid, the ‘start’ date is revised to reflect the new information.

Alex Carrick is Chief Economist for ConstructConnect. He has delivered presentations throughout North America on the U.S., Canadian and world construction outlooks. Mr. Carrick has been with the company since 1985. Links to his numerous articles are featured on Twitter @ConstructConnx, which has 50,000 followers.

**TABLE 2: VALUE OF UNITED STATES CONSTRUCTION STARTS —
ConstructConnect® INSIGHT VERSION — AUGUST 2019
ARRANGED TO MATCH THE ALPHABETICAL CATEGORY DROP-DOWN MENUS IN INSIGHT**

	Jan-Aug 2019 (\$ billions)	% Change Jan-Aug 19 vs Jan-Aug 18	% Change Aug 19 vs Aug 18	% Change Aug 19 vs Jul 19
Summary				
CIVIL	121.859	5.7%	64.9%	27.4%
NONRESIDENTIAL BUILDING	215.018	0.3%	19.8%	-0.5%
RESIDENTIAL	179.277	-12.1%	-16.1%	-2.7%
GRAND TOTAL	516.154	-3.3%	13.6%	5.1%
Verticals				
Airport	4.807	-2.1%	5.3%	-24.5%
All Other Civil	17.694	4.9%	1002.6%	637.4%
Bridges	18.113	13.4%	52.4%	4.3%
Dams / Canals / Marine Work	5.565	48.7%	-27.0%	-16.8%
Power Infrastructure	8.422	47.6%	1080.9%	263.7%
Roads	46.103	-1.9%	-18.3%	-29.4%
Water and Sewage Treatment	21.155	0.4%	7.0%	-27.3%
CIVIL	121.859	5.7%	64.9%	27.4%
Offices (private)	18.246	-14.6%	-31.6%	-58.3%
Parking Garages	2.092	15.6%	-8.7%	-61.2%
Transportation Terminals	8.395	97.7%	104.9%	-70.8%
Commercial (small subset)	28.734	4.8%	-15.7%	-62.6%
Amusement	4.398	-15.1%	2.9%	-57.2%
Libraries / Museums	2.313	34.1%	-50.5%	-81.3%
Religious	1.086	-25.9%	-26.0%	54.6%
Sports Arenas / Convention Centers	4.331	-24.8%	183.9%	-27.3%
Community	12.128	-14.2%	15.9%	-50.3%
College / University	12.216	-9.0%	-25.6%	-5.3%
Elementary / Pre School	16.044	1.7%	-7.6%	-16.9%
Jr / Sr High School	23.581	5.4%	-10.8%	-5.1%
Special / Vocational	1.222	-5.2%	45.8%	-37.7%
Educational	53.064	0.4%	-12.7%	-9.9%
Courthouses	0.850	-21.7%	-20.0%	67.2%
Fire and Police Stations	2.103	-2.7%	-39.8%	25.3%
Government Offices	7.774	12.6%	1.6%	-26.7%
Prisons	1.279	-36.2%	-14.2%	7.3%
Government	12.006	-1.2%	-10.7%	-13.3%
Industrial Labs / Labs / School Labs	1.333	-35.2%	56.1%	122.3%
Manufacturing	43.400	68.1%	155.8%	75.6%
Warehouses	13.127	-11.1%	-3.9%	58.2%
Industrial	57.861	35.7%	106.5%	73.8%
Hospitals / Clinics	10.842	-5.0%	21.8%	-22.4%
Medical Misc.	5.018	-34.0%	-32.6%	12.6%
Nursing Homes	5.706	-18.7%	-52.2%	-65.2%
Medical	21.566	-17.1%	-6.6%	-26.9%
Military	2.618	-7.2%	-14.8%	15.3%
Hotels	12.175	-32.9%	-27.2%	-13.1%
Retail Misc.	4.246	-15.3%	7.3%	0.9%
Shopping	10.622	-19.2%	-29.3%	-6.4%
Retail	27.043	-25.5%	-23.3%	-8.0%
NONRESIDENTIAL BUILDING	215.018	0.3%	19.8%	-0.5%
Multi-Family	47.749	-22.5%	-32.9%	12.8%
Single-Family	131.527	-7.6%	-8.4%	-7.0%
RESIDENTIAL	179.277	-12.1%	-16.1%	-2.7%
NONRESIDENTIAL	336.877	2.2%	34.4%	8.9%
GRAND TOTAL	516.154	-3.3%	13.6%	5.1%

Table 1 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks nonresidential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers. Table 2 presents an alternative, perhaps more user-friendly and intuitive type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source: ConstructConnect/Table: ConstructConnect.

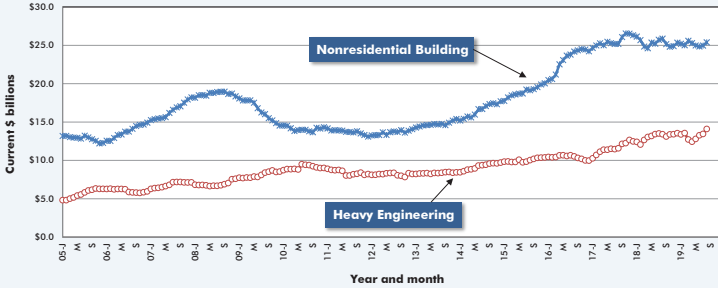
TABLE 3: ConstructConnect's TOP 10 PROJECT STARTS IN AUGUST 2019

LOCATION (EAST TO WEST)	TYPE OF CONSTRUCTION	DESCRIPTION	SQUARE FEET 000S*	DOLLARS 000,000S
Massachusetts Boston	Institutional	Beth Israel Deaconess Medical Center Inpatient Building (1 structure; 10 stories; 158 beds) 111 Francis St Beth Israel Deaconess Medical Center Facilities Department	1,759	\$534
Virginia Alexandria	Commercial	WMATA Potomac Yard Metro Rail Station (2 structures; 3 stories) George Washington Memorial Pkwy City of Alexandria - Purchasing	200	\$370
Florida Orlando	Civil/Engineering	Virgin Trains (Formerly The Brightline Express) - Second Phase FL-528 All Aboard Florida LLC	*	\$4,000
Michigan Detroit	Industrial	Fiat Chrysler Assembly Plant (1 structure) 4000 St Jean Fiat Chrysler Automobiles	791	\$1,600
East China	Civil/Engineering	Blue Water Energy Center / East China Township (natural gas-fired power plant) (1 structure) M-29 DTE Energy	*	\$1,000
Madison Heights	Civil/Engineering	I-75 Modernization Segment 3 Michigan Department of Transportation (MDOT) - Metro Office	*	\$750
Illinois Chicago	Civil/Engineering	The Red and Purple Modernization (RPM) Project Phase One Multiple Locations Chicago Transit Authority (CTA)	*	\$2,100
Iowa Des Moines	Civil/Engineering	Wind XII Electric Power Generation Midamerican Energy	*	\$922
Texas Corpus Christi	Industrial	ExxonMobil Ethane Cracker Plant (1 structure) SABIC	*	\$10,000
Nevada Reno	Industrial	North Valleys Commerce Center IV (1 structure) Virginia St & Stead Blvd Panattoni Development	1,357	\$729
TOTALS:			4,107	\$22,005

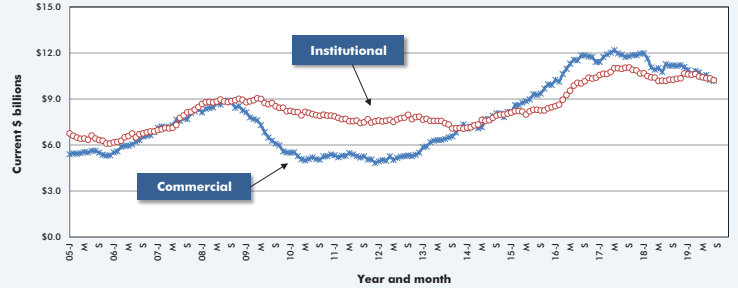
*A square footage measure does not apply for alteration, some forms of industrial (e.g., petrochemical) and most engineering/civil work.

Source: ConstructConnect/Table: ConstructConnect.

GRAPH 3: U.S. NONRESIDENTIAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



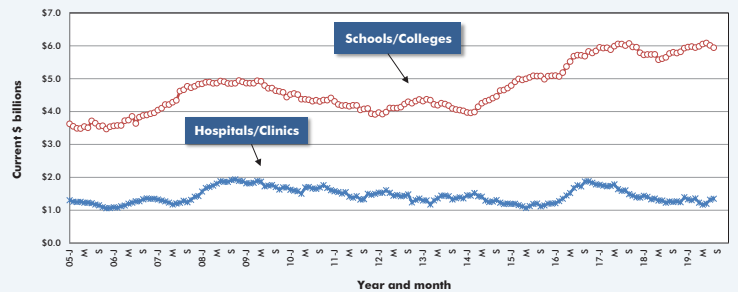
GRAPH 4: U.S. COMMERCIAL AND INSTITUTIONAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



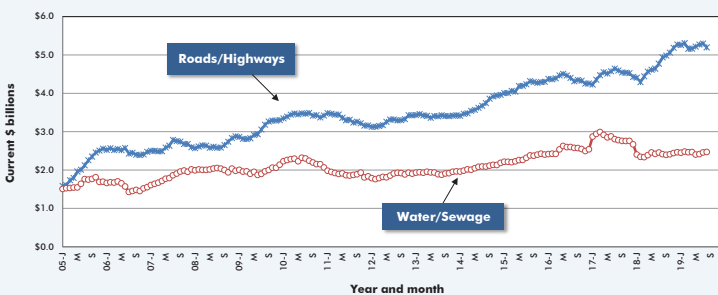
GRAPH 5: U.S. RETAIL AND PRIVATE OFFICE BUILDING CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



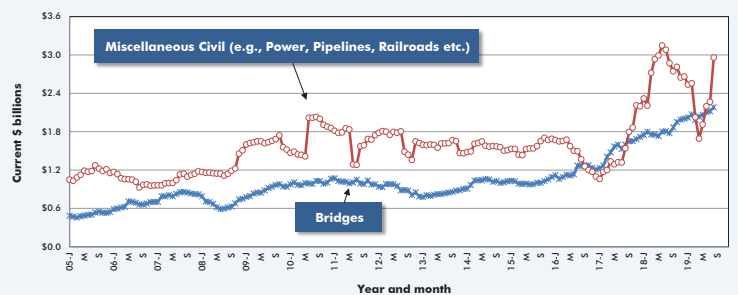
GRAPH 6: U.S. HOSPITAL/CLINIC AND SCHOOL/COLLEGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



GRAPH 7: U.S. ROAD/HIGHWAY AND WATER/SEWAGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



GRAPH 8: U.S. BRIDGES AND MISCELLANEOUS CIVIL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



The last data points in all the graphs on this page are for August, 2019.

Source: ConstructConnect/Charts: ConstructConnect.

**TABLE 4: U.S. YEAR-TO-DATE REGIONAL STARTS
NONRESIDENTIAL CONSTRUCTION* — ConstructConnect®**

	Jan-Aug 2018	Jan-Aug 2019	% Change
Connecticut	\$2,684,542,448	\$3,304,999,213	23.1%
Maine	\$1,652,849,656	\$1,132,075,146	-31.5%
Massachusetts	\$6,770,818,039	\$8,835,848,300	30.5%
New Hampshire	\$1,068,372,574	\$979,317,236	-8.3%
Rhode Island	\$1,159,429,548	\$611,533,969	-47.3%
Vermont	\$393,147,410	\$292,080,261	-25.7%
Total New England	\$13,729,159,675	\$15,155,854,125	10.4%
New Jersey	\$5,733,787,256	\$4,682,047,670	-18.3%
New York	\$19,973,851,369	\$16,165,176,621	-19.1%
Pennsylvania	\$9,384,052,533	\$10,758,885,867	14.7%
Total Middle Atlantic	\$35,091,691,158	\$31,606,110,158	-9.9%
TOTAL NORTHEAST	\$48,820,850,833	\$46,761,964,283	-4.2%
Illinois	\$9,927,735,772	\$11,602,898,428	16.9%
Indiana	\$5,611,806,620	\$4,587,557,812	-18.3%
Michigan	\$7,335,109,998	\$9,150,804,885	24.8%
Ohio	\$10,706,271,183	\$8,801,772,436	-17.8%
Wisconsin	\$17,281,736,040	\$6,921,293,478	-60.0%
Total East North Central	\$50,862,659,613	\$41,064,327,039	-19.3%
Iowa	\$3,934,018,024	\$4,696,593,796	19.4%
Kansas	\$3,899,070,686	\$3,065,745,298	-21.4%
Minnesota	\$6,684,264,949	\$7,789,840,175	16.5%
Missouri	\$6,021,839,080	\$5,807,208,397	-3.6%
Nebraska	\$1,897,569,678	\$2,481,706,568	30.8%
North Dakota	\$2,808,267,090	\$1,169,091,756	-58.4%
South Dakota	\$1,280,875,233	\$1,116,145,384	-12.9%
Total West North Central	\$26,525,904,740	\$26,126,331,374	-1.5%
TOTAL MIDWEST	\$77,388,564,353	\$67,190,658,413	-13.2%
Delaware	\$687,808,393	\$812,559,196	18.1%
District of Columbia	\$2,609,070,149	\$1,236,418,893	-52.6%
Florida	\$20,072,839,062	\$23,551,414,848	17.3%
Georgia	\$8,129,176,944	\$12,934,485,661	59.1%
Maryland	\$5,159,442,619	\$4,859,050,173	-5.8%
North Carolina	\$9,738,001,935	\$8,486,916,930	-12.8%
South Carolina	\$4,845,348,811	\$4,534,142,959	-6.4%
Virginia	\$11,402,332,965	\$6,906,233,515	-39.4%
West Virginia	\$6,528,925,389	\$1,203,186,892	-81.6%
Total South Atlantic	\$69,172,946,267	\$64,524,409,067	-6.7%
Alabama	\$3,870,680,149	\$5,828,722,252	50.6%
Kentucky	\$3,420,735,937	\$4,330,567,620	26.6%
Mississippi	\$1,616,312,899	\$1,828,147,829	13.1%
Tennessee	\$5,710,990,576	\$5,622,871,552	-1.5%
Total East South Central	\$14,618,719,561	\$17,610,309,253	20.5%
Arkansas	\$2,003,895,094	\$1,975,581,889	-1.4%
Louisiana	\$3,636,119,886	\$7,232,490,501	98.9%
Oklahoma	\$3,974,624,869	\$3,580,301,257	-9.9%
Texas	\$36,401,095,540	\$59,020,535,539	62.1%
Total West South Central	\$46,015,735,389	\$71,808,909,186	56.1%
TOTAL SOUTH	\$129,807,401,217	\$153,943,627,506	18.6%
Arizona	\$7,003,446,771	\$5,088,004,251	-27.3%
Colorado	\$4,812,599,403	\$5,849,170,263	21.5%
Idaho	\$1,437,504,487	\$1,464,971,259	1.9%
Montana	\$1,031,669,595	\$845,567,999	-18.0%
Nevada	\$4,145,558,562	\$4,551,134,954	9.8%
New Mexico	\$1,541,250,903	\$1,015,813,607	-34.1%
Utah	\$4,326,044,662	\$3,285,804,256	-24.0%
Wyoming	\$807,810,151	\$3,819,681,665	372.8%
Total Mountain	\$25,105,884,534	\$25,920,148,254	3.2%
Alaska	\$1,315,221,266	\$794,332,220	-39.6%
California	\$31,105,370,787	\$25,303,628,569	-18.7%
Hawaii	\$1,834,105,843	\$1,418,811,439	-22.6%
Oregon	\$4,566,583,930	\$4,045,077,467	-11.4%
Washington	\$9,704,470,170	\$11,498,823,692	18.5%
Total Pacific	\$48,525,751,996	\$43,060,673,387	-11.3%
TOTAL WEST	\$73,631,636,530	\$68,980,821,641	-6.3%
TOTAL U.S.	\$329,648,452,933	\$336,877,071,843	2.2%

*Figures above are comprised of non-res building and engineering (i.e., residential is omitted).

Source: ConstructConnect/Table: ConstructConnect.

TABLE 5: VALUE OF U.S. NATIONAL CONSTRUCTION STARTS — AUGUST 2019 — ConstructConnect®
BILLIONS OF CURRENT \$\$, NOT SEASONALLY ADJUSTED (NSA)

	Latest month actuals			Moving averages (placed in end month)						Year to Date	
	Jun 19	Jul 19	Aug 19	Jun 19	3-months Jul 19	Aug 19	Jun 19	12-months Jul 19	Aug 19	Jan-Aug 2018	Jan-Aug 2019
Single Family	17,793	17,729	16,487	17,794	17,555	17,336	16,129	16,090	15,964	142,387	131,527
month-over-month % change	3.8%	-0.4%	-7.0%	3.3%	-1.3%	-1.2%	-0.6%	-0.2%	-0.8%	4.0%	-7.6%
year-over-year % change	-5.9%	-2.6%	-8.4%	-9.7%	-8.3%	-5.6%	-6.1%	-6.1%	-6.8%		
Apartment	5,774	4,893	5,520	5,923	5,143	5,395	7,099	6,877	6,651	61,574	47,749
month-over-month % change	21.2%	-15.3%	12.8%	-5.4%	-13.2%	4.9%	-3.5%	-3.1%	-3.3%		
year-over-year % change	-34.9%	-35.3%	-32.9%	-28.0%	-36.3%	-34.4%	-14.2%	-15.8%	-17.2%	-26.0%	-22.5%
TOTAL RESIDENTIAL	23,566	22,622	22,006	23,717	22,698	22,731	23,228	22,967	22,615	203,961	179,277
month-over-month % change	7.6%	-4.0%	-2.7%	1.0%	-4.3%	0.1%	-1.5%	-1.1%	-1.5%	-7.3%	-12.1%
year-over-year % change	-15.2%	-12.2%	-16.1%	-15.1%	-16.6%	-14.5%	-8.7%	-9.3%	-10.1%		
Hotel/Motel	1,545	1,354	1,177	1,470	1,452	1,359	1,752	1,719	1,682	18,156	12,175
month-over-month % change	6.0%	-12.3%	-13.1%	-15.2%	-1.2%	-6.4%	-0.8%	-1.9%	-2.1%		
year-over-year % change	-9.8%	-22.9%	-27.2%	-33.3%	-52.4%	-19.9%	-20.2%	-22.4%	-22.7%	-12.3%	-32.9%
Retail/Shopping	1,501	1,159	1,085	1,465	1,374	1,248	1,397	1,344	1,306	13,141	10,622
month-over-month % change	2.7%	-22.8%	-6.4%	5.2%	-6.2%	-9.1%	1.0%	-3.8%	-2.8%		
year-over-year % change	11.0%	-35.3%	-29.3%	-11.2%	-14.5%	-20.0%	-11.4%	-16.0%	-16.8%	-8.0%	-19.2%
Parking Garages	0,302	0,401	0,156	0,264	0,325	0,286	0,248	0,262	0,261	1,809	2,092
month-over-month % change	11.0%	32.8%	-61.2%	-2.2%	22.9%	-11.9%	4.9%	5.8%	-0.5%		
year-over-year % change	86.0%	75.4%	-8.7%	-13.2%	12.9%	52.9%	-3.6%	-2.7%	-3.5%	-13.0%	15.6%
Amusement	0,610	1,059	0,454	0,494	0,707	0,708	0,592	0,642	0,643	5,182	4,398
month-over-month % change	34.7%	73.6%	-57.2%	13.2%	43.1%	0.0%	-4.0%	8.4%	0.2%		
year-over-year % change	-32.5%	127.8%	-2.9%	-35.6%	0.7%	17.3%	-14.4%	-1.8%	0.4%	-3.3%	-15.1%
Office	3,918	2,910	1,213	2,735	2,719	2,680	2,498	2,266	2,219	21,361	18,246
month-over-month % change	194.4%	-25.7%	-58.3%	0.2%	-0.6%	-1.4%	9.8%	-9.3%	-2.1%		
year-over-year % change	215.4%	-48.9%	-31.6%	54.2%	-3.3%	-7.7%	21.7%	-5.7%	-7.3%	-1.2%	-14.6%
Governmental Offices	1,215	1,562	1,145	1,024	1,229	1,307	0,929	0,989	0,991	6,905	7,774
month-over-month % change	33.3%	28.6%	-26.7%	22.3%	20.1%	6.3%	1.3%	6.5%	0.1%		
year-over-year % change	13.6%	86.7%	-1.6%	1.7%	27.1%	29.1%	13.8%	28.0%	24.1%	-12.6%	12.6%
Laboratories	0,106	0,142	0,311	0,143	0,115	0,187	0,208	0,173	0,182	2,057	1,333
month-over-month % change	8.0%	33.8%	122.3%	-20.8%	-13.2%	62.8%	-4.2%	-16.8%	5.5%		
year-over-year % change	-51.0%	-74.7%	56.1%	-54.5%	-70.4%	-42.5%	0.7%	-27.6%	-27.1%	0.1%	-35.2%
Warehouse	1,756	1,217	1,925	2,016	1,441	1,633	1,753	1,667	1,661	14,772	13,127
month-over-month % change	30.2%	-30.7%	58.2%	6.1%	-28.5%	13.3%	0.8%	-4.9%	-0.4%		
year-over-year % change	10.1%	-45.9%	-3.9%	1.1%	-35.0%	-16.3%	-0.2%	-5.2%	-4.4%	-4.6%	-11.1%
Misc Commercial	0,528	2,161	0,883	2,011	2,489	1,191	1,193	1,197	1,239	10,006	12,727
month-over-month % change	-89.0%	309.5%	-59.1%	-12.6%	23.8%	-52.2%	-10.0%	0.4%	3.5%		
year-over-year % change	-73.1%	2.4%	136.3%	-14.2%	44.2%	-22.4%	-1.6%	-11.9%	-7.5%	-24.6%	27.2%
TOTAL COMMERCIAL	11,479	11,963	8,352	11,611	11,851	10,598	10,569	10,259	10,184	93,389	82,494
month-over-month % change	-5.2%	4.2%	-30.2%	-1.3%	2.1%	-10.6%	0.9%	-2.9%	-0.7%		
year-over-year % change	10.7%	-23.8%	-9.6%	-8.5%	-13.9%	-9.9%	-1.8%	-9.0%	-8.8%	-9.1%	-11.7%
TOTAL INDUSTRIAL (Manufacturing)	0,428	6,820	11,979	4,683	6,540	6,409	3,370	3,834	4,442	25,822	43,400
month-over-month % change	-96.5%	1491.9%	75.6%	-24.6%	39.7%	-2.0%	-4.2%	13.7%	15.9%		
year-over-year % change	-80.7%	440.0%	155.8%	-11.2%	25.5%	135.4%	-7.2%	5.6%	16.2%	54.6%	68.1%
Religious	0,146	0,083	0,129	0,143	0,126	0,119	0,159	0,155	0,151	1,465	1,086
month-over-month % change	-1.9%	-43.0%	54.6%	-2.3%	-11.5%	-5.3%	-7.3%	-2.8%	-2.4%		
year-over-year % change	-50.8%	-39.2%	-26.0%	-42.2%	-42.9%	-41.1%	-10.0%	-9.8%	-12.4%	-11.0%	-25.9%
Hospitals/Clinics	1,675	2,399	1,862	0,996	1,564	1,979	1,196	1,321	1,348	11,406	10,842
month-over-month % change	171.1%	43.2%	-22.4%	6.5%	57.0%	26.5%	2.5%	10.4%	2.1%		
year-over-year % change	26.7%	166.5%	21.8%	-39.3%	30.6%	58.3%	-7.5%	7.6%	6.6%	-11.3%	-5.0%
Nursing/Assisted Living	0,472	0,738	0,256	0,672	0,658	0,489	0,803	0,797	0,774	7,021	5,706
month-over-month % change	-38.3%	56.3%	-65.2%	-17.6%	-2.0%	-25.8%	-4.7%	-0.7%	-2.9%		
year-over-year % change	-52.4%	-8.3%	-136.2%	-31.8%	-29.0%	-35.9%	-17.1%	-16.2%	-17.4%	-10.7%	-18.7%
Libraries/Museums	0,201	0,476	0,089	0,352	0,404	0,253	0,260	0,285	0,278	1,724	2,313
month-over-month % change	-62.5%	137.3%	-81.3%	-13.5%	14.8%	-36.8%	-1.8%	9.5%	-2.7%		
year-over-year % change	-21.9%	164.5%	-50.5%	19.4%	37.7%	24.2%	4.0%	23.3%	29.8%	-37.1%	34.1%
Fire/Police/Courthouse/Prison	0,630	0,506	0,648	0,596	0,592	0,595	0,643	0,612	0,593	5,251	4,232
month-over-month % change	-1.5%	-19.6%	28.1%	11.3%	-0.8%	0.5%	-1.6%	-4.9%	-3.2%		
year-over-year % change	-16.7%	-42.7%	-26.4%	-21.4%	-23.8%	-29.2%	11.0%	-0.4%	-6.3%	-14.0%	-19.4%
Military	0,358	0,349	0,402	0,308	0,329	0,370	0,427	0,425	0,419	2,820	2,618
month-over-month % change	-27.4%	-2.6%	15.3%	-31.8%	6.5%	12.3%	12.6%	0.5%	0.4%		
year-over-year % change	-0.4%	-7.2%	-14.8%	-22.0%	-28.6%	-8.2%	6.8%	6.0%	0.4%	9.0%	-7.2%
Schools/Collages	10,534	6,136	5,530	8,792	8,306	7,400	6,084	6,010	5,943	52,867	53,064
month-over-month % change	27.7%	-41.8%	-9.9%	21.2%	-5.5%	-10.9%	0.5%	-1.2%	-1.1%		
year-over-year % change	3.8%	-12.6%	-12.7%	6.8%	1.4%	-5.5%	8.5%	6.4%	3.1%	-0.6%	0.4%
Misc Medical	0,813	0,439	0,494	0,841	0,725	0,582	0,784	0,744	0,724	7,602	5,018
month-over-month % change	-11.9%	-46.0%	12.6%	12.4%	-13.8%	-19.7%	-6.0%	-5.2%	-2.7%		
year-over-year % change	-42.4%	-52.5%	-32.3%	-31.8%	-34.6%	-42.1%	-20.6%	-17.6%	-17.6%	-4.6%	-34.0%
TOTAL INSTITUTIONAL	14,829	11,126	9,411	12,699	12,704	11,788	10,356	10,348	10,229	90,156	84,878
month-over-month % change	22.0%	-25.0%	-15.4%	13.6%	0.0%	-7.2%	-0.5%	-0.1%	-1.2%		
year-over-year % change	-4.3%	-0.9%	-13.2%	-7.9%	-3.6%	-5.8%	1.6%	1.6%	-0.3%	-5.0%	-5.9%
Misc Non Residential	0,538	0,546	0,551	0,537	0,515	0,545	0,555	0,534	0,537	5,010	4,246
month-over-month % change	16.4%	1.6%	0.9%	-1.0%	-4.1%	5.8%	-4.1%	-3.8%	0.6%		
year-over-year % change	-34.8%	-31.5%	7.3%	-20.6%	-29.3%	-23.5%	-11.0%	-15.5%	-12.2%	-6.1%	-15.3%
TOTAL NON-RES BUILDING	27,274	30,456	30,293	29,530	31,611	29,341	24,850	24,974	25,391	214,377	215,018
month-over-month % change	-28.5%	11.7%	-0.5%	-0.6%	7.0%	-7.2%	-6.5%	-0.5%	1.7%		
year-over-year % change	-5.7%	5.1%	19.8%	-9.0%	-3.8%	5.8%	-1.4%	-2.9%	-1.9%	-2.4%	0.3%
Airports	0,576	0,859	0,648	0,597	0,707	0,694	0,564	0,584	0,586	4,909	4,807
month-over-month % change	-16.3%	49.2%	-24.5%	17.2%	18.5%	-1.9%	2.6%	3.5%	0.5%		
year-over-year % change	41.6%	38.5%	5.3%	21.9%	35.8%	26.8%	-40.4%	-38.1%	-37.4%	-21.0%	-2.1%
Roads/Highways	6,692	7,550	5,330	6,965	7,103	6,524	5,272	5,297	5,198	47,001	46,103
month-over-month % change	-5.3%	12.8%	-29.4%	8.2%	2.0%	-8.2%	1.0%	0.5%	-1.9%		
year-over-year % change	10.5%	4.1%	-18.3%	6.9%	7.9%	-1.3%	13.6%	11.0%	5.2%	15.1%	-1.9%
Bridges	2,744	2,021	2,107	2,581	2,320	2,290	2,106	2,121	2,182	15,973	18,113
month-over-month % change	24.9%	-26.3%	4.3%	16.2%	-10.1%	-1.3%	2.0%	0.7%	2.8%		
year-over-year % change	21.9%	10.2%	52.4%	22.8%	17.3%	25.7%	16.9%	17.4%	22.8%	4.6%	13.4%
Dams/Marine	1,139	0,551	0,459	1,193	1,253	0,716	0,718	0,720	0,706	3,741	5,565
month-over-month % change	-44.9%	-51.6%	-16.8%	32.3%	5.0%	-42.8%	9.4%	0.3%	-2.0%		
year-over-year % change	185.5%	5.5%	-27.0%	119.6%	140.2%	38.7%	55.5%	59.8%	48.6%	19.6%	48.7%
Water/Sewage	2,598	3,107	2,260	2,986	2,895	2,655	2,416	2,457	2,469	21,074	21,155
month-over-month % change	-12.8%	19.6%	-27.3%	7.2%	-3.1%	-8.3%	-3.1%	1.7%	0.5%		
year-over-year % change	6.6%	19.1%	-7.0%	-6.0%	-1.3%	11.3%	-0.1%	11.3%	2.3%	-12.7%	0.4%
Misc Civil (Power, etc.)	6,467	1,545	9,108	4,073	4,060	5,707	2,196	2,267	2,958	22,572	26,117
month-over-month % change	55.1%	-76.1%	489.6%	66.5%	-0.3%	40.5%	14.9%	3.2%	30.5%		
year-over-year % change	112.6%	122.2%	1020.7%	20.2%	131.3%	276.2%	-30.3%	-26.4%	3.0%	56.1%	15.7%
TOTAL ENGINEERING (Civil)	20,216	15,632	19,912	18,394	18,338	18,587	13,271	13,446	14,100		