

October 2022 (based on September 2022 Starts Stats)

# Construction Industry Snapshot



## September's Nonresidential Construction Starts +26% M/M, +19% Y/Y & +29% Ytd

ConstructConnect announced today that September 2022's volume of construction starts, excluding residential work, was \$51.1 billion, a pickup of +26.0% compared with August's figure of \$40.6 billion. Mega projects returned to prominence.

September 2022 compared with September 2021 was +19.0%. The year-to-date performance of nonresidential starts has been +28.5% vs Jan-Sept 2021. Through Q3 2022, grand total starts (i.e., including residential) were +15.1%.



Comparison	Commercial	Retail	Private Office	Hotel & Motel	Industrial	Institutional	Schools	Hospitals & Clinics	Heavy Engineering	Total Non-Residential
Sep 2022 vs Aug 2022	+14%	+14%	+47%	-45%	+420%	-1%	-32%	-30%	-4%	+26%
Jan-Sep 2022 vs Jan-Sep 2021	+7%	+9%	-11%	+46%	+172%	+13%	+16%	+14%	+23%	+29%
Jan-Sep 2021 vs Jan-Sep 2020	+1%	+11%	-16%	-33%	+59%	-5%	-12%	+44%	+2%	+3%

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## September's Nonresidential Construction Starts +26% M/M, +19% Y/Y & +29% Ytd

### Mega Projects Reignited Starts in September

ConstructConnect announced today that September 2022's volume of construction starts, excluding residential work, was \$51.1 billion (green shaded box, bottom of page 11), an increase of +26.0 compared with August's figure of \$40.6 billion (originally reported as \$40.0 billion).

Following on the heels of a month (August 2022) in which there were no mega-sized project starts (i.e., projects carrying an estimated value of a billion dollars or more each), September roared back on that front. September was like the stretch of four months from April through July of this year when mega project ground-breakings were quite pronounced.

In April, there were five such projects adding to \$17.1 billion; in May, four for \$20.0 billion; in June, three for \$7.8 billion; and in July, five for \$13.3 billion. September's tally was four outsized projects summing to \$14.2 billion. The largest was a semiconductor chip-making plant for Samsung being built near Austin, Texas. Samsung says it's planning plenty more such spending in Texas out to 2030.

Some of the biggest construction projects have fixed-in-place target completion dates tied to carbon reduction commitments, either specified in legislation or made to the public. Under these circumstances, interest rate hikes may not be as inhibiting as one might suppose. Also, there are workarounds to be found among corporate bond issuances, specially negotiated borrowing costs, partnership agreements to spread the risk and government tax breaks or grants. More likely to be chilled by the tightening credit conditions and the thoughts of recession are mid-sized and smaller construction projects.

September 2022's total dollar volume of nonresidential construction starts was up by +19.0% when compared with September 2021. On a year-to-date basis, total nonresidential starts have been +28.5% versus January to September of last year.

To complete the starts picture, the GRAND TOTAL (i.e., adding residential to nonresidential activity) in September 2022 was +8.6% m/m, +8.1% y/y and +15.1% ytd.

### Non-residential Building Starts Take the Lead

There are three major sub-categories of total starts: residential, nonresidential building and heavy engineering/civil. On a year-to-date percentage-change basis in September, nonresidential building starts shone brightest, +31.8%, with engineering also up resoundingly, +23.2%. Residential, on the other hand, was locked in inertia, -0.8%.

On a month-to-month basis in September, nonresidential building starts again led the way, +50.0%, while both engineering and residential took steps backwards, -3.5% and -14.5% respectively.

### Y/Y Trailing 12-Month Starts Decelerate Somewhat

Other statistics often beloved by analysts are trailing twelve-month (TTM) results and these are set out for all the various type-of-structure categories in Table 9 on page 11 of this report.

Grand Total TTM starts in September on a month-to-month basis picked up nicely (+0.7%) versus August (+0.1%), although they did not quite measure up to July (+1.1%).

On a year-over-year basis in September, GT TTM starts were ahead in robust fashion, +13.5%, but they were showing a bit of an easing from August's +14.9% and July's +15.8%.

### Manufacturing Leaps Ahead in PIP Stats

'Starts' compile the total estimated dollar value and square footage of all projects on which ground is broken in any given month. They lead, by nine months to as much as two years, put-in-place (PIP) statistics from the Census Bureau which are analogous to work-in-progress payments as the building of structures proceeds to completion.

PIP numbers cover the 'universe' of construction, new plus all manner of renovation activity, with residential traditionally (i.e., over the decade preceding the pandemic) making up two-fifths (about 40%) of the total and nonresidential, three-fifths (i.e., the bigger portion, at around 60%).

Over the past several years, however, there has been an eye-popping change in the ratio. In 2021's full year PIP results, the residential to nonresidential relationship was about half and half. Through August of this present year, 2022, residential now claims a 52.8% share of the total, with nonresidential holding the other 47.2%.

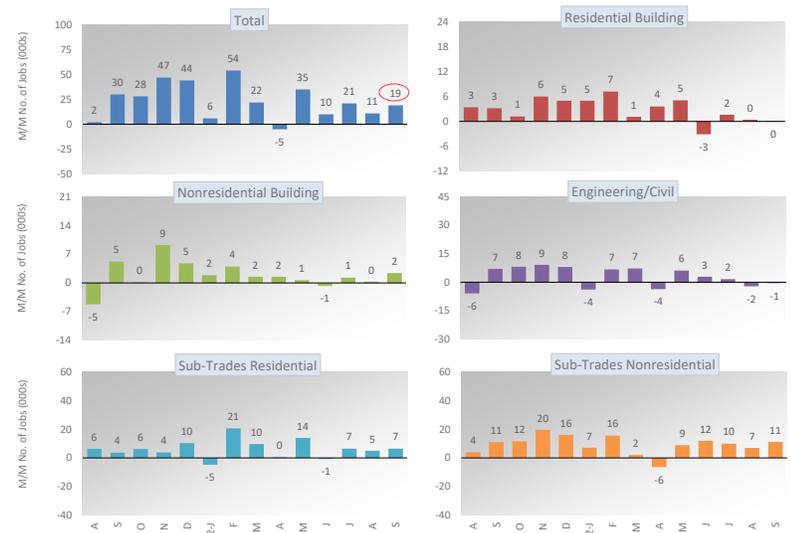
TABLE 1: VALUE OF UNITED STATES NONRESIDENTIAL CONSTRUCTION STARTS — SEPTEMBER 2022 (ConstructConnect®)

	Jan-Sept 2022 (\$ billions)	% Change Jan-Sept 22 vs Jan-Sept 21	% Change Sept 22 vs Sept 21	% Change Sept 22 vs Aug 22
Hotel/Motel	8.169	46.2%	0.2%	-45.2%
Retail/Shopping	11.465	9.3%	18.2%	13.7%
Parking Garage	1.776	24.5%	218.1%	130.7%
Amusement	5.651	7.7%	83.4%	3.7%
Private Office	13.968	-11.4%	-38.1%	46.9%
Government Office	10.064	8.7%	68.2%	-1.0%
Laboratory	3.414	93.8%	469.3%	-12.1%
Warehouse	20.370	-5.4%	-2.7%	31.0%
Miscellaneous Commercial *	9.646	19.5%	-38.5%	78.6%
<b>COMMERCIAL (big subset)</b>	<b>84.523</b>	<b>6.8%</b>	<b>2.7%</b>	<b>13.9%</b>
<b>INDUSTRIAL (Manufacturing)</b>	<b>72.786</b>	<b>172.3%</b>	<b>9.1%</b>	<b>420.0%</b>
Religious	0.730	-12.6%	52.6%	-41.9%
Hospital/Clinic	15.795	13.6%	-57.2%	-30.3%
Nursing/Assisted Living	3.107	-34.7%	-65.0%	-33.5%
Library/Museum	2.609	-10.1%	-64.6%	22.7%
Fire/Police/Courthouse/Prison	6.206	8.1%	76.6%	6.1%
Military	7.533	20.3%	110.1%	131.4%
School/College	57.040	16.1%	11.3%	-31.9%
Miscellaneous Medical	7.320	30.7%	108.1%	270.5%
<b>INSTITUTIONAL</b>	<b>100.339</b>	<b>12.6%</b>	<b>8.4%</b>	<b>-1.0%</b>
Miscellaneous Non-residential	5.678	18.2%	23.6%	39.5%
<b>NONRESIDENTIAL BUILDING</b>	<b>263.326</b>	<b>31.8%</b>	<b>7.2%</b>	<b>50.0%</b>
Airport	5.934	39.5%	165.9%	96.7%
Road/Highway	68.792	27.4%	65.2%	8.9%
Bridge	22.372	58.3%	117.0%	-13.5%
Dam/Marine	6.297	19.8%	-15.0%	-36.0%
Water/Sewage	32.994	25.0%	31.8%	-2.7%
Miscellaneous Civil (power, pipelines, etc.)	16.381	-17.9%	-22.0%	-48.2%
<b>HEAVY ENGINEERING (Civil)</b>	<b>152.771</b>	<b>23.2%</b>	<b>50.5%</b>	<b>-3.5%</b>
<b>TOTAL NONRESIDENTIAL</b>	<b>416.097</b>	<b>28.5%</b>	<b>19.0%</b>	<b>26.0%</b>

\* Includes transportation terminals and sports arenas.

Source: ConstructConnect Research Group/Table: ConstructConnect.

GRAPH 1: CHANGE IN LEVEL OF U.S. CONSTRUCTION EMPLOYMENT, MONTH TO MONTH (M/M) — TOTAL & BY CATEGORIES — SEPTEMBER 2022



Monthly average jobs creation in the U.S. construction sector so far in 2022 has been +19,000. Standalone Sept was right on the average. Last year's comparable figure for Jan-Sept was +8,000. ... Total U.S. jobs growth is presently +3.9% y/y. Construction is the same, +3.9% y/y.

For each month, 'net' = zero. 'Sub-trade' in BLS data referred to as 'specialty' trade.

Data Source: Bureau of Labor Statistics (BLS)/Chart: ConstructConnect.

Continued on page 3

Continued from page 2

The January-August 2022 over January-August 2021 total dollar volume of PIP construction was +10.9%. Residential was still going gangbusters at +19.4%. Nonresidential was restrained, at +2.8%, although not all of its sub-categories were laid back. Manufacturing was +23.6%.

PIP numbers, being more spread out, have smaller peak-over-trough percent-change amplitudes than the 'starts' series. As an additional valuable service for clients and powered by its extensive 'starts' database, ConstructConnect, in partnership with Oxford Economics, a world-leader in econometric modeling, has developed put-in-place construction statistics by types of structure for U.S. states, cities and counties, actuals and forecasts. ConstructConnect's PIP numbers are being released quarterly and are featured in a separate reporting system.

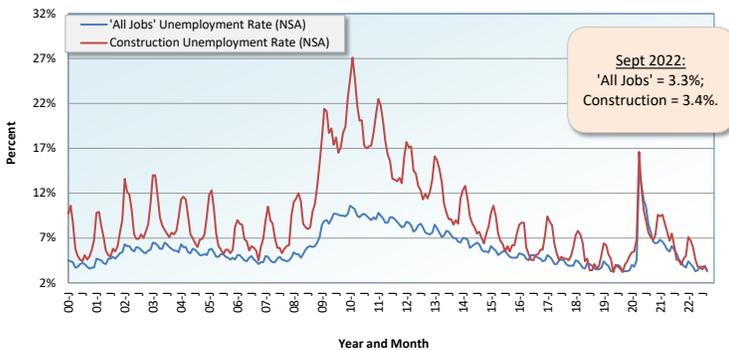
## Construction More than Held its Own in Total Jobs Increase

Construction's share of U.S. total non-farm employment in the monthly labor market report issued by the Bureau of Labor Statistics (BLS) is slightly more than 5.0%. To claim its proportional share of September's economy-wide number-of-jobs increase of +263,000, the figure for construction would be +13,000. The actual result was a little better at +19,000.

It has also been the case that the monthly average increase in construction employment through the first three quarters of the current year has been +19,000. Last year, the monthly average through the Q3 mark was only +8,000. More than half of September's total staffing gain arose at the nonresidential sub-trade level (+11,000 jobs).

Construction's not seasonally adjusted (NSA) unemployment rate in  
*Continued on page 4*

## GRAPH 3: U.S. UNEMPLOYMENT RATES: HEADLINE (I.E., 'ALL JOBS') & CONSTRUCTION (NOT SEASONALLY ADJUSTED (NSA))

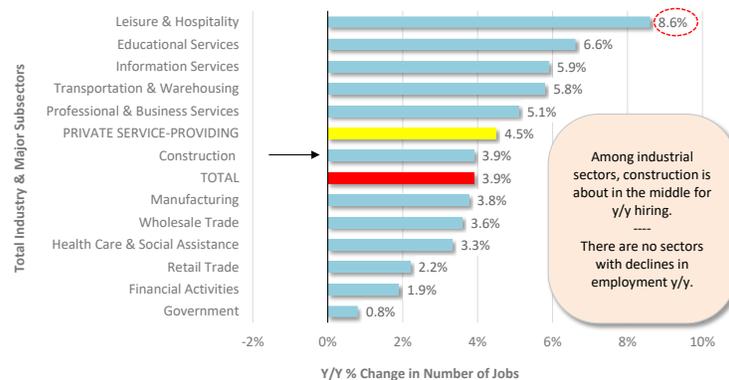


There used to be wide seasonal discrepancies between the unemployment rates for 'all jobs' and for construction, indicating that a career in the latter was more precarious. In recent times, though, the gap has largely disappeared, which should be a help in **recruiting drives** to sign up more onsite workers.

Current through September, 2022.

Data source: Bureau of Labor Statistics (BLS) / Chart: ConstructConnect.

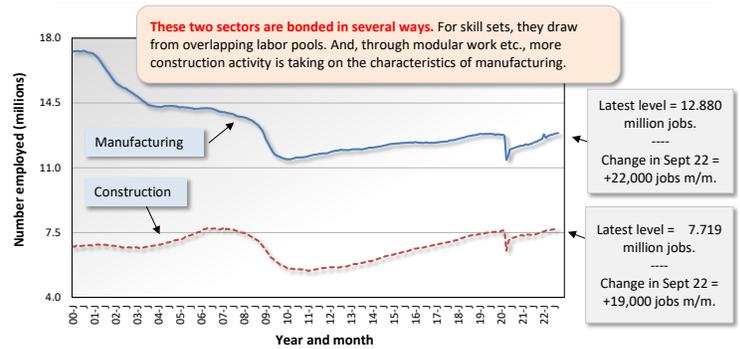
## GRAPH 5: Y/Y JOBS CHANGE, U.S. TOTAL INDUSTRY & MAJOR SUBSECTORS — SEPTEMBER 2022 (BASED ON SEASONALLY ADJUSTED PAYROLL DATA)



September 2022's y/y changes in employment within the pandemic's initially hardest-hit sector, 'leisure & hospitality', were: 'hotels/motels', +12.0%; 'amusements/gambling', +8.5%; and 'restaurants & bars', +7.7%.

Data source: Payroll Survey, U.S. Bureau of Labor Statistics (Dept of Labor)/Chart: ConstructConnect.

## GRAPH 2: U.S. MANUFACTURING VS CONSTRUCTION EMPLOYMENT SEPTEMBER, 2022 — SEASONALLY ADJUSTED (SA) PAYROLL DATA

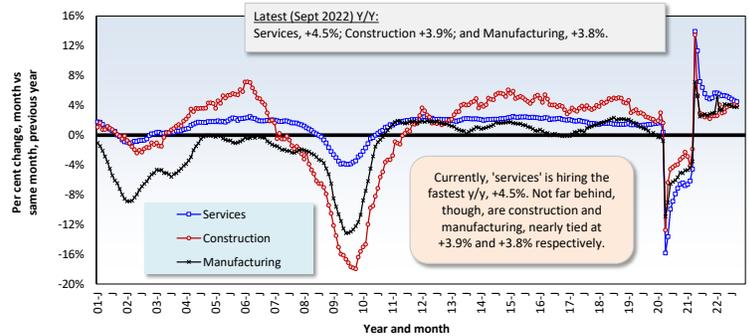


The not seasonally adjusted (NSA) unemployment rate for construction is presently 3.4%. In April 2020, at its worst, it was 16.6%. Manufacturing's current NSA jobless rate is 2.8%. April 2020's extreme was 13.2%. In early 2000, the ratio of construction to manufacturing jobs was 0.4 to 1.0. Now, it's 0.6 to 1.0.

Latest data points are for September, 2022.

Source: Payroll Survey, U.S. Bureau of Labor Statistics (BLS) / Chart: ConstructConnect-CanaData.

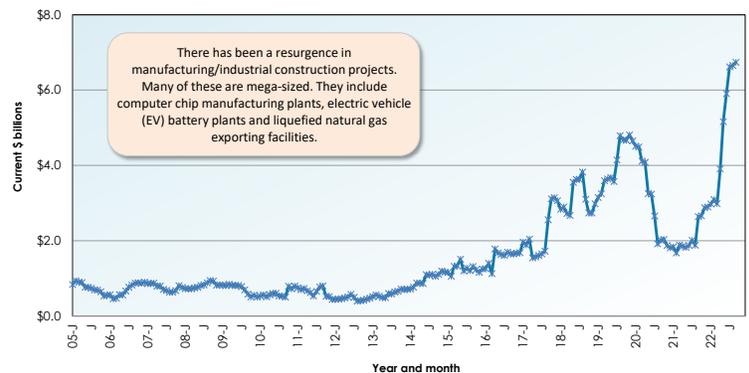
## GRAPH 4: U.S. EMPLOYMENT SEPTEMBER 2022 — % CHANGE Y/Y BASED ON SEASONALLY ADJUSTED (SA) DATA



The latest data points are for September, 2022.

Data source: Payroll Survey, Bureau of Labor Statistics (U.S. Department of Labor)/Chart: ConstructConnect.

## GRAPH 6: U.S. MANUFACTURING/INDUSTRIAL CONSTRUCTION STARTS — CONSTRUCTCONNECT



The last data point is for September 2022.

Data source: ConstructConnect. Graph: ConstructConnect.

Continued from page 3

September was 3.4%, making it almost as good as the 'all jobs' NSA U figure of 3.3%. In August, construction workers were looking at a 3.9% NSA U rate and in September 2021, 4.6%.

In the latest month, the U.S. construction sector managed the same year-over-year gain in employment as 'all jobs', +3.9%. At the same time, hiring by manufacturers was slower by the smallest of margins, +3.8% y/y. Private sector services employment, though, was speedier, +4.5% y/y. The leisure and hospitality services sector, still striving towards full recovery after being floored by various waves of the coronavirus, added to its collective payroll by +8.6% y/y.

In other segments of the economy with close ties to construction, the latest y/y percentage changes in employment have been as follows: oil and gas exploration and development, +11.6%; machinery and equipment rental and leasing, +6.9%; architectural and engineering design services, +5.4%; cement and concrete product manufacturing, +3.2%; real estate, +2.9%; and building materials and supplies dealers, -0.3%, or essentially no change.

Design services work leads into later onsite activity. Therefore, the +5.4% metric for the industry noted above is a positive read on the prospects for future in-the-field employment. Offering corroboration has been the Architecture Billings Index (ABI) from the American Institute of Architects (AIA). The ABI in August was 53.3, an improvement on July's 51.0. (For the ABI, 50.0 is the pivot point that separates more sales from fewer, month to month.) Over the same two-month span, the AIA's New Project Inquiries index moved upwards to 57.9 from 56.1.

**Pluses and Minuses among Type of Structure Sub-categories**

The more than one quarter (+26.0%) increase in September 2022's total nonresidential starts month-to-month (m/m) was driven mainly by the industrial sub-category (+420.0% - chipmaking plant in Texas, page 8), although commercial also recorded a decent gain (+13.9%). Both institutional (-1.0%) and heavy engineering/civil (-3.5%) failed to move forward.

The +19.0% advance of total nonresidential starts in September of this year versus September of last year (y/y) was due to across-the-board buoyancy in the major sub-categories, with engineering in especially fine fettle (+50.5%), followed by industrial (+9.1%), institutional (+8.4%) and commercial (+2.7%).

September's +28.5% year-to-date (ytd) upswing in total nonresidential starts was also thanks to a parade of positivity. Performing best was industrial (+172.3%), with engineering (+23.2%), institutional (+12.6%) and commercial (+6.8%) upbeat as well, to varying lesser degrees.

There are two dominant sub-categories of total nonresidential starts. When the volumes of 'roads/highways' and 'schools/colleges' are added together, they accounted for 30.2% of September's total nonresidential starts ytd (i.e., shares of 16.5% and 13.7% respectively).

The three percentage-change metrics for street starts in September 2022 were +8.9% m/m, +65.2% y/y, and +27.4% ytd. For educational facility starts, the results were -31.9% m/m, but +11.3% y/y and +16.1% ytd. The +16.1% pickup in school starts through Q3 is owing primarily to 'pre-school and elementary' structures, +30.1% and 'colleges and universities', +22.4% ytd.

Important beyond roads within the engineering sub-category are 'water/sewage' and 'bridge' starts. Groundbreakings in the former in September were -2.7% m/m, but +31.8% y/y and +25.0% ytd. For the latter, the results were -13.5% m/m, but +117.0% y/y, and +58.3% ytd.

Important beyond schools in institutional are three medical sub-categories - i.e., 'hospitals/clinics', 'nursing/assisted living' and 'miscellaneous medical'. Their combined starts in September 2022 were +53.5% m/m, -10.3% y/y, and +8.1% ytd. On their own, 'hospital/clinic' starts in the latest month were -30.3% m/m, and -57.2% y/y, but +13.6% ytd.

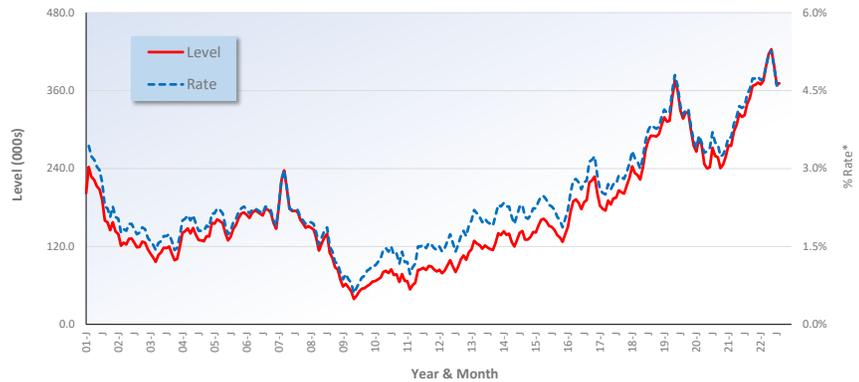
Among commercial starts in September, an array of ytd

TABLE 2: CONSTRUCTION STARTS IN SOME ADDITIONAL TYPE OF STRUCTURE SUB-CATEGORIES — ConstructConnect®

	Jan-Sept 2022 (\$ billions)	% Change vs Jan-Sept 2021
Sports Stadiums/Convention Centers	\$4.598	20.4%
Transportation Terminals	\$5.048	18.7%
Courthouses	\$1.196	-33.0%
Police Stations & Fire Halls	\$3.186	43.2%
Prisons	\$1.824	5.5%
Pre-School/Elementary	\$17.827	30.1%
Junior & Senior High Schools	\$23.379	5.2%
K-12 (sum of above two categories)	\$41.206	14.7%
Special & Vocational Schools	\$1.529	-0.2%
Colleges & Universities	\$14.305	22.4%
Electric Power Infrastructure	\$6.440	-20.7%

Source: ConstructConnect/Table: ConstructConnect.

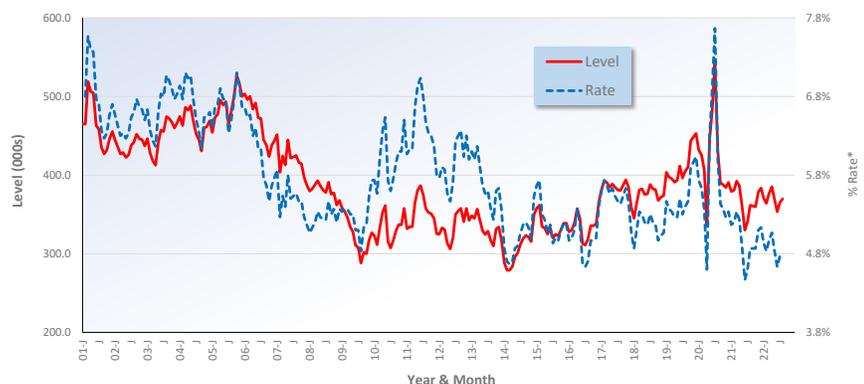
GRAPH 7: U.S. CONSTRUCTION JOB OPENINGS (FROM JOLTS REPORT) (3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)



For the individual month of August (rather than the 3-month moving average), 'openings' as a level for all jobs declined steeply. Construction was an exception, registering a significant climb.

\*Rate is number of job openings end-of-month as % of 'construction employment plus number of job openings'. Latest seasonally adjusted data points are for August 2022. ... JOLTS = Job Openings and Labor Turnover Survey. Data source: Bureau of Labor Statistics (Dept of Labor)/Chart: ConstructConnect.

GRAPH 8: U.S. CONSTRUCTION JOB HIRES (FROM JOLTS REPORT) (3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)



The 'hires' numbers for construction from the JOLTS report, both as a level and a rate, continue to fluctuate within a fairly narrow range and without much uplift. Strong 'openings' but weak 'hires' is a problem for many industries.

\*Rate is number of hires during month as % of construction employment. Latest seasonally adjusted data points are for August 2022. ... JOLTS = Job Openings and Labor Turnover Survey. Data source: Bureau of Labor Statistics (Dept of Labor)/Chart: ConstructConnect.

Continued on page 5

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percentage change increases is being headlined by laboratories (+93.8%), with 'hotels/motels' (+46.2%), 'miscellaneous' (+19.5%), 'retail/shopping' (+9.3%), 'government office buildings' (+8.7%) and 'amusement' (+7.7%) in supporting roles. 'Miscellaneous' includes 'sports stadiums/convention centers' (+20.4% ytd) and 'transportation terminals' (+18.7% ytd). Producing weak ytd results within commercial starts so far in 2022 have been 'warehouses' (-5.4%) and 'private office buildings' (-11.4%), although it's worth noting that m/m, they both did pretty good, +31.0% and +46.9% respectively.

This section wouldn't be complete without emphasizing how wonderfully industrial starts have been behaving. Lifted by a wealth of mega project initiations, industrial (+420.0% m/m; +9.1% y/y; and +172.3% ytd) has been the standout among the four major type-of-structure sub-categories (see Graph 6).

### Engineering Trend Graphs the Most Upbeat

Page 9 of this Industry Snapshot sets out the history, January 2005 to the present, of 12-month moving 'starts' averages (derived from ConstructConnect's database) for a dozen construction types-of-structure. The moving-average approach is designed to capture trends. (As a technical note, the moving average is graphed in the ending month.)

With recent ascending curvatures, 'schools/colleges', 'roads/highways', 'water/sewage' and 'bridges' are showing clear signs of uptrends. 'Retail' and 'hospitals/clinics' are continuing along level planes. The slope for 'private office buildings' has not yet reversed its negative course.

### Construction Job 'Openings' Continue to Climb

For ease of viewing, Graphs 7 and 8 show 'smoothed' curves (i.e., based on three-month moving averages, placed in the latest month) for the Job Openings and Labor Turnover Survey (JOLTS) results pertaining to construction industry 'openings' and 'hires'.

For the construction sector, the JOLTS story remains the same as it has been for quite some time. There's an excess of openings, without an accompanying upsurge in hires.

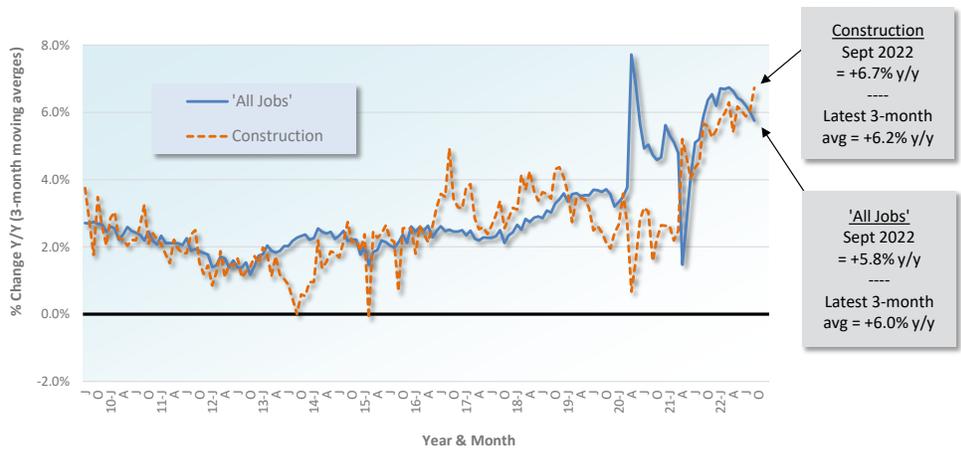
Many other industries have also been experiencing this problem. But a change may be in the wind. In the latest (August) set of JOLTS numbers, 'openings' figures as a level fell in nearly every industry. The one notable exception was construction, where 'openings' continued to climb.

### Formidable Wage Hikes Throughout the Economy

Tables B-3 and B-8 of the monthly *Employment Situation* report, from the BLS, 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 percentage changes to spotlight.

From September 2022's Table B-3 (including bosses), year-over-year all-jobs earnings were +5.0% hourly and +4.1% weekly. Construction workers, as a subset of 'all jobs', did better hourly, +5.5%, but fell behind weekly, +3.3%. From Table B-8 for production and non-supervisory workers (i.e., excluding bosses), the all-jobs wage advances were +5.8% hourly and +4.8% weekly. Construction workers fared better hourly, +6.7%, but they weren't rewarded as richly weekly, +4.4%.

GRAPH 9: AVERAGE HOURLY EARNINGS Y/Y — 'ALL JOBS' & CONSTRUCTION



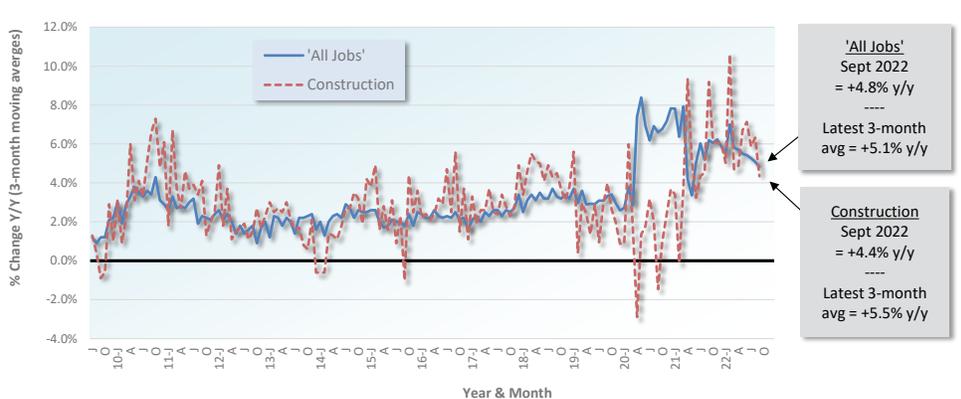
Even at +5.8% y/y, hourly wages aren't matching the rapid pace of CPI-U inflation, +8.3% y/y in August 2022. The average annual increase for 'construction workers' from 2010 to 2019 was +2.3%; for 'all jobs' over the same period, +2.4%.

From 'Production Workers and Non-supervisory Personnel' Table (B8).

The latest data points are for September, 2022.

Data Source: Bureau of Labor Statistics (BLS)'s Employment Situation report/Chart: ConstructConnect.

GRAPH 10: AVERAGE WEEKLY EARNINGS Y/Y — 'ALL JOBS' & CONSTRUCTION



The y/y increase in weekly wages paid to construction workers soared in Feb 2022, +10.6%. Some moderation has occurred since then. Presently, the NSA unemployment rate in construction (3.4%) is slightly higher than the 'all jobs' NSA U rate (3.3%).

From 'Production Workers and Non-supervisory Personnel' Table (B8).

The latest data points are for September, 2022.

Data Source: Bureau of Labor Statistics (BLS)'s Employment Situation report/Chart: ConstructConnect.

### Reason Returning to Material Inputs Marketplace

September 2022's y/y results for three building related BLS Producer Price Index (PPI) series were: (A) 'construction materials special index', +6.2% (moderating from August's +9.5%); (B) 'inputs to new construction index, excluding capital investment, labor, and imports', +11.5% (staying the same as in the previous month); and (C) 'final demand construction', designed to capture bid prices, +23.1% (up minutely from the +22.9% change in August).

(A) comes from a data series with a long history, but it's confined to a limited number of major construction materials. (B) has a shorter history, but it's more comprehensive in its coverage, although it includes some items (e.g., transportation) that aren't strictly materials.

Concerning the cost of some major construction material inputs, as revealed in the

PPI data set for September 2022 published by the BLS, there's some spirited dancing still going on, but the frenzied music is winding down. Diesel fuel is +65.9% y/y; asphalt, +43.3% y/y; gypsum, +18.4%; softwood lumber, +14.5%; hot rolled steel bars, plates, and structural shapes, +12.1%; ready-mix concrete, +11.6%; cement, +10.9%; aluminum mill shapes, -10.8%; and copper wire and cable, -8.7%. There's an 'inputs to highways and streets' PPI index and it's +12.9% y/y.

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

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**September 2022's 'Grand Total' Starts +15.1% Ytd**

From Table 6 on page 7 (also Table 9 on page 11) of this report, ConstructConnect's total residential starts in September 2022 were -14.5% m/m, -8.4% y/y, and -0.8% ytd. Multi-family starts were -28.6% m/m, but +19.7% y/y and +14.3% ytd. Single-family starts were -5.2% m/m, -17.9% y/y and -6.7% ytd.

Including home building with all nonresidential categories, **Grand Total** starts in September 2022 were +8.6% m/m, +8.1% y/y and +15.1% ytd.

ConstructConnect adopts a research-assigned 'start' 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.

**Flexible and Adaptable Strategies for 2023**

The rapidly changing pace of events in 2022 means that for many construction firms, plans and strategies for next year may need to be rethought. Consider that mortgage applications for the week ending October 7th were down 39% from the same period a year ago. Such a substantial change points to a construction market that is likely to be very different in 2023.

The cooling of residential construction will mean the loss of the most powerful driver of total U.S. construction spending since 2020. Taking its place will be a growing list of nonresidential 'mega' projects of a billion \$s or more each. The present list of mega projects breaking ground constitutes a greater portion of total construction spending than at any time in recent history.

As the transition unfolds, material and labor requirements will naturally shift to where they are most valued. Excess supplies of labor and materials formerly involved in residential construction work will likely shift the cost dynamics downwards for the first time since COVID. Distributors and suppliers that fail to prepare for this change could end up holding excessive and unnecessary levels of residential products. They'll be tying up capital that could otherwise be productively and profitably spent on commercial and civil construction-related products.

Knowing how to proactively respond to the market will require an 'eyes-wide-open' mentality and the careful monitoring of industry data. The construction industry's success in 2023 will be determined by the willingness of business leaders to quickly adapt to changing circumstances.

*Michael Guckes, Senior Economist*

**Expansion Index Monitors Construction Prospects**

A rule of thumb is that nonresidential construction is a lagging indicator among economic measures. Companies are hesitant to undertake capital spending until their personnel needs are rapidly expanding and their office square footage or plant footprints are straining capacity. Plus, it helps if profits are abundant. Also, today's greater tendency to work from home has made office occupancy and the resulting need for construction much more difficult to assess. The 'rule', however, may not hold true under the present circumstances, with the weakness in such areas as retail spending to be offset by a rich deposit of large industrial and engineering construction projects to mine.

Each month, ConstructConnect publishes information on upcoming construction projects at its *Expansion Index* web location, to be found by clicking on this link, <https://www.construct-connect.com/expansion-index>

The *Expansion Index*, for hundreds of cities in the U.S. and Canada, calculates the ratio, based on dollar volume, of projects in the planning stage, at present, divided by the comparable figure a year ago. The ratio moves above 1.0 when there is currently a larger dollar volume of construction 'prospects' than there was last year at the same time. The ratio sinks below 1.0 when the opposite is the case. The results are set out in interactive maps for both countries.

TABLE 3: 2022 YTD RANKING OF TOP 20 STATES BY \$ VOLUME OF NONRESIDENTIAL CONSTRUCTION STARTS — ConstructConnect®

	Jan-Sept 2022	% Change vs Jan-Sept 2021
1 Texas	\$74,932,094,504	98.5%
2 California	\$30,515,186,656	7.2%
3 New York	\$22,559,274,446	35.0%
4 Florida	\$20,627,847,664	10.6%
5 Michigan	\$16,843,507,846	123.0%
6 Louisiana	\$15,883,025,324	183.6%
7 North Carolina	\$15,819,853,390	36.2%
8 Illinois	\$13,295,997,041	21.5%
9 Pennsylvania	\$12,996,699,658	17.3%
10 Kentucky	\$10,548,339,858	226.5%
11 Indiana	\$10,452,487,768	59.3%
12 Georgia	\$10,433,118,669	12.9%
13 Ohio	\$9,667,492,811	-14.6%
14 Virginia	\$8,597,695,460	15.7%
15 Massachusetts	\$8,160,086,807	-14.1%
16 Washington	\$7,990,556,150	17.1%
17 Wisconsin	\$7,826,242,783	14.9%
18 Missouri	\$7,421,605,559	4.7%
19 Minnesota	\$6,975,758,925	-17.7%
20 New Jersey	\$6,923,841,355	21.0%

Figures are comprised of non-res building & engineering (residential is omitted).

TABLE 4: 2022 YTD RANKING OF TOP 20 STATES BY \$ VOLUME OF NONRESIDENTIAL BUILDING CONSTRUCTION STARTS — ConstructConnect®

	Jan-Sept 2022	% Change vs Jan-Sept 2021
1 Texas	\$53,845,332,473	138.8%
2 California	\$18,628,450,840	9.5%
3 New York	\$13,452,296,786	26.9%
4 Florida	\$13,224,247,649	9.8%
5 Louisiana	\$12,909,688,002	248.2%
6 Michigan	\$12,304,586,934	246.7%
7 North Carolina	\$11,391,564,538	28.9%
8 Kentucky	\$8,813,545,647	386.3%
9 Pennsylvania	\$7,848,398,317	0.7%
10 Georgia	\$7,361,156,124	19.2%
11 Indiana	\$6,293,962,356	59.2%
12 Illinois	\$6,122,666,611	7.2%
13 Massachusetts	\$5,743,291,837	25.9%
14 Ohio	\$5,239,762,887	-25.9%
15 Arizona	\$5,126,484,907	-62.8%
16 Virginia	\$5,059,594,471	-7.5%
17 Wisconsin	\$4,789,043,600	40.0%
18 Missouri	\$4,483,795,768	-8.4%
19 Washington	\$4,464,869,099	3.4%
20 Tennessee	\$4,091,931,428	-34.4%

TABLE 5: 2022 YTD RANKING OF TOP 20 STATES BY \$ VOLUME OF HEAVY ENGINEERING/CIVIL CONSTRUCTION STARTS — ConstructConnect®

	Jan-Sept 2022	% Change vs Jan-Sept 2021
1 Texas	\$21,086,762,031	38.7%
2 California	\$11,886,735,816	3.8%
3 New York	\$9,106,977,660	49.0%
4 Florida	\$7,403,600,015	11.9%
5 Illinois	\$7,173,330,430	37.0%
6 Pennsylvania	\$5,148,301,341	56.6%
7 Michigan	\$4,538,920,912	13.3%
8 Minnesota	\$4,466,017,746	-21.1%
9 North Carolina	\$4,428,288,852	59.5%
10 Ohio	\$4,427,729,924	4.4%
11 New Jersey	\$4,166,081,479	66.8%
12 Indiana	\$4,158,525,412	59.6%
13 Virginia	\$3,538,100,989	80.4%
14 Washington	\$3,525,687,051	40.9%
15 Georgia	\$3,071,962,545	0.2%
16 Wisconsin	\$3,037,199,183	-10.4%
17 Louisiana	\$2,973,337,322	57.1%
18 Missouri	\$2,937,809,791	34.2%
19 Colorado	\$2,770,778,361	25.3%
20 Iowa	\$2,448,313,401	19.6%

Data source and Tables: ConstructConnect.

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.

## INSIGHT view of starts statistics

TABLE 6: VALUE OF UNITED STATES CONSTRUCTION STARTS  
ConstructConnect® INSIGHT VERSION — SEPTEMBER 2022  
ARRANGED TO MATCH THE ALPHABETICAL CATEGORY DROP-DOWN MENUS IN INSIGHT

	Jan-Sept 2022 (\$ billions)	% Change Jan-Sept 22 vs Jan-Sept 21	% Change Sept 22 vs Sept 21	% Change Sept 22 vs Aug 22
<b>Summary</b>				
CIVIL	152.771	23.2%	50.5%	-3.5%
NONRESIDENTIAL BUILDING	263.326	31.8%	7.2%	50.0%
RESIDENTIAL	270.580	-0.8%	-8.4%	-14.5%
<b>GRAND TOTAL</b>	<b>686.677</b>	<b>15.1%</b>	<b>8.1%</b>	<b>8.6%</b>
<b>Verticals</b>				
Airport	5.934	39.5%	165.9%	96.7%
All Other Civil	9.940	-16.0%	-8.0%	-23.5%
Bridges	22.372	58.3%	117.0%	-13.5%
Dams / Canals / Marine Work	6.297	19.8%	-15.0%	-36.0%
Power Infrastructure	6.440	-20.7%	-58.3%	-81.8%
Roads	68.792	27.4%	65.2%	8.9%
Water and Sewage Treatment	32.994	25.0%	31.8%	-2.7%
<b>CIVIL</b>	<b>152.771</b>	<b>23.2%</b>	<b>50.5%</b>	<b>-3.5%</b>
Offices (private)	13.968	-11.4%	-38.1%	46.9%
Parking Garages	1.776	24.5%	218.1%	130.7%
Transportation Terminals	5.048	18.7%	-24.1%	790.0%
<b>Commercial (small subset)</b>	<b>20.792</b>	<b>-3.0%</b>	<b>-24.0%</b>	<b>132.4%</b>
Amusement	5.651	7.7%	83.4%	3.7%
Libraries / Museums	2.609	-10.1%	-64.6%	22.7%
Religious	0.730	-12.6%	52.6%	-41.9%
Sports Arenas / Convention Centers	4.598	20.4%	-63.2%	-53.3%
<b>Community</b>	<b>13.588</b>	<b>6.1%</b>	<b>-36.3%</b>	<b>-15.5%</b>
College / University	14.305	22.4%	3.0%	-32.7%
Elementary / Pre School	17.827	30.1%	11.8%	-48.5%
Jr / Sr High School	23.379	5.2%	20.8%	-12.2%
Special / Vocational	1.529	-0.2%	-42.8%	-65.4%
<b>Educational</b>	<b>57.040</b>	<b>16.1%</b>	<b>11.3%</b>	<b>-31.9%</b>
Courthouses	1.196	-33.0%	109.8%	80.6%
Fire and Police Stations	3.186	43.2%	101.4%	21.3%
Government Offices	10.064	8.7%	68.2%	-1.0%
Prisons	1.824	5.5%	22.1%	-36.5%
<b>Government</b>	<b>16.271</b>	<b>8.5%</b>	<b>71.5%</b>	<b>1.8%</b>
Industrial Labs / Labs / School Labs	3.414	93.8%	469.3%	-12.1%
Manufacturing	72.786	172.3%	9.1%	420.0%
Warehouses	20.370	-5.4%	-2.7%	31.0%
<b>Industrial</b>	<b>96.570</b>	<b>93.1%</b>	<b>10.0%</b>	<b>209.8%</b>
Hospitals / Clinics	15.795	13.6%	-57.2%	-30.3%
Medical Misc.	7.320	30.7%	108.1%	270.5%
Nursing Homes	3.107	-34.7%	-65.0%	-33.5%
<b>Medical</b>	<b>26.221</b>	<b>8.1%</b>	<b>-10.3%</b>	<b>53.5%</b>
<b>Military</b>	<b>7.533</b>	<b>20.3%</b>	<b>110.1%</b>	<b>131.4%</b>
Hotels	8.169	46.2%	0.2%	-45.2%
Retail Misc.	5.678	18.2%	23.6%	39.5%
Shopping	11.465	9.3%	18.2%	13.7%
<b>Retail</b>	<b>25.311</b>	<b>21.2%</b>	<b>14.3%</b>	<b>-7.1%</b>
<b>NONRESIDENTIAL BUILDING</b>	<b>263.326</b>	<b>31.8%</b>	<b>7.2%</b>	<b>50.0%</b>
Multi-Family	87.566	14.3%	19.7%	-28.6%
Single-Family	183.014	-6.7%	-17.9%	-5.2%
<b>RESIDENTIAL</b>	<b>270.580</b>	<b>-0.8%</b>	<b>-8.4%</b>	<b>-14.5%</b>
<b>NONRESIDENTIAL</b>	<b>416.097</b>	<b>28.5%</b>	<b>19.0%</b>	<b>26.0%</b>
<b>GRAND TOTAL</b>	<b>686.677</b>	<b>15.1%</b>	<b>8.1%</b>	<b>8.6%</b>

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 7 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.

## “Top Ten” projects of the month

TABLE 7: ConstructConnect’s TOP 10 PROJECT STARTS IN SEPTEMBER 2022

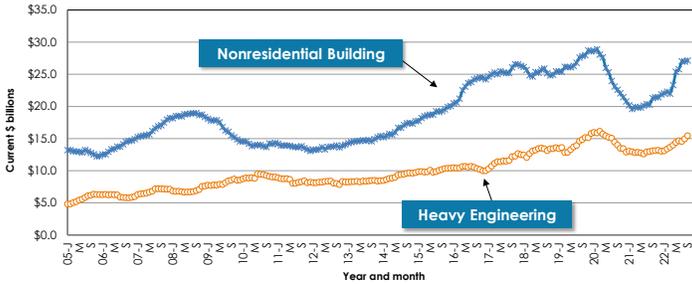
LOCATION (EAST TO WEST)	TYPE OF CONSTRUCTION	DESCRIPTION	SQUARE FEET 000S*	DOLLARS 000,000S
<b>Delaware</b> Middletown	Industrial	WuXi AppTec STA Pharmaceutical USA / Middletown (1 structure) 950 Industrial Dr WuXi AppTec	1,740	\$510
<b>Maryland</b> New Carrollton	Residential	New Carrollton Metro Station Mixed-use Project (4 structures; 1700 units) Prince Georges County Urban Atlantic LLC	2,700	\$500
<b>Michigan</b> Hemlock	Industrial	Hemlock Semiconductor Modernization / Thomas Township (2 structures) 12334 Geddes Rd Hemlock Semiconductor Corporation	300	\$375
<b>Illinois</b> Granite City	Civil/Engineering	Replacement of SN 060-0035 which carries I-270 (2 structures) I-270 Illinois Department of Transportation (IDOT)	*	\$496
<b>Missouri</b> Wright City	Industrial	American Foods Group Beef Processing Plant / Warren County (1 structure; 1 story) Warren County American Foods Group LLC	775	\$800
<b>Oklahoma</b> Tulsa	Commercial	American Airlines New Hangar And Support Building (Tech Ops) (1 structure) 3800 N Mingo Rd American Airlines Group Inc. - Headquarters	193	\$550
<b>Texas</b> Taylor	Industrial	Samsung Semiconductor Chipmaking Plant (1 structure; 1 story) Co Rd 404 Samsung Austin Semiconductor	6,000	\$9,000
San Antonio	Civil/Engineering	I-35 NEX Central Project I-35 Texas Department of Transportation (TxDOT) - San Antonio	*	\$3,000
<b>Arizona</b> Litchfield park	Industrial	Prologis 303 (Loop 303) Industrial Park (3 structures; 1 story; 112 units) 4780 N Cotton Ln Prologis	1,627	\$1,000
<b>California</b> Torrance	Institutional	Harbor-UCLA Medical Center Replacement Program (2 structures) 1000 W Carson St Los Angeles County - Department of Public Works (DPW)	1,310	\$1,200
<b>TOTALS:</b>			<b>14,645</b>	<b>\$17,431</b>

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

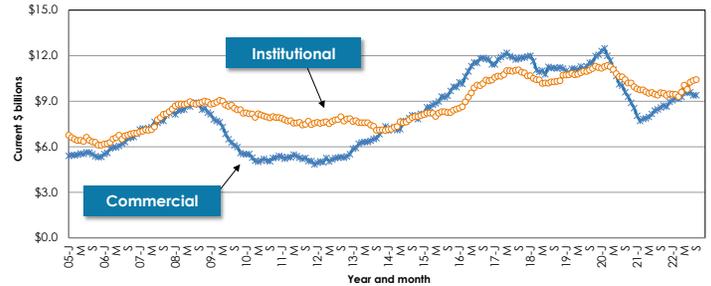
Source: ConstructConnect/Table: ConstructConnect.

## Trend graphs for 12 key categories

**GRAPH 11: U.S. NONRESIDENTIAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)**



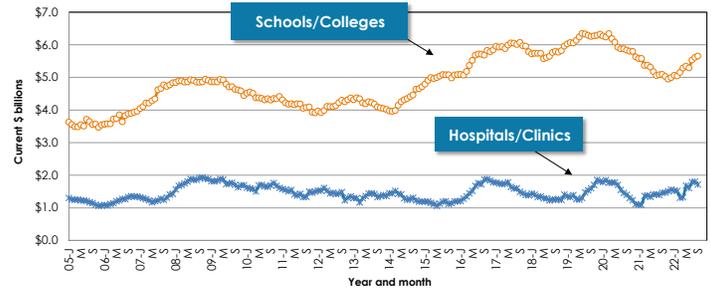
**GRAPH 12: U.S. COMMERCIAL AND INSTITUTIONAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)**



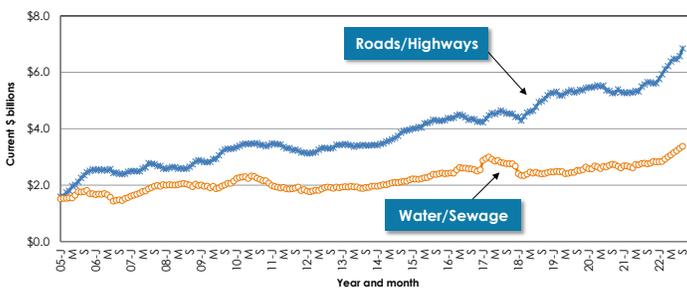
**GRAPH 13: U.S. RETAIL AND PRIVATE OFFICE BUILDING CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)**



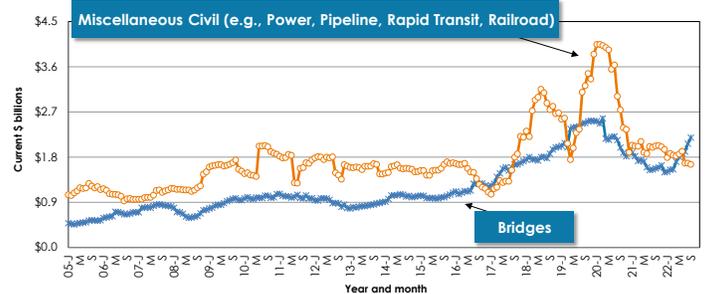
**GRAPH 14: U.S. HOSPITAL/CLINIC AND SCHOOL/COLLEGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)**



**GRAPH 15: U.S. ROAD/HIGHWAY AND WATER/SEWAGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)**



**GRAPH 16: 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 September, 2022.

Source: ConstructConnect/Charts: ConstructConnect.

## Regional starts table

TABLE 8: U.S. YEAR-TO-DATE REGIONAL STARTS, NONRESIDENTIAL CONSTRUCTION\* — ConstructConnect®

	Jan-Sept 2021	Jan-Sept 2022	% Change
Connecticut	\$2,267,809,149	\$2,388,918,280	5.3%
Maine	\$2,706,445,015	\$3,064,842,016	13.2%
Massachusetts	\$9,502,787,126	\$8,160,086,807	-14.1%
New Hampshire	\$1,137,931,085	\$692,446,334	-39.1%
Rhode Island	\$858,794,240	\$933,345,643	8.7%
Vermont	\$326,076,475	\$470,462,371	44.3%
<b>Total New England</b>	<b>\$16,799,843,090</b>	<b>\$15,710,101,451</b>	<b>-6.5%</b>
New Jersey	\$5,723,458,951	\$6,923,841,355	21.0%
New York	\$16,713,400,270	\$22,559,274,446	35.0%
Pennsylvania	\$11,077,740,217	\$12,996,699,658	17.3%
<b>Total Middle Atlantic</b>	<b>\$33,514,599,438</b>	<b>\$42,479,815,459</b>	<b>26.8%</b>
<b>TOTAL NORTHEAST</b>	<b>\$50,314,442,528</b>	<b>\$58,189,916,910</b>	<b>15.7%</b>
Illinois	\$10,943,037,988	\$13,295,997,041	21.5%
Indiana	\$6,559,561,693	\$10,452,487,768	59.3%
Michigan	\$7,554,675,195	\$16,843,507,846	123.0%
Ohio	\$11,315,290,122	\$9,667,492,811	-14.6%
Wisconsin	\$6,808,756,123	\$7,826,242,783	14.9%
<b>Total East North Central</b>	<b>\$43,181,321,121</b>	<b>\$58,085,728,249</b>	<b>34.5%</b>
Iowa	\$4,389,103,877	\$4,193,178,481	-4.5%
Kansas	\$2,510,468,666	\$3,688,348,205	46.9%
Minnesota	\$8,473,419,703	\$6,975,758,925	-17.7%
Missouri	\$7,086,786,260	\$7,421,605,559	4.7%
Nebraska	\$3,188,404,714	\$4,515,013,310	41.6%
North Dakota	\$1,913,797,002	\$3,589,850,724	87.6%
South Dakota	\$1,359,711,631	\$2,749,345,867	102.2%
<b>Total West North Central</b>	<b>\$28,921,691,853</b>	<b>\$33,133,101,071</b>	<b>14.6%</b>
<b>TOTAL MIDWEST</b>	<b>\$72,103,012,974</b>	<b>\$91,218,829,320</b>	<b>26.5%</b>
Delaware	\$894,122,711	\$1,421,925,211	59.0%
District of Columbia	\$948,420,146	\$1,537,093,459	62.1%
Florida	\$18,658,847,337	\$20,627,847,664	10.6%
Georgia	\$9,241,261,377	\$10,433,118,669	12.9%
Maryland	\$4,794,129,605	\$5,588,450,153	16.6%
North Carolina	\$11,614,171,330	\$15,819,853,390	36.2%
South Carolina	\$4,144,871,165	\$5,620,739,976	35.6%
Virginia	\$7,429,035,749	\$8,597,695,460	15.7%
West Virginia	\$935,924,717	\$1,565,198,998	67.2%
<b>Total South Atlantic</b>	<b>\$58,660,784,137</b>	<b>\$71,211,922,980</b>	<b>21.4%</b>
Alabama	\$5,340,577,503	\$5,427,525,688	1.6%
Kentucky	\$3,230,381,349	\$10,548,339,858	226.5%
Mississippi	\$2,049,206,031	\$2,336,333,493	14.0%
Tennessee	\$8,126,919,444	\$6,355,031,163	-21.8%
<b>Total East South Central</b>	<b>\$18,747,084,327</b>	<b>\$24,667,230,202</b>	<b>31.6%</b>
Arkansas	\$2,450,507,205	\$2,626,620,931	7.2%
Louisiana	\$5,600,636,449	\$15,883,025,324	183.6%
Oklahoma	\$3,495,733,712	\$4,798,405,757	37.3%
Texas	\$37,752,756,709	\$74,932,094,504	98.5%
<b>Total West South Central</b>	<b>\$49,299,634,075</b>	<b>\$98,240,146,516</b>	<b>99.3%</b>
<b>TOTAL SOUTH</b>	<b>\$126,707,502,539</b>	<b>\$194,119,299,698</b>	<b>53.2%</b>
Arizona	\$14,772,049,576	\$6,733,640,329	-54.4%
Colorado	\$5,940,314,477	\$5,239,972,178	-11.8%
Idaho	\$958,378,770	\$1,834,789,670	91.4%
Montana	\$939,380,368	\$1,433,505,621	52.6%
Nevada	\$3,355,637,296	\$3,732,725,170	11.2%
New Mexico	\$1,558,871,351	\$2,427,338,659	55.7%
Utah	\$4,284,748,075	\$4,349,921,313	1.5%
Wyoming	\$835,362,471	\$1,145,701,918	37.2%
<b>Total Mountain</b>	<b>\$32,644,742,384</b>	<b>\$26,897,594,858</b>	<b>-17.6%</b>
Alaska	\$982,433,352	\$1,331,653,096	35.5%
California	\$28,458,801,544	\$30,515,186,656	7.2%
Hawaii	\$1,456,549,560	\$1,368,940,263	-6.0%
Oregon	\$4,317,973,505	\$4,464,602,072	3.4%
Washington	\$6,820,923,607	\$7,990,556,150	17.1%
<b>Total Pacific</b>	<b>\$42,036,681,568</b>	<b>\$45,670,938,237</b>	<b>8.6%</b>
<b>TOTAL WEST</b>	<b>\$74,681,423,952</b>	<b>\$72,568,533,095</b>	<b>-2.8%</b>
<b>TOTAL U.S.</b>	<b>\$323,806,381,993</b>	<b>\$416,096,579,023</b>	<b>28.5%</b>

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

Source: ConstructConnect/Table: ConstructConnect.

# Detailed national table

TABLE 9: VALUE OF U.S. NATIONAL CONSTRUCTION STARTS — SEPTEMBER 2022 — ConstructConnect®  
BILLIONS OF CURRENT \$\$, NOT SEASONALLY ADJUSTED (NSA)

	Latest month actuals			Moving averages (placed in end month)					Year to Date		
	Jul 22	Aug 22	Sep 22	Jul 22	3-months Aug 22	Sep 22	Jul 22	12-months Aug 22	Sep 22	Jan-Sept 2021	Jan-Sept 2022
Single Family	18.621	18.471	17.505	20.650	19.592	18.199	21.021	20.702	20.384	196.099	183.014
month-over-month % change	-14.1%	-0.8%	-5.2%	-8.9%	-5.1%	-7.1%	-2.0%	-1.5%	-1.5%		
year-over-year % change	-21.5%	-17.2%	-17.9%	-14.3%	-17.9%	-18.9%	-1.3%	-3.4%	-5.0%	24.2%	-6.7%
Apartment	8.943	12.105	8.638	8.892	9.839	9.896	9.466	9.502	9.620	76.608	87.566
month-over-month % change	5.6%	35.4%	-28.6%	-9.4%	10.7%	0.6%	0.7%	0.4%	1.2%		
year-over-year % change	10.2%	3.7%	19.7%	6.8%	3.0%	9.9%	23.2%	17.3%	18.2%	25.4%	14.3%
<b>TOTAL RESIDENTIAL</b>	<b>27.564</b>	<b>30.576</b>	<b>26.143</b>	<b>29.542</b>	<b>29.431</b>	<b>28.095</b>	<b>30.487</b>	<b>30.204</b>	<b>30.005</b>	<b>272.707</b>	<b>270.580</b>
month-over-month % change	-8.6%	10.9%	-14.5%	-9.0%	-0.4%	-4.5%	-1.2%	-0.9%	-0.7%		
year-over-year % change	-13.4%	-10.0%	-8.4%	-8.9%	-11.9%	-10.7%	5.2%	2.3%	1.4%	24.5%	-0.8%
Hotel/Motel	1.737	1.247	0.683	1.116	1.292	1.222	0.752	0.811	0.811	5.588	8.169
month-over-month % change	95.0%	-28.2%	-45.2%	52.3%	15.8%	-5.4%	12.5%	7.8%	0.0%		
year-over-year % change	136.3%	129.6%	0.2%	43.3%	79.7%	87.1%	22.8%	33.3%	31.2%	-33.2%	46.2%
Retail/Shopping	0.999	1.070	1.216	1.352	1.094	1.095	1.186	1.139	1.154	10.494	11.465
month-over-month % change	-17.5%	7.1%	13.7%	-5.0%	-19.1%	0.1%	1.6%	-4.0%	1.4%		
year-over-year % change	30.0%	-34.6%	18.2%	11.4%	-17.8%	-4.3%	11.2%	2.8%	4.3%	10.6%	9.3%
Parking Garages	0.212	0.147	0.338	0.169	0.184	0.232	0.158	0.157	0.176	1.426	1.776
month-over-month % change	9.1%	-30.8%	130.7%	-22.1%	9.2%	26.0%	1.9%	-0.9%	12.3%		
year-over-year % change	19.8%	-10.0%	218.1%	6.9%	8.7%	56.2%	5.4%	5.7%	20.3%	1.4%	24.5%
Amusement	1.022	0.638	0.662	0.678	0.722	0.774	0.552	0.555	0.580	5.247	5.651
month-over-month % change	101.9%	-37.5%	3.7%	33.3%	6.5%	7.2%	-2.4%	0.5%	4.5%		
year-over-year % change	-13.5%	5.0%	83.4%	-15.8%	-12.9%	8.0%	-1.4%	-4.4%	3.1%	9.4%	7.7%
Office	1.129	0.764	1.123	1.691	1.411	1.005	1.861	1.643	1.585	15.764	13.968
month-over-month % change	-51.7%	-32.3%	46.9%	-21.5%	-16.5%	-28.8%	-4.4%	-11.7%	-3.5%		
year-over-year % change	-47.4%	-77.4%	-38.1%	11.0%	-37.7%	-58.9%	-2.2%	-12.5%	-16.9%	-16.0%	-11.4%
Governmental Offices	1.253	1.376	1.362	1.279	1.331	1.330	0.990	0.991	1.037	9.261	10.064
month-over-month % change	-8.1%	9.8%	-1.0%	2.9%	4.0%	0.0%	-5.7%	0.1%	4.6%		
year-over-year % change	-36.5%	0.5%	68.2%	3.4%	-3.0%	-3.9%	-0.2%	-4.0%	8.5%	9.5%	8.7%
Laboratories	0.351	0.636	0.559	0.373	0.507	0.515	0.270	0.303	0.342	1.762	3.414
month-over-month % change	-34.2%	80.9%	-12.1%	-17.3%	35.9%	1.6%	-1.0%	12.4%	12.7%		
year-over-year % change	-8.3%	172.7%	469.3%	57.1%	87.9%	116.3%	30.3%	40.2%	66.6%	6.6%	93.8%
Warehouse	3.039	1.982	2.596	2.546	2.299	2.539	2.300	2.253	2.247	21.534	20.370
month-over-month % change	62.0%	-34.8%	31.0%	0.9%	-9.7%	10.4%	2.9%	-2.0%	-0.3%		
year-over-year % change	34.2%	-22.1%	-2.7%	8.9%	-4.7%	1.9%	3.1%	0.3%	-3.5%	8.7%	-5.4%
Misc Commercial	0.909	0.637	1.138	1.497	0.718	0.895	1.523	1.625	1.466	8.072	9.646
month-over-month % change	49.8%	-29.9%	78.6%	-3.4%	-52.1%	24.7%	2.6%	0.1%	-3.9%		
year-over-year % change	100.4%	2.9%	-38.5%	26.8%	-41.9%	-8.2%	132.7%	136.1%	95.9%	35.2%	19.5%
<b>TOTAL COMMERCIAL</b>	<b>10.652</b>	<b>8.496</b>	<b>9.678</b>	<b>10.701</b>	<b>9.557</b>	<b>9.609</b>	<b>9.593</b>	<b>9.376</b>	<b>9.398</b>	<b>79.148</b>	<b>84.523</b>
month-over-month % change	11.9%	-20.2%	13.9%	-1.0%	-10.7%	0.5%	0.5%	-2.3%	0.2%		
year-over-year % change	5.6%	-23.4%	2.7%	13.0%	-9.9%	-5.8%	14.5%	10.8%	9.5%	0.6%	6.8%
<b>TOTAL INDUSTRIAL (Manufacturing)</b>	<b>11.348</b>	<b>2.357</b>	<b>12.255</b>	<b>12.891</b>	<b>8.023</b>	<b>8.653</b>	<b>6.620</b>	<b>6.652</b>	<b>6.737</b>	<b>26.726</b>	<b>72.786</b>
month-over-month % change	9.5%	-79.2%	420.0%	-2.5%	-38.2%	7.9%	12.2%	0.5%	1.3%		
year-over-year % change	314.2%	19.2%	9.1%	506.9%	289.8%	62.7%	229.5%	253.3%	155.3%	59.1%	172.3%
Religious	0.055	0.131	0.076	0.078	0.095	0.087	0.095	0.090	0.093	0.835	0.730
month-over-month % change	-44.3%	138.8%	-41.9%	-6.0%	21.8%	-7.9%	0.9%	-4.5%	2.4%		
year-over-year % change	24.3%	-28.3%	62.6%	-16.0%	-11.0%	-5.3%	-12.0%	-20.6%	-13.6%	-28.8%	-12.6%
Hospitals/Clinics	3.361	1.107	0.771	3.096	1.843	1.746	1.790	1.804	1.718	13.908	15.795
month-over-month % change	216.9%	-67.1%	-30.3%	29.1%	-40.5%	-5.2%	11.3%	0.8%	-4.8%		
year-over-year % change	185.7%	18.2%	-57.2%	148.7%	35.3%	33.8%	26.2%	29.3%	17.1%	44.0%	13.6%
Nursing/Assisted Living	0.401	0.279	0.185	0.344	0.356	0.288	0.413	0.388	0.360	4.756	3.107
month-over-month % change	2.8%	-30.5%	-33.5%	-8.8%	3.7%	-19.2%	-2.6%	-6.1%	-7.4%		
year-over-year % change	-24.9%	-51.9%	-65.0%	-43.4%	-44.7%	-47.3%	-29.0%	-31.3%	-34.3%	-16.2%	-34.7%
Libraries/Museums	0.386	0.301	0.369	0.260	0.278	0.352	0.322	0.331	0.275	2.902	2.609
month-over-month % change	159.1%	-22.0%	22.7%	34.9%	7.2%	26.4%	1.0%	2.8%	-16.9%		
year-over-year % change	11.6%	56.6%	-64.6%	-14.9%	7.6%	-33.1%	47.6%	54.4%	-6.1%	-9.2%	-10.1%
Fire/Police/Courthouse/Prison	0.859	0.886	0.940	0.741	0.814	0.895	0.626	0.651	0.685	5.740	6.206
month-over-month % change	23.4%	3.2%	6.1%	10.8%	9.8%	10.0%	1.8%	3.9%	5.2%		
year-over-year % change	17.8%	48.8%	76.6%	3.4%	9.6%	44.6%	-13.2%	-5.4%	1.0%	1.0%	8.1%
Military	0.678	0.769	1.780	0.708	0.613	1.076	0.780	0.796	0.873	6.264	7.533
month-over-month % change	73.3%	13.4%	131.4%	-42.1%	-13.5%	75.5%	1.2%	2.0%	9.8%		
year-over-year % change	19.9%	32.3%	110.1%	-14.8%	-22.7%	61.8%	5.6%	8.3%	20.4%	-7.4%	20.3%
Schools/Colleges	7.825	6.952	4.733	7.492	7.374	6.503	5.535	5.610	5.650	49.132	57.040
month-over-month % change	6.5%	-11.2%	-31.9%	-0.2%	-1.6%	-11.8%	4.6%	1.4%	0.7%		
year-over-year % change	59.5%	15.0%	11.3%	15.4%	17.0%	28.3%	9.4%	10.4%	11.0%	-11.6%	16.1%
Misc Medical	0.809	0.539	1.998	0.803	0.666	1.115	0.680	0.680	0.766	5.599	7.320
month-over-month % change	24.2%	-33.3%	270.5%	17.2%	-17.0%	67.4%	3.7%	-0.1%	12.7%		
year-over-year % change	55.7%	-1.8%	108.1%	28.0%	11.1%	64.9%	11.1%	11.5%	18.8%	-7.8%	30.7%
<b>TOTAL INSTITUTIONAL</b>	<b>14.372</b>	<b>10.963</b>	<b>10.852</b>	<b>13.521</b>	<b>12.039</b>	<b>12.062</b>	<b>10.241</b>	<b>10.350</b>	<b>10.419</b>	<b>89.136</b>	<b>100.339</b>
month-over-month % change	33.3%	-23.7%	-1.0%	2.9%	-11.0%	0.2%	4.7%	1.1%	0.7%		
year-over-year % change	63.0%	13.5%	8.4%	23.9%	11.4%	27.0%	8.3%	10.1%	9.1%	-5.0%	12.6%
Misc Non Residential	0.858	0.544	0.759	0.672	0.663	0.720	0.579	0.588	0.600	4.802	5.678
month-over-month % change	46.0%	-36.6%	39.5%	13.4%	-1.4%	8.6%	4.5%	1.5%	2.1%		
year-over-year % change	52.8%	24.1%	23.6%	16.7%	32.3%	33.9%	10.6%	13.3%	13.1%	13.5%	18.2%
<b>TOTAL NON-RES BUILDING</b>	<b>37.230</b>	<b>22.359</b>	<b>33.544</b>	<b>37.876</b>	<b>30.281</b>	<b>31.044</b>	<b>27.033</b>	<b>26.966</b>	<b>27.154</b>	<b>199.813</b>	<b>263.326</b>
month-over-month % change	19.1%	-39.9%	50.0%	0.1%	-20.1%	2.5%	4.9%	-0.2%	0.7%		
year-over-year % change	67.7%	-3.5%	7.2%	64.0%	26.3%	21.5%	32.7%	33.1%	27.5%	3.2%	31.8%
Airports	0.986	0.625	1.231	0.880	0.739	0.947	0.510	0.510	0.573	4.254	5.934
month-over-month % change	63.1%	-36.6%	96.7%	25.3%	-16.0%	28.3%	8.0%	-0.1%	12.6%		
year-over-year % change	84.2%	-0.8%	165.9%	19.4%	6.2%	74.5%	4.9%	6.5%	24.9%	-10.8%	39.5%
Roads/Highways	7.800	7.498	8.169	8.469	7.772	7.822	6.464	6.578	6.847	54.004	68.792
month-over-month % change	-2.7%	-3.9%	8.9%	-3.1%	-8.2%	0.6%	-0.3%	1.8%	4.1%		
year-over-year % change	-3.0%	22.5%	65.2%	13.0%	11.1%	22.8%	17.6%	18.1%	21.2%	8.3%	27.4%
Bridges	1.902	3.089	2.673	2.386	2.481	2.555	1.913	2.066	2.186	14.135	22.372
month-over-month % change	-22.4%	62.4%	-13.5%	-21.3%	4.0%	3.0%	1.8%	8.0%	5.8%		
year-over-year % change	27.9%	147.4%	117.0%	52.4%	73.8%	93.2%	24.0%	33.1%	38.9%	-21.5%	58.3%
Dams/Marine	0.740	1.262	0.808	0.620	0.808	0.937	0.761	0.812	0.800	5.255	6.297
month-over-month % change	76.1%	70.5%	-36.0%	28.9%	30.2%	16.0%	2.1%	6.6%	-1.5%		
year-over-year % change	34.3%	91.3%	-15.0%	11.1%	29.9%	30.0%	26.1%	37.2%	25.4%	-10.7%	19.8%
Water/Sewage	4.310	3.825	3.721	4.323	4.136	3.952	3.214	3.300	3.375	26.396	32.994
month-over-month % change	0.9%	-11.2%	-2.7%	6.0%	-4.3%	-4.4%	2.1%	2.7%	2.3%		
year-over-year % change	23.2%	36.7%	31.8%	24.4%	29.9%	30.0%	16.3%	19.0%	22.9%	6.9%	25.0%
Misc Civil (Power, etc.)	1.474	1.936	1.002	1.814	1.933	1.471	1.680	1.678	1.654	19.950	16.381
month-over-month % change	-38.3%	31.3%	-48.2%	-12.4%	6.6%	-23.9%	-12.2%	-0.1%	-1.4%		
year-over-year % change	-65.6%	-1.3%	-22.0%	-24.1%	-27.3%	-41.4%	-16.5%	-15.8%	-18.2%		