

September 2022 (based on August 2022 Starts Stats)

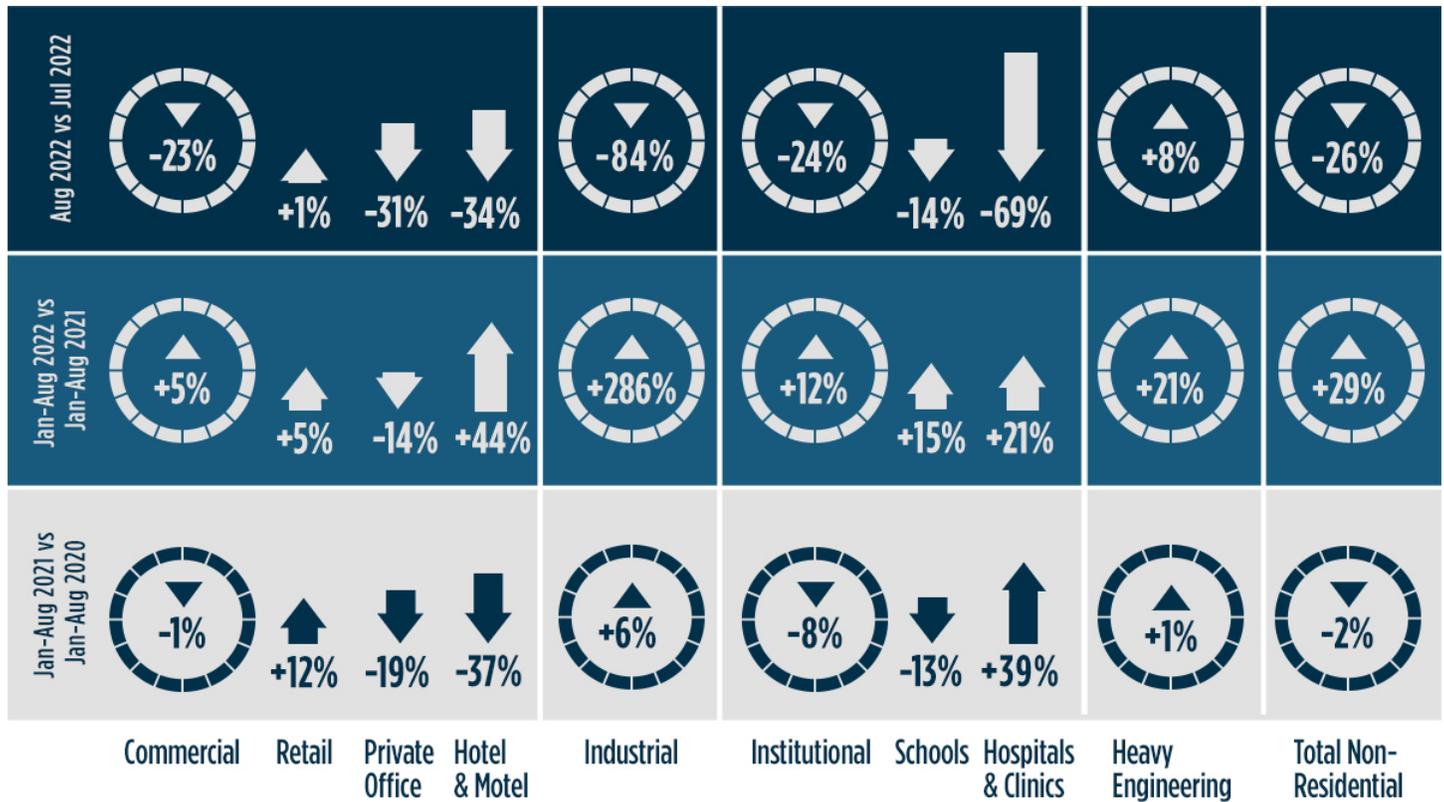
Construction Industry Snapshot



August's Nonresidential Construction Starts -26% M/M, +9% Y/Y & +29% Ytd

ConstructConnect announced today that August 2022's volume of construction starts, excluding residential work, was \$40.0 billion, a drop of -26.3% compared with July's mega-project-filled figure of \$54.3 billion.

August 2022 compared with August 2021 was +9.4%. The year-to-date performance of nonresidential starts has been +28.7% vs Jan-Aug 2021. Ytd Grand Total starts (i.e., including residential) have been +15.0%.



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August Found July to be Hard Act to Follow

ConstructConnect announced today that August 2022's volume of construction starts, excluding residential work, was \$40.0 billion (green shaded box, bottom of page 11), a decrease of -26.3% compared with July's figure of \$54.3 billion (originally reported as \$53.7 billion).

With respect to starts overall, and mega project starts in particular, August found July to be a hard act to follow. July featured five projects with estimated values in excess of \$1 billion each, totaling \$13.3 billion. August had no such work to crow about. August did, however, have quite a nice string of projects in the hundreds of millions of dollars each.

There are plenty more really big projects in the pipeline. They mainly originate in the auto and energy sectors, with semiconductor capacity expansions and air and rapid transit planned undertakings as an extra bonus. They just haven't hit the starts yet.

But it also needs saying that there's a reason to be uncertain about the outlook. The possibility of recession, and the Federal Reserve's chest thumping about interest rate hikes, to combat an inflation rate that remains stubbornly elevated (+8.3% y/y for CPI-U in August), threaten to cause delays in some big project authorizations.

August 2022's total dollar volume of nonresidential construction starts was up by +9.4% when compared with August 2021. On a year-to-date basis, total nonresidential starts have been +28.7% versus January to August of last year.

To complete the starts picture, the GRAND TOTAL (i.e., adding residential to nonresidential activity) in August 2022 was -12.6% m/m, +0.4% y/y and +15.0% ytd.

Type-of-Structure Distortions from Mega Projects

There are three major sub-categories of total starts: residential, non-residential building and heavy engineering/civil. On a year-to-date percentage-change basis in August 2022, nonresidential building starts performed best, +34.0%, with engineering also up in solid fashion, +20.7%. Residential stood on the curb, watching the parade go by, -0.8%.

On a month-to-month basis, though, residential made a good showing in August, +15.3%, and engineering also did well, +7.9%. Nonresidential building starts, however, with nothing to replace July's mega project lineup, were down steeply, -42.1%.

Y/Y Trailing 12-Month Starts Ease a Bit

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 10 on page 11 of this report.

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

	Jan-Aug 2022 (\$ billions)	% Change Jan-Aug 22 vs Jan-Aug 21	% Change Aug 22 vs Aug 21	% Change Aug 22 vs Jul 22
Hotel/Motel	7.038	43.5%	101.1%	-33.5%
Retail/Shopping	9.963	5.3%	-38.7%	1.1%
Parking Garage	1.431	8.4%	-13.7%	-34.2%
Amusement	5.011	2.6%	4.4%	-40.7%
Private Office	12.059	-13.6%	-79.7%	-30.8%
Government Office	8.916	5.5%	7.3%	7.9%
Laboratory	2.861	72.0%	187.0%	104.7%
Warehouse	17.217	-8.7%	-30.0%	-40.6%
Miscellaneous Commercial *	8.345	34.1%	2.5%	-36.0%
COMMERCIAL (big subset)	72.841	4.5%	-26.9%	-23.4%
INDUSTRIAL (Manufacturing)	59.843	286.3%	-6.5%	-83.8%
Religious	0.658	-16.2%	-29.5%	108.7%
Hospital/Clinic	14.593	20.6%	13.5%	-68.7%
Nursing/Assisted Living	2.714	-35.8%	-53.1%	-27.1%
Library/Museum	2.247	20.8%	45.6%	-27.3%
Fire/Police/Courthouse/Prison	5.302	1.8%	50.9%	0.4%
Military	5.920	9.3%	55.3%	27.5%
School/College	51.717	15.2%	12.2%	-13.8%
Miscellaneous Medical	5.231	12.8%	11.5%	-8.5%
INSTITUTIONAL	88.382	11.7%	13.2%	-23.8%
Miscellaneous Non-residential	4.800	14.6%	38.2%	-20.8%
NONRESIDENTIAL BUILDING	225.865	34.0%	-7.2%	-42.1%
Airport	4.754	25.4%	5.5%	-33.0%
Road/Highway	60.757	23.8%	23.4%	-3.1%
Bridge	19.964	54.7%	154.9%	63.5%
Dam/Marine	5.499	27.7%	88.2%	65.6%
Water/Sewage	29.246	24.1%	39.3%	-7.7%
Miscellaneous Civil (power, pipelines, etc.)	15.367	-17.7%	1.9%	35.2%
HEAVY ENGINEERING (Civil)	135.587	20.7%	38.2%	7.9%
TOTAL NONRESIDENTIAL	361.452	28.7%	9.4%	-26.3%

* Includes transportation terminals and sports arenas.

Source: ConstructConnect Research Group/Table: ConstructConnect.

Grand Total TTM starts in August 2022 on a month-to-month basis remained flat (0.0%), which was an easing from July's +1.0% and June's +0.3%.

On a year-over-year basis in August 2022, GT TTM starts were up by a good amount, +13.9%, although not by quite as much as either July's +14.8% or June's +15.4%.

A Flipping of the Res-to-Nonres Ratio 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.

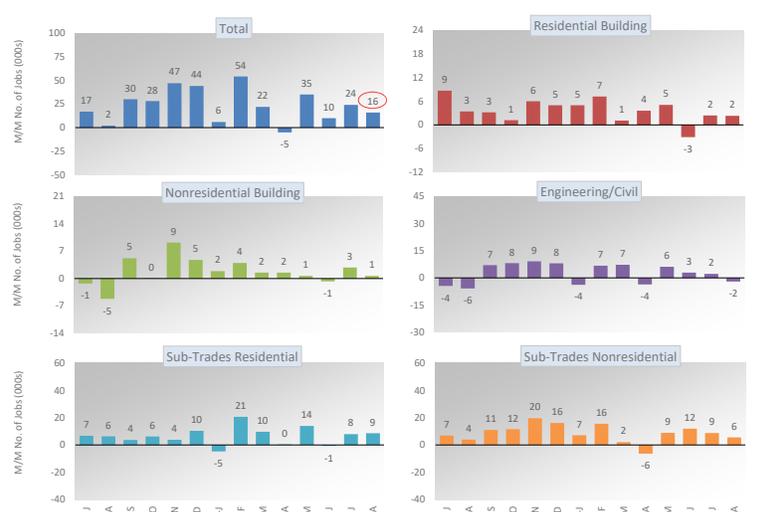
PIP numbers cover the 'universe' of construction, new plus all manner of renovation activity, with residential traditionally (i.e., over the decade preceding the pandemic) making up two-fifths (about 40%) of the total and nonresidential, three-fifths (i.e., the bigger portion, at around 60%).

Over the past several years, however, the mix has undergone a startling shift. In 2021's full year PIP results, the residential to nonresidential relationship was about half and half. Through July of this present year, 2022, there's been a flipping of the ratio to the point where residential now claims a 53.0% share of the total, leaving nonresidential with the other 47.0%.

The January-July 2022 over January-July 2021 total dollar volume of PIP construction was +10.8%, with residential robust at +20.3% and non-residential meek, at +1.7%. In the months ahead, the big disparity in gains

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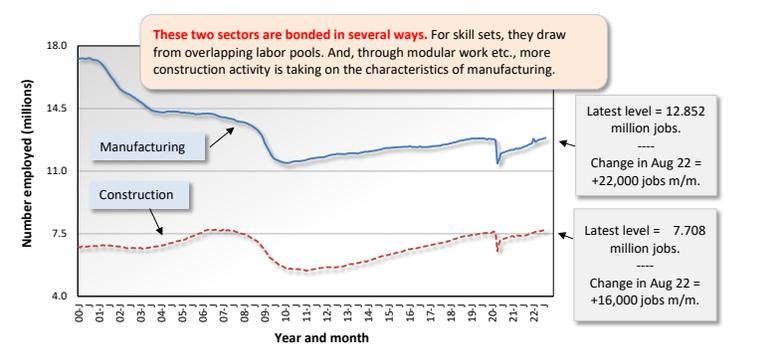
GRAPH 1: CHANGE IN LEVEL OF U.S. CONSTRUCTION EMPLOYMENT, MONTH TO MONTH (M/M) — TOTAL & BY CATEGORIES — AUGUST 2022



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

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

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

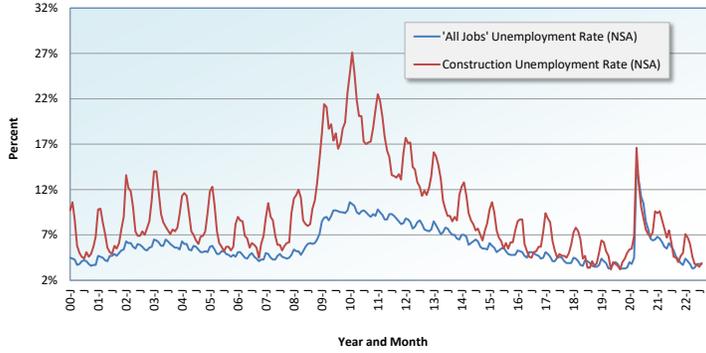


The not seasonally adjusted (NSA) unemployment rate for construction is presently 3.9%. In April 2020, at its worst, it was 16.6%. Manufacturing's current NSA jobless rate is 3.3%. April 2020's extreme was 13.2%. In early 2000, the ratio of construction to manufacturing jobs was 0.4 to 1.0. Now, it's 0.6 to 1.0.

Latest data points are for August, 2022.

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

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

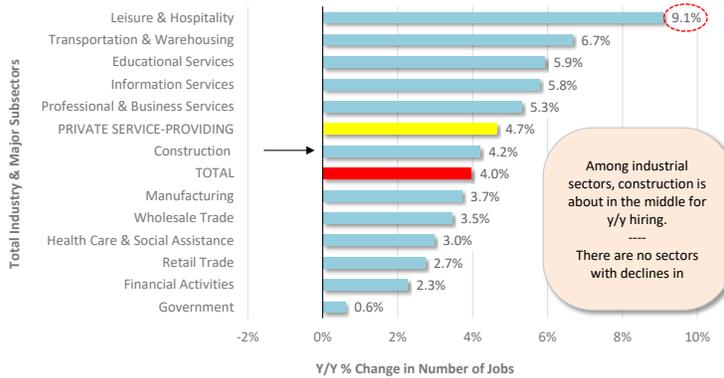


There used to be wide seasonal discrepancies between the unemployment rates for 'all jobs' and for construction, indicating that a career in the latter was more precarious. In recent times, though, the gap has largely disappeared, which should be a help in **recruiting drives** to sign up more onsite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

Current through August, 2022.

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

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

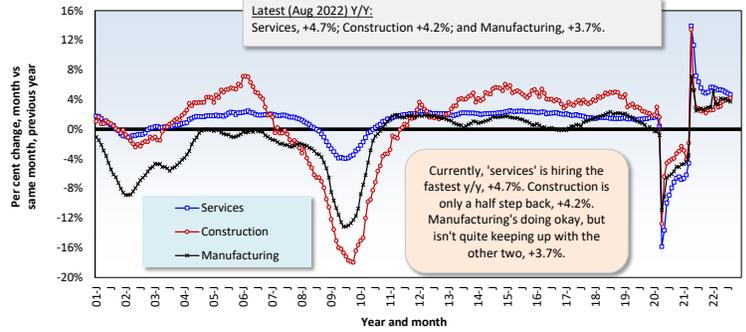


Among industrial sectors, construction is about in the middle for y/y hiring. There are no sectors with declines in

August 2022's y/y changes in employment within the pandemic's initially hardest-hit sector, 'leisure & hospitality', were: 'hotels/motels', +13.5%; 'amusements/gambling', +10.2%; and 'restaurants & bars', +7.7%.

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

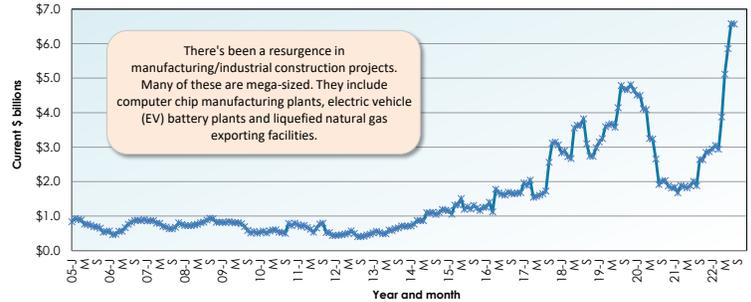
GRAPH 4: U.S. EMPLOYMENT AUGUST 2022 — % CHANGE Y/Y BASED ON SEASONALLY ADJUSTED (SA) DATA



The latest data points are for August, 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



There's been a resurgence in manufacturing/industrial construction projects. Many of these are mega-sized. They include computer chip manufacturing plants, electric vehicle (EV) battery plants and liquefied natural gas exporting facilities.

The last data point is for August 2022.

Data source: ConstructConnect. Graph: ConstructConnect.

TABLE 2: MONITORING THE U.S. EMPLOYMENT RECOVERY — AUGUST 2022

The Big Drop (revised data) April 2020 vs Feb 2020 (Feb 2020 was last month unaffected by COVID-19)	Change in Number of Jobs (Millions)		% Change		Jobs Recovery Since Apr 2020, Millions	Claw Back Ratio
	Millions	%	Jul 2022 vs Feb 2020 (Feb 2020 was last month unaffected by COVID-19)	Jul 2022 vs Jun 2022 (i.e., vs previous month)		
-21.991 (-14.4%)	Grand Total	0.240	0.315	0.2%	22.231	101.1%
-18.475 (-17.0%)	Private Services-Providing	0.779	0.263	0.7%	19.254	104.2%
-1.362 (-10.7%)	Manufacturing	0.067	0.022	0.5%	1.429	104.9%
-1.108 (-14.5%)	Construction	0.084	0.016	1.1%	1.192	107.6%
-2.245 (-14.4%)	Retail Trade	0.259	0.044	1.7%	2.505	111.6%
-0.506 (-8.7%)	Transportation & Warehouse	0.748	0.005	12.9%	1.254	247.9%
-0.280 (-3.2%)	Financial Activities	0.111	0.017	1.3%	0.391	139.6%
-2.302 (-10.8%)	Professional & Business	1.048	0.068	4.9%	3.350	145.5%
-0.261 (-9.0%)	Information Services	0.129	0.007	4.4%	0.390	149.4%
-2.839 (-11.5%)	Education and Health	-0.054	0.068	-0.2%	2.785	98.1%
-8.203 (-48.3%)	Leisure & Hospitality	-1.215	0.031	-7.2%	6.988	85.2%
-0.975 (-4.3%)	Government	-0.645	0.007	-2.8%	0.330	33.8%

The present U.S. total jobs count of 152.5 million is a match for peak employment in February 2020, before the arrival of the coronavirus. In other words, all of the huge jobs loss in the Spring of 2020 has finally been restored. As an indicator of a full return to 'normalcy', however, leisure & hospitality is perhaps the sector to watch most carefully. Its present jobs claw-back ratio of 85.2% still has a ways to go to reach 100.0%.

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

Continued from page 2

will almost certainly narrow. Residential construction activity is notoriously susceptible to shrinkage under a climbing interest rate regime. (Conversely, it receives a big boost when mortgage rates are declining.)

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 Claimed an Appropriate Share of August's 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 August's economy-wide number-of-jobs increase of +315,000, the figure for construction would be +16,000. Lo and behold, that's exactly what it was, +16,000.

The year-to-date monthly average of construction employment is now +20,000 jobs versus +5,000 in Jan-Aug 2021. In August 2022, residential (+9,000) and non-residential (+6,000) sub-contractors provided nearly all the month-to-month lift in the total construction jobs count.

Construction's not seasonally adjusted (NSA) unemployment rate in August was 3.9%, placing it about on a par with the 'all jobs' rate of 3.8%. The latest NSA U rate for construction wasn't quite as tight as the prior month's 3.5%, but it was an improvement versus August 2021's 4.6%.

August's year-over-year gain in construction employment, at +4.2%, was a little speedier than the 'all jobs' y/y pickup of +4.0%. It also beat manufacturing's +3.7% jobs gain. The sector hardest hit by the pandemic, 'leisure and hospitality', saw a y/y jobs leap in August of +9.1%.

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, +18.8%; architectural and engineering design services, +6.3%; machinery and equipment rental and leasing, +6.0%; cement and concrete product manufacturing, +2.9%; real estate, +2.8%; and building materials and supplies dealers, -0.7%, or virtually no change.

Design services work leads into later onsite activity. Therefore, the +6.3% increase for design services jobs is a positive read on the prospects for future hardhat employment. On a somewhat cautionary note, though, the latest (July 2022) Architecture Billings Index (ABI) from the American Institute of Architects (AIA), which provides a gauge of the demand for construction design services, was 51.0 in August, down from 53.2 in June. While still healthy, it's approaching the 50.0 benchmark figure that separates more sales from fewer, month to month.

Pluses and Minuses among Type of Structure Sub-categories

August 2022's total nonresidential starts' setback of -26.3% month-to-month (m/m) originated mainly in the industrial sub-category (-83.8%), although institutional and commercial were out of sorts as well, and to almost matching degrees, -23.8% and -23.4% respectively. Only heavy engineering/civil took a step forward, +7.9%.

The +9.4% advance of total nonresidential starts in August of this year versus August of last year (y/y) was thanks to the buoyancy in engineering (+38.2%) and institutional (+13.2%) that wasn't swamped by the negativity in commercial (-26.9%) and industrial (-6.5%).

As for August's year-to-date (ytd) gain of +20.7% for total nonresidential starts, it drew strength from all the major sub-categories, with industrial +286.3%; engineering, +20.7%; institutional, +11.7%; and commercial, +4.5%. To date in 2022, it's been an exceptional year for mega projects.

There are two dominant sub-categories of total nonresidential starts. When the volumes of 'roads/highways' and 'schools/

TABLE 3: CONSTRUCTION STARTS IN SOME ADDITIONAL TYPE OF STRUCTURE SUB-CATEGORIES — ConstructConnect®

	Jan-Aug 2022 (\$ billions)	% Change vs Jan-Aug 2021
Sports Stadiums/Convention Centers	\$4.352	38.7%
Transportation Terminals	\$3.994	29.5%
Courthouses	\$1.012	-40.4%
Police Stations & Fire Halls	\$2.674	36.6%
Prisons	\$1.616	4.1%
Pre-School/Elementary	\$16.331	29.7%
Junior & Senior High Schools	\$21.050	3.3%
K-12 (sum of above two categories)	\$37.381	13.4%
Special & Vocational Schools	\$1.380	0.6%
Colleges & Universities	\$12.956	22.8%
Electric Power Infrastructure	\$6.320	-18.6%

Source: ConstructConnect/Table: ConstructConnect.

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

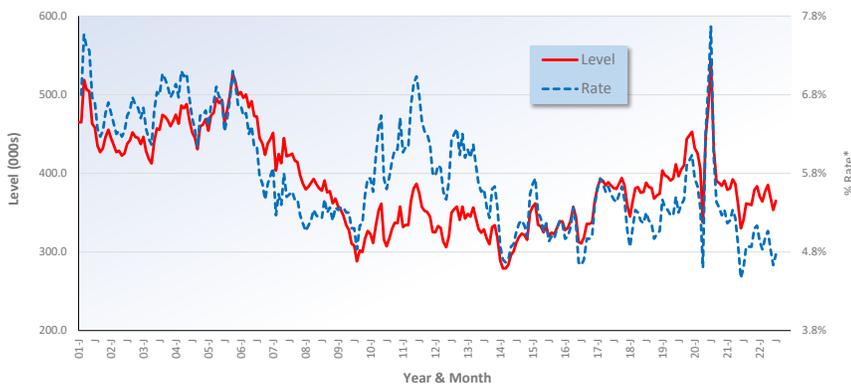


The JOLTS 'openings' figures for construction, both as a level and a rate, have eased back down a bit over the past two months. In a historical context, however, they still remain quite elevated.

*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 July 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 July's JOLTS report ticked upwards slightly but continued to be low, with 'level' a little better than 'rate'. 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 July 2022. ... JOLTS = Job Openings and Labor Turnover Survey.

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

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colleges' are added together, they account for 31.1% of August's total nonresidential starts ytd (i.e., shares of 16.8% and 14.3% respectively).

The three percentage-change metrics for street starts in August 2022 were -3.1% m/m, but +23.4% y/y and +23.8% ytd. Educational facility starts in the latest month were -13.8% m/m, but +12.2% y/y and +15.2% ytd. The pickup in school starts is being driven primarily by 'pre-school and elementary' structures, +29.7% ytd, and 'colleges and universities', +22.8% ytd.

Important beyond roads within the engineering sub-category are 'water/sewage' and 'bridge' starts. The groundbreaking performances in the former in August were -7.7% m/m, but +39.3% y/y and +24.1% ytd. For the latter, the results were uniformly outstanding: +63.5% m/m; +154.9% y/y; and +54.7% 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 August 2022 were -56.1% m/m and -5.7% y/y, but +7.5% ytd. 'Hospital/clinic' starts on their own were +20.6% ytd, although 'nursing/assisted living' starts were -35.8% ytd.

Among commercial starts in August, impressive year-to-date increases have been recorded by 'laboratories' (+72.0%), 'hotels/motels' (+43.5%), and 'miscellaneous' (+34.1%). The latter includes 'sports stadiums/convention centers' (+38.7% ytd) and 'transportation terminals' (+29.5% ytd). 'Government office buildings' (+5.5% ytd), 'retail/shopping' (+5.3% ytd), and 'amusement' (+2.6% ytd) are making minor headway. 'Warehouses' (-8.7% ytd) and 'private office buildings' (-13.6%) are struggling at the moment.

None of the foregoing, however, holds a candle to what's been happening in the industrial sub-category. Manufacturing starts in August have been -83.8% m/m and -6.5% y/y; but, due to the greenlighting of many really large projects earlier in 2022, they are an eye-popping +286.3% ytd. (See Graph 4).

Three Exceptions to Mostly Inclining Trend Graphs

Page 9 of this Industry Snapshot sets out the history, January 2005 to the present, of 12-month moving ConstructConnect starts averages for a dozen construction types-of-structure. The moving average (placed in the latest month) approach is designed to capture trends.

The slopes of many of the graphs are now inclining fairly emphatically. Unfortunately, there are three exceptions. 'Private office buildings', 'retail', and 'miscellaneous civil' are having trouble breaking free from pandemic-imposed lethargy.

Little Cheer in the JOLTS Story

For ease of viewing, Graphs 5 and 6 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'.

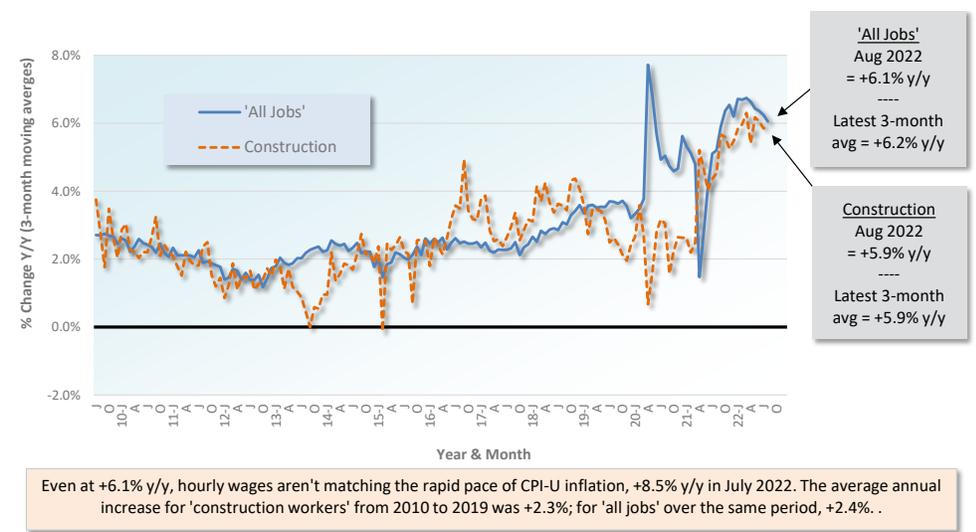
The JOLTS story remains the same as it has been for a while now. There's an excess of openings, but filling those positions is meeting with only limited success. Moreover, this is a problem not limited to construction.

An aging population, with accompanying retirements, is depleting the labor pool. Plus everyone involved in hiring should be aware that the competition for workers is about to become exponentially stiffer, given that employment opportunities are widening in so many new ways (e.g., jobs in AI, the metaverse, blockchain development, climate-change disaster mitigation, etc.)

Construction Earnings Fare Fine vs 'All Jobs'

Tables B-3 and B-8 of the monthly Employment Situation report, from the BLS, record average hourly and average weekly wages for industry sec-

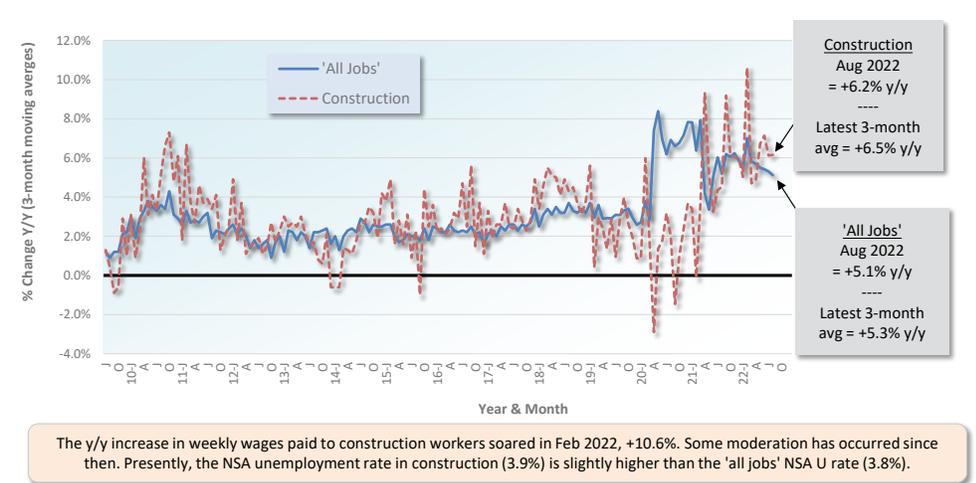
GRAPH 9: AVERAGE HOURLY EARNINGS Y/Y — 'ALL JOBS' & CONSTRUCTION



From 'Production Workers and Non-supervisory Personnel' Table (B8). The latest data points are for August, 2022.

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

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



From 'Production Workers and Non-supervisory Personnel' Table (B8). The latest data points are for August, 2022.

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

tors. 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 August 2022's Table B-3 (including bosses), year-over-year all-jobs earnings were +5.2% hourly and +4.6% weekly. Construction workers, as a subset of 'all jobs', did marginally better with y/y hourly and weekly increases of +5.3% in both instances. From Table B-8 for production and non-supervisory workers (i.e., excluding bosses), the all-jobs wage advances were +6.1% hourly and +5.1% weekly. Construction workers didn't quite keep up hourly, +5.9%, but they soared ahead weekly, +6.2%.

Moderation in Material Input Costs

August 2022's y/y results for three building related BLS Producer Price Index (PPI) series were: (A) 'construction materials special index', +9.0% (a little under July's +10.5%); (B)

'inputs to new construction index, excluding capital investment, labor, and imports', +12.1% (a smidge over the previous month's +11.8%); and (C) 'final demand construction', designed to capture bid prices, +22.9% (barely moving away from the prior month's figure of +23.0%).

(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 August 2022 published by the BLS, asphalt is +60.6% y/y; diesel fuel is +53.8%; gypsum, +18.4%; softwood lumber, +14.8%; hot rolled steel bars, plates, and structural shapes, +12.7%; ready-mix concrete, +11.0%; cement, +9.8%; aluminum mill shapes, -3.9%; and copper wire and cable, -5.6%. There's also an 'inputs to highways and streets' PPI index and it's +13.1% y/y.

The value of construction starts each month

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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.

August 2022's 'Grand Total' Starts +15.0% Ytd

From Table 7 on page 7 (also Table 10 on page 11) of this report, ConstructConnect's total residential starts in August 2022 were +15.3% m/m, -9.3% y/y, and -0.8% ytd. Multi-family starts in August were +46.0% m/m, -2.2% y/y and +8.5% ytd. Single-family starts were +2.5% m/m, -13.0% y/y and -4.5% ytd.

Including home building with all nonresidential categories, **Grand Total starts in August 2022 were -12.6% m/m, +0.4% y/y and +15.0% 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.

Improving Supply Chain Indicators

Broad measures of supply chain performance in recent months have improved considerably. The most well-known of these may be the Manufacturing Supplier Deliveries Index produced by the Institute for Supply Management (ISM). Readings below '50' suggest faster or quickening delivery performance while readings above '50' indicate lengthening delivery times. In the nearly 10-year period after the Great Recession and prior to COVID, the Index averaged 54.4.

As a result of supply chain and operations disruptions stemming from COVID, index readings for much of 2020 and early 2021 reached historic highs. However, since the fourth quarter of 2021, readings have frequently signaled an improvement in supply chain performance. The latest available reading, representing August's performance, measured 55.1, landing well within historic norms.

Furthermore, inventory-to-sales readings, which serve as a useful measure of inventory levels relative to customer demand, have also returned to pre-pandemic norms. However, the outlook for supply chain experts is not without some hazards. In the immediate future a lack of transportation labor poses a significant threat to the efficient and timely delivery of goods. In both the railroad and trucking sectors, the number of employed drivers, conductors and yardmasters has fallen significantly since 2020.

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

	Jan-Aug 2022	% Change vs Jan-Jul 2021
1 Texas	\$57,147,848,981	68.1%
2 California	\$26,744,962,910	7.8%
3 New York	\$20,979,807,976	37.1%
4 Florida	\$17,874,101,838	9.6%
5 Louisiana	\$15,747,821,652	321.8%
6 Michigan	\$15,424,168,330	123.5%
7 North Carolina	\$13,858,065,676	37.9%
8 Pennsylvania	\$11,960,129,963	23.0%
9 Illinois	\$11,648,773,266	28.9%
10 Kentucky	\$9,942,410,291	256.3%
11 Indiana	\$9,635,007,024	68.4%
12 Georgia	\$9,181,385,948	8.7%
13 Ohio	\$8,644,455,671	-19.9%
14 Virginia	\$7,767,296,848	25.9%
15 Washington	\$7,391,025,836	27.0%
16 Massachusetts	\$7,203,146,814	-20.6%
17 Wisconsin	\$7,130,340,577	20.4%
18 New Jersey	\$6,273,096,679	24.5%
19 Missouri	\$6,135,357,198	-9.2%
20 Minnesota	\$6,053,607,248	-21.6%

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

TABLE 5: 2022 YTD RANKING OF TOP 20 STATES BY \$ VOLUME OF NONRESIDENTIAL BUILDING CONSTRUCTION STARTS — ConstructConnect®

	Jan-Aug 2022	% Change vs Jan-Jul 2021
1 Texas	\$40,468,799,038	96.7%
2 California	\$15,939,673,016	11.0%
3 Louisiana	\$12,998,062,678	487.7%
4 New York	\$12,771,042,947	31.3%
5 Florida	\$11,354,775,272	10.2%
6 Michigan	\$11,159,562,319	250.2%
7 North Carolina	\$9,836,200,815	29.9%
8 Kentucky	\$8,406,477,091	439.8%
9 Pennsylvania	\$7,284,158,593	8.3%
10 Georgia	\$6,474,900,910	15.5%
11 Indiana	\$5,722,492,343	72.3%
12 Illinois	\$5,671,554,853	32.0%
13 Massachusetts	\$5,211,654,333	21.2%
14 Virginia	\$4,638,935,282	3.0%
15 Ohio	\$4,514,686,278	-33.4%
16 Wisconsin	\$4,217,085,856	53.5%
17 Washington	\$4,129,327,034	12.2%
18 Tennessee	\$3,558,294,060	-37.5%
19 Maryland	\$3,494,095,327	9.0%
20 Arizona	\$3,470,222,144	-33.6%

TABLE 6: 2022 YTD RANKING OF TOP 20 STATES BY \$ VOLUME OF HEAVY ENGINEERING/CIVIL CONSTRUCTION STARTS — ConstructConnect®

	Jan-Aug 2022	% Change vs Jan-Jul 2021
1 Texas	\$16,679,049,943	24.3%
2 California	\$10,805,289,894	3.4%
3 New York	\$8,208,765,029	47.4%
4 Florida	\$6,519,326,566	8.4%
5 Illinois	\$5,977,218,413	26.1%
6 Pennsylvania	\$4,675,971,370	56.1%
7 Michigan	\$4,264,606,011	14.8%
8 Ohio	\$4,129,769,393	3.0%
9 North Carolina	\$4,021,864,861	62.1%
10 Minnesota	\$3,998,475,306	-26.5%
11 Indiana	\$3,912,514,681	62.9%
12 New Jersey	\$3,817,339,601	81.6%
13 Washington	\$3,261,698,802	52.5%
14 Virginia	\$3,128,361,566	88.0%
15 Wisconsin	\$2,913,254,721	-8.2%
16 Missouri	\$2,849,862,898	38.6%
17 Louisiana	\$2,749,758,974	80.8%
18 Georgia	\$2,706,485,038	-4.8%
19 Colorado	\$2,475,750,102	17.9%
20 Iowa	\$2,336,138,639	25.0%

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

	Jan-Aug 2022 (\$ billions)	% Change Jan-Aug 22 vs Jan-Aug 21	% Change Aug 22 vs Aug 21	% Change Aug 22 vs Jul 22
Summary				
CIVIL	135.587	20.7%	38.2%	7.9%
NONRESIDENTIAL BUILDING	225.865	34.0%	-7.2%	-42.1%
RESIDENTIAL	242.134	-0.8%	-9.3%	15.3%
GRAND TOTAL	603.586	15.0%	0.4%	-12.6%
Verticals				
Airport	4.754	25.4%	5.5%	-33.0%
All Other Civil	9.047	-17.0%	-31.8%	-7.2%
Bridges	19.964	54.7%	154.9%	63.5%
Dams / Canals / Marine Work	5.499	27.7%	88.2%	65.6%
Power Infrastructure	6.320	-18.6%	197.3%	244.8%
Roads	60.757	23.8%	23.4%	-3.1%
Water and Sewage Treatment	29.246	24.1%	39.3%	-7.7%
CIVIL	135.587	20.7%	38.2%	7.9%
Offices (private)	12.059	-13.6%	-79.7%	-30.8%
Parking Garages	1.431	8.4%	-13.7%	-34.2%
Transportation Terminals	3.994	29.5%	-55.4%	-84.2%
Commercial (small subset)	17.483	-4.7%	-75.4%	-49.6%
Amusement	5.011	2.6%	4.4%	-40.7%
Libraries / Museums	2.247	20.8%	45.6%	-27.3%
Religious	0.658	-16.2%	-29.5%	108.7%
Sports Arenas / Convention Centers	4.352	38.7%	35.7%	50.5%
Community	12.268	15.0%	14.6%	-15.7%
College / University	12.956	22.8%	-8.2%	0.9%
Elementary / Pre School	16.331	29.7%	89.0%	6.1%
Jr / Sr High School	21.050	3.3%	-8.5%	-30.9%
Special / Vocational	1.380	0.6%	2.4%	-31.3%
Educational	51.717	15.2%	12.2%	-13.8%
Courthouses	1.012	-40.4%	6.5%	-34.7%
Fire and Police Stations	2.674	36.6%	86.6%	-18.3%
Government Offices	8.916	5.5%	7.3%	7.9%
Prisons	1.616	4.1%	34.6%	90.7%
Government	14.217	4.1%	20.5%	4.9%
Industrial Labs / Labs / School Labs	2.861	72.0%	187.0%	104.7%
Manufacturing	59.843	286.3%	-6.5%	-83.8%
Warehouses	17.217	-8.7%	-30.0%	-40.6%
Industrial	79.921	121.9%	-9.6%	-70.9%
Hospitals / Clinics	14.593	20.6%	13.5%	-68.7%
Medical Misc.	5.231	12.8%	11.5%	-8.5%
Nursing Homes	2.714	-35.8%	-53.1%	-27.1%
Medical	22.538	7.5%	-5.7%	-56.1%
Military	5.920	9.3%	55.3%	27.5%
Hotels	7.038	43.5%	101.1%	-33.5%
Retail Misc.	4.800	14.6%	38.2%	-20.8%
Shopping	9.963	5.3%	-38.7%	1.1%
Retail	21.800	17.5%	3.2%	-20.5%
NONRESIDENTIAL BUILDING	225.865	34.0%	-7.2%	-42.1%
Multi-Family	75.299	8.5%	-2.2%	46.0%
Single-Family	166.835	-4.5%	-13.0%	2.5%
RESIDENTIAL	242.134	-0.8%	-9.3%	15.3%
NONRESIDENTIAL	361.452	28.7%	9.4%	-26.3%
GRAND TOTAL	603.586	15.0%	0.4%	-12.6%

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 8: ConstructConnect’s TOP 10 PROJECT STARTS IN AUGUST 2022

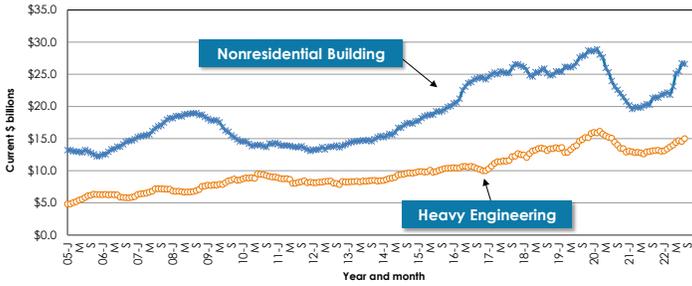
LOCATION (EAST TO WEST)	TYPE OF CONSTRUCTION	DESCRIPTION	SQUARE FEET 000S*	DOLLARS 000,000S
New York New York	Civil/Engineering	RFQ D/B - Van Wyk Expressway (VWE) Capacity and Access Improvements to JFK Airport Project - Contract 3 (8 structures) Van Wyck Expy New York State Department of Transportation (NYSDOT)	*	\$804
North Carolina Statesville	Industrial	Sherwin-Williams Distribution Center (3 structures; 2 stories) 188 Side Track Dr Sherwin-Williams	798	\$324
Florida Miami	Institutional	Centennial Village - University of Miami (2 structures; 9 stories; 3800) S Dixie Hwy University of Miami - Facilities Design & Construction	522	\$335
Indiana Harrison Township	Civil/Engineering	Mammoth Solar 1 (1 structure) E 900 S & N 300 W AEP	*	\$475
North Dakota Casselton	Industrial	Soybean Processing Plant (1 structure) Cass County Minnesota Soybean Processor	2,000	\$400
Kansas Cherryvale	Industrial	Bartlett Grain Co Soybean Crushing Plant (1 structure) Montgomery County Savage Service Corporation	2,462	\$375
Texas Austin	Commercial	Waller Creek Tower (5 structures; 74 stories; 603 units) 98 Red River St Lincoln Property Company (LPC Southwest) - Austin Office	2,700	\$500
San Antonio	Civil/Engineering	IH 10 - Construct Direct Connectors (2 structures) I-10 Texas Department of Transportation (TxDOT) - Austin	*	\$418
Washington Woodinville	Residential	Harvest (Woodinville Wine Village) (7 structures; 427 units) WA-202 & Woodinville - Redmond Rd NE Windward Real Estate Services, Inc.	500	\$600
Hawaii Honolulu	Residential	The Park on Keeaumoku (6 structures; 42 stories; 972 units) Ke'eaumoku St Nan Inc.	1,100	\$600
TOTALS:			10,082	\$4,831

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

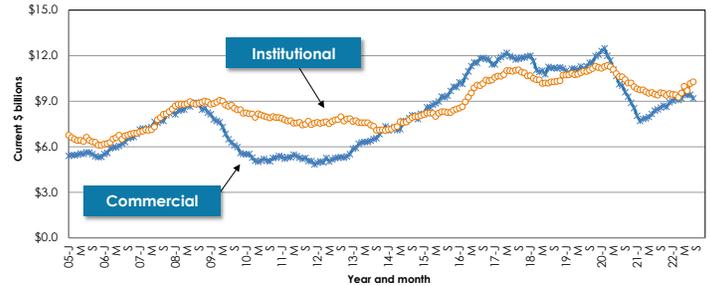
Source: ConstructConnect/Table: ConstructConnect.

Trend graphs for 12 key categories

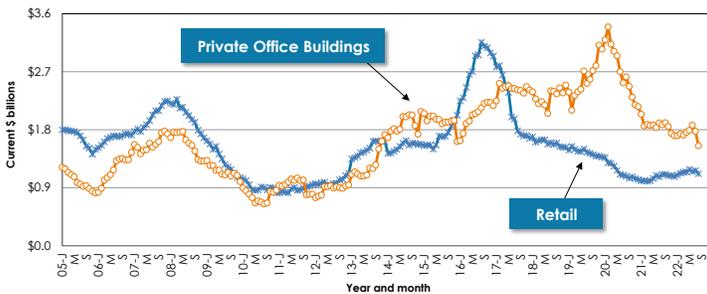
GRAPH 11: U.S. NONRESIDENTIAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



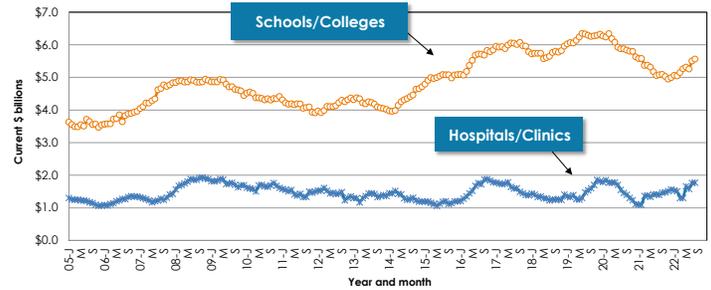
GRAPH 12: U.S. COMMERCIAL AND INSTITUTIONAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



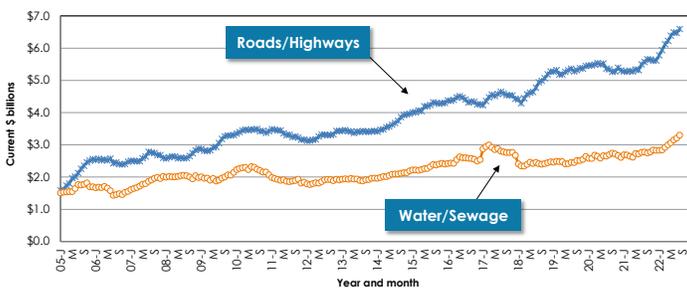
GRAPH 13: U.S. RETAIL AND PRIVATE OFFICE BUILDING CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



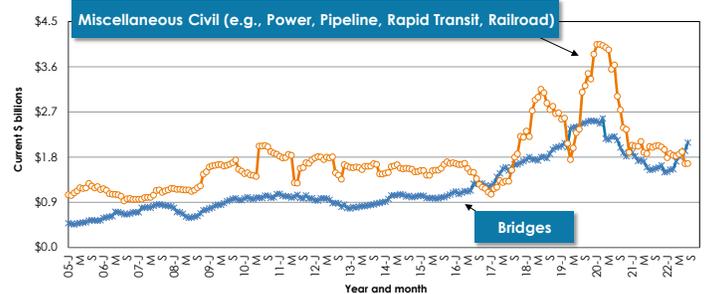
GRAPH 14: U.S. HOSPITAL/CLINIC AND SCHOOL/COLLEGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



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 July, 2022.

Source: ConstructConnect/Charts: ConstructConnect.

Regional starts table

TABLE 9: U.S. YEAR-TO-DATE REGIONAL STARTS, NONRESIDENTIAL CONSTRUCTION* — ConstructConnect®

	Jan-Aug 2021	Jan-Aug 2022	% Change
Connecticut	\$2,005,866,353	\$2,029,454,061	1.2%
Maine	\$2,544,928,962	\$3,019,869,387	18.7%
Massachusetts	\$9,070,372,083	\$7,203,146,814	-20.6%
New Hampshire	\$1,105,491,839	\$647,490,825	-41.4%
Rhode Island	\$693,701,488	\$855,637,823	23.3%
Vermont	\$310,076,793	\$420,719,334	35.7%
Total New England	\$15,730,437,518	\$14,176,318,244	-9.9%
New Jersey	\$5,039,889,513	\$6,273,096,679	24.5%
New York	\$15,298,076,996	\$20,979,807,976	37.1%
Pennsylvania	\$9,722,662,678	\$11,960,129,963	23.0%
Total Middle Atlantic	\$30,060,629,187	\$39,213,034,618	30.4%
TOTAL NORTHEAST	\$45,791,066,705	\$53,389,352,862	16.6%
Illinois	\$9,038,079,334	\$11,648,773,266	28.9%
Indiana	\$5,722,182,476	\$9,635,007,024	68.4%
Michigan	\$6,901,962,693	\$15,424,168,330	123.5%
Ohio	\$10,790,846,131	\$8,644,455,671	-19.9%
Wisconsin	\$5,921,327,399	\$7,130,340,577	20.4%
Total East North Central	\$38,374,398,033	\$52,482,744,868	36.8%
Iowa	\$4,080,997,121	\$3,932,169,853	-3.6%
Kansas	\$2,265,457,716	\$3,459,246,455	52.7%
Minnesota	\$7,721,660,064	\$6,053,607,248	-21.6%
Missouri	\$6,755,065,369	\$6,135,357,198	-9.2%
Nebraska	\$2,895,265,168	\$4,097,230,723	41.5%
North Dakota	\$1,720,580,444	\$3,366,869,825	95.7%
South Dakota	\$1,315,673,337	\$2,606,680,971	98.1%
Total West North Central	\$26,754,699,219	\$29,651,162,273	10.8%
TOTAL MIDWEST	\$65,129,097,252	\$82,133,907,141	26.1%
Delaware	\$852,119,020	\$775,284,052	-9.0%
District of Columbia	\$879,633,706	\$1,441,169,950	63.8%
Florida	\$16,313,934,691	\$17,874,101,838	9.6%
Georgia	\$8,447,674,195	\$9,181,385,948	8.7%
Maryland	\$3,985,161,924	\$5,023,099,003	26.0%
North Carolina	\$10,052,677,512	\$13,858,065,676	37.9%
South Carolina	\$3,694,084,562	\$5,203,279,639	40.9%
Virginia	\$6,168,356,500	\$7,767,296,848	25.9%
West Virginia	\$784,197,959	\$1,350,072,795	72.2%
Total South Atlantic	\$51,177,840,069	\$62,473,755,749	22.1%
Alabama	\$4,960,160,156	\$4,679,785,908	-5.7%
Kentucky	\$2,790,617,679	\$9,942,410,291	256.3%
Mississippi	\$1,906,275,385	\$2,041,504,507	7.1%
Tennessee	\$7,098,068,523	\$5,529,876,314	-22.1%
Total East South Central	\$16,755,121,743	\$22,193,577,020	32.5%
Arkansas	\$1,917,531,393	\$2,082,365,621	8.6%
Louisiana	\$3,733,152,823	\$15,747,821,652	321.8%
Oklahoma	\$2,996,764,398	\$3,384,410,997	12.9%
Texas	\$33,994,229,803	\$57,147,848,981	68.1%
Total West South Central	\$42,641,678,417	\$78,362,447,251	83.8%
TOTAL SOUTH	\$110,574,640,229	\$163,029,780,020	47.4%
Arizona	\$6,142,160,921	\$4,685,380,893	-23.7%
Colorado	\$5,595,428,947	\$4,587,767,374	-18.0%
Idaho	\$878,177,178	\$1,675,016,626	90.7%
Montana	\$790,053,137	\$1,358,993,462	72.0%
Nevada	\$3,219,825,569	\$3,458,072,656	7.4%
New Mexico	\$1,378,469,660	\$1,924,595,203	39.6%
Utah	\$3,751,438,165	\$3,770,260,986	0.5%
Wyoming	\$734,567,877	\$994,435,007	35.4%
Total Mountain	\$22,490,121,454	\$22,454,522,207	-0.2%
Alaska	\$842,315,401	\$1,142,585,724	35.6%
California	\$24,804,964,331	\$26,744,962,910	7.8%
Hawaii	\$1,325,858,510	\$1,120,636,943	-15.5%
Oregon	\$4,046,125,826	\$4,045,402,493	0.0%
Washington	\$5,820,366,041	\$7,391,025,836	27.0%
Total Pacific	\$36,839,630,109	\$40,444,613,906	9.8%
TOTAL WEST	\$59,329,751,563	\$62,899,136,113	6.0%
TOTAL U.S.	\$280,824,555,749	\$361,452,176,136	28.7%

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

Source: ConstructConnect/Table: ConstructConnect.

Detailed national table

TABLE 10: VALUE OF U.S. NATIONAL CONSTRUCTION STARTS — AUGUST 2022 — ConstructConnect®
BILLIONS OF CURRENT \$, NOT SEASONALLY ADJUSTED (NSA)

	Latest month actuals			Moving averages (placed in end month)					Year to Date		
	Jun 22	Jul 22	Aug 22	Jun 22	3-month Jul 22	Aug 22	Jun 22	12-months Jul 22	Aug 22	Jan-Aug 2021	Jan-Aug 2022
Single Family	21,763	18,929	19,411	22,692	20,779	20,034	21,454	21,054	20,813	174,783	166,835
month-over-month % change	0.5%	-13.0%	2.5%	-1.2%	-8.4%	-3.6%	-1.5%	-1.9%	-1.1%		
year-over-year % change	-15.0%	-20.2%	-13.0%	-3.9%	-13.8%	-16.1%	2.0%	-1.1%	-2.9%	27.7%	-4.5%
Apartment	7,635	7,818	11,417	9,378	8,079	8,957	9,169	9,144	9,123	69,390	75,299
month-over-month % change	-13.1%	2.4%	46.0%	-7.5%	-13.9%	10.9%	-1.1%	-0.3%	-0.2%		
year-over-year % change	-13.8%	-3.7%	-2.2%	2.3%	-3.0%	-6.2%	20.7%	19.1%	12.6%	27.8%	8.5%
TOTAL RESIDENTIAL	29,399	26,746	30,827	32,071	28,858	28,991	30,623	30,198	29,935	244,174	242,134
month-over-month % change	-3.4%	-9.0%	15.3%	-3.1%	-10.0%	0.5%	-1.4%	-1.4%	-0.9%		
year-over-year % change	-14.7%	-16.0%	-9.3%	-2.2%	-11.0%	-13.3%	6.9%	4.2%	1.3%	27.7%	-0.8%
Hotel/Motel	0,831	1,642	1,092	0,706	1,058	1,188	0,659	0,735	0,781	4,906	7,038
month-over-month % change	18.7%	97.5%	-33.5%	5.2%	49.8%	12.3%	-0.6%	11.5%	6.2%		
year-over-year % change	-5.3%	123.4%	101.1%	-4.9%	35.9%	65.3%	7.0%	20.0%	28.3%	-37.1%	43.5%
Retail/Shopping	1,168	0,993	1,004	1,379	1,307	1,055	1,148	1,167	1,114	9,465	9,963
month-over-month % change	-33.6%	-15.0%	1.1%	-3.8%	-5.2%	-19.2%	-2.9%	1.6%	-4.5%		
year-over-year % change	-26.4%	29.2%	-38.7%	2.9%	7.7%	-20.7%	5.4%	9.4%	0.6%	12.0%	5.3%
Parking Garages	0,194	0,213	0,140	0,217	0,169	0,183	0,155	0,158	0,157	1,320	1,431
month-over-month % change	94.1%	9.9%	-34.2%	28.2%	-21.9%	7.9%	1.4%	2.0%	-1.2%		
year-over-year % change	15.1%	20.7%	-13.7%	85.3%	7.3%	7.8%	7.9%	5.3%	5.3%	3.5%	8.4%
Amusement	0,482	1,070	0,635	0,498	0,686	0,729	0,564	0,554	0,557	4,886	5,011
month-over-month % change	-5.0%	121.9%	-40.7%	-5.2%	37.7%	6.2%	-3.1%	-1.6%	0.4%		
year-over-year % change	-31.0%	-9.4%	4.4%	-7.1%	-14.7%	-12.1%	14.3%	-1.0%	-4.1%	15.7%	2.6%
Office	2,230	0,991	0,686	2,005	1,572	1,303	1,869	1,772	1,548	13,950	12,059
month-over-month % change	49.3%	-56.6%	-30.8%	16.2%	-21.6%	-17.1%	4.5%	-5.2%	-12.7%		
year-over-year % change	76.2%	-53.9%	-79.7%	43.9%	3.2%	-42.5%	1.9%	-6.8%	-17.5%	-19.5%	-13.6%
Governmental Offices	1,369	1,362	1,469	1,247	1,319	1,400	1,052	1,001	1,009	8,451	8,916
month-over-month % change	11.6%	-0.6%	7.9%	9.4%	5.8%	6.1%	5.0%	-4.9%	0.8%		
year-over-year % change	77.3%	-31.0%	7.3%	32.9%	6.8%	2.0%	17.1%	0.9%	-2.2%	25.6%	5.5%
Laboratories	0,535	0,327	0,669	0,451	0,365	0,510	0,272	0,267	0,303	1,664	2,861
month-over-month % change	128.8%	-38.9%	104.7%	20.7%	-19.1%	39.7%	11.7%	-1.7%	13.6%		
year-over-year % change	176.6%	-14.7%	187.0%	157.8%	53.7%	89.0%	45.2%	29.0%	40.2%	17.2%	72.0%
Warehouse	1,816	2,998	1,782	2,453	2,508	2,199	2,205	2,266	2,202	18,865	17,217
month-over-month % change	-33.0%	65.1%	-40.6%	0.3%	2.3%	-12.4%	-2.3%	2.8%	-2.8%		
year-over-year % change	-25.3%	32.4%	-30.0%	-10.3%	7.3%	-8.9%	0.5%	1.6%	-1.9%	4.0%	-8.7%
Misc Commercial	0,607	0,992	0,635	1,514	1,511	0,744	1,465	1,510	1,511	6,222	8,345
month-over-month % change	-79.3%	63.4%	-36.0%	1.1%	-0.2%	-50.7%	-10.3%	3.1%	0.1%		
year-over-year % change	-76.9%	118.7%	2.5%	23.2%	28.0%	-39.7%	110.5%	130.7%	134.0%	16.3%	34.1%
TOTAL COMMERCIAL	9,233	10,588	8,112	10,471	10,496	9,311	9,389	9,430	9,182	69,729	72,841
month-over-month % change	-20.9%	14.7%	-23.4%	4.9%	0.2%	-11.3%	-1.2%	0.4%	-2.6%		
year-over-year % change	-13.1%	5.0%	-26.9%	13.7%	10.8%	-12.2%	15.2%	12.6%	8.5%	-1.4%	4.5%
TOTAL INDUSTRIAL (Manufacturing)	10,306	11,448	1,849	13,295	12,962	7,868	5,852	6,578	6,567	15,490	59,843
month-over-month % change	-39.8%	11.1%	-83.8%	25.9%	-2.5%	-39.3%	14.4%	12.4%	-0.2%		
year-over-year % change	607.3%	317.9%	-6.5%	705.5%	506.1%	282.3%	212.0%	227.3%	248.8%	5.8%	286.3%
Religious	0,099	0,062	0,129	0,083	0,080	0,096	0,094	0,095	0,091	0,785	0,658
month-over-month % change	24.5%	-38.0%	108.7%	1.3%	-2.9%	20.3%	0.6%	1.6%	-4.7%		
year-over-year % change	7.2%	39.8%	-29.5%	-24.9%	-13.3%	-9.2%	-15.9%	-11.6%	-20.3%	-24.7%	-16.2%
Hospitals/Clinics	1,018	3,393	1,063	2,328	3,080	1,824	1,580	1,764	1,775	12,104	14,593
month-over-month % change	-78.9%	233.3%	-68.7%	-4.7%	32.3%	-40.8%	-4.8%	11.7%	0.6%		
year-over-year % change	-48.4%	188.4%	-13.5%	92.4%	147.3%	33.9%	11.6%	24.4%	27.2%	38.9%	20.6%
Nursing/Assisted Living	0,385	0,372	0,272	0,371	0,330	0,343	0,405	0,392	0,366	4,227	2,714
month-over-month % change	65.1%	-3.2%	-27.1%	31.3%	-11.1%	3.9%	-8.2%	-3.3%	-6.5%		
year-over-year % change	-53.2%	-30.2%	-53.1%	-37.4%	-45.6%	-46.8%	-29.0%	-32.7%	-35.2%	-14.3%	-35.8%
Libraries/Museums	0,149	0,385	0,280	0,202	0,260	0,271	0,321	0,324	0,332	1,861	2,247
month-over-month % change	-39.5%	158.0%	-27.3%	-33.5%	28.8%	4.3%	-2.3%	1.0%	2.3%		
year-over-year % change	-37.4%	114.4%	45.6%	-13.7%	-14.7%	4.9%	54.2%	48.8%	54.9%	-39.9%	20.8%
Fire/Police/Courthouse/Prison	0,687	0,896	0,899	0,670	0,754	0,830	0,614	0,628	0,654	5,208	5,302
month-over-month % change	4.0%	28.5%	0.4%	11.2%	12.6%	10.1%	-2.7%	2.3%	4.0%		
year-over-year % change	-22.9%	22.8%	50.9%	-0.7%	5.2%	11.8%	-13.5%	-12.9%	-4.9%	3.4%	1.8%
Military	0,392	0,708	0,903	1,225	0,718	0,667	0,771	0,783	0,810	5,417	5,920
month-over-month % change	-62.9%	80.6%	27.5%	1.3%	-41.4%	-7.1%	-8.3%	1.5%	3.4%		
year-over-year % change	-68.2%	25.1%	55.3%	69.0%	-13.6%	-15.8%	4.1%	6.0%	10.2%	-6.8%	9.3%
Schools/Colleges	7,236	7,860	6,779	7,398	7,449	7,292	5,255	5,502	5,563	44,880	51,717
month-over-month % change	-0.2%	8.6%	-13.8%	5.8%	0.7%	-2.1%	-1.1%	4.7%	1.1%		
year-over-year % change	-9.0%	60.3%	12.2%	6.2%	14.8%	15.7%	1.5%	6.7%	9.5%	-12.8%	15.2%
Misc Medical	0,638	0,669	0,612	0,678	0,752	0,640	0,654	0,667	0,672	4,639	5,231
month-over-month % change	-32.9%	4.9%	-8.5%	-2.3%	10.9%	-15.0%	-1.2%	1.9%	0.8%		
year-over-year % change	-12.6%	23.7%	11.5%	-2.2%	20.0%	6.7%	2.7%	8.8%	10.3%	-16.2%	12.8%
TOTAL INSTITUTIONAL	10,613	14,344	10,935	12,955	13,424	11,964	9,695	10,155	10,262	79,121	88,382
month-over-month % change	-30.7%	35.2%	-23.8%	2.7%	3.6%	-10.9%	-2.8%	4.7%	1.0%		
year-over-year % change	-23.9%	62.7%	13.2%	15.6%	23.0%	10.7%	1.3%	7.4%	9.2%	-7.6%	11.7%
Misc Non Residential	0,558	0,765	0,606	0,576	0,629	0,643	0,546	0,563	0,577	4,188	4,800
month-over-month % change	-1.3%	37.0%	-20.8%	-1.9%	9.2%	2.1%	0.8%	3.1%	2.5%		
year-over-year % change	10.7%	36.2%	-38.2%	2.9%	9.3%	28.3%	7.2%	7.5%	11.2%	11.5%	14.6%
TOTAL NON-RES BUILDING	30,711	37,144	21,502	37,297	37,512	29,786	25,481	26,726	26,587	168,528	225,865
month-over-month % change	-31.3%	20.9%	-42.1%	10.5%	0.6%	-20.6%	1.4%	4.9%	-0.5%		
year-over-year % change	15.8%	67.3%	-7.2%	64.9%	62.4%	24.3%	26.7%	31.2%	31.2%	-3.6%	34.0%
Airports	0,603	0,992	0,666	0,702	0,882	0,753	0,473	0,511	0,514	3,791	4,754
month-over-month % change	-42.6%	64.6%	-33.0%	7.1%	25.6%	-14.6%	-5.3%	8.0%	0.6%		
year-over-year % change	-34.5%	85.3%	5.5%	-1.1%	19.6%	8.3%	-5.2%	5.1%	7.3%	-7.0%	25.4%
Roads/Highways	8,058	7,797	7,555	8,753	8,476	7,803	6,491	6,470	6,589	49,060	60,757
month-over-month % change	-15.8%	-3.2%	-3.1%	-0.6%	-3.2%	-7.9%	1.6%	-0.3%	1.8%		
year-over-year % change	18.2%	-3.1%	23.4%	20.4%	13.1%	11.6%	22.0%	17.7%	18.3%	7.0%	23.8%
Bridges	2,467	1,947	3,182	3,057	2,406	2,532	1,889	1,927	2,088	12,903	19,964
month-over-month % change	-12.0%	-21.1%	63.5%	6.9%	-21.3%	5.2%	4.2%	2.0%	8.4%		
year-over-year % change	59.5%	30.9%	154.9%	75.5%	53.7%	77.4%	18.2%	24.9%	34.6%	-24.3%	54.7%
Dams/Marine	0,423	0,750	1,242	0,488	0,624	0,805	0,747	0,764	0,812	4,305	5,499
month-over-month % change	-39.7%	77.4%	65.6%	-26.9%	27.9%	28.9%	-2.5%	2.2%	6.3%		
year-over-year % change	-35.4%	36.0%	88.2%	-13.4%	11.9%	29.4%	24.0%	26.5%	37.3%	-21.6%	27.7%
Water/Sewage	4,314	4,225	3,898	4,072	4,302	4,145	3,145	3,206	3,298	23,572	29,246
month-over-month % change	-1.2%	-2.1%	-7.7%	5.2%	5.6%	-3.6%	2.9%	1.9%	2.9%		
year-over-year % change	32.4%	20.8%	39.3%	28.5%	23.9%	30.1%	15.9%	16.0%	18.9%	9.5%	24.1%
Misc Civil (Power, etc.)	2,309	1,478	1,998	2,040	1,789	1,928	1,903	1,669	1,672	18,665	15,367
month-over-month % change	46.0%	-36.0%	35.2%	21.2%	-12.3%	7.8%	2.6%	-12.3%	0.2%		
year-over-year % change	33.1%	-65.5%	1.9%	15.3%	-25.1%	-27.5%	1.9%	-17.0%	-16.1%	6.8%	-17.7%
TOTAL											