## **Construct**

June 2022 (based on May 2022 Starts Stats)

# Construction Industry Snapshot

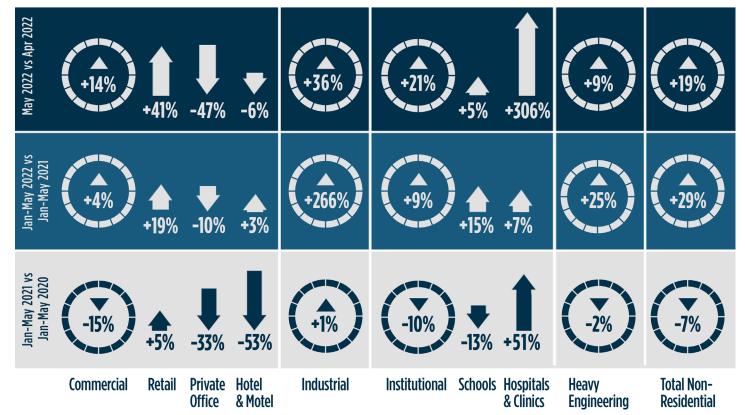


## May's Nonresidential Construction Starts +19% M/M, +77% Y/Y & +29% Ytd

ConstructConnect announced today that May 2022's volume of construction starts, excluding residential work, was \$63.4 billion, an increase of +18.9% compared with April's figure of \$53.3 billion.

The latest month's result versus May of last year was +76.5%. On a year-to-date basis, the performance of nonresidential starts has been +28.8%. Lately, there has been exceptional strength in mega project groundbreakings.





For more information or media inquiries please contact: PR@ConstructConnect.com

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#### May outdoes April for Megas

ConstructConnect announced today that May 2022's volume of construction starts, excluding residential work, was \$63.4 billion (green shaded box, bottom of page 11), an increase of +18.9% versus April's figure of \$53.3 billion (previously reported as \$52.6 billion). An increase of nearly one fifth month to month is about double the usual climb at this time of year due to seasonality (i.e., less inclement weather than in winter, facilitating onsite work outdoors.)

More strikingly, the latest month's result was ahead by three-quarters (+76.5%) when compared with the nonresidential 'starts' dollar volume in May of last year. The reason has to do with an abundance of groundbreakings on large and mega-sized (i.e., of a billion dollars or more each) projects in May of this year (see Top 10 list, page 8). The nonresidential starts improvement year to date, compared with January-to-May 2021's performance, has now moved up to +28.8%,

In recent April's Industry Snapshot report, special mention was made of mega-project starts. There were five of them, with a total estimated dollar value of \$17.1 billion, the largest one being an LNG facility in Louisiana. Remarkably, May 2022 went a further step beyond April 2022. May's number of mega projects was one less, at four, but the total dollar amount soared to \$20.0 billion. The standout project is a \$15 billion semiconductor wafer manufacturing plant for Texas Instruments in Sherman (north of Dallas), Texas. In media reports, a \$30 billion figure is being quoted, but likely half of that will be for equipment, the setting up of 'clean rooms', and so on.

Also among the mega project groundbreakings in May are two hospital jobs, in Philadelphia and Indianapolis. This is good to see, since the weak showing in hospital starts statistics during much of the pandemic has been a bit of a mystery and hard to explain. The other mega project, and not unexpected, is the building of additional passenger gates at Terminal 4, JFK Airport, New York.

Many signs point to an overall economy that is presently slowing down. Construction of significant large projects has languished for a long time, however, and it appears a correction or reversal is underway. Huge dollar spending has been announced for car and battery plant expansions (both related to electric vehicle manufacturing), more in the way of computer chip-making capacity, steel mill production, LNG exporting sites and resource development.

GRAND TOTAL starts in May 2022 (i.e., adding residential to nonresidential activity) were +6.7% m/m, +37.9% y/y and +16.0% ytd.

#### NRB and Engineering outrun Residential

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 May 2022, nonresidential building and engineering starts were both well ahead, +31.6% and +24.6% respectively, while residential was basically standing still, +16%.

On a month-to-month basis in May, nonresidential building starts were out front, +24.1%, followed by engineering, +9.4%, with residential stumbling somewhat, -12.9%.

#### Y/Y Trailing 12-Month Starts Stats on Uptrend

Other statistics often beloved by analysts are trailing twelvemonth (TTM) results and these are set out for all the various typeof-structure categories in Table 10 on page 11 of this report.

Grand Total TTM starts in May 2022 on a month-to-month basis were +3.2%, a slight pickup from April's +2.2%, and a notably sunnier outcome than March's -0.5%.

On a year-over-year basis in May 2022, GT TTM starts were +12.6%, proceeding at a pace a little faster than both April's +10.4% and March's +10.0%.

## Res vs Nonres Shares of Total PIP Tilt in Favor of Former

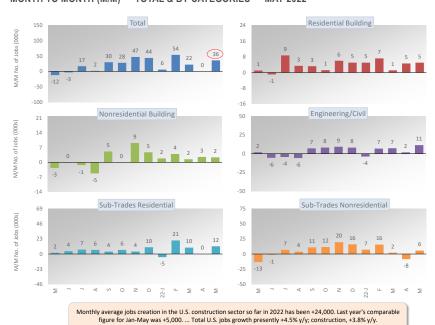
'Starts' compile the total estimated dollar value and square footage of all projects on which ground is broken in any given month. They lead, by nine months to as much as two years, put-inplace (PIP) statistics from the Census Bureau which are analogous TABLE 1: VALUE OF UNITED STATES NONRESIDENTIAL CONSTRUCTION STARTS — MAY 2022 (ConstructConnect®)

|  | Jan-May 2022<br>(\$ billions) | % Change<br>Jan-May 22 vs<br>Jan-May 21 | % Change<br>May 22 vs<br>May 21 | % Change<br>May 22 vs<br>Apr 22 |
|--|-------------------------------|---|---------------------------------|---------------------------------|
| Hotel/Motel                                  | 2.826                         | 2.8%                                    | -45.4%                          | -5.7%                           |
| Retail/Shopping                              | 6,499                         | 18.8%                                   | 32.4%                           | 40.5%                           |
| Parking Garage                               | 0.684                         | -15.7%                                  | -22.9%                          | -38.4%                          |
| Amusement                                    | 2.807                         | 17.0%                                   | -15.7%                          | -11.3%                          |
| Private Office                               | 6.432                         | -10.2%                                  | -15.7%                          | -46.8%                          |
| Government Office                            | 4.879                         | 12.5%                                   | 59.8%                           | 34.8%                           |
| Laboratory                                   | 1.090                         | 27.6%                                   | -37.0%                          | -82.6%                          |
| Warehouse                                    | 8.736                         | -24.9%                                  | -0.7%                           | -6.7%                           |
| Miscellaneous Commercial *                   | 5.489                         | 118.0%                                  | 550.2%                          | 197.6%                          |
| COMMERCIAL (big subset)                      | 39.441                        | 4.0%                                    | 36.5%                           | 13.9%                           |
| INDUSTRIAL (Manufacturing)                   | 34.119                        | 266.2%                                  | 645.6%                          | 35.6%                           |
| Religious                                    | 0.358                         | -23.3%                                  | -44.2%                          | 19.8%                           |
| Hospital/Clinic                              | 8.539                         | 6.5%                                    | 681.6%                          | 306.3%                          |
| Nursing/Assisted Living                      | 1.504                         | -34.4%                                  | -58.3%                          | -47.3%                          |
| Library/Museum                               | 1.425                         | 31.3%                                   | -24.9%                          | 26.8%                           |
| Fire/Police/Courthouse/Prison                | 2.591                         | -13.0%                                  | 20.9%                           | -7.1%                           |
| Military                                     | 4.041                         | 33.0%                                   | 58.6%                           | -52.1%                          |
| School/College                               | 29.887                        | 15.0%                                   | 17.1%                           | 4.6%                            |
| Miscellaneous Medical                        | 2.555                         | -10.1%                                  | -11.0%                          | 68.2%                           |
| INSTITUTIONAL                                | 50.900                        | 9.0%                                    | 51.7%                           | 21.3%                           |
| Miscellaneous Non-residential                | 2.719                         | 1.3%                                    | -8.3%                           | 4.8%                            |
| NONRESIDENTIAL BUILDING                      | 127.178                       | 31.6%                                   | 108.2%                          | 24.1%                           |
| Airport                                      | 2.521                         | 47.8%                                   | 38.9%                           | 108.3%                          |
| Road/Highway                                 | 37.282                        | 32.8%                                   | 25.5%                           | 10.7%                           |
| Bridge                                       | 12.421                        | 44.1%                                   | 71.1%                           | -27.2%                          |
| Dam/Marine                                   | 3.528                         | 44.6%                                   | 144.6%                          | 235.5%                          |
| Water/Sewage                                 | 16.932                        | 20.8%                                   | 24.8%                           | 29.5%                           |
| Miscellaneous Civil (power, pipelines, etc.) | 9.010                         | -15.7%                                  | 19.5%                           | -25.9%                          |
| HEAVY ENGINEERING (Civil)                    | 81.694                        | 24.6%                                   | 34.1%                           | 9.4%                            |
| TOTAL NONRESIDENTIAL                         | 208.872                       | 28.8%                                   | 76.5%                           | 18.9%                           |

<sup>\*</sup> 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 — MAY 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.

Continued on page 3

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 making up two-fifths (about 40%) of the total and nonresidential, three-fifths (i.e., the bigger portion, at around 60%).

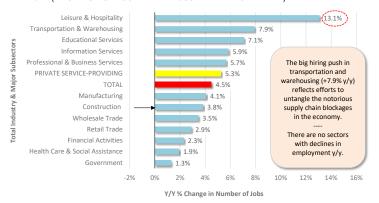
Over the past several years of pandemic, though, the mix has undergone quite a shift. In 2021's full year PIP results, the residential to nonresidential relationship was approximately half and half. Through April 2022, the ratio, on a not seasonally adjusted (NSA) basis, has tilted even more in residential's favor, pitting 51.4% against 48.6% for nonresidential. ('Nonresidential' is nonresidential buildings plus engineering). April is the latest available month for PIP stats.

The January-April 2022 over January-April 2021 total dollar volume of PIP construction was +12.4%, with residential being +18.8% and nonresidential, +6.3%. In second half 2022, nonresidential activity should reclaim more of its traditional market share of 'total' relative to residential. The type-of-structure 'starts' series point in that direction, although it needs saying that residential, at least in PIP terms, has been tenacious, with good staying power, so far.

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

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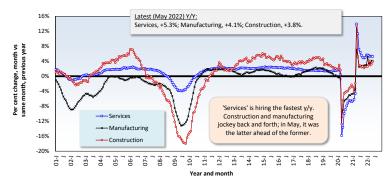
## GRAPH 3: Y/Y JOBS CHANGE, U.S. TOTAL INDUSTRY & MAJOR SUBSECTORS — MAY 2022 (BASED ON SEASONALLY ADJUSTED PAYROLL DATA)



May 2022's y/y changes in employment within the pandemic's initially hardest-hit sector, 'leisure & hospitality', were: 'hotels/motels', +21.9%; 'amusements/gambling', +14.0%; and 'restaurants & bars', +10.8%.

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

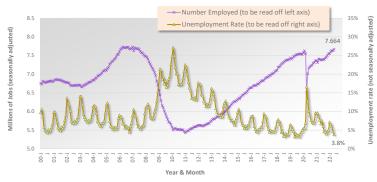
## GRAPH 2: U.S. EMPLOYMENT MAY 2022 — % CHANGE Y/Y BASED ON SEASONALLY ADJUSTED (SA) DATA



The latest data points are for May, 2022.

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

#### GRAPH 4: U.S. CONSTRUCTION EMPLOYMENT (SA) & UNEMPLOYMENT RATE (NSA)



Current through May, 2022.

SA is seasonally adjusted / NSA is not seasonally adjusted.

The U.S. economy as a whole has now recovered 96.3% of its big jobs loss experienced from Feb-Apr 2020. Construction, as a subset, has done better with a commendable jobs 'clawback' ratio of 103.6%.

Current through May, 2022. SA is seasonally adjusted / NSA is not seasonally adjusted.

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

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

|                           | g Drop   |                            | Change in Number  | of Jobs (Millions)                                | % Ch  | ange  |  |                    |
|---------------------------|--|----------------------------|---|---|---|---|--|--------------------|
| April 2020<br>(Feb 2020 w | ed data)<br>vs Feb 2020<br>as last month<br>by COVID-19) |                            | May 2022 vs Feb 2020<br>(Feb 2020 was last month<br>unaffected by COVID-19) | May 2022 vs Apr 2022<br>(i.e., vs previous month) | May 2022 vs Feb 2020<br>(Feb 2020 was last month<br>unaffected by COVID-19) | May 2022 vs Apr 2022<br>(i.e., vs previous month) | Jobs<br>Recovery<br>Since<br>Apr 2020, | Claw Back<br>Ratio |
| Millions                  |  |                            |   |   |   |   | Millions                               |                    |
| -21.991                   | (-14.4%)   | Grand Total                | -0.822  | 0.390   | (-0.5%)   | 0.3%  | 21.169                                 | (96.3%)            |
| -18.475                   | -17.0%   | Private Services-Providing | -0.162  | 0.274   | -0.1%   | 0.3%  | 18.313                                 | 99.1%              |
| -1.362                    | -10.7%   | Manufacturing              | -0.017  | 0.018   | -0.1%   | 0.1%  | 1.345                                  | 98.8%              |
| -1.108                    | -14.5%   | Construction               | 0.040   | 0.036   | 0.5%  | 0.5%  | 1.148                                  | 103.6%             |
| -2.245                    | -14.4%   | Retail Trade               | 0.160   | -0.060  | 1.0%  | -0.4%   | 2.405                                  | 107.1%             |
| -0.506                    | -8.7%  | Transportation & Warehouse | 0.709   | 0.047   | 12.2%   | 0.7%  | 1.215                                  | 240.2%             |
| -0.280                    | -3.2%  | Financial Activities       | 0.078   | 0.008   | 0.9%  | 0.1%  | 0.358                                  | 127.9%             |
| -2.302                    | -10.8%   | Professional & Business    | 0.821   | 0.075   | 3.8%  | 0.3%  | 3.123                                  | 135.7%             |
| -0.261                    | -9.0%  | Information Services       | 0.064   | 0.016   | 2.2%  | 0.5%  | 0.325                                  | 124.5%             |
| -2.839                    | -11.5%   | Education and Health       | -0.340  | 0.074   | -1.4%   | 0.3%  | 2.499                                  | 88.0%              |
| -8.203                    | -48.3%   | Leisure & Hospitality      | -1.345  | 0.084   | -7.9%   | 0.5%  | 6.858                                  | 83.6%              |
| -0.975                    | -4.3%  | Government                 | -0.615  | 0.057   | -2.7%   | 0.3%  | 0.360                                  | 36.9%              |

The U.S. total jobs count of 151.7 million is still a little short (i.e., by 0.8 million) of what it was in February 2020, before the arrival of the coronavirus. Construction, though, has recovered all its job losses of Spring 2020. ... As an indicator of a full restoration of 'normalcy', leisure & hospitality is perhaps the sector to watch most carefully. Its present jobs claw-back ratio of 83.6% continues to leave room for improvement.

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

and forecasts. ConstructConnect's PIP numbers are being released quarterly and are featured in a separate reporting system.

## Construction Claimed More than its Share of Total Jobs Increase

Construction's share of May's total non-farm employment in the monthly Employment Situation report was 5.1%. To claim its proportional share of May's total job-count increase of +390,000, the figure for construction would have been +20,000. Instead, it was nearly double, +36,000. Most active in hiring and combining to account for two-thirds of the +36,000 in the latest month, were engineering/civil contractors (+11,000) and residential sub-trades (+12,000 jobs).

The not seasonally adjusted (NSA) unemployment rate for all jobs in May was 3.4%. For construction as a subset of all jobs, the NSA U rate was a tight 3.8%. The previous month's figure was 4.6%. A year prior, in May 2020, construction was looking at a 6.7% NSA U rate.

The construction sector has recovered all the jobs it shed between February and April 2020 when COVID-19 first pounced and sent the economy spinning. The jobs clawback ratio for all jobs, at 96.3%, isn't all the way back yet. Manufacturing is at 98.8%. As for year-over-year jobs-count percentage changes, neither manufacturing, +4.1%, nor construction, +3.8%, are doing as well as 'all jobs', +4.5%. But the +4.5% is being boosted by the sector that most fell into disarray in Spring 2020, 'leisure and hospitality', where the number of jobs in latest May was +13.1% 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, +18.4%; machinery and equipment rental and leasing, +9.9%; architectural and engineering design services, +5.8%; real estate, +4.2%; cement and concrete product manufacturing, +2.0%; and building materials and supplies dealers, -2.4%.

The latest (April 2022) Architecture Billings Index (ABI) from the American Institute of Architects (AIA), which provides a gauge of the demand for construction design services, remained strong at 56.5, well above the 50.0 benchmark that indicates flat activity.

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

May 2022's +18.9% month-to-month (m/m) increase in total nonresidential starts resulted from gains in all the major type-of-structure sub-categories, with industrial (+35.6%) leading the way, followed by institutional (+21.3%), commercial (+13.9%) and engineering/civil (+9.4%).

The +76.5% performance of total nonresidential starts in May of this year versus May of last year (y/y) had its biggest sub-category jump in industrial (+645.6%), but institutional (+51.7%), commercial (+36.5%) and engineering (+34.1%) weren't left standing on the sidelines.

As for May's year-to-date gain of +28.8% for total nonresidential starts, it arose thanks to notable support from industrial (+266.2%) and engineering (+24.6%), while the pickups turned in by institutional (+9.0%) and commercial (+4.0%) were more muted.

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 nearly one-third of total year-to-date nonresidential activity in May 2022 (i.e., shares of 17.8% and 14.3% respectively, summing to 32.1%).

The three percentage-change metrics for street starts in May 2022 were all positive: +10.7% m/m, +25.5% y/y and +32.8% ytd. The same was true for school starts: +4.6% m/m; +17.1% y/y; and +15.0% ytd. Delving deeper into educational work, the starts action was most evident in 'colleges and universities', +48.4% ytd and at the level of 'pre-school and elementary', +22.0%.

Also important within the engineering sub-category (i.e., next in line behind 'roads/highways') are 'water/sewage' and 'bridge' starts, and they have had fine year-to-date perfor-

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

|                                    | Jan-May 2022<br>(\$ billions) | % Change vs<br>Jan-May 2021 |
|------------------------------------|-------------------------------|-----------------------------|
| Sports Stadiums/Convention Centers | \$2.379                       | 26.4%                       |
| Transportation Terminals           | \$3.109                       | 389.7%                      |
| Courthouses                        | \$0.404                       | -54.3%                      |
| Police Stations & Fire Halls       | \$1.256                       | -1.6%                       |
| Prisons                            | \$0.931                       | 13.7%                       |
| Pre-School/Elementary              | \$9.143                       | 22.0%                       |
| Junior & Senior High Schools       | \$11.147                      | -5.6%                       |
| K-12 (sum of above two categories) | \$20.289                      | 5.1%                        |
| Special & Vocational Schools       | \$0.738                       | 4.1%                        |
| Colleges & Universities            | \$8.860                       | 48.4%                       |
| Electric Power Infrastructure      | \$3.483                       | -9.2%                       |

Source: ConstructConnect/Table: ConstructConnect.

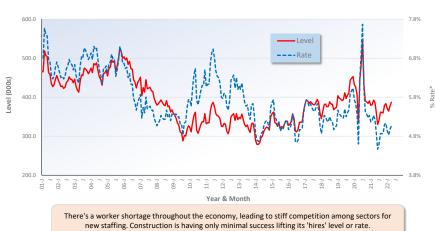
## GRAPH 5: U.S. CONSTRUCTION JOB OPENINGS (FROM JOLTS REPORT) (3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)



\*Rate is number of job openings end-of-month as % of 'construction employment plus number of job openings'. Latest seasonally adjusted data points are for April 2022. ... JOLTS = Job Openings and Labor Turnover Survey.

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

## GRAPH 6: U.S. CONSTRUCTION JOB HIRES (FROM JOLTS REPORT) (3-MONTH MOVING AVERAGES PLACED IN LATEST MONTH)



\*Rate is number of hires during month as % of construction employment.

Latest seasonally adjusted data points are for April 2022. ... JOLTS = Job Openings and Labor Turnover Survey.

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

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mances, +20.8% and +44.1% respectively.

For the three medical sub-categories combined - i.e., 'hospital/clinic', 'nursing/assisted living' and 'miscellaneous medical' - May 2022's starts were a huge and positive reversal in course. They were still down ytd, although only by a small amount, -4.2%, but they were +191.6% mm and +217.0% y/y. 'Hospital/clinic' starts alone have now improved to +6.5% ytd (see three such projects in the Top 10

'Military' starts in May were -52.1% m/m, but they were +58.6% y/y and +33.0% ytd. With the fighting in Ukraine at top of mind, and geopolitical tension in other hot spots around the world, spending on airfields (e.g., Tyndall AFB, Florida in May's Top 10) and shipyards has been supercharged this year.

Among commercial starts year-to-date in May, the 'retail/shopping' (+18.8%), 'amusement' (+17.0%), 'government office' (+12.5%), and 'miscellaneous' (+118.0%) sub-categories have been nicely upbeat. ('Miscellaneous' includes 'transportation terminals'; see page 8 for JFK). 'Private office building' (-10.2% ytd) and 'warehouse' starts (-24.9% ytd) continue to strugale.

#### Upticks in 10 of 12 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.

For ten of the 12 curves, there's an encouragingto-see upwards hook at the end, for the most recent period. The most pronounced present upticks are for 'schools/colleges', 'hospitals/clinics', 'roads/highways', and 'bridges'. There's only one curve where the trend is still obviously down, 'private office buildings'. 'Miscellaneous' civil has been tending to move sideways of late.

#### JOLTS and the Unemployment (U) Rate

According to the latest workforce report from the Bureau of Labor Statistics (BLS), there are 6.0 million (SA) unemployed individuals in the U.S. economy. The latest Job Openings and Labor Turnover Survey (JOLTS) report says there are 11.4 million (SA) vacant positions begging to be filled. Even allowing for mismatches between skills needed and those at hand, the stats indicate the tightness in the labor market, as reflected by the exceptionally low U rate, will be ongoing.

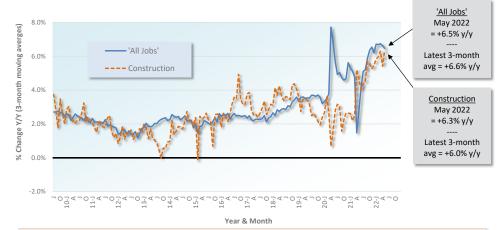
For ease of viewing, Graphs 5 and 6 show 'smoothed' curves (i.e., based on three-month moving averages) for the JOLTS results, 'openings' and 'hires', pertaining to construction.

'Openings' in construction have reached new peaks (both as a level and rate), but the 'hires' figures (level and rate) remain only so-so responsive. The construction sector is in a contest with most other sectors throughout the economy to acquire workers amidst a severe shortage. For prospective hires, relative compensation increases are an important incentive. On that score, construction has been upping its game.

#### Construction Ups its Game on Pay **Front**

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.

#### GRAPH 7: AVERAGE HOURLY EARNINGS Y/Y — 'ALL JOBS' & CONSTRUCTION

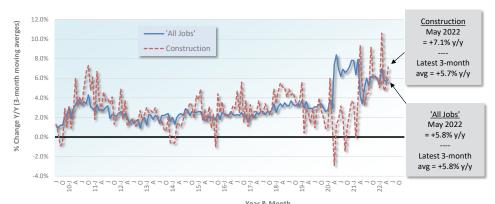


Even at +6.5% y/y, hourly wages aren't matching the rapid pace of CPI-U inflation, +8.6% y/y in May 2022. The average annual increase for 'construction workers' from 2010 to 2019 was +2.3%; for 'all jobs' over the same period, +2.4%.

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

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

#### GRAPH 8: AVERAGE WEEKLY EARNINGS Y/Y — 'ALL JOBS' & CONSTRUCTION



The y/y increase in weekly wages paid to construction workers soared in February 2022, +10.6%. The percentage change has since settled back a bit. The NSA unemployment rate in construction is presently 3.8%. The 'all jobs' NSA U rate is 3.4%.

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

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

From May 2022's Table B-3 (including bosses), year-over-year all-jobs earnings were +5.2% hourly and +4.3% weekly. Construction workers, as a subset of 'all jobs', fared better, +5.6% both hourly and weekly. From Table B-8 for production and non-supervisory workers (i.e., excluding bosses), the all-jobs compensation jumps were +6.5% hourly and +5.8% weekly. Construction workers made about the same gain hourly, +6.3%, but raced ahead weekly, +7.1%.

#### Y/Y Bid Prices = Y/Y Material Costs

April 2022's y/y results for three building related BLS Producer Price Index (PPI) series were: (A) 'construction materials special index', +17.9% (significantly down from March's +24.6%); (B) 'inputs to new construction index, excluding capital investment, labor, and imports', +20.9% (also down in a big way versus its previous month's advance, +23.0%); and (C) 'final demand construction', designed to capture bid prices, +19.6% (a sizable jump from March's +16.6%).

(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.

What's important to know, though, is that for the first time in nearly two years, the y/y change in the bid price index (+19.6%) has caught up with the average y/y change for the two material input cost indices ((17.9% + 20.9%)/2 = +19.4%. There were times around a year into the pandemic when there was an enormous gap and contractors were taking a beating.

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

Continued on page 6

set published by the BLS, diesel fuel is +86.5% y/y; aluminum sheet and strip, +45.2%; asphalt, +39.9%; hot rolled steel bars, plates, and structural shapes, +38.3%; gypsum, +17.8%; copper wire and cable, +14.1%; ready-mix concrete, +8.8%; cement, +6.2%; and softwood lumber, -5.5%. There's also an 'inputs to highways and streets' PPI index and it's +21.0% y/y.

The value of construction starts each month is derived from Construct-Connect'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.

#### May 2022's 'Grand Total' Starts +16.0% Ytd

From Table 10 on page 11 of this report, ConstructConnect's total residential starts in May 2022 were -12.9% m/m and -7.0% y/y, but +1.6% ytd. Multi-family starts in May were -47.2% m/m, -30.7% y/y and -1.6% ytd. Single-family starts were +3.0% m/m, +1.3% y/y and +2.8% ytd.

Including home building with all nonresidential categories, **Grand Total** starts in May 2022 were +6.7% m/m, +37.9% y/y and +16.0% 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.

#### Non-Dollar Measures to Track Construction's True Trajectory

Unprecedented levels of price inflation have caused nearly every dollar-denominated measure of the construction industry to appear to be moving strongly higher. Material price indices which measure the change in construction input costs on an annualized basis have been near 20% since before the second half of 2021. This means that for a fixed quantity of physical structures being built, the dollar cost of the materials needed has increased by 20% over the last year. Tracking the dollar cost of this construction work across time, one might incorrectly think the construction market has grown 20%; however, the amount of physical structure demanded has remained stagnant.

For this reason, it is helpful to consider non-dollar metrics when monitoring the true or 'real' health of the construction industry. Non-dollar measures that provide insights to the construction market include, but are not limited to, construction starts in square feet or number of projects (or units, if talking about housing); inventory-to-sales ratios; and diffusion indexes for material input new orders and production. As these measures are not calculated in dollar-terms they are less affected by the inflationary price pressures that have made virtually every dollar-measure of the industry appear to be rocketing higher regardless of the real demand for structures in the market.

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. Also, it helps if profits are abundant. Also, today's greater tendency to work from home has made office occupancy and 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 be mined.

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

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-May 2022     | % Change vs Jan-May 2021 |
|------------------|------------------|--------------------------|
| 1 Texas          | \$38,170,480,169 | 87.4%                    |
| 2 California     | \$14,240,573,911 | -1.9%                    |
| 3 Louisiana      | \$14,175,135,180 | 716.2%                   |
| 4 New York       | \$12,259,839,736 | 49.4%                    |
| 5 Florida        | \$10,335,697,208 | 17.7%                    |
| 6 North Carolina | \$7,103,898,755  | 27.1%                    |
| 7 Pennsylvania   | \$6,939,205,596  | 34.1%                    |
| 8 Illinois       | \$6,654,509,013  | 16.6%                    |
| 9 Indiana        | \$6,429,972,176  | 70.0%                    |
| 10 Michigan      | \$5,413,067,762  | 44.4%                    |
| 11 Ohio          | \$4,858,078,036  | -32.8%                   |
| 12 Georgia       | \$4,815,891,473  | -9.0%                    |
| 13 Wisconsin     | \$4,227,224,648  | 24.5%                    |
| 14 New Jersey    | \$4,130,209,621  | 95.2%                    |
| 15 Virginia      | \$4,018,167,568  | 4.4%                     |
| 16 Missouri      | \$3,807,472,938  | -10.5%                   |
| 17 Minnesota     | \$3,629,866,015  | -33.5%                   |
| 18 Maryland      | \$3,515,180,261  | 97.2%                    |
| 19 Massachusetts | \$3,504,357,061  | -2.6%                    |
| 20 Washington    | \$2,980,032,161  | -7.4%                    |
|                  |                  |                          |

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-May 2022     | % Change vs Jan-May 2021 |
|------------------|------------------|--------------------------|
| 1 Texas          | \$28,688,410,058 | -24.6%                   |
| 2 Louisiana      | \$12,387,921,556 | 345.1%                   |
| 3 California     | \$8,626,787,124  | 0.2%                     |
| 4 New York       | \$6,861,604,105  | -83.9%                   |
| 5 Florida        | \$6,005,953,322  | -9.4%                    |
| 6 North Carolina | \$4,350,986,295  | -52.4%                   |
| 7 Pennsylvania   | \$4,060,967,704  | 24.1%                    |
| 8 Indiana        | \$4,028,907,918  | 55.6%                    |
| 9 Georgia        | \$3,250,336,256  | 18.7%                    |
| 10 Illinois      | \$3,161,888,761  | 10.2%                    |
| 11 Michigan      | \$2,584,430,471  | 94.7%                    |
| 12 Massachusetts | \$2,582,231,565  | 53.4%                    |
| 13 Maryland      | \$2,484,057,424  | -49.7%                   |
| 14 Wisconsin     | \$2,460,545,645  | 53.9%                    |
| 15 Ohio          | \$2,418,277,183  | -38.8%                   |
| 16 Maine         | \$2,180,194,190  | 80.3%                    |
| 17 Virginia      | \$2,137,455,868  | -19.7%                   |
| 18 Missouri      | \$1,944,642,339  | -29.4%                   |
| 19 Utah          | \$1,890,618,359  | 73.8%                    |
| 20 Tennessee     | \$1,846,316,273  | 213.9%                   |

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

|                  | Jan-May 2022    | % Change vs Jan-May 2021 |
|------------------|-----------------|--------------------------|
| 1 Texas          | \$9,482,070,111 | 25.8%                    |
| 2 California     | \$5,613,786,787 | 0.2%                     |
| 3 New York       | \$5,398,235,631 | 42.2%                    |
| 4 Florida        | \$4,329,743,886 | 29.4%                    |
| 5 Illinois       | \$3,492,620,252 | 23.1%                    |
| 6 Pennsylvania   | \$2,878,237,892 | 64.1%                    |
| 7 Michigan       | \$2,828,637,291 | 37.0%                    |
| 8 North Carolina | \$2,752,912,460 | 114.7%                   |
| 9 New Jersey     | \$2,662,231,455 | 185.5%                   |
| 10 Minnesota     | \$2,625,742,520 | -37.6%                   |
| 11 Ohio          | \$2,439,800,853 | 0.7%                     |
| 12 Indiana       | \$2,401,064,258 | 40.1%                    |
| 13 Virginia      | \$1,880,711,700 | 66.4%                    |
| 14 Missouri      | \$1,862,830,599 | 24.3%                    |
| 15 Louisiana     | \$1,787,213,624 | 128.3%                   |
| 16 Wisconsin     | \$1,766,679,003 | -1.6%                    |
| 17 Washington    | \$1,673,719,040 | 39.9%                    |
| 18 Colorado      | \$1,647,070,977 | 39.3%                    |
| 19 Georgia       | \$1,565,555,217 | -1.9%                    |
| 20 lowa          | \$1,508,733,563 | 23.6%                    |

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 <a href="mailto:Twitter@ConstructConnx">Twitter@ConstructConnx</a>, which has 50,000 followers.

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## **INSIGHT view of starts statistics**

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

|                                      | Jan-May 2022<br>(\$ billions) | % Change<br>Jan-May 22 vs<br>Jan-May 21 | % Change<br>May 22 vs<br>May 21 | % Change<br>May 22 vs<br>Apr 22 |
|--------------------------------------|-------------------------------|---|---------------------------------|---------------------------------|
| Summary                              |                               |   |                                 |                                 |
| CIVIL                                | 81.694                        | 24.6%                                   | 34.1%                           | 9.4%                            |
| NONRESIDENTIAL BUILDING              | 127.178                       | 31.6%                                   | 108.2%                          | 24.1%                           |
| RESIDENTIAL                          | 146.145                       | 1.6%                                    | -7.0%                           | -12.9%                          |
| GRAND TOTAL                          | 355.017                       | 16.0%                                   | 37.9%                           | 6.7%                            |
| Verticals                            |                               |   |                                 |                                 |
| Airport                              | 2.521                         | 47.8%                                   | 38.9%                           | 108.3%                          |
| All Other Civil                      | 5.528                         | -19.3%                                  | 28.3%                           | -42.5%                          |
| Bridges                              | 12.421                        | 44.1%                                   | 71.1%                           | -27.2%                          |
| Dams / Canals / Marine Work          | 3.528                         | 44.6%                                   | 144.6%                          | 235.5%                          |
| Power Infrastructure                 | 3.483                         | -9.2%                                   | 1.1%                            | 208.7%                          |
| Roads                                | 37.282                        | 32.8%                                   | 25.5%                           | 10.7%                           |
| Water and Sewage Treatment           | 16.932                        | 20.8%                                   | 24.8%                           | 29.5%                           |
| CIVIL                                | 81.694                        | 24.6%                                   | 34.1%                           | 9.4%                            |
| Offices (private)                    | 6.432                         | -10.2%                                  | -15.7%                          | -46.8%                          |
| Parking Garages                      | 0.684                         | -15.7%                                  | -22.9%                          | -38.4%                          |
| Transportation Terminals             | 3.109                         | 389.7%                                  | 1985.6%                         | 361.6%                          |
| Commercial (small subset)            | 10.225                        | 18.8%                                   | 115.3%                          | 23.3%                           |
| Amusement                            | 2.807                         | 17.0%                                   | -15.7%                          | -11.3%                          |
| Libraries / Museums                  | 1.425                         | 31.3%                                   | -24.9%                          | 26.8%                           |
| Religious                            | 0.358                         | -23.3%                                  | -44.2%                          | 19.8%                           |
| Sports Arenas / Convention Centers   | 2.379                         | 26.4%                                   | 195.3%                          | 83.6%                           |
| Community                            | 6.969                         | 19.5%                                   | 35.3%                           | 36.8%                           |
| College / University                 | 8.860                         | 48.4%                                   | 49.3%                           | -6.0%                           |
| Elementary / Pre School              | 9.143                         | 22.0%                                   | 14.7%                           | 0.3%                            |
| Jr / Sr High School                  | 11.147                        | -5.6%                                   | -2.5%                           | 17.7%                           |
| Special / Vocational                 | 0.738                         | 4.1%                                    | 60.0%                           | 45.4%                           |
| Educational                          | 29.887                        | 15.0%                                   | 17.1%                           | 4.6%                            |
| Courthouses                          | 0.404                         | -54.3%                                  | 9.8%                            | 46.3%                           |
| Fire and Police Stations             | 1.256                         | -1.6%                                   | 47.1%                           | 5.3%                            |
| Government Offices                   | 4.879                         | 12.5%                                   | 59.8%                           | 34.8%                           |
| Prisons                              | 0.931                         | 13.7%                                   | -0.2%                           | -32.2%                          |
| Government                           | 7.470                         | 2.1%                                    | 46.3%                           | 19.2%                           |
| Industrial Labs / Labs / School Labs | 1.090                         | 27.6%                                   | -37.0%                          | -82.6%                          |
| Manufacturing                        | 34.119                        | 266.2%                                  | 645.6%                          | 35.6%                           |
| Warehouses                           | 8.736                         | -24.9%                                  | -0.7%                           | -6.7%                           |
| Industrial                           | 43.944                        | 101.6%                                  | 305.1%                          | 24.8%                           |
| Hospitals / Clinics                  | 8.539                         | 6.5%                                    | 681.6%                          | 306.3%                          |
| Medical Misc.                        | 2.555                         | -10.1%                                  | -11.0%                          | 68.2%                           |
| Nursing Homes                        | 1.504                         | -34.4%                                  | -58.3%                          | -47.3%                          |
| Medical                              | 12.597                        | -4.2%                                   | 217.0%                          | 191.6%                          |
| Military                             | 4.041                         | 33.0%                                   | 58.6%                           | -52.1%                          |
| Hotels                               | 2.826                         | 2.8%                                    | -45.4%                          | -5.7%                           |
| Retail Misc.                         | 2.719                         | 1.3%                                    | -8.3%                           | 4.8%                            |
| Shopping                             | 6.499                         | 18.8%                                   | 32.4%                           | 4.8%                            |
| Retail                               | 12.044                        | 10.4%                                   | 1.2%                            | 22.4%                           |
| NONRESIDENTIAL BUILDING              | 127.178                       | 31.6%                                   |                                 | 24.1%                           |
| Multi-Family                         | 40.094                        | -1.6%                                   | 108.2%<br>-30.7%                | -47.2%                          |
| Single-Family                        | 106.051                       | -1.6%<br>2.8%                           | 1.3%                            | 3.0%                            |
| ·                                    |                               | 1.6%                                    |                                 | -12.9%                          |
| RESIDENTIAL NONRESIDENTIAL           | 146.145<br>208.872            | 28.8%                                   | -7.0%<br>76.5%                  | -12.9%<br>18.9%                 |
|                                      |                               |   |                                 |                                 |

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.

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## "Top Ten" projects of the month

TABLE 8: ConstructConnect's TOP 10 PROJECT STARTS IN MAY 2022

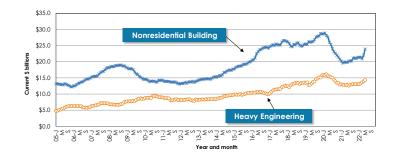
| LOCATION<br>(EAST TO WEST)        | TYPE OF CONSTRUCTION | DESCRIPTION   | SQUARE<br>FEET 000S* | DOLLARS<br>000,000S |
|-----------------------------------|----------------------|---|----------------------|---------------------|
| New York<br>New York              | Commercial           | Terminal 4 (T4) Redevelopment (10 New Gates) / JFK<br>Airport<br>(2 structures) Queens, NY<br>DACK Consulting Solutions, Inc (Owner's Rep)  | 150                  | \$1,500             |
| West Islip                        | Institutional        | Good Samaritan Hospital Patient Care Pavilion<br>(1 structure; 6 stories; 133 units) 1000 Montauk Hwy<br>Catholic Health Services of Long Island                                  | 220                  | \$500               |
| Pennsylvania<br>Philadelphia      | Institutional        | New Inpatient Tower - Children's Hospital of<br>Philadelphia<br>(1 structure; 22 stories; 300 units) 515 Osler Cir<br>The Children's Hospital of Philadelphia (CHOP)              | 2,500                | \$1,900             |
| Florida<br>Tyndall AFB            | Institutional        | Zone 1 - F-35 Flightline Facilities (multiple structures,<br>hangar work, lighting) Tyndall AFB, FL<br>(3 structures) Tyndall AFB<br>US Army Corps of Engineers - Mobile District | *                    | \$700               |
| Winter Haven                      | Civil/Engineering    | Southeast Wellfield Project, Phase 1 West Polk Lower<br>Floridan Aquifer Project, Phase 1<br>(1 structure) Multiple Locations<br>City of Winter Haven                             | *                    | \$462               |
| Indiana<br>Indianapolis           | Institutional        | IU Health Methodist Hospital - Hospital Consolidation<br>(3 structures; 10 stories; 589 units) N Capitol Ave<br>Indiana University Health (IU Health)                             | 700                  | \$1,600             |
| <b>Louisiana</b><br>Golden Meadow | Civil/Engineering    | LA 1: Leeville to Golden Meadow (Phase 2)<br>(5 structures) LA-1<br>Louisiana Department of Transportation and<br>Development (LaDOTD)  | *                    | \$464               |
| <b>Kansas</b><br>Manhattan        | Industrial           | Polytechnic Residence Hall - Kansas State University<br>(1 structure) 1620 Denison Ave<br>Kansas State University   | *                    | \$768               |
| <b>Texas</b><br>Sherman           | Industrial           | Texas Instruments Semiconductor Wafer Fabrication<br>Plants<br>(1 structure) 6412 US-75<br>Texas Instruments Inc  | 4,700                | \$15,000            |
| <b>California</b><br>Chula Vista  | Commercial           | Chula Vista Bayfront Gaylord Pacific Hotel and<br>Convention Center<br>(6 structures; 22 stories; 1600 units) 999 Bayside Pkwy<br>Rida Development Corporation                    | 2,500                | \$800               |
| TOTALS:                           |                      |   | 10,770               | \$23,694            |

<sup>\*</sup>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 9: U.S. NONRESIDENTIAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



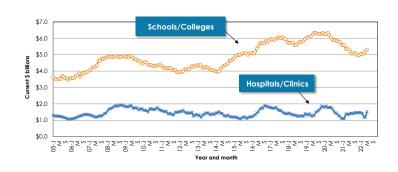
GRAPH 10: U.S. COMMERCIAL AND INSTITUTIONAL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



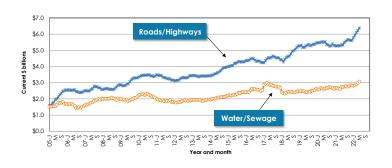
GRAPH 11: U.S. RETAIL AND PRIVATE OFFICE BUILDING CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



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

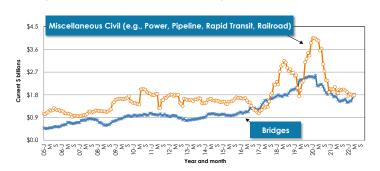


GRAPH 13: U.S. ROAD/HIGHWAY AND WATER/SEWAGE CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



The last data points in all the graphs on this page are for May, 2022.

GRAPH 14: U.S. BRIDGES AND MISCELLANEOUS CIVIL CONSTRUCTION STARTS — ConstructConnect® (12-MONTH MOVING AVERAGES)



Source: ConstructConnect/Charts: ConstructConnect.

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## **Regional starts table**

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

|                                    | Jan-May 2021                         | Jan-May 2022                         | % Change        |
|------------------------------------|--------------------------------------|--------------------------------------|-----------------|
| Connecticut                        | \$1,120,357,096                      | \$1,074,253,581                      | -4.1%           |
| Maine                              | \$2,004,431,158                      | \$2,564,672,301                      | 28.0%           |
| Massachusetts                      | \$3,597,947,622                      | \$3,504,357,061                      | -2.6%           |
| New Hampshire                      | \$783,164,020                        | \$364,365,110                        | -53.5%          |
| Rhode Island                       | \$553,425,567                        | \$291,592,840                        | -47.3%          |
| Vermont                            | \$203,354,161                        | \$226,639,707                        | 11.5%           |
| Total New England                  | \$8,262,679,624                      | \$8,025,880,600                      | -2.9%           |
| New Jersey                         | \$2,115,606,103                      | \$4,130,209,621                      | 95.2%           |
| New York                           | \$8,205,238,355                      | \$12,259,839,736                     | 49.4%           |
| Pennsylvania Total Middle Atlantic | \$5,174,577,632                      | \$6,939,205,596                      | 34.1%<br>50.6%  |
| TOTAL NORTHEAST                    | \$15,495,422,090<br>\$23,758,101,714 | \$23,329,254,953<br>\$31,355,135,553 | 32.0%           |
| Illinois                           | \$5,706,809,080                      | \$6,654,509,013                      | 16.6%           |
| Indiana                            | \$3,782,426,198                      | \$6,429,972,176                      | 70.0%           |
| Michigan                           | \$3,749,124,250                      | \$5,413,067,762                      | 44.4%           |
| Ohio                               | \$7,229,462,033                      | \$4,858,078,036                      | -32.8%          |
| Wisconsin                          | \$3,394,332,824                      | \$4,227,224,648                      | 24.5%           |
| Total East North Central           | \$23,862,154,385                     | \$27,582,851,635                     | 15.6%           |
| Iowa                               | \$2,516,308,363                      | \$2,301,268,258                      | -8.5%           |
| Kansas                             | \$1,538,018,212                      | \$2,483,890,460                      | 61.5%           |
| Minnesota                          | \$5,461,025,623                      | \$3,629,866,015                      | -33.5%          |
| Missouri                           | \$4,252,030,259                      | \$3,807,472,938                      | -10.5%          |
| Nebraska<br>North Dakota           | \$1,607,739,152                      | \$2,336,833,587                      | 45.3%           |
| North Dakota<br>South Dakota       | \$994,556,773<br>\$720,799,171       | \$1,760,364,219<br>\$1,791,697,288   | 77.0%<br>148.6% |
| Total West North Central           | \$17,090,477,553                     | \$18,111,392,765                     | 6.0%            |
| TOTAL MIDWEST                      | \$40,952,631,938                     | \$45,694,244,400                     | 11.6%           |
| Delaware                           | \$581,148,445                        | \$390,855,864                        | -32.7%          |
| District of Columbia               | \$458,292,124                        | \$697,275,174                        | 52.1%           |
| Florida                            | \$8,781,288,579                      | \$10,335,697,208                     | 17.7%           |
| Georgia                            | \$5,289,504,096                      | \$4,815,891,473                      | -9.0%           |
| Maryland                           | \$1,782,221,409                      | \$3,515,180,261                      | 97.2%           |
| North Carolina                     | \$5,589,131,889                      | \$7,103,898,755                      | 27.1%           |
| South Carolina                     | \$2,515,565,586                      | \$2,905,870,181                      | 15.5%           |
| Virginia                           | \$3,848,858,451                      | \$4,018,167,568                      | 4.4%            |
| West Virginia                      | \$481,531,300                        | \$741,581,041                        | 54.0%           |
| Total South Atlantic Alabama       | \$29,327,541,879<br>\$2,568,196,373  | \$34,524,417,525<br>\$2,752,103,968  | 17.7%<br>7.2%   |
| Kentucky                           | \$1,643,582,456                      | \$2,646,832,920                      | 61.0%           |
| Mississippi                        | \$705,012,855                        | \$1,242,865,024                      | 76.3%           |
| Tennessee                          | \$5,263,331,644                      | \$2,944,599,919                      | -44.1%          |
| Total East South Central           | \$10,180,123,328                     | \$9,586,401,831                      | -5.8%           |
| Arkansas                           | \$945,701,991                        | \$1,086,080,965                      | 14.8%           |
| Louisiana                          | \$1,736,781,989                      | \$14,175,135,180                     | 716.2%          |
| Oklahoma                           | \$1,739,655,784                      | \$1,892,546,815                      | 8.8%            |
| Texas                              | \$20,363,922,756                     | \$38,170,480,169                     | 87.4%           |
| Total West South Central           | \$24,786,062,520                     | \$55,324,243,129                     | 123.2%          |
| TOTAL SOUTH                        | \$64,293,727,727                     | \$99,435,062,485                     | 54.7%           |
| Arizona<br>Colorado                | \$2,981,838,989<br>\$2,916,739,238   | \$2,218,980,558<br>\$2,714,041,555   | -25.6%          |
| Idaho                              | \$2,916,739,236<br>\$521,639,379     | \$2,714,041,555                      | -6.9%<br>74.7%  |
| Montana                            | \$435,421,283                        | \$844,324,910                        | 93.9%           |
| Nevada                             | \$1,627,849,331                      | \$1,729,791,318                      | 6.3%            |
| New Mexico                         | \$827,572,688                        | \$767,360,335                        | -7.3%           |
| Utah                               | \$2,757,394,209                      | \$2,492,805,058                      | -9.6%           |
| Wyoming                            | \$418,380,447                        | \$738,713,672                        | 76.6%           |
| Total Mountain                     | \$12,486,835,564                     | \$12,417,224,219                     | -0.6%           |
| Alaska                             | \$435,828,878                        | \$543,919,190                        | 24.8%           |
| California                         | \$14,521,355,498                     | \$14,240,573,911                     | -1.9%           |
| Hawaii                             | \$672,045,194                        | \$341,337,503                        | -49.2%          |
| Oregon                             | \$1,833,336,922                      | \$1,864,409,023                      | 1.7%            |
| Washington                         | \$3,219,161,209                      | \$2,980,032,161                      | -7.4%           |
| Total Pacific                      | \$20,681,727,701                     | \$19,970,271,788                     | -3.4%           |
| TOTAL U.S.                         | \$33,168,563,265                     | \$32,387,496,007                     | -2.4%           |
| TOTAL U.S.                         | \$162,173,024,644                    | \$208,871,938,445                    | 28.8%           |

<sup>\*</sup>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 — MAY 2022 — ConstructConnect® BILLIONS OF CURRENT \$S, NOT SEASONALLY ADJUSTED (NSA)

|  | Lates                  | month actu<br>Apr 22   | _                | Mar 22           | Moving<br>3-months<br>Apr 22 |                        | laced in end r<br>Mar 22 | •                | May 22          | Year to D<br>Jan-May<br>2021 | oate.<br>Jan-May<br>2022 |
|--|------------------------|------------------------|------------------|------------------|------------------------------|------------------------|--------------------------|------------------|-----------------|------------------------------|--------------------------|
| Single Family month-over-month % change                  | 22.139<br>14.9%        | 22.598<br>2.1%         | 23.274<br>3.0%   | 20.060<br>5.0%   | 21.336<br>6.4%               | 22.670<br>6.3%         | 21.663<br>-0.5%          | 21.691<br>0.1%   | 21.716          | 103.161                      | 106.05                   |
| year-over-year % change<br>Apartment                     | -5.7%<br>8.150         | 1.5%<br>10.496         | 1.3%<br>5.543    | 3.9%<br>8.018    | 2.2%<br>8.571                | -1.0%<br>8.063         | 13.4%<br>8.410           | 9.6%<br>8.398    | 6.1%<br>8.193   | 34.4%<br>40.740              | 40.094                   |
| month-over-month % change<br>year-over-year % change     | 15.4%<br>3.9%          | 28.8%<br>-1.4%         | -47.2%<br>-30.7% | 7.3%<br>8.9%     | 6.9%<br>-4.2%                | -5.9%<br>-8.7%         | 0.3%<br>21.1%            | -0.1%<br>14.1%   | -2.4%<br>9.4%   | 23.3%                        | -1.6%                    |
| TOTAL RESIDENTIAL  | 30.289                 | 33.094                 | 28.817           | 28.078           | 29.906                       | 30.733                 | 30.073                   | 30.089           | 29.908          | 143.901                      | 146.14                   |
| month-over-month % change<br>year-over-year % change     | 15.0%<br>-3.3%         | 9.3%<br>0.6%           | -12.9%<br>-7.0%  | 5.7%<br>5.3%     | 6.5%<br>0.3%                 | 2.8%<br>-3.2%          | -0.3%<br>15.5%           | 0.1%<br>10.8%    | -0.6%<br>7.0%   | 31.0%                        | 1.6%                     |
| Hotel/Motel month-over-month % change                    | 0.718<br>38.3%         | 0.418<br>-41.8%        | 0.394<br>-5.7%   | 0.671<br>16.6%   | 0.552<br>-17.8%              | 0.510<br>-7.5%         | 0.647<br>1.1%            | 0.630<br>-2.7%   | 0.602<br>-4.3%  | 2.749                        | 2.826                    |
| year-over-year % change                                  | 14.0%                  | -33.4%                 | -45.4%           | 44.0%            | 2.3%                         | -22.7%                 | 10.2%                    | 12.9%            | 2.8%            | -53.5%                       | 2.8%                     |
| Retail/Shopping<br>month-over-month % change             | 1.199<br>3.3%          | 1.210<br>0.9%          | 1.700<br>40.5%   | 1.196<br>24.2%   | 1.190<br>-0.5%               | 1.370<br>15.1%         | 1.109<br>0.2%            | 1.114<br>0.5%    | 1.149<br>3.1%   | 5.472                        | 6.499                    |
| year-over-year % change<br>Parking Garages               | 2.3%<br>0.051          | 5.4%<br>0.160          | 32.4%<br>0.098   | 18.1%<br>0.142   | 12.2%<br>0.125               | 14.0%<br>0.103         | 11.1%<br>0.126           | 10.3%<br>0.135   | 10.1%<br>0.132  | 4.6%<br>0.812                | 18.8%                    |
| month-over-month % change                                | -68.8%                 | 211.5%                 | -38.4%           | -10.2%           | -11.8%                       | -17.6%                 | -6.8%                    | 7.0%             | -1.8%           |                              |                          |
| year-over-year % change Amusement                        | -68.2%<br>0.621        | 195.1%<br>0.508        | -22.9%<br>0.451  | -32.4%<br>0.616  | -17.5%<br>0.685              | -9.8%<br>0.527         | -15.1%<br>0.576          | -8.2%<br>0.587   | -5.6%<br>0.580  | -6.8%<br>2.399               | -15.79<br>2.807          |
| month-over-month % change<br>year-over-year % change     | -33.0%<br>-1.3%        | -18.2%<br>35.0%        | -11.3%           | 13.8%<br>24.2%   | 11.2%<br>42.4%               | -23.1%<br>2.5%         | -0.1%<br>17.1%           | 1.9%<br>25.4%    | -1.2%<br>20.8%  | -18.3%                       |                          |
| Office   | 1.259                  | 1.831                  | -15.7%<br>0.974  | 1.209            | 1.348                        | 1.355                  | 1.588                    | 1.594            | 1.579           | 7.159                        | 17.0%<br>6.432           |
| month-over-month % change<br>year-over-year % change     | 31.9%<br>-20.0%        | 45.4%<br>4.1%          | -46.8%<br>-15.7% | 3.5%<br>-14.5%   | 11.5%<br>-11.6%              | 0.5%<br>-9.5%          | -1.6%<br>-15.5%          | 0.4%<br>-14.5%   | -0.9%<br>-15.6% | -32.5%                       | -10.2%                   |
| Governmental Offices                                     | 0.869                  | 1.146                  | 1.545            | 0.729            | 0.870                        | 1.187                  | 0.973                    | 0.979            | 1.027           | 4.335                        | 4.879                    |
| month-over-month % change<br>year-over-year % change     | 46.4%<br>-3.4%         | 32.0%<br>6.6%          | 34.8%<br>59.8%   | 2.8%<br>-4.6%    | 19.3%<br>-6.1%               | 36.5%<br>21.0%         | -0.3%<br>11.5%           | 0.6%<br>10.2%    | 4.9%<br>12.9%   | 6.1%                         | 12.5%                    |
| Laboratories   | 0.293                  | 0.492                  | 0.086            | 0.171            | 0.316                        | 0.290                  | 0.198                    | 0.223            | 0.218           | 0.854                        | 1.090                    |
| month-over-month % change<br>year-over-year % change     | 79.5%<br>-3.8%         | 68.1%<br>151.5%        | -82.6%<br>-37.0% | 22.3%<br>-2.0%   | 85.3%<br>47.2%               | -8.2%<br>36.9%         | -0.5%<br>13.5%           | 12.5%<br>20.6%   | -1.9%<br>15.2%  | -8.1%                        | 27.6%                    |
| Warehouse<br>month-over-month % change                   | 1.534<br>40.2%         | 2.470<br>61.0%         | 2.305<br>-6.7%   | 1.321<br>7.5%    | 1.700<br>28.7%               | 2.103<br>23.7%         | 2.105<br>-4.8%           | 2.023<br>-3.9%   | 2.022<br>-0.1%  | 11.627                       | 8.736                    |
| year-over-year % change                                  | -45.4%                 | -28.5%                 | -0.7%            | -32.3%           | -33.5%                       | -26.5%                 | -2.2%                    | -9.0%            | -9.0%           | 4.1%                         | -24.9%                   |
| Misc Commercial month-over-month % change                | 0.431<br>-54.9%        | 0.996<br>130.9%        | 2.965<br>197.6%  | 0.509<br>-70.8%  | 0.795<br>56.1%               | 1.464<br>84.2%         | 1.308<br>-3.0%           | 1.341<br>2.5%    | 1.550<br>15.6%  | 2.517                        | 5.489                    |
| year-over-year % change                                  | -53.1%                 | 66.4%                  | 550.2%           | 4.4%             | 34.2%                        | 122.5%                 | 149.6%                   | 155.2%           | 197.0%          | -19.6%                       | 118.0%                   |
| TOTAL COMMERCIAL<br>month-over-month % change            | 6.976<br>6.8%          | 9.231<br>32.3%         | 10.518<br>13.9%  | 6.564<br>-9.2%   | 7.580<br>15.5%               | 8.908<br>17.5%         | 8.631<br>-2.0%           | 8.626<br>-0.1%   | 8.860<br>2.7%   | 37.923                       | 39.44                    |
| year-over-year % change TOTAL INDUSTRIAL (Manufacturing) | -23.3%<br>1.504        | -0.6%<br>12.210        | 36.5%            | -5.9%<br>1.786   | -5.8%<br>5.148               | 2.4%<br>10.088         | 10.2%<br>2.708           | 9.6%             | 11.3%<br>4.813  | -15.5%                       | 4.0%<br>34.119           |
| month-over-month % change                                | -13.1%                 | 711.8%                 | 16.551<br>35.6%  | 11.0%            | 188.3%                       | 95.9%                  | -5.4%                    | 3.619<br>33.7%   | 33.0%           | 9.316                        |                          |
| year-over-year % change<br>Religious                     | -55.4%<br>0.090        | 858.0%<br>0.066        | 645.6%<br>0.079  | -8.0%<br>0.071   | 191.7%<br>0.064              | 340.5%<br>0.078        | 43.6%<br>0.084           | 95.2%<br>0.081   | 164.3%<br>0.076 | 1.2%<br>0.467                | 266.29                   |
| month-over-month % change                                | 143.1%                 | -26.9%                 | 19.8%            | 36.2%            | -10.1%                       | 21.7%                  | -2.0%                    | -3.1%            | -6.4%           |                              |                          |
| year-over-year % change<br>Hosptials/Clinics             | -18.8%<br>1.162        | -32.0%<br>1.127        | -44.2%<br>4.580  | -6.7%<br>0.944   | -28.3%<br>1.110              | -32.7%<br>2.289        | -24.2%<br>1.186          | -27.9%<br>1.190  | -33.4%<br>1.523 | -35.2%<br>8.018              | -23.3%<br>8.539          |
| month-over-month % change<br>year-over-year % change     | 11.5%<br>-70.3%        | -3.0%<br>5.3%          | 306.3%<br>681.6% | 3.0%<br>-55.5%   | 17.6%<br>-47.7%              | 106.2%<br>23.5%        | -16.2%<br>-13.2%         | 0.4%<br>-14.0%   | 28.0%<br>13.9%  | 50.6%                        | 6.5%                     |
| Nursing/Assisted Living                                  | 0.109                  | 0.369                  | 0.194            | 0.313            | 0.340                        | 0.224                  | 0.456                    | 0.446            | 0.423           | 2.293                        | 1.504                    |
| month-over-month % change<br>year-over-year % change     | -79.9%<br>-82.9%       | 237.7%<br>-25.0%       | -47.3%<br>-58.3% | -18.0%<br>-29.6% | 8.6%<br>-22.8%               | -34.2%<br>-57.8%       | -8.8%<br>-19.8%          | -2.2%<br>-19.6%  | -5.1%<br>-23.6% | -26.7%                       | -34.4%                   |
| Libraries/Museums  | 0.455                  | 0.196                  | 0.249            | 0.326            | 0.316                        | 0.300                  | 0.328                    | 0.333            | 0.326           | 1.085                        | 1.42                     |
| month-over-month % change<br>year-over-year % change     | 54.0%<br>87.5%         | -56.8%<br>48.4%        | 26.8%<br>-24.9%  | 8.2%<br>57.7%    | -3.3%<br>67.5%               | -4.9%<br>27.4%         | 5.7%<br>43.8%            | 1.6%<br>54.1%    | -2.1%<br>51.3%  | -52.9%                       | 31.3%                    |
| Fire/Police/Courthouse/Prison                            | 0.492                  | 0.675                  | 0.627            | 0.430            | 0.531                        | 0.598                  | 0.599                    | 0.605            | 0.614           | 2.980                        | 2.59                     |
| month-over-month % change<br>year-over-year % change     | 15.1%<br>5.4%          | 37.3%<br>12.3%         | -7.1%<br>20.9%   | -17.7%<br>-30.7% | 23.6%<br>4.1%                | 12.5%<br>13.1%         | 0.4%<br>-9.0%            | 1.0%<br>-9.4%    | 1.5%<br>-9.4%   | 1.9%                         | -13.0%                   |
| Military month-over-month % change                       | 0.345<br>126.0%        | 2.304<br>567.5%        | 1.104<br>-52.1%  | 0.211<br>-42.8%  | 0.934<br>342.9%              | 1.251<br>33.9%         | 0.652<br>-6.7%           | 0.824<br>26.3%   | 0.858<br>4.1%   | 3.037                        | 4.04                     |
| year-over-year % change                                  | -62.0%                 | 834.7%                 | 58.6%            | -69.8%           | 86.7%                        | 102.9%                 | -20.3%                   | 21.8%            | 23.8%           | -22.7%                       | 33.0%                    |
| Schools/Colleges<br>month-over-month % change            | 6.096<br>65.7%         | 7.406<br>21.5%         | 7.746<br>4.6%    | 4.912<br>19.0%   | 5.727<br>16.6%               | 7.083<br>23.7%         | 5.128<br>2.1%            | 5.217<br>1.7%    | 5.312<br>1.8%   | 25.981                       | 29.887                   |
| year-over-year % change                                  | 26.7%                  | 16.9%                  | 17.1%            | 13.1%            | 13.1%                        | 19.6%                  | -4.4%                    | -2.9%            | -0.1%           | -12.7%                       | 15.0%                    |
| Misc Medical<br>month-over-month % change                | 0.615<br>49.6%         | 0.334<br>-45.7%        | 0.562<br>68.2%   | 0.553<br>-2.7%   | 0.454<br>-18.0%              | 0.504<br>11.1%         | 0.620<br>2.1%            | 0.588<br>-5.2%   | 0.582<br>-1.0%  | 2.841                        | 2.55                     |
| year-over-year % change TOTAL INSTITUTIONAL              | 33.2%<br>9.364         | -53.5%<br>12.478       | -11.0%<br>15.140 | 11.3%<br>7.761   | -23.5%<br>9.476              | -16.6%<br>12.327       | -0.2%<br>9.053           | -7.1%<br>9.285   | -5.4%<br>9.715  | -22.6%<br>46.701             | -10.1%<br>50.900         |
| month-over-month % change                                | 42.1%                  | 33.3%                  | 21.3%            | 7.2%             | 22.1%                        | 30.1%                  | -2.0%                    | 2.6%             | 4.6%            |                              |                          |
| year-over-year % change<br>Misc Non Residential          | -18.9%<br>0.555        | 28.7%<br>0.579         | 51.7%<br>0.608   | -13.9%<br>0.511  | -0.3%<br>0.524               | 18.5%<br>0.581         | -7.0%<br>0.520           | -3.5%<br>0.525   | 2.0%<br>0.521   | -9.8%<br>2.684               | 9.0%                     |
| month-over-month % change<br>year-over-year % change     | 26.8%<br>6.0%          | 4.4%<br>12.7%          | 4.8%<br>-8.3%    | 11.0%<br>1.6%    | 2.6%<br>1.2%                 | 10.8%<br>2.5%          | 0.5%<br>7.7%             | 1.0%<br>6.9%     | -0.9%<br>1.8%   | 14.9%                        | 1.3%                     |
| TOTAL NON-RES BUILDING                                   | 18.399                 | 34.498                 | 42.817           | 16.621           | 22.729                       | 31.904                 | 20.911                   | 22.055           | 23.909          | 96.625                       | 127.178                  |
| month-over-month % change<br>year-over-year % change     | 20.3%<br>-25.0%        | 87.5%<br>66.1%         | 24.1%<br>108.2%  | 0.5%<br>-9.8%    | 36.7%<br>14.6%               | 40.4%<br>45.3%         | -2.4%<br>4.9%            | 5.5%<br>11.2%    | 8.4%<br>20.6%   | -10.7%                       | 31.6%                    |
| Airports   | 0.438                  | 0.504                  | 1.049            | 0.323            | 0.374                        | 0.664                  | 0.473                    | 0.477            | 0.502           | 1.705                        | 2.52                     |
| month-over-month % change<br>year-over-year % change     | 143.2%<br>118.3%       | 15.0%<br>10.8%         | 108.3%<br>38.9%  | 22.0%<br>95.3%   | 15.9%<br>36.6%               | 77.5%<br>41.1%         | 4.4%<br>1.5%             | 0.9%<br>-0.3%    | 5.1%<br>1.1%    | -4.2%                        | 47.89                    |
| Roads/Highways   | 8.104                  | 8.649                  | 9.571            | 6.354            | 7.399                        | 8.774                  | 6.111                    | 6.218            | 6.380           | 28.077                       | 37.28                    |
| month-over-month % change<br>year-over-year % change     | 48.8%<br>35.4%         | 6.7%<br>17.5%          | 10.7%<br>25.5%   | 32.6%<br>45.6%   | 16.4%<br>31.7%               | 18.6%<br>25.5%         | 3.0%<br>15.3%            | 1.8%<br>17.9%    | 2.6%<br>19.4%   | 1.7%                         | 32.89                    |
| Bridges  | 1.872<br>17.5%         | 3.907<br>108.7%        | 2.843<br>-27.2%  | 1.890<br>18.9%   | 2.457<br>30.0%               | 2.874<br>17.0%         | 1.560<br>0.6%            | 1.718<br>10.1%   | 1.816<br>5.7%   | 8.620                        | 12.42                    |
| month-over-month % change<br>year-over-year % change     | 6.7%                   | 93.8%                  | 71.1%            | 14.7%            | 51.5%                        | 58.7%                  | -9.5%                    | -1.4%            | 6.0%            | -20.4%                       | 44.19                    |
| Dams/Marine<br>month-over-month % change                 | 0.958<br>163.1%        | 0.342<br>-64.3%        | 1.148<br>235.5%  | 0.679<br>-2.3%   | 0.555<br>-18.3%              | 0.816<br>47.1%         | 0.765<br>4.9%            | 0.746<br>-2.5%   | 0.802<br>7.6%   | 2.440                        | 3.52                     |
| year-over-year % change                                  | 80.9%                  | -39.8%                 | 144.6%           | 45.3%            | 10.3%                        | 56.2%                  | 17.6%                    | 17.0%            | 32.7%           | -29.7%                       | 44.69                    |
| Water/Sewage month-over-month % change                   | 3.735<br>74.2%         | 3.532<br>-5.5%         | 4.572<br>29.5%   | 2.943<br>19.4%   | 3.137<br>6.6%                | 3.947<br>25.8%         | 2.916<br>2.9%            | 2.995<br>2.7%    | 3.071<br>2.5%   | 14.017                       | 16.93                    |
| year-over-year % change Visc Civil (Power, etc.)         | 36.5%<br>1.376         | 36.8%<br>1.858         | 24.8%<br>1.377   | 13.6%            | 28.7%<br>1.610               | 31.8%<br>1.537         | 10.4%                    | 14.8%            | 12.5%<br>1.780  | 12.0%<br>10.688              | 20.89<br>9.01            |
| month-over-month % change                                | -13.8%                 | 35.0%                  | -25.9%           | 13.0%            | -16.3%                       | -4.5%                  | -1.0%                    | -2.6%            | 1.1%            |                              |                          |
| year-over-year % change TOTAL ENGINEERING (Civil)        | -14.3%<br>16.483       | -23.3%<br>18.792       | 19.5%<br>20.561  | -18.8%<br>14.114 | 1.1%<br>15.533               | -11.0%<br>18.612       | -10.2%<br>13.632         | -16.6%<br>13.914 | -5.9%<br>14.350 | -0.3%<br>65.548              | -15.79<br>81.69          |
| month-over-month % change                                | 45.6%                  | 14.0%                  | 9.4%             | 22.6%            | 10.1%                        | 19.8%                  | 2.3%                     | 2.1%             | 3.1%            |                              |                          |
| year-over-year % change GRAND TOTAL                      | 28.7%<br>65.171        | 22.0%<br>86.384        | 34.1%<br>92.194  | 21.6%<br>58.813  | 28.9%<br>68.168              | 28.2%<br>81.250        | 6.6%<br>64.616           | 8.3%<br>66.058   | 12.3%<br>68.167 | -2.1%<br>306.074             | 24.69<br>355.01          |
| month-over-month % change<br>year-over-year % change     | 23.1%                  | 32.6%                  | 6.7%<br>37.9%    | 7.7%             | 15.9%                        | 19.2%                  | -0.5%                    | 2.2%<br>10.4%    | 3.2%<br>12.6%   |                              |                          |
| NON-RES BLDG + ENGINEERING                               | -5.1%<br><b>34.882</b> | 25.0%<br><b>53.290</b> | 63.377           | 3.7%<br>30.735   | 10.5%<br>38.262              | 19.1%<br><b>50.516</b> | 10.0%<br><b>34.543</b>   | 35.969           | 38.259          | 7.4%<br>162.173              | 16.0%<br>208.872         |
| month-over-month % change                                | 31.1%                  | 52.8%                  | 18.9%            | 9.6%             | 24.5%                        | 32.0%                  | -0.6%                    | 4.1%             | 6.4%            |                              |                          |

Source: Construct Connect/Table: Construct Connect.