

Spring 2021 (For January 2021 Release)

# Construction Starts Forecast

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## Highlights

- Total US construction starts fell 22.3% year-on-year (y/y) in Q4 2020, taking the 2020 full-year decline to 18.3%. Non-residential building experienced the steepest decline, in both y/y terms in Q4 and for 2020 as a whole. The pandemic has weighed heavily on sectors such as hospitality, entertainment, retail and office working, with limited investment in new facilities in related sectors. Engineering construction contracted 30.3% y/y and 19.1% in 2020 overall, with the biggest drops seen in sectors related to new energy projects. Residential construction fell 1% y/y and averaged a 2.1% decline in 2020, with a marked recovery in the single-family segment seen towards the end of the year.
- With little economic momentum going into the year and a third wave of Covid infections limiting activity, GDP growth is expected to slow in the first quarter of 2021. However, a mix of fiscal stimulus and a gradual rollout of the vaccination program should lead to a mini economic boom this summer. Overall, we expect GDP to rise 4.2% in 2021 after a 3.5% contraction in 2020.
- US construction activity is forecast to post a “modest” rebound (relative to last year’s decline) in 2021 of 8.8%. However, the pandemic will leave severe scarring on the sector, with new construction not expected to reach its 2019 level until 2023. Civil engineering starts are expected to lead the pack, with only modest growth in non-residential building. Residential construction is expected to post the slowest growth, but against a background of a shallow decline last year, it is expected to rise above its 2019 level in 2021.
- Total construction starts in Canada in Q4 2020 declined 43.4% y/y and 22.3% in 2020 as a whole. All three headline sectors posted double-digit declines in 2020, with only activity in new residential construction showing a strong improvement by the end of the year.
- Canadian construction starts are expected to climb 11.5% this year, not rising above their pre-pandemic high (in 2018) until 2024. Like in the US, non-residential building will be the slowest to return to pre-pandemic levels, which is not expected over our forecast period to 2025. The scarring in the residential and civil engineering sectors will be less severe, with the former reaching its pre-pandemic high by 2024 and the latter by 2022.

**The U.S. jobs-recovery ratio, relative to Feb-Apr 2020’s plummet in employment, stayed flat in the latest month, at 52.1%. Canada’s total jobs count declined by -63,000 jobs, causing the jobs-recovery ratio to retreat from 80.9% in November to 78.8% in December.**



Sources: ConstructConnect®/Oxford Economics.  
Forecast reflects actual starts through Q4 2020.

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**Overview**

**US starts fall to lowest level in five years**

Total US construction starts continued to drop sharply in Q4 2020, shrinking 22.3% from a year earlier and taking the full year decline to 18.3% in 2020. Non-residential building experienced the largest decline, down 38.7% year-on-year (y/y) and 31.9% in 2020 as a whole. Engineering construction contracted 30.3% y/y in Q4 and 19.1% in 2020. New residential construction experienced the smallest decrease, shrinking 1% y/y and 2.1% for full year 2020.

The impact of the coronavirus pandemic weighed heavily on construction throughout the year. Stay-at-home orders included closures of construction sites in some locations during the first wave of the pandemic, most notably in Pennsylvania and Massachusetts, but projects have been allowed to operate since then. The impact on the demand side of the economy may have played a bigger role, with economic uncertainty leading to cuts to capital expenditures and tight state and local budgets weighing on engineering construction. This has had an especially large impact on mega projects valued at over \$1 billion. 2019 was an exceptional year for such projects, with construction starting on 35 mega projects worth a total of \$79.1 billion. By contrast, there were only a dozen mega projects in 2020, totalling \$21 billion. The collapse in mega projects certainly played a role in 2020's weakness, but soft underlying construction activity took the whole-year value of construction starts in 2020 to its lowest level since 2015.

Throughout 2020, non-residential building starts have seen large declines in almost all segments. The only categories to grow during the year were warehouses, courthouses, police & fire, prisons, and military. Warehouse building, in particular, was boosted by investment in logistics capabilities as customers moved en masse towards online shopping. Military construction was propped up by a \$1.75 billion project earlier in the year. By contrast, there were steep declines in industrial building and in several commercial sectors. New factory building contracted 68% from its level in 2019 — partly due to several large projects dropping out of the annual calculation — but like with the wider construction sector, new factory building was at its lowest level since 2015. The steepest declines in the commercial sector were in hotels & motels, sports & convention centers, and transportation terminals, all linked to the travel and entertainment sectors that have been hit so badly by the pandemic. Private office building also declined sharply, down 36.9%, unsurprising given moves towards working from home. However, construction of data centers

Table 1: Summary forecasts							
(Annual percentage changes unless specified otherwise)							
	2019	2020	2021	2022	2023	2024	2025
<b>US</b>							
<b>Macro variables</b>							
GDP	2.2	-3.5	4.2	3.4	2.0	1.8	1.8
Population growth	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Unemployment rate (%)	3.7	8.1	6.2	5.2	4.7	4.3	4.0
Real disposable income*	2.2	5.9	1.0	-1.2	1.3	1.3	1.3
Central bank rate (%)	2.2	0.4	0.1	0.1	0.1	0.3	0.5
10-year government yield (%)	2.1	0.9	1.3	1.6	1.9	2.0	2.2
<b>Construction starts (y/y % change of \$ volumes)</b>							
Total starts	8.5	-18.3	8.8	10.6	8.4	7.0	6.1
Residential	0.4	-2.1	6.7	9.0	8.3	8.0	7.4
Non-res bldg	12.2	-31.9	8.6	12.7	9.6	6.9	5.8
Civil engineering	16.1	-19.1	13.0	10.5	6.7	5.3	4.5
<b>Canada</b>							
<b>Macro variables</b>							
GDP	1.9	-5.5	4.0	4.0	2.4	2.0	1.9
Population growth	1.4	1.2	0.8	1.1	1.1	1.0	1.0
Unemployment rate (%)	5.7	9.5	8.6	7.3	6.7	6.5	6.3
Real disposable income*	2.2	8.8	-0.3	0.2	2.5	2.2	2.1
Central bank rate (%)	1.8	0.6	0.3	0.3	0.3	0.4	0.7
10-year government yield (%)	1.6	0.8	1.1	1.6	1.9	2.1	2.3
Exchange rate C\$ per US\$	1.33	1.34	1.29	1.27	1.24	1.22	1.19
<b>Construction starts (y/y % change of \$ volumes)</b>							
Total starts	-12.3	-22.3	11.5	16.4	11.2	8.3	6.8
Residential	3.5	-28.0	5.5	11.8	9.7	7.6	7.1
Non-res bldg	-36.2	-23.1	11.0	23.6	12.4	7.4	5.8
Civil engineering	5.8	-17.0	16.1	14.4	11.2	9.4	7.3

\* In 2020, boosted by stimulus checks and unemployment insurance top-ups.

provided some offset: for example, ground-breaking on two \$800 million Facebook data centers began in the fourth quarter.

New engineering construction declined in all sub-sectors, but the biggest drop was in power and miscellaneous civil projects. Both of these sectors contain projects related to energy, a sector hit by weak demand and falling (even negative) oil prices during the year. Both sectors also saw mega projects in 2019 fall out of the annual calculation. Road construction, the largest engineering sector, was more stable, falling 2.8%, and construction on two large highway projects (in Texas and in Florida) was started in the final quarter of the year. Water & sewage treatment plants and dams, canals, & marine projects also proved more stable in 2020, posting only single-digit declines.

Residential construction was the most robust in 2020, driven by a 10.6% increase in single-family homebuilding. Although single-family construction fell sharply early on during the initial part of the pandemic, by Q4, it was 28.5% higher than a year earlier. Demand for additional space has grown

as more workers work from home, driving growth in single-family homebuilding. By contrast, new multi-family construction fell 27.6% in 2020 and construction was down 50% year-on-year in Q4 as the pandemic has weakened demand for urban living.

Other construction indicators have been slightly better than the starts data. Put-in-place construction from the Census Bureau, for example, was 3.8% higher than a year earlier in November. However, this is a measure of continued construction activity, including the mega projects started in 2019, so it could be some time before the recent weakness in starts is fully realized in the put-in-place data. Like with starts, residential put-in-place construction has been much stronger than non-residential construction, with the former up 16.2% y/y but the latter down 4.7% y/y. Construction employment added 51,000 jobs in December at a time when the overall economy shed 140,000 jobs. Total construction employment in December was 3% below its peak in February, compared to 6.5% for overall employment.

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## Economic activity picking up after slow start to 2021

At the outset of 2021, the US economic outlook is one of contrasts — there is little economic momentum going into the new year amid a third wave of Covid infections that is limiting mobility, curbing employment, and constraining demand. Yet while worsening health conditions will weigh on growth in the near-term, a mix of fiscal stimulus and a gradual rollout of the vaccination program should lead to a mini boom this summer. After a 3.5% contraction in 2020, we expect GDP to grow 4.2% in 2021, with considerable upside risk depending on the size of the various stimulus proposals that are ultimately passed.

The pace of the economic recovery slowed markedly towards the end of 2020, with GDP rising at a 4% annualized rate in the final quarter of the year. What's more, the labor market ended the year on a sour note with the economy shedding 140,000 jobs, the first employment decline since the beginning of the post-pandemic recovery. The weakness was almost entirely due to a drop in leisure and hospitality employment, hit by surging infection rates and cold weather. These headwinds are likely to persist into the first quarter of 2021, and as a result, we expect Q1 growth to slow to about 1.5% annualized.

Congress passed a long-awaited \$900 billion fiscal stimulus package in December, which should support growth during the initial vaccine distribution phase. The Democrats' wins in the Georgia run-off Senate election means that additional fiscal stimulus is likely to be passed, but we expect this will fall short of the \$1.9 trillion package currently on the table. We foresee a \$1.2 trillion stimulus package being passed in Q1, providing additional support to households, state governments, and public health measures. But further stimulus related to the yet-to-be detailed "Build Back Better" program is likely to provide additional support.

Fed Chair Powell reaffirmed the Fed's extremely dovish forward guidance in the January FOMC statement. The Fed would rather err on the side of removing accommodative policy too slowly than removing it too rapidly, due to heightened uncertainty surrounding the pandemic and the shape of the recovery thereafter. We expect that a gradual tapering of QE asset purchases will begin in 2022 with the Fed commencing a gradual rise in the policy rate a year later.

## New construction activity to recover in 2021

After the sharp decline in construction activity of 2020, we expect a "modest" (in

**Table 2: Drivers of headline sectors**

Sector	Short-term drivers	Long-term drivers
Residential	Unemployment rate; Household liabilities; Mortgage interest rates; House prices; Population trends	House prices; Incomes
Non-residential building	Output trends in relevant sector; Population trends; Capacity utilization; Borrowing costs; Employment in relevant sector; Disposable income	Output trends in relevant sector; Employment in relevant sector
Civil engineering	Federal/State/Provincial spending; Government borrowing costs; Employment in government sector; Output trends in relevant sector	Federal/State/Provincial spending; Output trends in relevant sector

relative terms) rebound of construction starts of 8.8% in 2021. Civil engineering starts are forecast to lead the construction sector with growth of 13%. Non-residential building starts, which fell most precipitously last year, are forecast to grow by 8.6%. The residential sector is forecast to have the slowest growth at 6.7%, but this should be seen in the context of a particularly shallow decline in 2020.

Non-residential building starts are forecast to grow by 8.6% this year, a tepid rebound given the depth of the decline in 2020. The retail sector has been particularly affected as lockdowns have resulted in consumers shifting to online shopping as opposed to bricks & mortar retail. The slow path to recovery means that any serious upturn in retail construction is unlikely to take place this year, with the result that many stores will go out of business permanently. We forecast an expansion of just 4.2% this year, with construction not returning to its pre-pandemic level until 2023.

Office buildings is another sector that has witnessed a sharp drop in starts. However, with office construction, there is likely to be considerable scarring over the medium-term as a consequence of the pandemic. The move towards working from home, widely adopted during the pandemic, will to an extent remain a permanent feature of many people's working lives. This will lessen the demand for office space as firms are able to operate with less physical office space. Indeed, we expect office starts to decline again in 2021 adding to the sharp drop witnessed in 2020, and new construction is not expected to reach its pre-pandemic level over our forecast period (to 2025).

Looking at manufacturing starts, the outlook is more positive. After significant declines in new building work in 2020, man-

ufacturing is set to see robust growth over the next 3 years, although after an especially strong 2019, it will not regain its pre-pandemic level. The re-shoring of US factories continues, supported by favorable government policy, a large domestic energy sector, deep supply chains, and a strong domestic market, all of which will ensure stable demand for manufacturing construction.

Residential starts finished 2020 in a relatively strong position. After posting growth in 2020, single-family starts are expected to remain strong, growing by 8.2% this year. The fundamentals supporting single-family construction remain positive. Home-buying among millennials is increasingly focusing on the single-family sector, but affordability remains an issue for many first-time buyers. This is creating demand for new homebuilding that better suits the budgets of these new buyers.

The pandemic has had the impact of further strengthening the trend in single-family housing as a rise in working from home lowers the need to live closer to built-up areas where offices are usually located. In contrast, these trends do not bode so well for the multi-family segment, which typically accounts for more urban residential construction. Construction in that segment is forecast at only a 2.4% rebound this year, despite falling by 27.6% in 2020.

Civil engineering starts are forecast to rebound by 13% this year after nearly a 20% drop in 2020. Bridge construction is forecast to grow by 6.7%, while new road construction is to see growth of 10.3%. Both of these sectors are areas in need of significant investment after years of underfunding.

Growth is also set to come from the All Other Civil category, which includes the oil and gas sector, tunnels, and railway projects, among other things. However, this can

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largely be seen as a rebound after the sector witnessed free-fall declines in new projects last year amid plummeting energy prices, reduced transportation, and an economy in lockdown. The long-run outlook for the oil and gas sector is less certain as climate change policies become increasingly restrictive on new investments in fossil-based energy — already, the Biden administration has cancelled the planned construction of the Keystone XL pipeline which had already started north of the border.

The Biden administration is set to outline its infrastructure plan in early February with a target \$2 trillion package being talked about. Initial reports suggest that the plan will focus on new green construction initiatives such as building 50,000 new EV charging stations, investment in solar and wind power and improving the energy efficiency of new and existing buildings. Nonetheless, significant hurdles remain in place in terms of forming a sufficient political consensus to ensure passage of any new infrastructure bill through Congress.

### Growth in Canadian construction to resume after steep 2020 drop

Total construction starts in Canada declined 43.4% y/y in 2020 Q4, taking the full-year decline in 2020 to 22.3%. Almost all construction sub-sectors posted a decline in 2020, and unlike in the US, the magnitude of y/y decline worsened at the end of the year. Although there were restrictions on construction activity in Q2 2020 in Quebec and Ontario, large projects early in the year limited the extent of the annual decline in that quarter.

From a sectoral perspective, residential building construction experienced the sharpest drop in 2020, down 28%. The single-family segment was heavily affected by construction disruptions earlier in the year, but by the end of 2020, at least, had rebounded strongly, up 28% y/y in Q4. By contrast, the multi-family segment in Q4 was 67.3% below its level a year earlier as demand has shifted away from city living.

New non-residential building fell 23.1% in 2020, with annual declines in all categories

except transportation terminals and warehouses. The former was driven by a large project in Ottawa in Q2, while the latter has benefited from investments in logistics facilities to accommodate moves to online shopping.

Civil engineering construction fell 17% in 2020, with declines in all sub-sectors except for bridge construction, boosted by a project in Surrey, British Columbia in Q1. Like in the US, road construction was somewhat more stable, declining by just 1.9% on the year, in sharp contrast to all other sectors, which posted double-digit contractions.

The economic recovery in Canada has slowed as the course of the coronavirus pandemic has worsened. Increased restrictions and a slower-than-expected vaccine rollout will result in a 0.7% contraction of GDP in 2021 Q1. With hospitalizations and deaths at record highs, restrictions are set to remain in place for the time being. Ontario is again under a state of emergency with stay-at-home orders in place until at least February 11th while Quebec has issued a nightly curfew until at least February 8th. Employment fell by 62,600 jobs in December, the first decline since April of last year, leaving employment 636,000 jobs (3.3%) below its pre-pandemic level. We expect further job losses in early-2021. Price pressures are being kept in check by the depressed economic situation. We expect inflation will temporarily rise above 2% in mid-2021. However, our expectation remains that the Bank of Canada will keep the policy rate at the effective lower bound of 0.25% until early-2024.

Construction starts in Canada are forecast to grow by 11.5% in this year, rising to 16.4% in 2022. Civil engineering is set to see the strongest growth, rebounding by 16.1% as the oil and gas sector drives new activity. Non-residential construction is forecast to grow by 11% this year before rising to 23.6% in 2022. Residential growth is forecast to grow most slowly, expanding by only 5.5% this year and 11.8% in 2022. Fortunately for the construction sector, it is seen as an essential service and therefore is largely exempt from many of the lockdowns that were imposed earlier in the pandemic.

The non-residential sector faces similar issues to those in the US, namely ongoing business uncertainty and a lack of investment into new projects. This is particularly present within new office construction where lack of clarity about the eventual return to work will see office starts fall for a second year running. The hotels and motels sector will see growth of 12% this year, but this is in the context of a 50% decline in 2020. Demand for new hotel construction remains limited as the travel and tourism sector will continue on its downbeat path for at least the early part of 2021. Other areas of non-residential are more positive. The warehouse sector witnessed growth of 19.6% last year and is forecast to grow by 14.9% in 2021. The sector has been buoyed by the increasing demands by the logistics sector as people increasingly switch to online shopping and delivery. Canadian manufacturing is also set to see strong growth this year with starts nearly doubling on their 2020 level. Much of this is due to new LNG projects, which are counted under manufacturing.

The civil engineering sector, the largest part of Canadian construction, is forecast to rebound by 16.1% in 2021. Much of this rebound is due to work within the oil & gas space. We also forecast significant work within Canadian power infrastructure over the next two years. Both new road & bridge construction will also see new investment. A 2019 report into the state of Canadian infrastructure revealed significant shortcomings in Canadian road and bridge networks.

The residential sector is forecast to grow by 5.5% this year. Growth is being primarily driven by the single-family sector, caused by many of the same reasons as in the US. Single-family construction bucked the general trend in 2020 and continued growing despite lockdown restrictions. Robust population growth, averaging roughly 1% per year, will see demand for new housing continue past 2025. The millennial age grouping is amongst the most active new homebuyers with many young adults gravitating toward the single-family segment.

**Table 3: U.S. Type-of-Structure Forecasts**  
(\$ Billions USD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Single-family	198.781	219.795	237.720	255.054	275.231	296.424	317.530
Multi-family	99.042	71.666	73.390	83.970	91.768	100.025	108.060
<b>TOTAL RESIDENTIAL</b>	<b>297.823</b>	<b>291.461</b>	<b>311.110</b>	<b>339.024</b>	<b>366.999</b>	<b>396.449</b>	<b>425.590</b>
<i>(Yr/yr % change)</i>	<i>0.4%</i>	<i>-2.1%</i>	<i>6.7%</i>	<i>9.0%</i>	<i>8.3%</i>	<i>8.0%</i>	<i>7.4%</i>
Hotels/Motels	23.537	10.160	10.184	14.492	17.802	19.351	20.739
Shopping/Retail	16.510	11.605	12.093	15.125	17.462	19.530	20.855
Parking Garages	3.164	1.777	1.622	1.904	2.348	2.721	3.075
Amusement	7.596	5.966	6.483	7.028	7.637	8.153	8.549
Private Offices	36.585	23.086	22.296	24.333	26.070	27.574	29.451
Governmental Offices	11.749	10.917	11.579	12.156	12.703	13.169	13.583
Laboratories (Schools & Industrial)	2.417	2.143	2.789	3.116	3.267	3.399	3.533
Warehouses	22.563	22.853	23.413	24.080	24.827	25.503	26.764
Sports Stadium/Convention Center	9.835	4.330	4.666	6.064	7.836	9.155	9.844
Transportation Terminals	10.746	2.354	5.177	6.319	7.511	8.761	10.052
<b>TOTAL COMMERCIAL</b>	<b>144.703</b>	<b>95.191</b>	<b>100.301</b>	<b>114.617</b>	<b>127.465</b>	<b>137.318</b>	<b>146.446</b>
<i>(Yr/yr % change)</i>	<i>8.1%</i>	<i>-34.2%</i>	<i>5.4%</i>	<i>14.3%</i>	<i>11.2%</i>	<i>7.7%</i>	<i>6.6%</i>
<b>TOTAL INDUSTRIAL (manufacturing)</b>	<b>55.810</b>	<b>17.848</b>	<b>23.211</b>	<b>28.600</b>	<b>32.367</b>	<b>35.123</b>	<b>37.366</b>
<i>(Yr/yr % change)</i>	<i>55.9%</i>	<i>-68.0%</i>	<i>30.1%</i>	<i>23.2%</i>	<i>13.2%</i>	<i>8.5%</i>	<i>6.4%</i>
Religious	1.889	1.454	1.632	1.819	1.874	1.920	1.959
Hospitals/Clinics	21.790	12.505	13.891	15.923	18.159	20.204	22.076
Nursing Homes/Assisted Living	9.599	6.969	9.523	11.150	11.991	12.575	13.055
Libraries/Museums	4.072	3.660	4.069	4.302	4.523	4.728	4.893
Courthouse	1.568	2.381	2.297	2.474	2.641	2.769	2.878
Police/Fire	3.260	3.362	3.550	3.715	3.861	4.005	4.153
Prisons	2.111	2.480	2.617	2.816	2.921	3.027	3.137
Military	5.049	9.154	7.265	7.938	8.552	9.040	9.461
Educational Facilities	75.879	65.719	70.118	75.503	80.075	84.006	87.591
MED misc	9.342	7.252	8.609	9.826	11.193	11.977	12.812
<b>TOTAL INSTITUTIONAL</b>	<b>134.560</b>	<b>114.937</b>	<b>123.571</b>	<b>135.466</b>	<b>145.791</b>	<b>154.251</b>	<b>162.015</b>
<i>(Yr/yr % change)</i>	<i>4.7%</i>	<i>-14.6%</i>	<i>7.5%</i>	<i>9.6%</i>	<i>7.6%</i>	<i>5.8%</i>	<i>5.0%</i>
Miscellaneous Non-Res Building	7.667	5.445	6.330	6.965	7.406	7.825	8.046
<b>TOTAL NON-RES BLDG</b>	<b>342.740</b>	<b>233.420</b>	<b>253.413</b>	<b>285.648</b>	<b>313.028</b>	<b>334.518</b>	<b>353.873</b>
<i>(Yr/yr % change)</i>	<i>12.2%</i>	<i>-31.9%</i>	<i>8.6%</i>	<i>12.7%</i>	<i>9.6%</i>	<i>6.9%</i>	<i>5.8%</i>
Airport	7.393	6.083	6.396	7.467	8.241	9.332	10.091
Roads	65.315	63.486	70.005	76.027	79.990	83.154	86.452
Bridges	30.186	22.477	23.987	26.315	28.033	29.101	30.030
Dams/Canal/Marine	8.547	8.221	8.715	9.193	9.741	10.079	10.395
Water & Sewage Treatment	31.617	31.235	33.964	35.588	37.198	38.820	40.347
Misc Civil (Power, etc.)	46.189	21.630	30.011	36.692	40.884	44.510	47.262
<b>TOTAL ENGINEERING</b>	<b>189.247</b>	<b>153.132</b>	<b>173.079</b>	<b>191.283</b>	<b>204.087</b>	<b>214.996</b>	<b>224.575</b>
<i>(Yr/yr % change)</i>	<i>16.1%</i>	<i>-19.1%</i>	<i>13.0%</i>	<i>10.5%</i>	<i>6.7%</i>	<i>5.3%</i>	<i>4.5%</i>
<b>TOTAL NON-RESIDENTIAL</b>	<b>531.987</b>	<b>386.553</b>	<b>426.492</b>	<b>476.930</b>	<b>517.115</b>	<b>549.514</b>	<b>578.449</b>
<i>(Yr/yr % change)</i>	<i>13.6%</i>	<i>-27.3%</i>	<i>10.3%</i>	<i>11.8%</i>	<i>8.4%</i>	<i>6.3%</i>	<i>5.3%</i>
<b>GRAND TOTAL</b>	<b>829.810</b>	<b>678.013</b>	<b>737.601</b>	<b>815.955</b>	<b>884.114</b>	<b>945.963</b>	<b>1,004.039</b>
<i>(Yr/yr % change)</i>	<i>8.5%</i>	<i>-18.3%</i>	<i>8.8%</i>	<i>10.6%</i>	<i>8.4%</i>	<i>7.0%</i>	<i>6.1%</i>

EXPLANATION: Table 3 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 4 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

**Table 4: U.S. Type-of-Structure Forecasts**  
 Arranged to match the alphabetical category drop-down menus in INSIGHT (\$ Billions USD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
<b>Summary</b>							
CIVIL	189.247	153.132	173.079	191.283	204.087	214.996	224.575
NON-RESIDENTIAL BUILDING	342.740	233.420	253.413	285.648	313.028	334.518	353.873
RESIDENTIAL	297.823	291.461	311.110	339.024	366.999	396.449	425.590
<b>GRAND TOTAL</b>	<b>829.810</b>	<b>678.013</b>	<b>737.601</b>	<b>815.955</b>	<b>884.114</b>	<b>945.963</b>	<b>1,004.039</b>
<b>Verticals</b>							
Airport	7.393	6.083	6.396	7.467	8.241	9.332	10.091
All Other Civil	31.491	18.065	20.197	23.521	26.500	28.898	30.470
Bridges	30.186	22.477	23.987	26.315	28.033	29.101	30.030
Dams / Canals / Marine Work	8.547	8.221	8.715	9.193	9.741	10.079	10.395
Power Infrastructure	14.697	3.565	9.814	13.171	14.384	15.612	16.792
Roads	65.315	63.486	70.005	76.027	79.990	83.154	86.452
Water and Sewage Treatment	31.617	31.235	33.964	35.588	37.198	38.820	40.347
<b>CIVIL</b>	<b>189.247</b>	<b>153.132</b>	<b>173.079</b>	<b>191.283</b>	<b>204.087</b>	<b>214.996</b>	<b>224.575</b>
<i>(Yr/yr % change)</i>	<i>16.1%</i>	<i>-19.1%</i>	<i>13.0%</i>	<i>10.5%</i>	<i>6.7%</i>	<i>5.3%</i>	<i>4.5%</i>
Offices (private)	36.585	23.086	22.296	24.333	26.070	27.574	29.451
Parking Garages	3.164	1.777	1.622	1.904	2.348	2.721	3.075
Transportation Terminals	10.746	2.354	5.177	6.319	7.511	8.761	10.052
<b>Commercial</b>	<b>50.496</b>	<b>27.217</b>	<b>29.094</b>	<b>32.556</b>	<b>35.930</b>	<b>39.057</b>	<b>42.578</b>
<i>(Yr/yr % change)</i>	<i>32.9%</i>	<i>-46.1%</i>	<i>6.9%</i>	<i>11.9%</i>	<i>10.4%</i>	<i>8.7%</i>	<i>9.0%</i>
Amusement	7.596	5.966	6.483	7.028	7.637	8.153	8.549
Libraries / Museums	4.072	3.660	4.069	4.302	4.523	4.728	4.893
Religious	1.889	1.454	1.632	1.819	1.874	1.920	1.959
Sports Arenas / Convention Centers	9.835	4.330	4.666	6.064	7.836	9.155	9.844
<b>Community</b>	<b>23.392</b>	<b>15.411</b>	<b>16.851</b>	<b>19.212</b>	<b>21.871</b>	<b>23.956</b>	<b>25.245</b>
<i>(Yr/yr % change)</i>	<i>14.0%</i>	<i>-34.1%</i>	<i>9.3%</i>	<i>14.0%</i>	<i>13.8%</i>	<i>9.5%</i>	<i>5.4%</i>
College / University	19.675	17.014	17.297	18.818	20.152	21.408	22.735
Elementary / Pre School	21.456	19.518	21.207	22.878	24.477	25.848	26.910
Jr / Sr High School	32.841	27.262	29.593	31.725	33.302	34.550	35.693
Special / Vocational	1.908	1.924	2.022	2.083	2.145	2.200	2.252
<b>Educational</b>	<b>75.879</b>	<b>65.719</b>	<b>70.118</b>	<b>75.503</b>	<b>80.075</b>	<b>84.006</b>	<b>87.591</b>
<i>(Yr/yr % change)</i>	<i>6.1%</i>	<i>-13.4%</i>	<i>6.7%</i>	<i>7.7%</i>	<i>6.1%</i>	<i>4.9%</i>	<i>4.3%</i>
Courthouses	1.568	2.381	2.297	2.474	2.641	2.769	2.878
Fire and Police Stations	3.260	3.362	3.550	3.715	3.861	4.005	4.153
Government Offices	11.749	10.917	11.579	12.156	12.703	13.169	13.583
Prisons	2.111	2.480	2.617	2.816	2.921	3.027	3.137
<b>Government</b>	<b>18.688</b>	<b>19.140</b>	<b>20.042</b>	<b>21.161</b>	<b>22.126</b>	<b>22.970</b>	<b>23.751</b>
<i>(Yr/yr % change)</i>	<i>-2.3%</i>	<i>2.4%</i>	<i>4.7%</i>	<i>5.6%</i>	<i>4.6%</i>	<i>3.8%</i>	<i>3.4%</i>
Industrial Labs / Labs / School Labs	2.417	2.143	2.789	3.116	3.267	3.399	3.533
Manufacturing	55.810	17.848	23.211	28.600	32.367	35.123	37.366
Warehouses	22.563	22.853	23.413	24.080	24.827	25.503	26.764
<b>Industrial</b>	<b>80.790</b>	<b>42.844</b>	<b>49.413</b>	<b>55.797</b>	<b>60.461</b>	<b>64.025</b>	<b>67.663</b>
<i>(Yr/yr % change)</i>	<i>33.6%</i>	<i>-47.0%</i>	<i>15.3%</i>	<i>12.9%</i>	<i>8.4%</i>	<i>5.9%</i>	<i>5.7%</i>
Hospitals / Clinics	21.790	12.505	13.891	15.923	18.159	20.204	22.076
Medical Misc.	9.342	7.252	8.609	9.826	11.193	11.977	12.812
Nursing Homes	9.599	6.969	9.523	11.150	11.991	12.575	13.055
<b>Medical</b>	<b>40.731</b>	<b>26.726</b>	<b>32.023</b>	<b>36.899</b>	<b>41.343</b>	<b>44.756</b>	<b>47.943</b>
<i>(Yr/yr % change)</i>	<i>5.1%</i>	<i>-34.4%</i>	<i>19.8%</i>	<i>15.2%</i>	<i>12.0%</i>	<i>8.3%</i>	<i>7.1%</i>
Military	5.049	9.154	7.265	7.938	8.552	9.040	9.461
<i>(Yr/yr % change)</i>	<i>-3.5%</i>	<i>81.3%</i>	<i>-20.6%</i>	<i>9.3%</i>	<i>7.7%</i>	<i>5.7%</i>	<i>4.7%</i>
Hotels	23.537	10.160	10.184	14.492	17.802	19.351	20.739
Retail Misc.	7.667	5.445	6.330	6.965	7.406	7.825	8.046
Shopping	16.510	11.605	12.093	15.125	17.462	19.530	20.855
<b>Retail</b>	<b>47.715</b>	<b>27.210</b>	<b>28.607</b>	<b>36.581</b>	<b>42.670</b>	<b>46.707</b>	<b>49.641</b>
<i>(Yr/yr % change)</i>	<i>-7.8%</i>	<i>-43.0%</i>	<i>5.1%</i>	<i>27.9%</i>	<i>16.6%</i>	<i>9.5%</i>	<i>6.3%</i>
<b>NON-RESIDENTIAL BUILDING</b>	<b>342.740</b>	<b>233.420</b>	<b>253.413</b>	<b>285.648</b>	<b>313.028</b>	<b>334.518</b>	<b>353.873</b>
<i>(Yr/yr % change)</i>	<i>12.2%</i>	<i>-31.9%</i>	<i>8.6%</i>	<i>12.7%</i>	<i>9.6%</i>	<i>6.9%</i>	<i>5.8%</i>
Multi-Family	99.042	71.666	73.390	83.970	91.768	100.025	108.060
Single-Family	198.781	219.795	237.720	255.054	275.231	296.424	317.530
<b>RESIDENTIAL</b>	<b>297.823</b>	<b>291.461</b>	<b>311.110</b>	<b>339.024</b>	<b>366.999</b>	<b>396.449</b>	<b>425.590</b>
<i>(Yr/yr % change)</i>	<i>0.4%</i>	<i>-2.1%</i>	<i>6.7%</i>	<i>9.0%</i>	<i>8.3%</i>	<i>8.0%</i>	<i>7.4%</i>
<b>GRAND TOTAL</b>	<b>829.810</b>	<b>678.013</b>	<b>737.601</b>	<b>815.955</b>	<b>884.114</b>	<b>945.963</b>	<b>1,004.039</b>
<i>(Yr/yr % change)</i>	<i>8.5%</i>	<i>-18.3%</i>	<i>8.8%</i>	<i>10.6%</i>	<i>8.4%</i>	<i>7.0%</i>	<i>6.1%</i>

EXPLANATION: Table 3 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

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Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Table 5: U.S. States, Total Construction Starts — ConstructConnect

States (alphabetical by 2-letter code)	Actuals	Forecasts (Year versus previous year % change)				
	(Level in \$ Millions USD)	2021	2022	2023	2024	2025
	2020					
Alaska - AK	\$1,968	4.2%	13.1%	5.6%	6.1%	5.8%
Alabama - AL	\$10,053	18.3%	9.9%	8.4%	7.5%	6.1%
Arkansas - AR	\$7,272	-0.8%	10.5%	8.4%	7.5%	6.1%
Arizona - AZ	\$20,355	5.1%	4.7%	8.1%	6.7%	5.9%
California - CA*	\$61,061	3.4%	13.7%	8.8%	7.5%	6.9%
Colorado - CO	\$16,596	14.8%	13.9%	8.8%	7.7%	6.9%
Connecticut - CT	\$5,246	24.8%	10.9%	5.6%	5.2%	4.8%
District Of Columbia - DC	\$2,037	33.2%	14.7%	5.7%	6.2%	6.0%
Delaware - DE	\$2,769	-14.8%	8.7%	5.8%	5.9%	5.5%
Florida - FL*	\$52,004	15.3%	10.3%	8.8%	7.9%	6.7%
Georgia - GA	\$22,848	16.6%	9.0%	9.3%	7.7%	6.5%
Hawaii - HI	\$2,381	17.8%	3.3%	5.6%	3.8%	5.8%
Iowa - IA	\$6,989	10.4%	7.7%	8.3%	7.1%	5.7%
Idaho - ID	\$4,850	5.3%	3.8%	7.7%	7.7%	6.4%
Illinois - IL	\$19,153	8.2%	6.8%	7.5%	6.3%	5.2%
Indiana - IN	\$13,456	3.5%	8.8%	9.2%	7.2%	5.7%
Kansas - KS	\$6,961	-5.1%	7.6%	8.6%	7.0%	5.8%
Kentucky - KY	\$7,711	0.3%	14.3%	7.5%	6.9%	5.7%
Louisiana - LA	\$8,220	35.7%	3.0%	7.9%	7.0%	5.8%
Massachusetts - MA	\$11,821	13.0%	18.6%	5.2%	6.1%	5.8%
Maryland - MD	\$10,626	-0.7%	9.0%	6.2%	5.7%	5.0%
Maine - ME	\$2,345	10.1%	2.8%	6.4%	5.7%	5.5%
Michigan - MI	\$11,565	-2.2%	7.0%	5.5%	5.4%	5.3%
Minnesota - MN	\$14,931	2.0%	8.1%	7.3%	6.9%	5.6%
Missouri - MO	\$13,909	-1.2%	5.1%	7.4%	6.4%	5.2%
Mississippi - MS	\$4,937	-2.9%	6.7%	7.7%	7.8%	6.0%
Montana - MT	\$2,038	27.7%	20.5%	8.7%	7.0%	5.8%
North Carolina - NC	\$25,389	14.7%	12.9%	8.6%	7.9%	6.8%
North Dakota - ND	\$3,001	-5.5%	12.8%	8.1%	7.4%	6.5%
Nebraska - NE	\$5,974	-3.9%	6.7%	7.8%	7.9%	6.1%
New Hampshire - NH	\$1,793	33.7%	18.5%	5.3%	5.6%	5.6%
New Jersey - NJ	\$10,689	15.0%	14.9%	6.2%	5.7%	4.9%
New Mexico - NM	\$3,611	-10.3%	8.1%	7.4%	6.7%	5.5%
Nevada - NV	\$6,956	30.3%	22.2%	8.4%	6.8%	6.4%
New York - NY*	\$27,022	-2.6%	19.5%	16.4%	6.2%	6.2%
Ohio - OH	\$18,959	-4.9%	11.2%	6.7%	6.3%	5.3%
Oklahoma - OK	\$7,799	15.4%	8.7%	7.9%	7.6%	6.3%
Oregon - OR	\$7,735	15.8%	14.7%	7.3%	7.3%	7.0%
Pennsylvania - PA	\$16,089	26.5%	15.3%	6.3%	5.1%	5.0%
Rhode Island - RI	\$969	29.9%	15.8%	6.6%	6.2%	5.4%
South Carolina - SC	\$12,670	8.7%	9.9%	8.0%	7.3%	5.9%
South Dakota - SD	\$2,243	26.7%	11.5%	7.9%	7.3%	5.7%
Tennessee - TN	\$19,155	5.6%	7.0%	8.3%	7.3%	6.0%
Texas - TX*	\$93,589	11.2%	8.3%	9.1%	7.0%	6.6%
Utah - UT	\$12,282	9.8%	6.5%	8.6%	7.8%	6.8%
Virginia - VA	\$17,983	10.5%	10.2%	8.1%	7.0%	5.5%
Vermont - VT	\$864	1.1%	22.9%	4.4%	6.6%	5.8%
Washington - WA	\$21,653	1.3%	11.9%	7.4%	7.3%	6.6%
Wisconsin - WI	\$13,183	6.4%	11.0%	6.9%	6.3%	5.1%
West Virginia - WV	\$2,946	-1.7%	11.6%	7.0%	5.6%	4.7%
Wyoming - WY	\$1,361	55.0%	21.3%	8.1%	7.4%	5.9%
United States	\$678,013	8.8%	10.6%	8.4%	7.0%	6.1%

\*One in three Americans lives in one of the four shaded states, New York, Florida, Texas or California.  
Sum of first column may not exactly equal total due to rounding.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect /  
Table: ConstructConnect.

**Table 6: U.S. Four Largest States: Type-of-Structure Forecasts**  
(\$ Billions USD)


		Actuals		Forecasts				
		2019	2020	2021	2022	2023	2024	2025
New York	Residential	10.761	7.787	7.736	8.510	10.267	11.242	12.082
	Non-res Building	21.070	14.060	10.897	13.917	15.429	16.105	17.146
	Engineering/Civil	7.802	5.175	7.685	9.034	10.917	11.524	12.037
	Total	39.632	27.022	26.318	31.462	36.613	38.872	41.265
	(Yr vs previous yr % Change)	3.9%	-31.8%	-2.6%	19.5%	16.4%	6.2%	6.2%
Florida	Residential	28.887	28.398	32.003	35.531	38.540	41.922	45.205
	Non-res Building	18.938	14.905	16.520	18.038	20.005	21.646	22.921
	Engineering/Civil	14.363	8.700	11.444	12.584	13.399	14.078	14.686
	Total	62.188	52.004	59.967	66.153	71.945	77.646	82.811
	(Yr vs previous yr % Change)	11.9%	-16.4%	15.3%	10.3%	8.8%	7.9%	6.7%
Texas	Residential	44.134	44.983	46.888	50.149	53.589	57.313	61.865
	Non-res Building	63.303	29.430	34.475	38.152	43.611	47.017	49.797
	Engineering/Civil	24.006	19.176	22.708	24.362	25.694	27.213	28.515
	Total	131.444	93.589	104.070	112.662	122.894	131.543	140.177
	(Yr vs previous yr % Change)	36.7%	-28.8%	11.2%	8.3%	9.1%	7.0%	6.6%
California	Residential	24.358	22.668	22.647	24.634	27.335	30.127	32.747
	Non-res Building	25.881	20.221	24.040	28.693	30.858	32.714	34.854
	Engineering/Civil	15.566	18.172	16.442	18.446	19.879	21.061	22.090
	Total	65.806	61.061	63.129	71.772	78.071	83.902	89.690
	(Yr vs previous yr % Change)	-7.3%	-7.2%	3.4%	13.7%	8.8%	7.5%	6.9%

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
Table: ConstructConnect.

## Tweeted by ConstructConnect:

@ConstructConnx

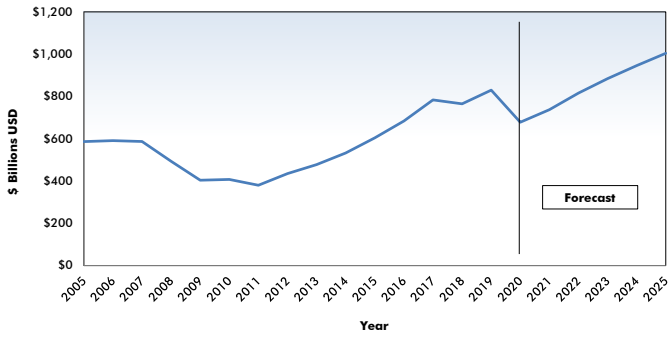
Yes, there have been declines in tax receipts caused by the pandemic, but they have not been as severe as perhaps imagined. In fact, total state & local tax collection over the past 4 quarters has been +1.3% compared with a year ago.



Link to article here: <https://bit.ly/3j0A2e4>

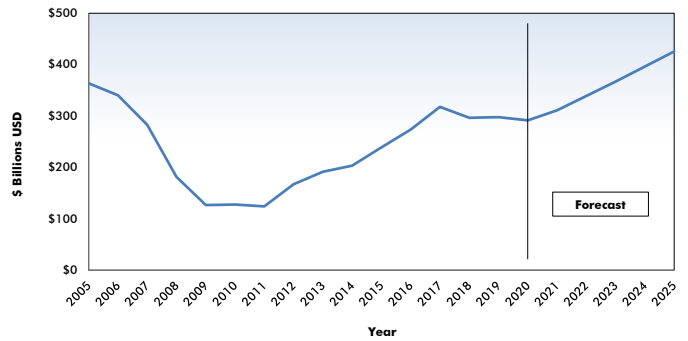


**Graph 1: U.S. Grand Total Construction Starts — ConstructConnect**



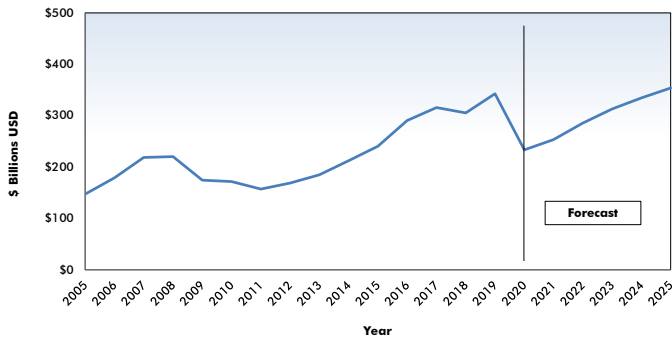
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 2: U.S. Total Residential Construction Starts — ConstructConnect**



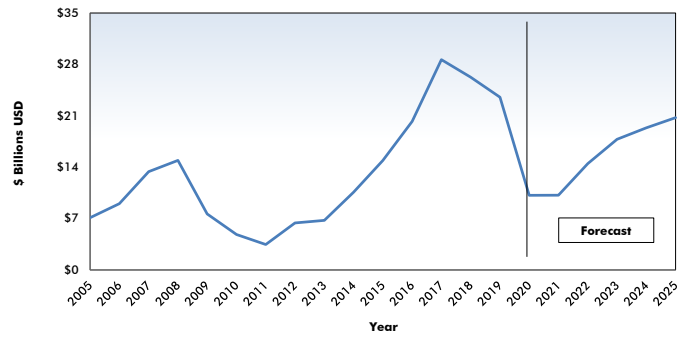
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 3: U.S. Total Non-Residential Building Starts — ConstructConnect**



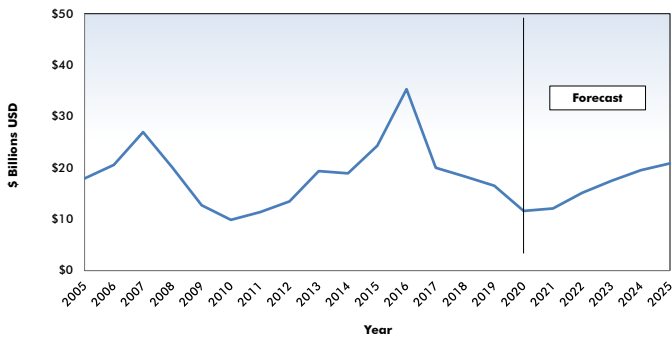
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 4: U.S. Hotel/Motel Construction Starts — ConstructConnect**



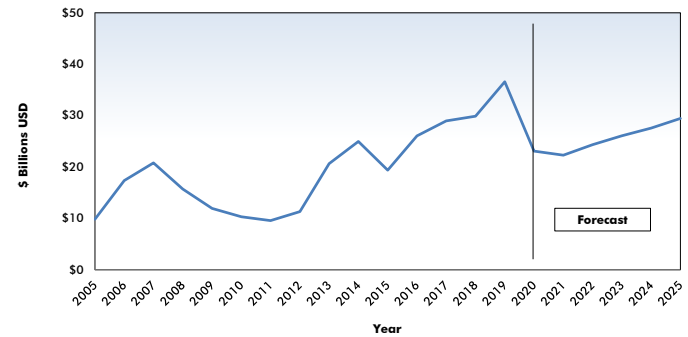
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 5: U.S. Shopping/Retail Construction Starts — ConstructConnect**



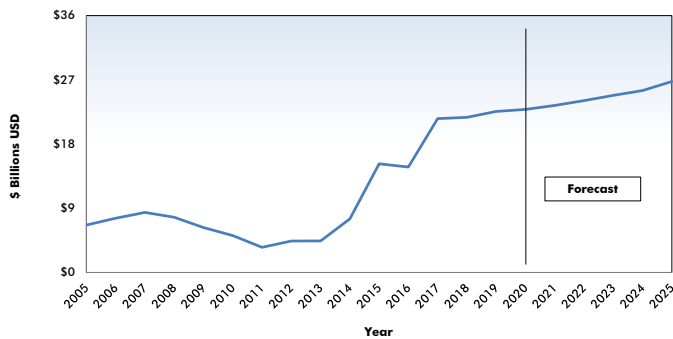
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 6: U.S. Private Office Building Construction Starts — ConstructConnect**



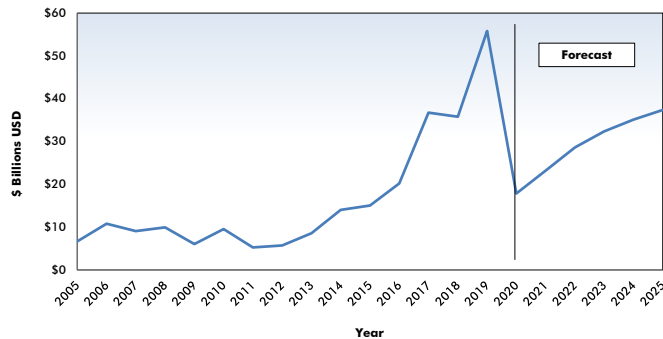
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 7: U.S. Warehouse Construction Starts — ConstructConnect**



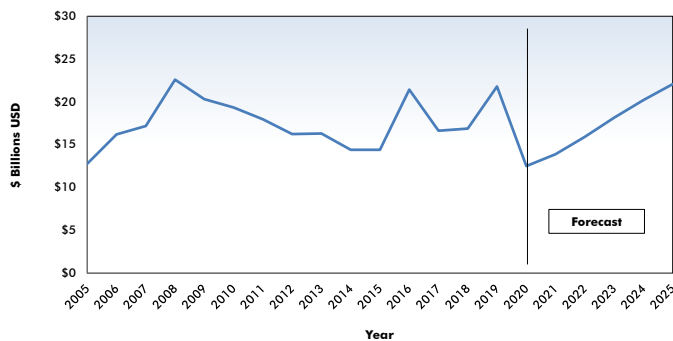
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 8: U.S. Industrial/Manufacturing Construction Starts — ConstructConnect**



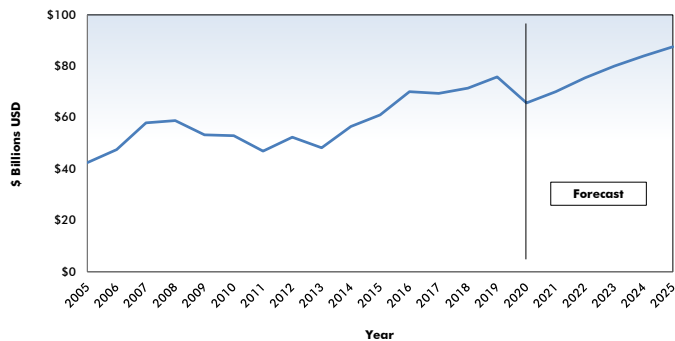
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 9: U.S. Hospital and Clinic Construction Starts — ConstructConnect**



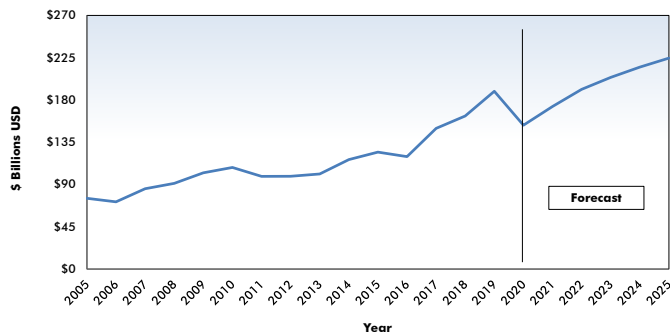
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 10: U.S. Total Educational Construction Starts — ConstructConnect**



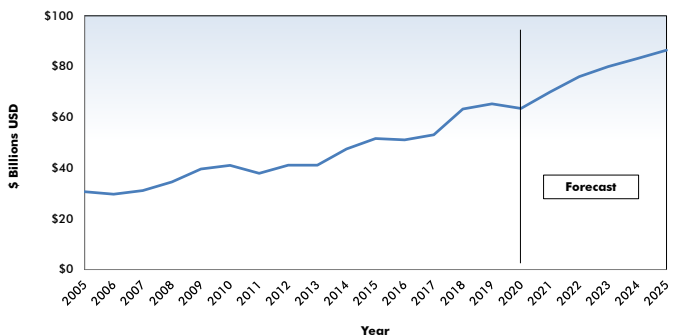
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 11: U.S. Total Heavy Engineering/Civil Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 12: U.S. Roadwork Construction Starts — ConstructConnect**



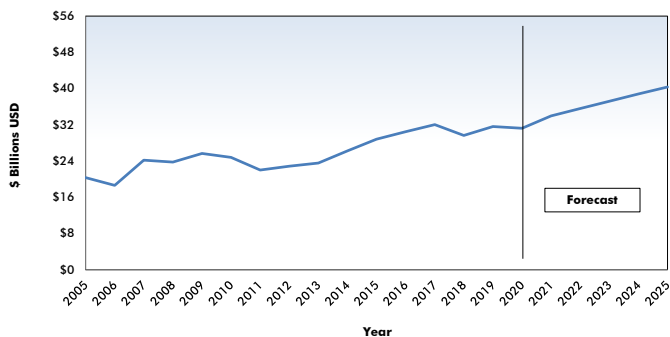
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 13: U.S. Bridge Construction Starts — ConstructConnect



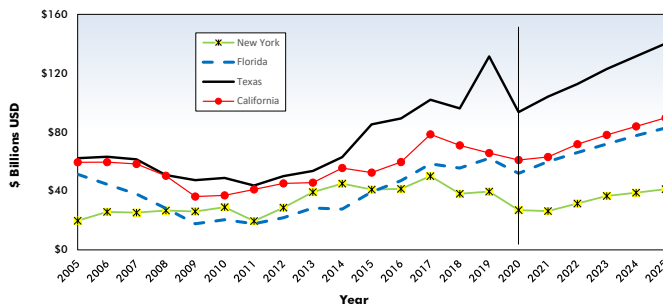
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 14: U.S. Water and Sewage Treatment Construction Starts — ConstructConnect



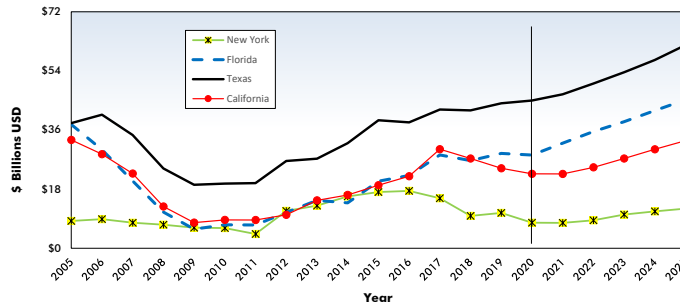
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 15: U.S. Four Largest States (by Population): Total Construction Starts — ConstructConnect



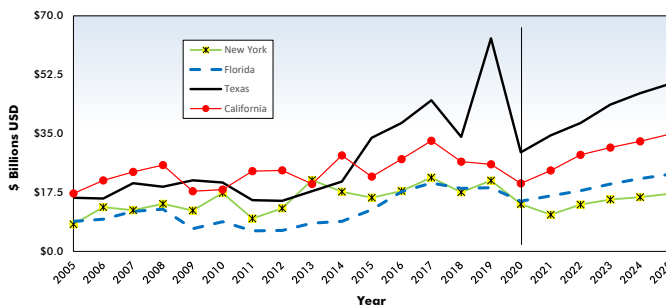
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 16: U.S. Four Largest States: Total Residential Construction Starts — ConstructConnect



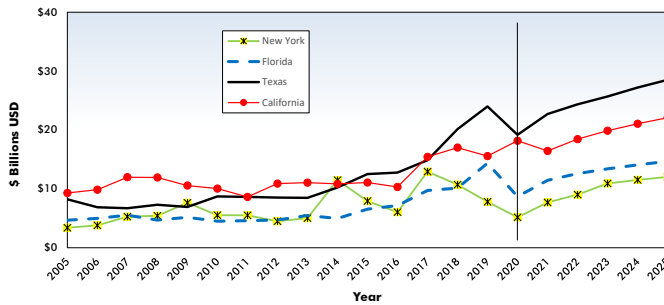
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 17: U.S. Four Largest States: Total Non-residential Building Starts — ConstructConnect



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 18: U.S. Four Largest States: Total Engineering/Civil Construction Starts — ConstructConnect



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Table 7: Canada Type-of-Structure Forecasts**  
(\$ Billions CAD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Single-family	12.331	13.291	14.320	15.271	16.322	17.391	18.495
Multi-family	18.466	8.890	9.083	10.892	12.388	13.510	14.607
<b>TOTAL RESIDENTIAL</b>	<b>30.797</b>	<b>22.182</b>	<b>23.402</b>	<b>26.163</b>	<b>28.709</b>	<b>30.901</b>	<b>33.102</b>
(Yr/yr % change)	3.5%	-28.0%	5.5%	11.8%	9.7%	7.6%	7.1%
Hotels/Motels	0.657	0.325	0.364	0.500	0.625	0.701	0.735
Private Offices	3.797	1.785	1.704	1.966	2.191	2.424	2.633
Governmental Offices	3.184	1.311	1.361	1.520	1.725	1.898	2.052
Shopping/Retail	2.296	0.289	0.423	0.645	0.803	0.934	1.030
Retail Miscellaneous	0.239	0.089	0.173	0.212	0.250	0.284	0.314
Parking Garages	0.383	0.127	0.139	0.162	0.192	0.227	0.262
Amusement	2.351	0.907	1.197	1.429	1.640	1.808	1.911
Warehouses	1.444	1.727	1.983	2.110	2.224	2.280	2.327
<b>TOTAL COMMERCIAL</b>	<b>14.351</b>	<b>6.561</b>	<b>7.345</b>	<b>8.543</b>	<b>9.649</b>	<b>10.555</b>	<b>11.264</b>
(Yr/yr % change)	50.6%	-54.3%	12.0%	16.3%	12.9%	9.4%	6.7%
<b>TOTAL INDUSTRIAL (manufacturing)</b>	<b>3.350</b>	<b>2.344</b>	<b>4.632</b>	<b>6.655</b>	<b>8.205</b>	<b>8.911</b>	<b>9.464</b>
(Yr/yr % change)	-82.7%	-30.0%	97.7%	43.7%	23.3%	8.6%	6.2%
Religious	0.050	0.033	0.047	0.061	0.074	0.090	0.103
Hospitals/Clinics	3.663	3.237	3.631	4.083	4.559	4.879	5.175
MED misc	0.295	0.114	0.236	0.371	0.458	0.540	0.616
Transportation Terminals*	1.497	5.277	3.645	5.172	5.419	5.651	5.907
Police/Fire	1.020	0.710	0.835	0.923	0.997	1.071	1.147
Educational Facilities	5.167	4.341	4.737	5.227	5.516	5.755	5.934
<b>TOTAL INSTITUTIONAL</b>	<b>11.691</b>	<b>13.712</b>	<b>13.131</b>	<b>15.838</b>	<b>17.023</b>	<b>17.986</b>	<b>18.882</b>
(Yr/yr % change)	-32.0%	17.3%	-4.2%	20.6%	7.5%	5.7%	5.0%
<b>TOTAL NON-RES BUILDING</b>	<b>29.392</b>	<b>22.617</b>	<b>25.108</b>	<b>31.036</b>	<b>34.877</b>	<b>37.452</b>	<b>39.610</b>
(Yr/yr % change)	-36.2%	-23.1%	11.0%	23.6%	12.4%	7.4%	5.8%
Bridges	2.275	3.545	3.716	3.817	3.821	3.753	3.643
Dams/Canal/Marine	0.710	0.554	0.662	0.735	0.798	0.848	0.898
Water & Sewage Treatment	3.827	2.794	3.618	4.178	4.636	4.967	5.278
Roads	9.677	9.496	10.207	11.096	11.970	12.761	13.271
Power Infrastructure	3.173	2.351	3.305	4.505	5.312	6.054	6.736
All Other Civil (Oil & Gas etc.)	17.479	12.091	14.290	16.624	19.012	21.471	23.660
<b>TOTAL ENGINEERING</b>	<b>37.141</b>	<b>30.830</b>	<b>35.798</b>	<b>40.955</b>	<b>45.548</b>	<b>49.853</b>	<b>53.487</b>
(Yr/yr % change)	5.8%	-17.0%	16.1%	14.4%	11.2%	9.4%	7.3%
<b>TOTAL NON-RESIDENTIAL</b>	<b>66.533</b>	<b>53.447</b>	<b>60.906</b>	<b>71.991</b>	<b>80.425</b>	<b>87.305</b>	<b>93.097</b>
(Yr/yr % change)	-18.1%	-19.7%	14.0%	18.2%	11.7%	8.6%	6.6%
<b>GRAND TOTAL</b>	<b>97.330</b>	<b>75.629</b>	<b>84.308</b>	<b>98.154</b>	<b>109.134</b>	<b>118.206</b>	<b>126.199</b>
(Yr/yr % change)	-12.3%	-22.3%	11.5%	16.4%	11.2%	8.3%	6.8%

\* With respect to Tables 3 and 7, 'transportation terminals' is the one type-of-structure that is categorized differently in Canada (institutional) than in the U.S. (commercial), for reasons having to do with government statistics.

EXPLANATION: Table 7 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 8 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
Table: ConstructConnect.

**Table 8: Canada Type-of-Structure Forecasts**

Arranged to match the alphabetical category drop-down menus in INSIGHT (\$ Billions CAD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
<b>Summary</b>							
CIVIL	37.141	30.830	35.798	40.955	45.548	49.853	53.487
NON-RESIDENTIAL BUILDING	29.392	22.617	25.108	31.036	34.877	37.452	39.610
RESIDENTIAL	30.797	22.182	23.402	26.163	28.709	30.901	33.102
GRAND TOTAL	97.330	75.629	84.308	98.154	109.134	118.206	126.199
<b>Verticals</b>							
All Other Civil	17.479	12.091	14.290	16.624	19.012	21.471	23.660
Bridges	2.275	3.545	3.716	3.817	3.821	3.753	3.643
Dams / Canals / Marine Work	0.710	0.554	0.662	0.735	0.798	0.848	0.898
Power Infrastructure	3.173	2.351	3.305	4.505	5.312	6.054	6.736
Roads	9.677	9.496	10.207	11.096	11.970	12.761	13.271
Water and Sewage Treatment	3.827	2.794	3.618	4.178	4.636	4.967	5.278
CIVIL	37.141	30.830	35.798	40.955	45.548	49.853	53.487
(Yr/yr % change)	5.8%	-17.0%	16.1%	14.4%	11.2%	9.4%	7.3%
Offices (private)	3.797	1.785	1.704	1.966	2.191	2.424	2.633
Parking Garages	0.383	0.127	0.139	0.162	0.192	0.227	0.262
Transportation Terminals	1.497	5.277	3.645	5.172	5.419	5.651	5.907
Commercial	5.678	7.190	5.488	7.300	7.801	8.301	8.801
(Yr/yr % change)	-38.5%	26.6%	-23.7%	33.0%	6.9%	6.4%	6.0%
Amusement	2.351	0.907	1.197	1.429	1.640	1.808	1.911
Religious	0.050	0.033	0.047	0.061	0.074	0.090	0.103
Community	2.401	0.941	1.244	1.490	1.715	1.898	2.014
(Yr/yr % change)	-9.6%	-60.8%	32.2%	19.8%	15.1%	10.7%	6.1%
Educational	5.167	4.341	4.737	5.227	5.516	5.755	5.934
(Yr/yr % change)	22.3%	-16.0%	9.1%	10.3%	5.5%	4.3%	3.1%
Fire and Police Stations	1.020	0.710	0.835	0.923	0.997	1.071	1.147
Government Offices	3.184	1.311	1.361	1.520	1.725	1.898	2.052
Government	4.204	2.021	2.196	2.443	2.722	2.969	3.200
(Yr/yr % change)	16.3%	-51.9%	8.7%	11.2%	11.4%	9.1%	7.8%
Manufacturing	3.350	2.344	4.632	6.655	8.205	8.911	9.464
Warehouses	1.444	1.727	1.983	2.110	2.224	2.280	2.327
Industrial	4.793	4.070	6.616	8.765	10.428	11.191	11.791
(Yr/yr % change)	-77.4%	-15.1%	62.5%	32.5%	19.0%	7.3%	5.4%
Hospitals / Clinics	3.663	3.237	3.631	4.083	4.559	4.879	5.175
Medical Misc.	0.295	0.114	0.236	0.371	0.458	0.540	0.616
Medical	3.958	3.351	3.867	4.454	5.017	5.419	5.791
(Yr/yr % change)	7.7%	-15.3%	15.4%	15.2%	12.6%	8.0%	6.9%
Hotels	0.657	0.325	0.364	0.500	0.625	0.701	0.735
Retail Misc.	0.239	0.089	0.173	0.212	0.250	0.284	0.314
Shopping	2.296	0.289	0.423	0.645	0.803	0.934	1.030
Retail	3.192	0.703	0.960	1.357	1.678	1.919	2.079
(Yr/yr % change)	117.2%	-78.0%	36.5%	41.3%	23.7%	14.4%	8.4%
NON-RESIDENTIAL BUILDING	29.392	22.617	25.108	31.036	34.877	37.452	39.610
(Yr/yr % change)	-36.2%	-23.1%	11.0%	23.6%	12.4%	7.4%	5.8%
Multi-Family	18.466	8.890	9.083	10.892	12.388	13.510	14.607
Single-Family	12.331	13.291	14.320	15.271	16.322	17.391	18.495
RESIDENTIAL	30.797	22.182	23.402	26.163	28.709	30.901	33.102
(Yr/yr % change)	3.5%	-28.0%	5.5%	11.8%	9.7%	7.6%	7.1%
TOTAL NON-RESIDENTIAL	66.533	53.447	60.906	71.991	80.425	87.305	93.097
(Yr/yr % change)	-18.1%	-19.7%	14.0%	18.2%	11.7%	8.6%	6.6%
GRAND TOTAL	97.330	75.629	84.308	98.154	109.134	118.206	126.199
(Yr/yr % change)	-12.3%	-22.3%	11.5%	16.4%	11.2%	8.3%	6.8%

EXPLANATION: Table 7 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 8 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

**Table 9: Canadian Provinces, Total Construction Starts — ConstructConnect**

Regions/Provinces (East to West)	Actuals (Level in \$ Millions CAD)	Forecasts (Year versus previous year % change)				
	2020	2021	2022	2023	2024	2025
Atlantic region	\$3,369	26.7%	18.3%	7.5%	6.2%	4.8%
Quebec	\$14,398	3.7%	22.9%	7.9%	6.8%	6.4%
Ontario	\$29,934	-12.9%	6.4%	11.0%	7.6%	6.4%
Manitoba	\$1,567	13.9%	39.9%	8.2%	10.4%	6.5%
Saskatchewan	\$1,394	28.0%	38.3%	3.7%	13.6%	6.8%
Alberta	\$11,972	45.3%	25.2%	12.9%	8.2%	7.1%
British Columbia	\$12,995	39.0%	12.2%	14.8%	10.3%	7.7%
Canada	\$75,629	11.5%	16.4%	11.2%	8.3%	6.8%

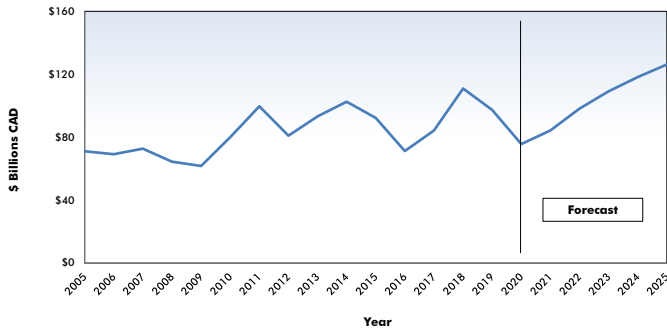
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
Table: ConstructConnect.

**Table 10: Canada Four Largest Provinces: Type-of-Structure Forecasts**  
(\$ Billions CAD)

		Actuals		Forecasts				
		2019	2020	2021	2022	2023	2024	2025
Quebec	Residential	4.934	3.512	4.549	5.483	5.834	6.162	6.575
	Non-res Building	8.271	4.222	5.045	6.911	7.447	7.883	8.353
	Engineering/Civil	7.695	6.664	5.333	5.952	6.519	7.098	7.577
	Total	20.899	14.398	14.927	18.345	19.799	21.143	22.505
	(Yr vs previous yr % Change)	-5.0%	-31.1%	3.7%	22.9%	7.9%	6.8%	6.4%
Ontario	Residential	13.371	10.596	9.479	10.035	10.705	11.513	12.368
	Non-res Building	9.919	12.585	9.037	9.197	10.646	11.434	12.062
	Engineering/Civil	7.715	6.753	7.569	8.529	9.462	10.215	10.853
	Total	31.005	29.934	26.085	27.761	30.812	33.163	35.283
	(Yr vs previous yr % Change)	-12.5%	-3.5%	-12.9%	6.4%	11.0%	7.6%	6.4%
Alberta	Residential	3.949	3.005	3.689	4.321	4.907	5.321	5.682
	Non-res Building	4.138	1.878	3.390	5.306	5.942	6.287	6.650
	Engineering/Civil	10.002	7.089	10.322	12.151	13.731	14.995	16.150
	Total	18.089	11.972	17.401	21.777	24.580	26.603	28.481
	(Yr vs previous yr % Change)	5.1%	-33.8%	45.3%	25.2%	12.9%	8.2%	7.1%
British Columbia	Residential	6.646	3.424	4.140	4.528	5.302	5.736	6.137
	Non-res Building	3.719	2.316	4.794	5.553	6.451	7.106	7.570
	Engineering/Civil	8.444	7.254	9.125	10.177	11.504	12.803	13.905
	Total	18.808	12.995	18.060	20.258	23.257	25.645	27.613
	(Yr vs previous yr % Change)	-29.3%	-30.9%	39.0%	12.2%	14.8%	10.3%	7.7%

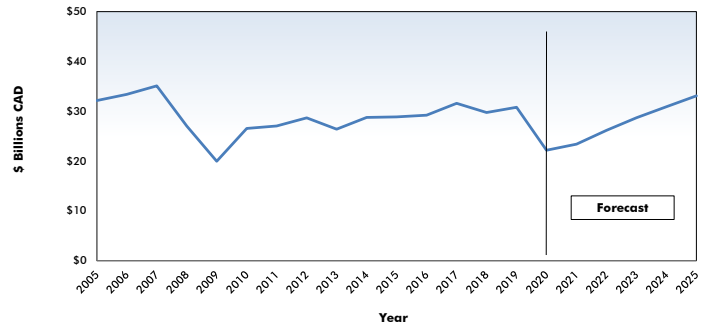
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
Table: ConstructConnect.

**Graph 19: Canadian Grand Total Construction Starts — ConstructConnect**



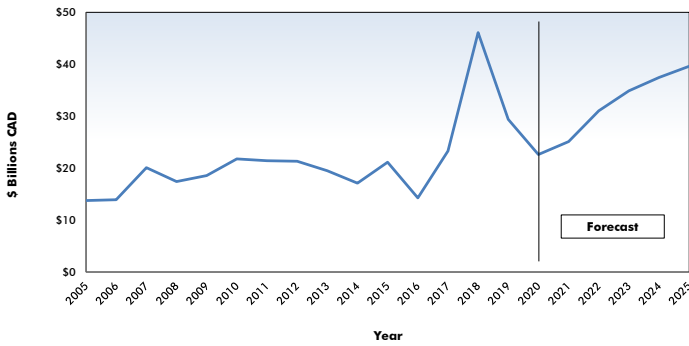
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 20: Canadian Residential Construction Starts — ConstructConnect**



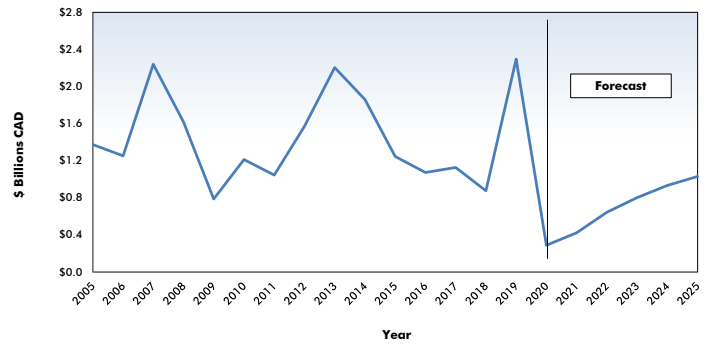
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 21: Canadian Non-Residential Building Starts — ConstructConnect**



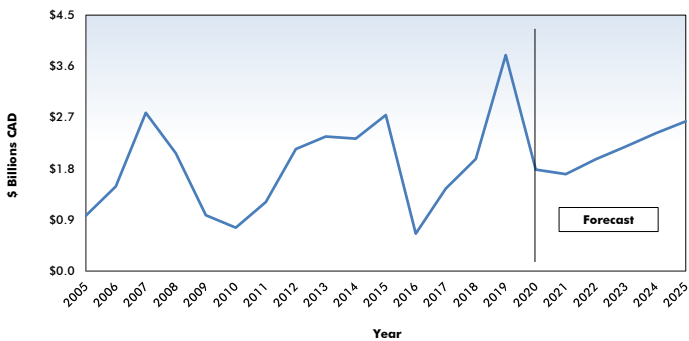
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect**



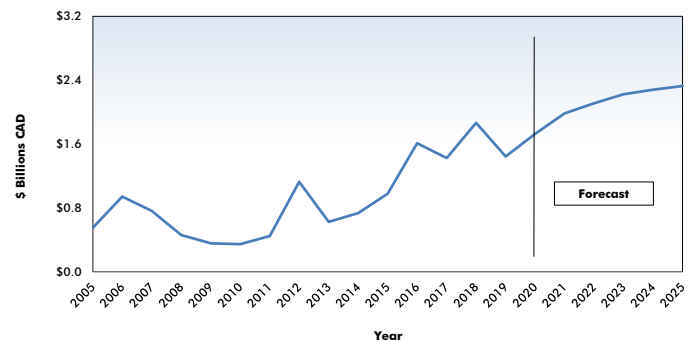
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 23: Canadian Private Offices Construction Starts — ConstructConnect**



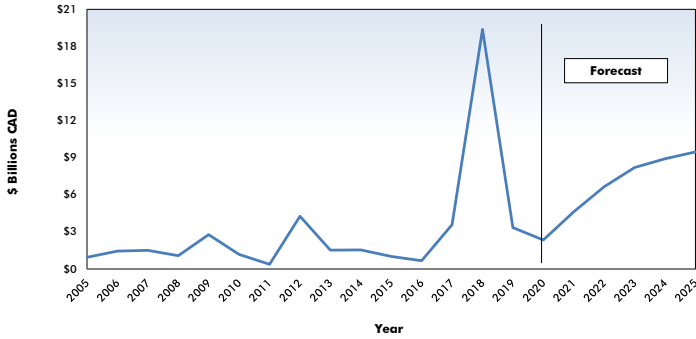
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 24: Canadian Warehouse Construction Starts — ConstructConnect**



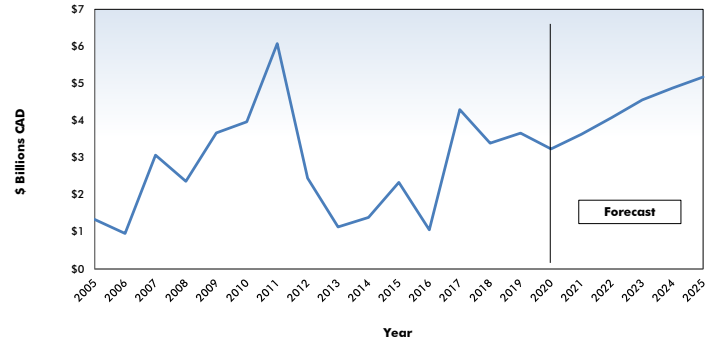
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 25: Canadian Industrial/Manufacturing Construction Starts — ConstructConnect**



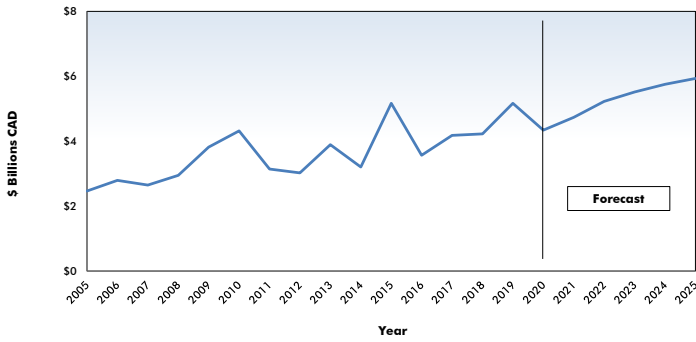
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect**



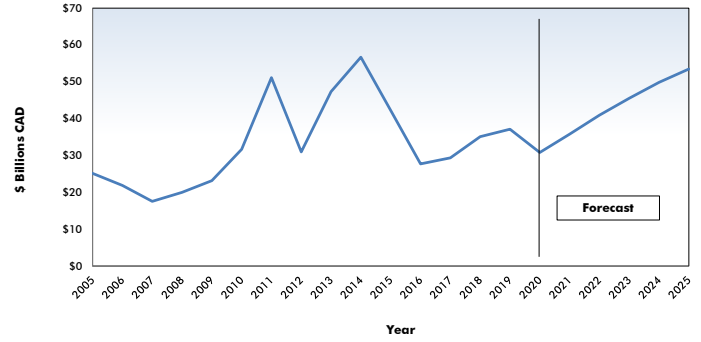
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 27: Canadian Education Construction Starts — ConstructConnect**



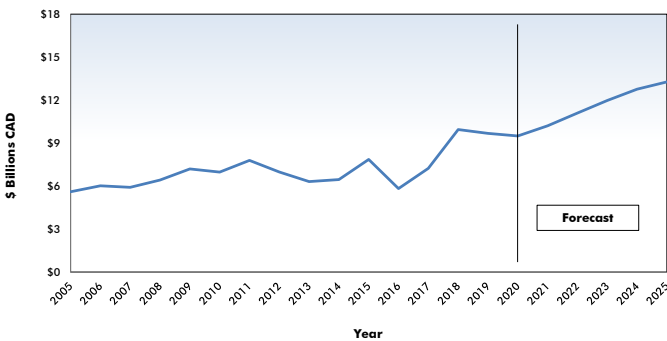
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 28: Canadian Engineering Construction Starts — ConstructConnect**



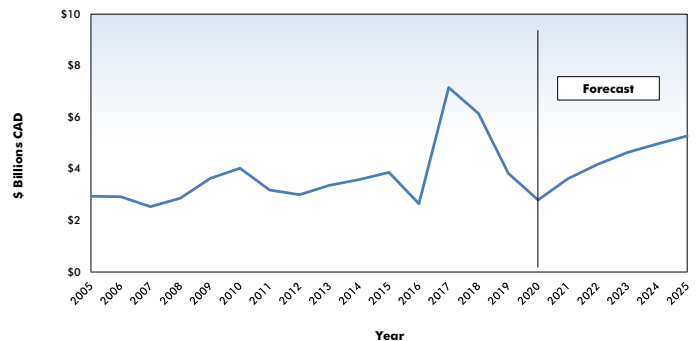
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 29: Canadian Roadwork Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

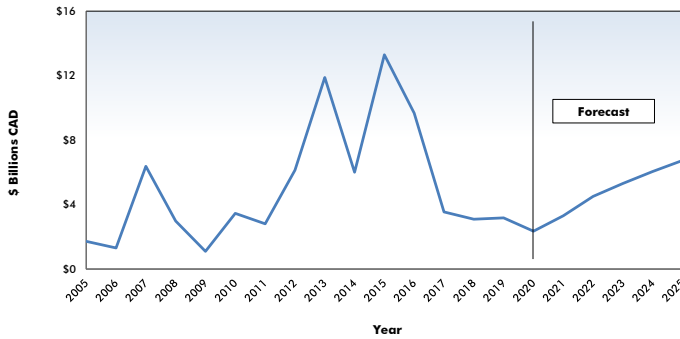
**Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

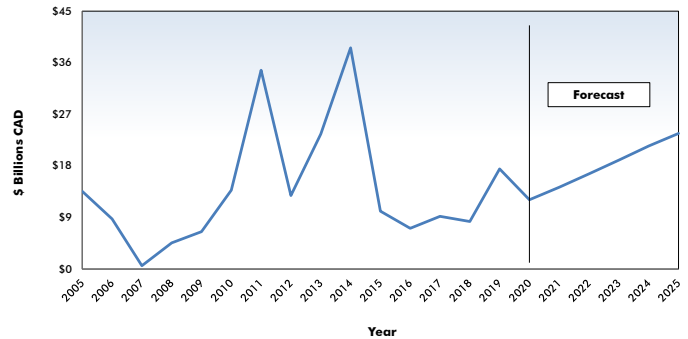


**Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect**



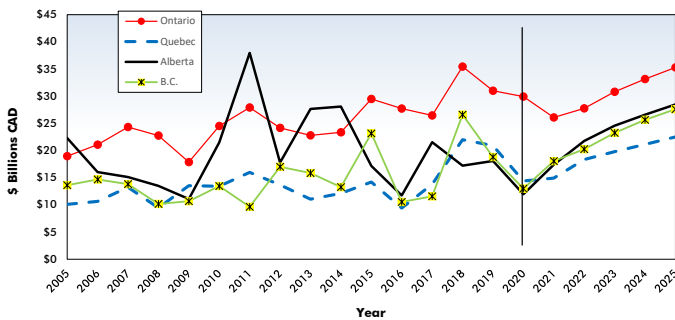
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 32: Canadian Oil Sands, Pipelines, Rapid Transit Construction Starts — ConstructConnect**



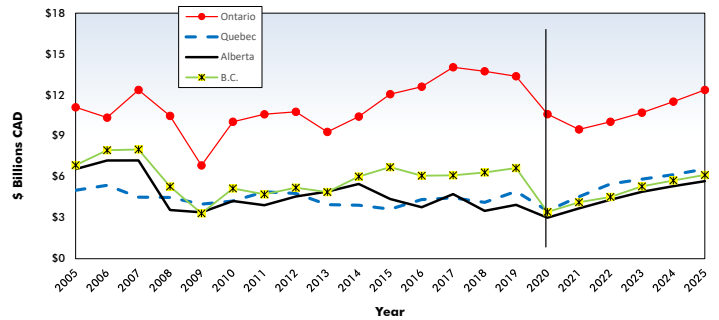
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 33: Canada Four Largest Provinces (by Population): Total Construction Starts — ConstructConnect**



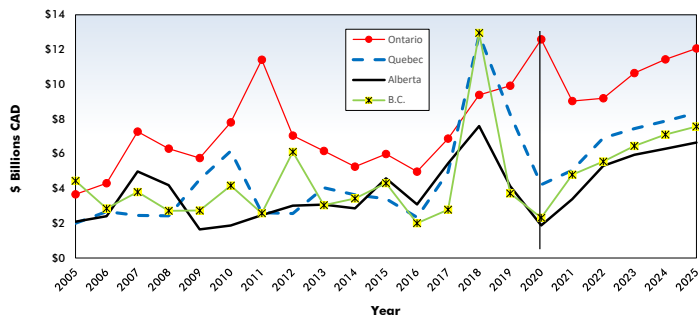
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 34: Canada Four Largest Provinces: Total Residential Construction Starts — ConstructConnect**



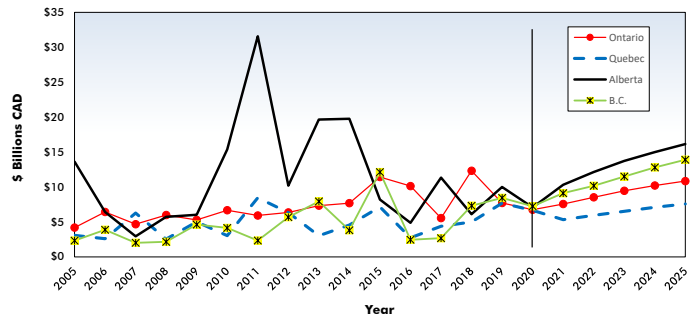
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 35: Canada Four Largest Provinces: Total Non-residential Building Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Graph 36: Canada Four Largest Provinces: Total Engineering/Civil Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

**Table 11: U.S. Type-of-Structure Forecasts**  
 (Square Feet Millions)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Single-family	1,643.6	1,817.3	1,965.6	2,108.9	2,275.7	2,450.9	2,625.5
Multi-family	555.0	408.2	409.9	473.9	519.2	566.2	611.8
<b>TOTAL RESIDENTIAL</b>	<b>2,198.6</b>	<b>2,225.5</b>	<b>2,375.5</b>	<b>2,582.7</b>	<b>2,794.9</b>	<b>3,017.2</b>	<b>3,237.2</b>
<i>(Yr/yr % change)</i>	<i>-0.1%</i>	<i>1.2%</i>	<i>6.7%</i>	<i>8.7%</i>	<i>8.2%</i>	<i>8.0%</i>	<i>7.3%</i>
Hotels/Motels	106.0	43.8	43.8	62.0	76.0	82.6	88.6
Shopping/Retail	69.0	47.1	49.7	61.8	71.2	79.6	85.0
Parking Garages	34.6	17.9	16.6	18.7	22.8	26.4	29.8
Amusement	23.9	20.5	22.0	24.0	26.2	27.9	29.3
Private Offices	107.8	64.9	63.5	70.5	77.5	84.5	90.0
Governmental Offices	17.2	13.9	14.7	15.6	16.4	17.0	17.6
Laboratories (Schools & Industrial)	3.5	2.8	3.9	4.9	5.7	6.4	6.9
Warehouses	207.4	198.2	198.7	206.4	213.3	219.2	230.1
Sports Stadium/Convention Center	21.0	11.7	13.5	17.0	21.9	25.5	27.4
Transportation Terminals	9.5	4.8	10.9	12.8	14.8	17.2	19.2
<b>TOTAL COMMERCIAL</b>	<b>599.9</b>	<b>425.7</b>	<b>437.2</b>	<b>493.6</b>	<b>545.7</b>	<b>586.4</b>	<b>623.9</b>
<i>(Yr/yr % change)</i>	<i>3.6%</i>	<i>-29.0%</i>	<i>2.7%</i>	<i>12.9%</i>	<i>10.6%</i>	<i>7.4%</i>	<i>6.4%</i>
<b>TOTAL INDUSTRIAL (manufacturing)</b>	<b>106.4</b>	<b>59.9</b>	<b>71.7</b>	<b>89.6</b>	<b>101.7</b>	<b>110.5</b>	<b>117.6</b>
<i>(Yr/yr % change)</i>	<i>7.2%</i>	<i>-43.7%</i>	<i>19.6%</i>	<i>25.0%</i>	<i>13.6%</i>	<i>8.6%</i>	<i>6.4%</i>
Religious	5.1	3.5	4.6	5.7	6.4	7.2	8.0
Hospitals/Clinics	33.4	15.2	22.4	29.7	38.2	45.3	51.0
Nursing Homes/Assisted Living	40.6	29.6	39.8	47.0	50.7	53.2	55.2
Libraries/Museums	3.2	3.3	4.0	4.0	4.1	4.3	4.5
Courthouse	1.8	3.0	2.8	3.0	3.2	3.3	3.5
Police/Fire	7.6	8.2	8.4	8.9	9.3	9.6	10.0
Prisons	2.1	2.8	2.8	2.9	3.0	3.1	3.2
Military	11.7	21.5	17.2	18.8	20.3	21.5	22.5
Educational Facilities	168.1	142.6	155.2	165.5	175.0	183.4	191.0
MED misc	19.7	13.7	15.8	18.2	20.8	22.2	23.8
<b>TOTAL INSTITUTIONAL</b>	<b>293.3</b>	<b>243.4</b>	<b>273.0</b>	<b>303.6</b>	<b>330.9</b>	<b>353.1</b>	<b>372.6</b>
<i>(Yr/yr % change)</i>	<i>2.7%</i>	<i>-17.0%</i>	<i>12.2%</i>	<i>11.2%</i>	<i>9.0%</i>	<i>6.7%</i>	<i>5.5%</i>
Miscellaneous Non-Res Building	26.7	19.3	22.4	24.6	26.2	27.7	28.4
<b>TOTAL NON-RES BLDG</b>	<b>1,026.4</b>	<b>748.3</b>	<b>804.3</b>	<b>911.4</b>	<b>1,004.5</b>	<b>1,077.6</b>	<b>1,142.5</b>
<i>(Yr/yr % change)</i>	<i>3.7%</i>	<i>-27.1%</i>	<i>7.5%</i>	<i>13.3%</i>	<i>10.2%</i>	<i>7.3%</i>	<i>6.0%</i>
<b>RESIDENTIAL + NON-RES BLDG</b>	<b>3,224.9</b>	<b>2,973.8</b>	<b>3,179.7</b>	<b>3,494.1</b>	<b>3,799.4</b>	<b>4,094.7</b>	<b>4,379.7</b>
<i>(Yr/yr % change)</i>	<i>1.1%</i>	<i>-7.8%</i>	<i>6.9%</i>	<i>9.9%</i>	<i>8.7%</i>	<i>7.8%</i>	<i>7.0%</i>

EXPLANATION: Table 11 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 12 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'.

The square footage forecasts are largely determined by dividing the dollar value forecasts by an average dollar-per-square-foot value. The underlying dollar-per-square-foot calculation is based on the most relevant of current data. While the projected dollar values are generated through econometric modeling driven by key economic and demographic variables, both the dollar value and square footage forecasts also allow for discretionary overrides when warranted by extraordinary circumstances, such as unique mega project start-ups.

*Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.*

**Table 12: U.S. Type-of-Structure Forecasts**

Arranged to match the alphabetical category drop-down menus in INSIGHT (Square Feet Millions)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
<b>Summary</b>							
NON-RESIDENTIAL BUILDING	1,026.4	748.3	804.3	911.4	1,004.5	1,077.6	1,142.5
RESIDENTIAL	2,198.6	2,225.5	2,375.5	2,582.7	2,794.9	3,017.2	3,237.2
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,224.9	2,973.8	3,179.7	3,494.1	3,799.4	4,094.7	4,379.7
<b>Verticals</b>							
Offices (private)	107.8	64.9	63.5	70.5	77.5	84.5	90.0
Parking Garages	34.6	17.9	16.6	18.7	22.8	26.4	29.8
Transportation Terminals	9.5	4.8	10.9	12.8	14.8	17.2	19.2
Commercial	151.9	87.6	91.0	102.0	115.1	128.1	139.1
(Yr/yr % change)	19.4%	-42.3%	3.9%	12.1%	12.9%	11.3%	8.6%
Amusement	23.9	20.5	22.0	24.0	26.2	27.9	29.3
Libraries / Museums	3.2	3.3	4.0	4.0	4.1	4.3	4.5
Religious	5.1	3.5	4.6	5.7	6.4	7.2	8.0
Sports Arenas / Convention Centers	21.0	11.7	13.5	17.0	21.9	25.5	27.4
Community	53.2	39.0	44.1	50.7	58.5	64.9	69.2
(Yr/yr % change)	3.8%	-26.7%	13.0%	15.0%	15.5%	10.9%	6.6%
College / University	38.1	29.6	29.5	32.2	34.6	36.7	39.0
Elementary / Pre School	48.8	46.7	51.5	55.6	59.5	62.8	65.4
Jr / Sr High School	75.6	61.0	68.5	72.0	75.2	77.9	80.4
Special / Vocational	5.6	5.3	5.6	5.7	5.9	6.0	6.1
Educational	168.1	142.6	155.2	165.5	175.0	183.4	191.0
(Yr/yr % change)	7.5%	-15.2%	8.8%	6.7%	5.8%	4.8%	4.1%
Courthouses	1.8	3.0	2.8	3.0	3.2	3.3	3.5
Fire and Police Stations	7.6	8.2	8.4	8.9	9.3	9.6	10.0
Government Offices	17.2	13.9	14.7	15.6	16.4	17.0	17.6
Prisons	2.1	2.8	2.8	2.9	3.0	3.1	3.2
Government	28.7	28.0	28.7	30.3	31.8	33.0	34.2
(Yr/yr % change)	-5.6%	-2.7%	2.7%	5.6%	4.8%	3.9%	3.5%
Industrial Labs / Labs / School Labs	3.5	2.8	3.9	4.9	5.7	6.4	6.9
Manufacturing	106.4	59.9	71.7	89.6	101.7	110.5	117.6
Warehouses	207.4	198.2	198.7	206.4	213.3	219.2	230.1
Industrial	317.4	260.9	274.3	300.9	320.7	336.0	354.6
(Yr/yr % change)	3.0%	-17.8%	5.1%	9.7%	6.6%	4.8%	5.5%
Hospitals / Clinics	33.4	15.2	22.4	29.7	38.2	45.3	51.0
Medical Misc.	19.7	13.7	15.8	18.2	20.8	22.2	23.8
Nursing Homes	40.6	29.6	39.8	47.0	50.7	53.2	55.2
Medical	93.8	58.5	78.0	94.9	109.6	120.7	130.1
(Yr/yr % change)	0.2%	-37.6%	33.4%	21.6%	15.5%	10.1%	7.8%
Military	11.7	21.5	17.2	18.8	20.3	21.5	22.5
(Yr/yr % change)	7.8%	84.2%	-20.1%	9.6%	7.8%	5.7%	4.7%
Hotels	106.0	43.8	43.8	62.0	76.0	82.6	88.6
Retail Misc.	26.7	19.3	22.4	24.6	26.2	27.7	28.4
Shopping	69.0	47.1	49.7	61.8	71.2	79.6	85.0
Retail	201.7	110.3	115.8	148.3	173.4	189.9	202.0
(Yr/yr % change)	-4.9%	-45.3%	5.0%	28.1%	16.9%	9.5%	6.4%
NON-RESIDENTIAL BUILDING	1,026.4	748.3	804.3	911.4	1,004.5	1,077.6	1,142.5
(Yr/yr % change)	3.7%	-27.1%	7.5%	13.3%	10.2%	7.3%	6.0%
Multi-Family	555.0	408.2	409.9	473.9	519.2	566.2	611.8
Single-Family	1,643.6	1,817.3	1,965.6	2,108.9	2,275.7	2,450.9	2,625.5
RESIDENTIAL	2,198.6	2,225.5	2,375.5	2,582.7	2,794.9	3,017.2	3,237.2
(Yr/yr % change)	-0.1%	1.2%	6.7%	8.7%	8.2%	8.0%	7.3%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,224.9	2,973.8	3,179.7	3,494.1	3,799.4	4,094.7	4,379.7
(Yr/yr % change)	1.1%	-7.8%	6.9%	9.9%	8.7%	7.8%	7.0%

EXPLANATION: Table 11 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 12 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

**Table 13: Canada Type-of-Structure Forecasts**  
(Square Feet Millions)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Single-family	106.4	114.8	123.6	131.8	140.8	150.1	159.6
Multi-family	93.2	44.7	46.3	55.1	62.6	68.2	73.7
<b>TOTAL RESIDENTIAL</b>	<b>199.6</b>	<b>159.5</b>	<b>169.9</b>	<b>186.9</b>	<b>203.4</b>	<b>218.3</b>	<b>233.3</b>
<i>(Yr/yr % change)</i>	<i>-3.0%</i>	<i>-20.1%</i>	<i>6.5%</i>	<i>10.0%</i>	<i>8.8%</i>	<i>7.3%</i>	<i>6.9%</i>
Hotels/Motels	2.6	0.6	0.8	1.1	1.4	1.6	1.8
Private Offices	11.2	4.1	3.8	4.9	5.7	6.3	6.9
Governmental Offices	2.3	1.6	1.8	2.1	2.3	2.5	2.6
Shopping/Retail	9.7	2.9	5.0	7.3	8.9	10.4	11.4
Retail Miscellaneous	1.3	0.3	0.4	0.6	0.7	0.8	0.9
Parking Garages	1.4	0.2	0.2	0.4	0.6	0.9	1.0
Amusement	3.9	1.3	2.0	2.2	2.5	2.8	2.9
Warehouses	10.2	8.5	9.8	10.6	11.7	12.5	13.2
<b>TOTAL COMMERCIAL</b>	<b>42.5</b>	<b>19.5</b>	<b>23.7</b>	<b>29.1</b>	<b>33.7</b>	<b>37.7</b>	<b>40.8</b>
<i>(Yr/yr % change)</i>	<i>8.9%</i>	<i>-54.2%</i>	<i>21.9%</i>	<i>22.5%</i>	<i>16.1%</i>	<i>11.7%</i>	<i>8.2%</i>
<b>TOTAL INDUSTRIAL (manufacturing)</b>	<b>6.3</b>	<b>4.9</b>	<b>5.5</b>	<b>6.1</b>	<b>6.7</b>	<b>7.4</b>	<b>7.9</b>
<i>(Yr/yr % change)</i>	<i>-19.8%</i>	<i>-23.3%</i>	<i>12.7%</i>	<i>12.0%</i>	<i>9.3%</i>	<i>9.9%</i>	<i>6.9%</i>
Religious	0.1	0.1	0.2	0.2	0.3	0.3	0.4
Hospitals/Clinics	7.6	7.9	8.6	9.3	10.1	10.8	11.4
MED misc	1.2	0.2	0.7	1.0	1.2	1.3	1.3
Transportation Terminals*	0.3	0.4	0.4	0.7	1.0	1.2	1.4
Police/Fire	1.5	1.1	1.2	1.4	1.5	1.6	1.7
Educational Facilities	12.3	9.0	10.2	11.0	11.5	12.0	12.4
<b>TOTAL INSTITUTIONAL</b>	<b>23.0</b>	<b>18.6</b>	<b>21.2</b>	<b>23.6</b>	<b>25.6</b>	<b>27.2</b>	<b>28.6</b>
<i>(Yr/yr % change)</i>	<i>-20.0%</i>	<i>-19.1%</i>	<i>14.0%</i>	<i>11.0%</i>	<i>8.7%</i>	<i>6.3%</i>	<i>5.1%</i>
<b>TOTAL NON-RES BLDG</b>	<b>71.8</b>	<b>42.9</b>	<b>50.4</b>	<b>58.8</b>	<b>66.1</b>	<b>72.3</b>	<b>77.3</b>
<i>(Yr/yr % change)</i>	<i>-5.1%</i>	<i>-40.2%</i>	<i>17.4%</i>	<i>16.5%</i>	<i>12.4%</i>	<i>9.4%</i>	<i>6.9%</i>
<b>RESIDENTIAL + NON-RES BLDG</b>	<b>271.5</b>	<b>202.5</b>	<b>220.4</b>	<b>245.7</b>	<b>269.5</b>	<b>290.6</b>	<b>310.6</b>
<i>(Yr/yr % change)</i>	<i>-3.5%</i>	<i>-25.4%</i>	<i>8.9%</i>	<i>11.5%</i>	<i>9.7%</i>	<i>7.8%</i>	<i>6.9%</i>

\* With respect to Tables 11 and 13, 'transportation terminals' is the one type-of-structure that is categorized differently in Canada (institutional) than in the U.S. (commercial), for reasons having to do with government statistics.

EXPLANATION: Table 13 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 14 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.*

**Table 14: Canada Type-of-Structure Forecasts**  
 Arranged to match the alphabetical category drop-down menus in INSIGHT (Square Feet Millions)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
<b>Summary</b>							
NON-RESIDENTIAL BUILDING	71.8	42.9	50.4	58.8	66.1	72.3	77.3
RESIDENTIAL	199.6	159.5	169.9	186.9	203.4	218.3	233.3
RESIDENTIAL + NON-RESIDENTIAL BUILDING	271.5	202.5	220.4	245.7	269.5	290.6	310.6
<b>Verticals</b>							
Offices (private)	11.2	4.1	3.8	4.9	5.7	6.3	6.9
Parking Garages	1.4	0.2	0.2	0.4	0.6	0.9	1.0
Transportation Terminals	0.3	0.4	0.4	0.7	1.0	1.2	1.4
Commercial	12.9	4.6	4.4	6.0	7.4	8.4	9.3
(Yr/yr % change)	-4.9%	-64.3%	-3.5%	34.7%	23.3%	14.0%	10.4%
Amusement	3.9	1.3	2.0	2.2	2.5	2.8	2.9
Religious	0.1	0.1	0.2	0.2	0.3	0.3	0.4
Community	4.0	1.4	2.1	2.4	2.8	3.1	3.3
(Yr/yr % change)	-25.4%	-65.4%	52.3%	14.8%	14.2%	11.1%	6.5%
Educational	12.3	9.0	10.2	11.0	11.5	12.0	12.4
(Yr/yr % change)	2.6%	-26.8%	13.0%	7.9%	5.0%	4.2%	3.1%
Fire and Police Stations	1.5	1.1	1.2	1.4	1.5	1.6	1.7
Government Offices	2.3	1.6	1.8	2.1	2.3	2.5	2.6
Government	3.8	2.7	3.1	3.5	3.8	4.1	4.4
(Yr/yr % change)	3.9%	-28.9%	11.6%	14.0%	8.6%	7.8%	7.4%
Manufacturing	6.3	4.9	5.5	6.1	6.7	7.4	7.9
Warehouses	10.2	8.5	9.8	10.6	11.7	12.5	13.2
Industrial	16.5	13.3	15.3	16.7	18.4	19.9	21.0
(Yr/yr % change)	-21.1%	-19.2%	14.3%	9.4%	9.9%	8.3%	5.9%
Hospitals / Clinics	7.6	7.9	8.6	9.3	10.1	10.8	11.4
Medical Misc.	1.2	0.2	0.7	1.0	1.2	1.3	1.3
Medical	8.8	8.0	9.3	10.3	11.3	12.1	12.8
(Yr/yr % change)	-16.6%	-8.9%	15.5%	11.4%	9.4%	7.0%	5.8%
Hotels	2.6	0.6	0.8	1.1	1.4	1.6	1.8
Retail Misc.	1.3	0.3	0.4	0.6	0.7	0.8	0.9
Shopping	9.7	2.9	5.0	7.3	8.9	10.4	11.4
Retail	13.5	3.9	6.1	8.9	11.0	12.8	14.2
(Yr/yr % change)	41.0%	-71.4%	59.1%	44.7%	23.6%	16.4%	10.6%
NON-RESIDENTIAL BUILDING	71.8	42.9	50.4	58.8	66.1	72.3	77.3
(Yr/yr % change)	-5.1%	-40.2%	17.4%	16.5%	12.4%	9.4%	6.9%
Multi-Family	93.2	44.7	46.3	55.1	62.6	68.2	73.7
Single-Family	106.4	114.8	123.6	131.8	140.8	150.1	159.6
RESIDENTIAL	199.6	159.5	169.9	186.9	203.4	218.3	233.3
(Yr/yr % change)	-3.0%	-20.1%	6.5%	10.0%	8.8%	7.3%	6.9%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	271.5	202.5	220.4	245.7	269.5	290.6	310.6
(Yr/yr % change)	-3.5%	-25.4%	8.9%	11.5%	9.7%	7.8%	6.9%

EXPLANATION: Table 13 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 14 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 of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.*

**Graph 37: U.S. Residential Construction Starts — ConstructConnect**



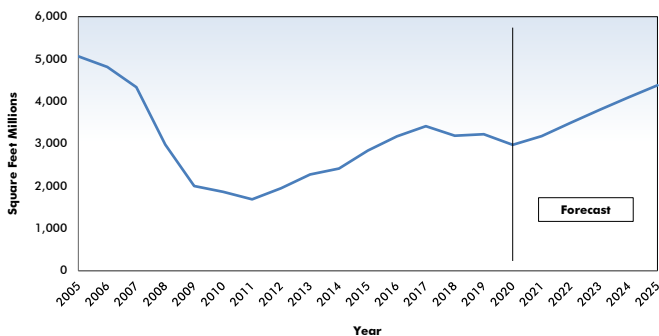
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

**Graph 38: U.S. Non-Residential Building Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

**Graph 39: U.S. Residential + Non-Residential Building Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

**Graph 40: Canada Residential + Non-Residential Building Construction Starts — ConstructConnect**



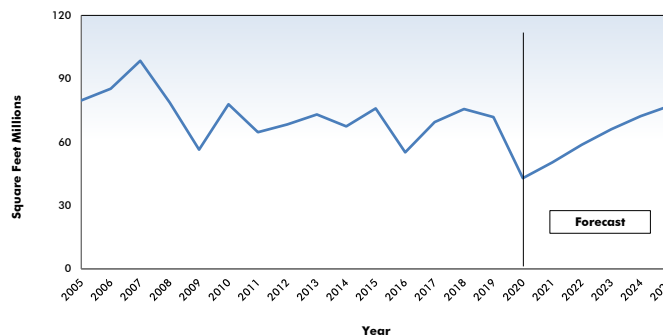
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

**Graph 41: Canada Residential Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

**Graph 42: Canada Non-Residential Building Construction Starts — ConstructConnect**



Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.  
 Chart: ConstructConnect.

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