

Fall 2021 (For July 2021 Release)

Construction Starts Forecast

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Highlights

- US construction starts increased 7.9% year-on-year (y/y) in Q2 2021. This growth was driven by residential construction, which grew 33.5% y/y, primarily due to a strong increase in single-family builds. Non-residential building experienced the most significant contraction, down 9% y/y, as sectors dependent on high-contact activities, office work and travel suffered heavily from pandemic restrictions. Engineering construction fell 4.7% y/y despite strong growth in power project starts.
- Full vaccination rates of nearly 50%, warm weather and fiscal stimulus contributed to a 6.5% annualised GDP growth in 2021 Q2. The \$1.2 trillion bipartisan infrastructure bill, whose passage looks increasingly likely, will further boost the economy. We expect 7% GDP growth for 2021 as a whole as reduced restrictions allow for pent-up consumer demand to be released. High inflation and a strong economy have influenced the Fed to pivot away from its ultra-dovish stance, planning two rate hikes in 2023.
- We forecast total construction starts to grow 6.3% in 2021, following a severe contraction last year. Robust growth in residential construction and engineering will be partly offset by a contraction in non-residential building starts. Biden's infrastructure bill will provide a further boost to civil engineering, mainly through funding new transportation infrastructure. Non-residential construction is forecast to return to growth in 2022; however, subsectors such as office building could still be below pre-pandemic peaks in 2025.
- Total Canadian construction starts fell 8.5% y/y in Q2 2021, with non-residential and engineering segments both down over 25% y/y. Residential construction performance mirrored that of the US, with solid growth in single-family homes. Other sectors which saw robust growth were hospitals and power infrastructure.
- We forecast Canadian construction starts to rise 4.5% in 2021, then accelerate to 17.1% in 2022 as almost all sub-sectors return to growth. The recent increased pace of the vaccine rollout means vaccination rates are now slightly above the US, which should pave the way for a full re-opening of the economy, allowing constrained consumer demand to be released. Power infrastructure will continue to be an area of strength going forward, whereas, like the US, sectors related to offices and leisure will see significant scarring to the end of the forecast period in 2025.

Total employment in the U.S. rose by +850,000 positions in June. Of note, the jobs count in the 'leisure and hospitality' sector in the latest month soared by +343,000. The U.S. seasonally adjusted unemployment rate economy-wide now stands at 5.9%.



Sources: ConstructConnect*/Oxford Economics.
Forecast reflects actual starts through Q2 2021.

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3825 Edwards Road, Ste. 800, Cincinnati, OH 45209 P. 1-800-364-2059 www.constructconnect.com/blog

Overview

Return to year-on-year growth in US starts

Total US construction starts rose 7.9% year-on-year (y/y) in Q2 2021. The initial pandemic shock was most acutely felt in Q2 2020. This relatively resilient y/y growth rate looks more disappointing when set against the steep drop in construction activity at this time a year ago. Indeed, the level of construction starts in 2021 Q2 is below the quarterly average in 2019. The year-to-date (ytd) calculation, from January to June over the same period in 2020, was up by a more modest 2.1%.

Non-residential building starts experienced a relatively large y/y contraction of 9%. The majority of sub-sectors have continued to decline since the pandemic shock in Q2 2020, however a reasonable number have recovered at least partially. Among those sub-sectors with positive y/y growth are two notable outliers, courthouses and transportation terminals. The latter of these is mainly driven by groundbreaking on the \$1.39 billion modernization megaproject of Pittsburgh's International Airport Terminal. Furthermore, two large hospital projects began in June with a combined value of \$1.07 billion, leading to 10.6% y/y growth in the hospitals sub-sector (and 45% ytd growth after an even stronger Q1). In contrast, several sectors are still posting a y/y contraction, despite the weakness from last year falling out of the annual calculation. Decline in the ytd calculation better reflects ongoing weakness in the recovery phase so far. Sectors with a ytd decline of more than 30% include hotels & motels, private offices, libraries & museums, religious institutions, and laboratories. The common theme amongst many of these sectors is their dependence on high-contact activities, office work, and travel. Warehousing contracted 17.6% y/y and 17.9% ytd despite groundbreaking on Amazon fulfilment centres throughout the pandemic. However, it is worth noting that the sector hit a record level in 2020.

Engineering construction starts declined 4.7% y/y and 4.8% ytd. Bridges, dams/canal/marine and miscellaneous civil have all continued to contract by at least 20% y/y. Road construction has seen groundbreaking on two relatively large projects this quarter in Utah and Georgia with a combined value of \$704 million, however the sector is yet to make any recovery from the pandemic low, with 2021 Q2 y/y growth flat. Water & sewage treatment starts expanded by 12.8% y/y driven in part by the Bay Park Conveyance project begun in April. Construction of new power projects also grew 73% y/y due to groundbreaking on several new wind

Table 1: Summary forecasts							
(Annual percentage changes unless specified otherwise)							
	2019	2020	2021	2022	2023	2024	2025
US							
Macro variables							
GDP	2.2	-3.5	7.0	4.3	2.2	1.8	1.7
Population growth	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Unemployment rate (%)	3.7	8.1	5.3	4.0	3.6	3.5	3.5
Real disposable income*	2.2	6.0	3.8	-2.0	0.8	1.4	1.4
Central bank rate (%)	2.2	0.4	0.1	0.1	0.3	0.6	1.0
10-year government yield (%)	2.1	0.9	1.6	2.2	2.5	2.5	2.6
Construction starts (y/y % change of \$ volumes)							
Total starts	8.5	-15.5	6.3	12.5	9.2	7.6	6.1
Residential	0.4	0.6	12.8	10.2	7.7	7.1	6.2
Non-res bldg	12.2	-27.9	-4.3	15.6	10.6	7.2	6.0
Civil engineering	16.1	-18.4	10.8	12.6	10.2	9.1	6.0
Canada							
Macro variables							
GDP	1.9	-5.3	6.8	3.9	1.4	1.6	1.8
Population growth	1.4	1.1	0.7	1.1	1.1	1.0	1.0
Unemployment rate (%)	5.7	9.6	7.6	7.0	6.8	6.4	6.2
Real disposable income*	2.2	9.5	0.7	-1.0	2.1	1.8	1.7
Central bank rate (%)	1.8	0.6	0.3	0.3	0.5	0.9	1.2
10-year government yield (%)	1.6	0.8	1.4	2.1	2.5	2.6	2.6
Exchange rate C\$ per US\$	1.33	1.34	1.24	1.25	1.25	1.22	1.19
Construction starts (y/y % change of \$ volumes)							
Total starts	-12.0	-14.5	4.5	17.1	11.1	8.0	6.2
Residential	4.4	-15.4	18.0	3.8	4.2	5.1	4.7
Non-res bldg	-35.8	-15.5	5.7	14.6	13.1	8.1	6.3
Civil engineering	5.6	-13.0	-7.3	33.2	15.3	10.1	7.3

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

power projects. The only other sub-sector which experienced y/y growth this quarter is airport construction, which suffered heavily during the pandemic and is now making some headway towards recovery, expanding 11.2% y/y (although the ytd calculation was still negative at -7.8%).

Residential construction grew strongly by 33.5% y/y, predominantly driven by single-family builds. New single-family homebuilding increased 43.6% y/y as the pandemic restrictions increased demand for larger living spaces and home remodelling, combined with a pre-existing shortage for homes. Multi-family residential construction has grown by a more modest 9% y/y as groundbreaking on several reasonably large apartment complexes begins, but the pandemic driven trend shift away from urban living continues.

Other measures of construction activity tell a similar story. The Census Bureau's put-in-place construction measure grew 7.5% y/y in May. Like with the starts data, residential PiP construction held up total

sectoral growth, growing 28.2% y/y in May, in contrast to non-residential construction which was down 7.1%. These changes have caused a shift in the year-to-date PiP mix from majority non-residential, towards a 50/50 residential to non-residential split. Construction employment grew by 93,000 jobs in March 2021, but from April to June, the sector has shed a net 38,000 jobs.

In recent months, the soaring price of raw building materials has been an important and worrying development in the construction sector. The price of construction materials had risen 20.4% y/y in June 2021, nearly double the strong increases in earlier periods of sharp escalation. The price rises are focused on some key sectors, particularly lumber, which has risen 97% y/y in June 2021. This has resulted from strong demand in the single-family homebuilding sector and increased DIY home renovation, combined with pandemic related supply shortages leading to depleted inventories. As inventories recover, we expect the prices to normalise again. Lumber is not the only

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sector of concern in the construction supply chain, with steel mill prices up 88% y/y, putting upward pressure on non-residential building costs.

Summer boom in US economy carries on

Although the US economy is likely past peak growth as the vaccine rollout slows, a summer boom is still underway. With nearly 50% of the population fully vaccinated, warm weather and fiscal stimulus helped push GDP growth to 6.5% annualised in Q2 after growing 6.4% annualised in the first quarter. We expect GDP to grow 7% in 2021 overall, then to slow to 4.3% in 2022. The rapid spread of the Delta variant across the US means the pandemic remains the critical downside risk, although vaccinations and a largely reopened economy means the downside risks look less acute than they did six months ago. Now that most of the vaccine rollout has occurred, the key upside risk of additional fiscal stimulus measures is growing.

As health conditions improve and the economy reopens, we expect increased consumer confidence and fiscal stimulus to allow pent-up demand from the pandemic to be released, fuelling a significant rise in consumer spending of 8.9% this year. We expect the labour market recovery to accelerate this summer as higher wages and reduced COVID risk incentivise more workers to accept job offers. Furthermore, on July 28th President Biden's \$1.2 trillion infrastructure bill passed in the Senate. The bill plans to allocate the most spending to roads, rail, power infrastructure and broadband, stimulating job creation and business investment.

We expect inflation to cool over the next few quarters but remain at high levels not seen since the early 1990s. Headline PCE inflation, the Fed's preferred measure, is expected to average 3.5% in 2021. The Fed has adjusted its previously ultra-dovish stance, with forward guidance showing two rate hikes in 2023. Furthermore, the Fed is now actively discussing QE tapering, which we expect to be formally announced in August and to begin early next year. This pivot in the Fed's approach to managing the pandemic recovery reflects increasing evidence that the economy is rebounding faster than previously expected.

Starts return to growth this year, but pandemic-sensitive sectors to lag

Following the significant contraction in 2020, we forecast total construction starts to grow 6.3% in 2021. This growth rate masks large variations across the subsec-

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

tors, with robust growth in residential construction and engineering starts offset by a fall in non-residential construction. In 2022 we expect total starts to expand 12.5%, as non-residential starts join the other sectors in returning to growth.

We expect residential construction starts to experience the most robust growth in 2021, increasing 12.8%. Single-family housing will underpin the sector this year, as working from home becomes more common, and millennials form families, driving a shift out of the cities in search of more living space. This demographic trend has existed for a few years previously but has accelerated in the wake of the pandemic. Strong growth in the sub-sector should also help to alleviate some of the upward pressure on house prices and the supply shortage. However, growth in single-family homes is expected to slow over the coming years after the current high demand is met. We forecast multi-family housing construction will return to growth this year after an 18.9% fall in 2020 but will not return to its pre-pandemic 2017 peak until 2025.

Civil engineering starts are forecast to make good headway on recovery from the pandemic in 2021, growing 10.8%. Growth in the sector will be driven solely by water & sewage treatment and miscellaneous civil engineering (mainly power) this year, but we expect all sub-sectors to return to growth in 2022. The \$1.2 trillion bipartisan infrastructure bill continues to progress, and its likely passage will further boost the sector. Much of the spending is intended for transportation infrastructure, clean energy and broadband.

Regarding the engineering sub-sectors, we expect the most significant growth rate in power infrastructure, rising just under 40% annually in 2021 and 2022. This sector

is also forecast to be further boosted by the bipartisan infrastructure bill. Furthermore, there is significant upside potential for the renewable energy sector if President Biden's proposed \$3.5 trillion Federal budget is approved, as it has a clear green agenda. Specifically, the proposal involves tackling climate change by funding a clean energy transition of the grid and providing tax incentives for renewables.

The miscellaneous civil engineering sector, which includes oil & gas, tunnels and railway projects, is expected to grow 30.9% in 2021. Long-run growth in this sector will primarily be driven by tunnels and railway projects, as these are the focus of Biden's infrastructure bill. However, growth will slow in the misc. civil sector as oil & gas projects could be at risk with the current administration's focus on renewables. We forecast growth in the airport sector to shrink a further 0.8% in 2021 before beginning its recovery and growing 23% in 2022 as international travel begins to recover in earnest from the pandemic.

We expect non-residential building to shrink 4.3% in 2021, a much milder contraction when compared to the nearly 30% fall in 2020. The sub-sectors contributing most to this year's decline are hotels (-31.1%), private offices (-38.6%) and libraries/museums (-30.5%), which underscores the continuing impact of remote working and inability or unwillingness to travel and engage in leisure activities in crowded spaces. Ground-breaking for retail stores, in contrast, is expected to return to growth this year as households shift more of their spending from online to in-store.

By 2022, we forecast all non-residential sub-sectors to return to growth as the re-opening of the economy allows the pent-up demand from the pandemic to be released in

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segments that are expected to lag this year. Hotel construction is expected to rebound strongly in 2022 following four consecutive years of decline. Construction of private office buildings is forecast to grow over 40% in 2022; but due to the pandemic driving forward the pre-existing trend shift towards working from home, we expect starts in this segment will still be 35% below their 2019 peak by 2025.

There are some bright spots in non-residential construction looking forward. Firstly, Transportation terminals are forecast to grow 116.4% in 2021 as several large projects are planned. Furthermore, strong growth is expected to continue into the near term as an investment into public transport fits well with the Biden administration's green agenda, making it a target of the infrastructure bill. We expect hospital construction to rebound from a surprisingly weak 2020, growing 36.2% in 2021. This is because healthcare funding was focused on directly fighting the pandemic during the peak of the virus but can now be re-allocated towards investment in new facilities to accommodate a steadily aging population. There are also many manufacturing projects set to begin over the coming years. Semiconductors manufacturing is one area that will see particular investment, partially for strategic geopolitical reasons, as the US would like to reduce its reliance on China for semiconductor production. The sector will also be bolstered by the US Innovation and Competition Act (USICA) which passed in the Senate in June with strong bipartisan support and includes \$52 billion of direct funding for semiconductor manufacturing.

Ontario lockdowns contribute to Q2 decline in Canadian starts, but better days ahead

Total Canadian construction starts fell 8.5% y/y in Q2 2021, despite the pre-pandemic trough dropping out of the annual growth calculations. New residential construction had the strongest growth, up 65.6% y/y. New single-family starts grew 69.5% y/y, with multi-family builds up 59.6% y/y.

On a year-to-date basis, single-family starts have been much stronger than multi-family (+62.6% vs +2.2%), reflecting underlying demographics and a pandemic-related acceleration of the trend of moving out of cities and apartment buildings into houses. In addition, the restrictions on construction

activity in place in some provinces during spring 2020 — which had a large impact on home building — have now dropped out of the annual growth calculations.

The civil engineering sector contracted 26.6% y/y and 11.6% ytd. Y/y growth was negative in all sectors, except water & sewage and dams, canals, & marine infrastructure. However, power infrastructure & miscellaneous civil engineering had robust ytd growth rates, up 169% and 50% respectively, due to stronger Q1 outturns.

Non-residential construction fell 31% y/y and 16.8% ytd with significant differences between growth in the sub-sectors. The most considerable growth so far in 2021 came from hospitals, which grew 102% y/y and 429% ytd. Although Q2 saw some recovery in the y/y calculations of several pandemic-buffed sectors, ytd calculations remain more than 50% below the same period in 2021 in sectors such as hotels, private offices, government offices, retail, parking garages, and warehouses. The weakest sector was transportation terminals, down 98% ytd, as a massive project in Ottawa last year fell out of the annual calculation.

The Canadian economy contracted 0.3% m/m in April 2021, an unwelcome reversal of the 0.8% growth in Q1 which was driven by solid consumer spending growth. The slower growth in April is mainly due to lockdown restrictions being re-imposed to contain the third wave of coronavirus; however, these short-term restrictions should reduce the downside risk for Q3. Furthermore, although the initial speed of vaccinations in Canada lagged the US, a rapid increase in pace in June means now more than 50% of the population are fully vaccinated, which should allow the economy to fully reopen. Headline CPI inflation grew to 3.6% y/y in May for the first time since 2011. We expect inflation to remain high in the short term due to supply shortages and surging demand as the economy re-opens. Despite this, we expect the Bank of Canada to hold rates steady until early 2023 to avoid currency appreciation and worsening Canadian debt vulnerabilities.

We expect construction starts in Canada to grow only 4.5% in 2021; however, this will accelerate to 17.1% in 2022 as almost all sub-sectors return to growth. In 2021, there is considerable variability between growth rates in the three headline sectors, with residential construction growing 18%, non-

residential construction growing 5.7%, and engineering shrinking 7.3%.

Like the US, residential construction growth is forecast to be driven predominantly by single-family builds, which will see a 33.6% increase in 2021, whereas multi-family builds will rise only 2%. Growth in single-family housing is mainly due to pandemic-driven trends, such as demand for more space and increased working from home. However, high house prices and the formation of millennial families is also partially responsible for the increase. The medium-term outlook in the sector is more subdued as pandemic-led structural shifts run their course.

We also expect significant divergence in non-residential building sub-sectors. Among the commercial sectors, hotels, private offices, government offices, retail, parking garages, and warehouses are forecast to decline by over 30% in 2021. As the economy re-opens and pandemic restrictions no longer constrain these sectors, we expect strong growth in 2022 and 2023. However, even with some recovery expected, sectors such as office building will not reach their pre-pandemic peak over the forecast period to 2025. We forecast more robust growth in the institutional sectors, with hospital construction being a particular area of strength, expected to grow 88.8%, partially because of its exemption from lockdown restrictions this year. The only area of weakness in institutional construction is transportation terminals, which we expect to contract over 40% in 2021; however, this is a symptom of a large project in Ottawa falling out of the annual calculation rather than any inherent weakness in the sector. Factory construction has a solid outlook as several large oil refineries and LNG plants are planned in the coming years.

Civil engineering is the largest part of Canadian construction but will decline this year due to contractions in the roads, bridges and misc. civil sectors. We forecast a substantial fall in bridge construction after a 60.8% increase in 2020, as no large projects are planned in the industry this year. In contrast, power infrastructure will see robust growth going forward, as large renewable energy projects gain more favor. As a result, we expect double-digit growth figures until the end of the forecast period in 2025.

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

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Single-family	198.784	219.289	255.080	278.826	298.407	318.890	338.396
Multi-family	99.042	80.284	82.809	93.687	102.608	110.785	117.994
TOTAL RESIDENTIAL	297.826	299.573	337.889	372.513	401.015	429.675	456.390
<i>(Yr/yr % change)</i>	<i>0.4%</i>	<i>0.6%</i>	<i>12.8%</i>	<i>10.2%</i>	<i>7.7%</i>	<i>7.1%</i>	<i>6.2%</i>
Hotels/Motels	23.537	10.274	7.074	10.038	14.872	17.072	18.651
Shopping/Retail	16.510	12.256	13.600	16.674	18.304	20.021	21.475
Parking Garages	3.164	1.740	1.710	2.178	2.436	2.638	2.847
Amusement	7.596	6.350	6.025	7.105	7.857	8.538	9.308
Private Offices	36.585	25.551	15.676	19.334	21.019	22.380	23.793
Governmental Offices	11.749	10.660	10.621	11.617	12.498	13.068	13.418
Laboratories (Schools & Industrial)	2.417	2.305	2.179	2.557	2.906	3.011	3.096
Warehouses	22.563	25.657	22.177	25.851	28.000	29.287	30.638
Sports Stadium/Convention Center	9.835	4.506	4.801	6.197	7.636	8.626	9.067
Transportation Terminals	10.746	2.363	5.114	6.598	8.222	9.218	10.160
TOTAL COMMERCIAL	144.703	101.662	88.977	108.148	123.749	133.858	142.453
<i>(Yr/yr % change)</i>	<i>8.1%</i>	<i>-29.7%</i>	<i>-12.5%</i>	<i>21.5%</i>	<i>14.4%</i>	<i>8.2%</i>	<i>6.4%</i>
TOTAL INDUSTRIAL (manufacturing)	55.810	21.338	23.064	26.761	30.968	34.621	38.412
<i>(Yr/yr % change)</i>	<i>55.9%</i>	<i>-61.8%</i>	<i>8.1%</i>	<i>16.0%</i>	<i>15.7%</i>	<i>11.8%</i>	<i>10.9%</i>
Religious	1.889	1.638	1.399	1.571	1.675	1.750	1.787
Hospitals/Clinics	21.790	12.878	17.534	19.760	21.171	22.619	23.855
Nursing Homes/Assisted Living	9.599	7.322	6.916	8.418	9.673	10.689	11.618
Libraries/Museums	4.072	3.697	2.571	3.865	4.270	4.597	4.758
Courthouse	1.568	2.384	2.736	2.929	3.104	3.239	3.349
Police/Fire	3.260	3.317	3.184	3.395	3.526	3.659	3.744
Prisons	2.111	2.390	2.279	2.640	2.837	2.994	3.122
Military	5.049	9.213	9.159	10.592	11.330	11.795	12.065
Educational Facilities	75.879	67.389	65.454	70.578	74.424	77.855	81.145
MED misc	9.342	8.041	6.922	8.164	8.910	9.475	10.081
TOTAL INSTITUTIONAL	134.560	118.269	118.154	131.911	140.919	148.671	155.525
<i>(Yr/yr % change)</i>	<i>4.7%</i>	<i>-12.1%</i>	<i>-0.1%</i>	<i>11.6%</i>	<i>6.8%</i>	<i>5.5%</i>	<i>4.6%</i>
Miscellaneous Non-Res Building	7.667	5.724	6.068	6.316	6.482	6.624	6.772
TOTAL NON-RES BLDG	342.740	246.993	236.262	273.136	302.118	323.775	343.161
<i>(Yr/yr % change)</i>	<i>12.2%</i>	<i>-27.9%</i>	<i>-4.3%</i>	<i>15.6%</i>	<i>10.6%</i>	<i>7.2%</i>	<i>6.0%</i>
Airport	7.393	6.027	5.979	7.352	8.156	8.886	9.563
Roads	65.315	63.633	72.116	78.068	84.846	91.728	95.214
Bridges	30.186	22.746	20.891	24.368	27.542	30.932	34.303
Dams/Canal/Marine	8.547	8.273	6.975	7.875	8.849	9.724	10.353
Water & Sewage Treatment	31.617	31.208	35.567	38.777	41.924	45.443	48.196
Misc Civil (Power, etc.)	46.189	22.631	29.621	36.218	41.024	44.878	47.850
TOTAL ENGINEERING	189.247	154.518	171.148	192.658	212.340	231.590	245.479
<i>(Yr/yr % change)</i>	<i>16.1%</i>	<i>-18.4%</i>	<i>10.8%</i>	<i>12.6%</i>	<i>10.2%</i>	<i>9.1%</i>	<i>6.0%</i>
TOTAL NON-RESIDENTIAL	531.987	401.511	407.410	465.793	514.458	555.364	588.640
<i>(Yr/yr % change)</i>	<i>13.6%</i>	<i>-24.5%</i>	<i>1.5%</i>	<i>14.3%</i>	<i>10.4%</i>	<i>8.0%</i>	<i>6.0%</i>
GRAND TOTAL	829.813	701.084	745.299	838.307	915.473	985.039	1,045.030
<i>(Yr/yr % change)</i>	<i>8.5%</i>	<i>-15.5%</i>	<i>6.3%</i>	<i>12.5%</i>	<i>9.2%</i>	<i>7.6%</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
Summary							
CIVIL	189.247	154.518	171.148	192.658	212.340	231.590	245.479
NON-RESIDENTIAL BUILDING	342.740	246.993	236.262	273.136	302.118	323.775	343.161
RESIDENTIAL	297.826	299.573	337.889	372.513	401.015	429.675	456.390
GRAND TOTAL	829.813	701.084	745.299	838.307	915.473	985.039	1,045.030
Verticals							
Airport	7.393	6.027	5.979	7.352	8.156	8.886	9.563
All Other Civil	31.491	18.146	22.164	24.276	26.555	28.831	30.381
Bridges	30.186	22.746	20.891	24.368	27.542	30.932	34.303
Dams / Canals / Marine Work	8.547	8.273	6.975	7.875	8.849	9.724	10.353
Power Infrastructure	14.697	4.485	7.457	11.942	14.469	16.046	17.469
Roads	65.315	63.633	72.116	78.068	84.846	91.728	95.214
Water and Sewage Treatment	31.617	31.208	35.567	38.777	41.924	45.443	48.196
CIVIL	189.247	154.518	171.148	192.658	212.340	231.590	245.479
<i>(Yr/yr % change)</i>	<i>16.1%</i>	<i>-18.4%</i>	<i>10.8%</i>	<i>12.6%</i>	<i>10.2%</i>	<i>9.1%</i>	<i>6.0%</i>
Offices (private)	36.585	25.551	15.676	19.334	21.019	22.380	23.793
Parking Garages	3.164	1.740	1.710	2.178	2.436	2.638	2.847
Transportation Terminals	10.746	2.363	5.114	6.598	8.222	9.218	10.160
Commercial	50.496	29.653	22.499	28.109	31.677	34.236	36.800
<i>(Yr/yr % change)</i>	<i>32.9%</i>	<i>-41.3%</i>	<i>-24.1%</i>	<i>24.9%</i>	<i>12.7%</i>	<i>8.1%</i>	<i>7.5%</i>
Amusement	7.596	6.350	6.025	7.105	7.857	8.538	9.308
Libraries / Museums	4.072	3.697	2.571	3.865	4.270	4.597	4.758
Religious	1.889	1.638	1.399	1.571	1.675	1.750	1.787
Sports Arenas / Convention Centers	9.835	4.506	4.801	6.197	7.636	8.626	9.067
Community	23.392	16.191	14.795	18.738	21.438	23.510	24.920
<i>(Yr/yr % change)</i>	<i>14.0%</i>	<i>-30.8%</i>	<i>-8.6%</i>	<i>26.6%</i>	<i>14.4%</i>	<i>9.7%</i>	<i>6.0%</i>
College / University	19.675	17.819	16.282	18.606	19.724	20.786	21.731
Elementary / Pre School	21.456	19.783	20.034	20.844	22.116	23.017	23.861
Jr / Sr High School	32.841	27.835	27.524	29.240	30.564	31.955	33.400
Special / Vocational	1.908	1.952	1.614	1.888	2.020	2.097	2.152
Educational	75.879	67.389	65.454	70.578	74.424	77.855	81.145
<i>(Yr/yr % change)</i>	<i>6.1%</i>	<i>-11.2%</i>	<i>-2.9%</i>	<i>7.8%</i>	<i>5.4%</i>	<i>4.6%</i>	<i>4.2%</i>
Courthouses	1.568	2.384	2.736	2.929	3.104	3.239	3.349
Fire and Police Stations	3.260	3.317	3.184	3.395	3.526	3.659	3.744
Government Offices	11.749	10.660	10.621	11.617	12.498	13.068	13.418
Prisons	2.111	2.390	2.279	2.640	2.837	2.994	3.122
Government	18.688	18.751	18.820	20.581	21.965	22.960	23.633
<i>(Yr/yr % change)</i>	<i>-2.3%</i>	<i>0.3%</i>	<i>0.4%</i>	<i>9.4%</i>	<i>6.7%</i>	<i>4.5%</i>	<i>2.9%</i>
Industrial Labs / Labs / School Labs	2.417	2.305	2.179	2.557	2.906	3.011	3.096
Manufacturing	55.810	21.338	23.064	26.761	30.968	34.621	38.412
Warehouses	22.563	25.657	22.177	25.851	28.000	29.287	30.638
Industrial	80.790	49.301	47.420	55.169	61.874	66.919	72.146
<i>(Yr/yr % change)</i>	<i>33.6%</i>	<i>-39.0%</i>	<i>-3.8%</i>	<i>16.3%</i>	<i>12.2%</i>	<i>8.2%</i>	<i>7.8%</i>
Hospitals / Clinics	21.790	12.878	17.534	19.760	21.171	22.619	23.855
Medical Misc.	9.342	8.041	6.922	8.164	8.910	9.475	10.081
Nursing Homes	9.599	7.322	6.916	8.418	9.673	10.689	11.618
Medical	40.731	28.240	31.372	36.342	39.754	42.783	45.555
<i>(Yr/yr % change)</i>	<i>5.1%</i>	<i>-30.7%</i>	<i>11.1%</i>	<i>15.8%</i>	<i>9.4%</i>	<i>7.6%</i>	<i>6.5%</i>
Military	5.049	9.213	9.159	10.592	11.330	11.795	12.065
<i>(Yr/yr % change)</i>	<i>-3.5%</i>	<i>82.5%</i>	<i>-0.6%</i>	<i>15.6%</i>	<i>7.0%</i>	<i>4.1%</i>	<i>2.3%</i>
Hotels	23.537	10.274	7.074	10.038	14.872	17.072	18.651
Retail Misc.	7.667	5.724	6.068	6.316	6.482	6.624	6.772
Shopping	16.510	12.256	13.600	16.674	18.304	20.021	21.475
Retail	47.715	28.254	26.742	33.027	39.658	43.717	46.897
<i>(Yr/yr % change)</i>	<i>-7.8%</i>	<i>-40.8%</i>	<i>-5.3%</i>	<i>23.5%</i>	<i>20.1%</i>	<i>10.2%</i>	<i>7.3%</i>
NON-RESIDENTIAL BUILDING	342.740	246.993	236.262	273.136	302.118	323.775	343.161
<i>(Yr/yr % change)</i>	<i>12.2%</i>	<i>-27.9%</i>	<i>-4.3%</i>	<i>15.6%</i>	<i>10.6%</i>	<i>7.2%</i>	<i>6.0%</i>
Multi-Family	99.042	80.284	82.809	93.687	102.608	110.785	117.994
Single-Family	198.784	219.289	255.080	278.826	298.407	318.890	338.396
RESIDENTIAL	297.826	299.573	337.889	372.513	401.015	429.675	456.390
<i>(Yr/yr % change)</i>	<i>0.4%</i>	<i>0.6%</i>	<i>12.8%</i>	<i>10.2%</i>	<i>7.7%</i>	<i>7.1%</i>	<i>6.2%</i>
GRAND TOTAL	829.813	701.084	745.299	838.307	915.473	985.039	1,045.030
<i>(Yr/yr % change)</i>	<i>8.5%</i>	<i>-15.5%</i>	<i>6.3%</i>	<i>12.5%</i>	<i>9.2%</i>	<i>7.6%</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 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	\$1,966	-0.1%	9.8%	8.2%	8.3%	6.1%
Alabama - AL	\$10,167	19.3%	11.6%	10.9%	9.1%	6.2%
Arkansas - AR	\$7,688	-5.6%	15.0%	10.2%	8.5%	6.0%
Arizona - AZ	\$21,303	-7.0%	1.1%	6.5%	7.4%	5.3%
California - CA*	\$62,575	-5.9%	27.3%	11.1%	7.7%	6.6%
Colorado - CO	\$17,265	15.4%	17.7%	10.3%	8.3%	6.7%
Connecticut - CT	\$5,405	0.7%	36.4%	8.6%	6.5%	4.9%
District Of Columbia - DC	\$2,078	20.2%	58.6%	8.3%	3.5%	4.7%
Delaware - DE	\$3,114	-16.0%	2.9%	6.9%	6.9%	5.3%
Florida - FL*	\$53,257	6.8%	21.3%	9.2%	7.7%	6.1%
Georgia - GA	\$24,634	8.4%	12.6%	10.9%	8.7%	6.4%
Hawaii - HI	\$2,447	11.0%	11.7%	12.7%	1.2%	6.3%
Iowa - IA	\$6,958	5.6%	-12.7%	9.4%	8.6%	5.9%
Idaho - ID	\$4,863	20.5%	21.1%	7.4%	5.9%	5.8%
Illinois - IL	\$19,422	-1.6%	18.2%	9.1%	8.1%	5.6%
Indiana - IN	\$13,962	10.0%	5.1%	10.3%	8.4%	6.2%
Kansas - KS	\$7,196	-11.8%	18.5%	8.7%	8.3%	6.3%
Kentucky - KY	\$8,014	-1.5%	9.4%	11.0%	8.6%	5.8%
Louisiana - LA	\$8,365	16.7%	18.3%	8.7%	7.6%	5.7%
Massachusetts - MA	\$12,842	-3.1%	29.7%	6.6%	6.9%	6.1%
Maryland - MD	\$10,551	-3.1%	-9.1%	7.5%	7.6%	5.7%
Maine - ME	\$2,539	57.9%	-17.4%	8.1%	4.9%	7.8%
Michigan - MI	\$11,843	27.1%	12.3%	8.2%	7.1%	5.4%
Minnesota - MN	\$15,638	16.4%	-6.7%	8.5%	8.3%	5.8%
Missouri - MO	\$14,203	-10.5%	-13.2%	8.0%	8.0%	5.2%
Mississippi - MS	\$5,256	-16.9%	7.2%	10.0%	9.1%	6.0%
Montana - MT	\$2,045	0.7%	25.2%	8.5%	8.0%	5.4%
North Carolina - NC	\$26,386	18.2%	11.3%	10.0%	9.0%	6.5%
North Dakota - ND	\$2,968	6.4%	13.3%	9.5%	8.4%	6.8%
Nebraska - NE	\$5,894	-9.4%	-2.5%	9.0%	8.9%	6.3%
New Hampshire - NH	\$1,947	31.2%	14.4%	6.3%	7.9%	5.8%
New Jersey - NJ	\$11,254	3.5%	39.1%	7.7%	-7.8%	5.4%
New Mexico - NM	\$3,311	0.1%	9.8%	9.4%	7.6%	5.4%
Nevada - NV	\$7,159	5.8%	2.6%	9.9%	7.6%	6.1%
New York - NY*	\$27,864	9.8%	1.5%	9.7%	8.1%	6.4%
Ohio - OH	\$20,389	10.0%	-1.9%	8.7%	7.9%	5.6%
Oklahoma - OK	\$7,959	15.4%	7.6%	10.5%	8.9%	6.0%
Oregon - OR	\$7,794	15.8%	18.7%	8.4%	8.2%	6.5%
Pennsylvania - PA	\$17,075	25.1%	11.8%	8.7%	7.3%	5.5%
Rhode Island - RI	\$964	40.1%	9.2%	8.2%	7.3%	5.8%
South Carolina - SC	\$12,853	15.0%	12.7%	8.9%	6.5%	5.0%
South Dakota - SD	\$2,218	24.2%	8.9%	7.4%	8.1%	5.9%
Tennessee - TN	\$19,848	10.2%	-3.4%	8.8%	7.8%	5.8%
Texas - TX*	\$97,173	13.2%	9.3%	8.6%	7.8%	6.3%
Utah - UT	\$12,273	6.5%	22.5%	8.7%	8.8%	7.2%
Virginia - VA	\$18,492	6.1%	16.4%	9.1%	7.8%	5.3%
Vermont - VT	\$917	-18.6%	10.7%	9.0%	7.5%	6.1%
Washington - WA	\$22,744	-15.2%	38.0%	9.2%	8.4%	7.1%
Wisconsin - WI	\$13,597	-4.3%	3.4%	9.4%	8.5%	5.5%
West Virginia - WV	\$3,040	-27.0%	30.0%	10.7%	8.9%	5.6%
Wyoming - WY	\$1,370	21.7%	28.9%	10.7%	10.0%	6.6%
United States	\$701,084	6.3%	12.5%	9.2%	7.6%	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	10.760	8.323	9.664	8.616	9.519	10.961	11.589
	Non-res Building	21.070	14.268	11.588	10.989	12.084	12.990	13.811
	Engineering/Civil	7.802	5.272	9.349	11.451	12.467	12.871	13.775
	Total	39.631	27.864	30.601	31.056	34.070	36.822	39.175
	(Yr vs previous yr % Change)	3.9%	-29.7%	9.8%	1.5%	9.7%	8.1%	6.4%
Florida	Residential	28.886	29.193	32.971	38.672	41.315	44.310	47.183
	Non-res Building	18.938	15.274	14.158	17.639	19.909	21.313	22.501
	Engineering/Civil	14.363	8.790	9.727	12.676	14.095	15.473	16.335
	Total	62.187	53.257	56.856	68.987	75.320	81.096	86.019
	(Yr vs previous yr % Change)	11.9%	-14.4%	6.8%	21.3%	9.2%	7.7%	6.1%
Texas	Residential	44.134	45.414	54.518	55.813	58.670	62.046	66.376
	Non-res Building	63.303	32.413	32.173	39.622	44.954	48.483	51.292
	Engineering/Civil	24.006	19.346	23.276	24.720	26.811	30.059	31.774
	Total	131.444	97.173	109.967	120.156	130.434	140.589	149.442
	(Yr vs previous yr % Change)	36.7%	-26.1%	13.2%	9.3%	8.6%	7.8%	6.3%
California	Residential	24.366	23.245	22.295	29.051	32.112	34.769	37.225
	Non-res Building	25.881	21.043	20.982	27.736	30.614	32.109	34.130
	Engineering/Civil	15.566	18.288	15.622	18.197	20.600	22.899	24.336
	Total	65.814	62.575	58.899	74.984	83.326	89.777	95.690
	(Yr vs previous yr % Change)	-7.3%	-4.9%	-5.9%	27.3%	11.1%	7.7%	6.6%

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

Tweeted by ConstructConnect:

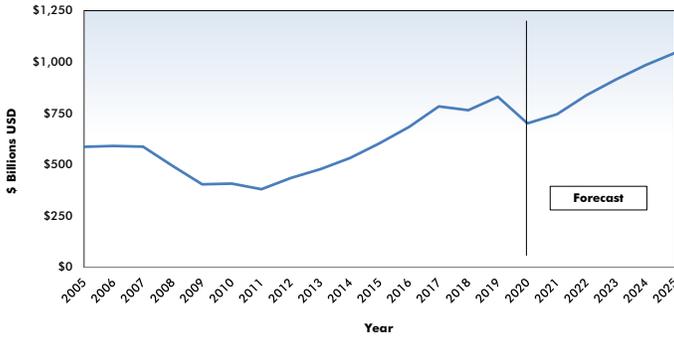
@ConstructConnx

In June, the All-items Consumer Price Index (CPI-U) in the U.S. moved up to +5.4% year over year from +5.0% in May. 'Headline' inflation is now increasing at its fastest rate in more than a decade. In Canada, headline inflation downshifted to +3.1% y/y in June from +3.6% y/y in May.



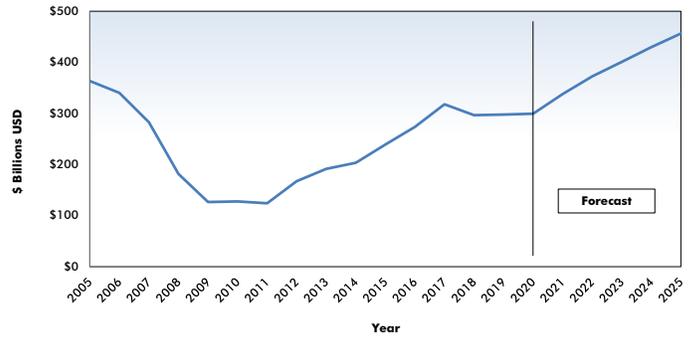
Link to article here: <https://bit.ly/2Tl0kt7>

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



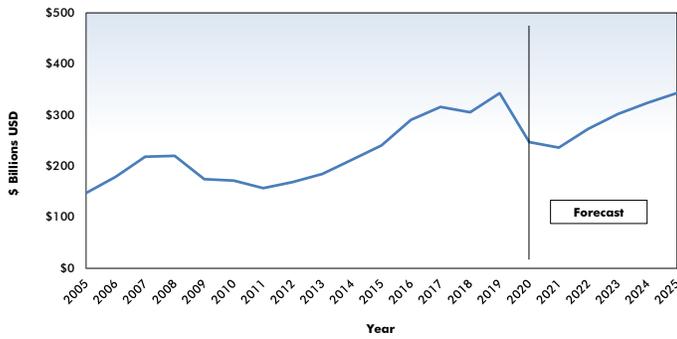
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



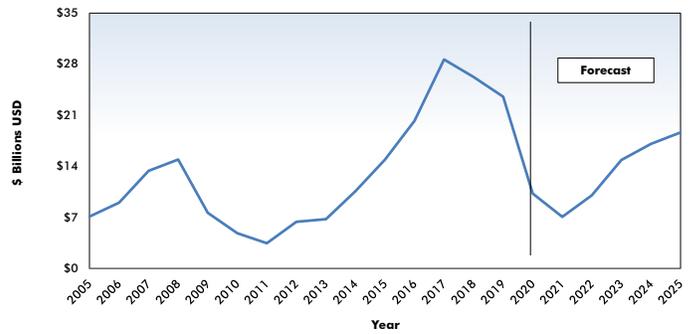
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



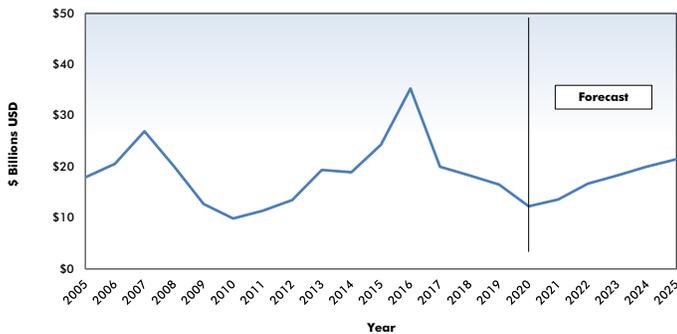
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



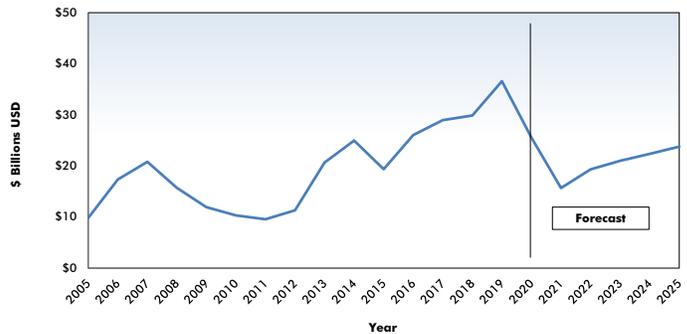
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



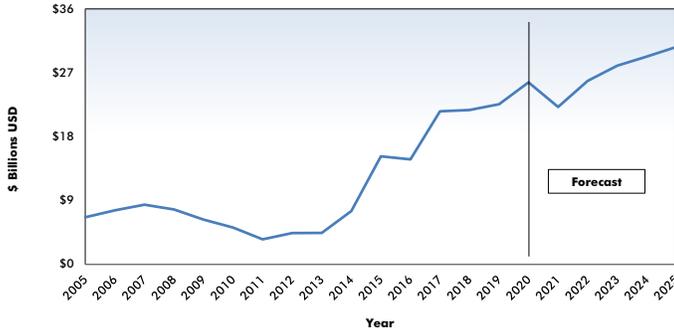
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



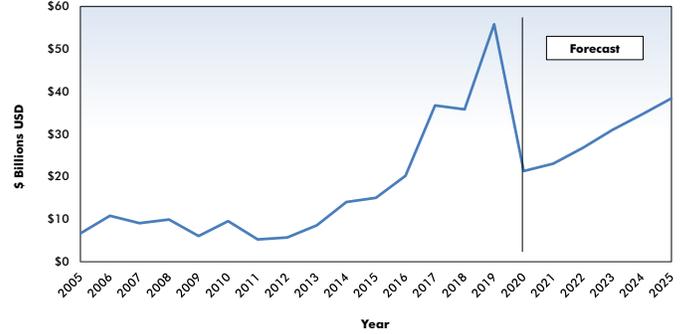
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



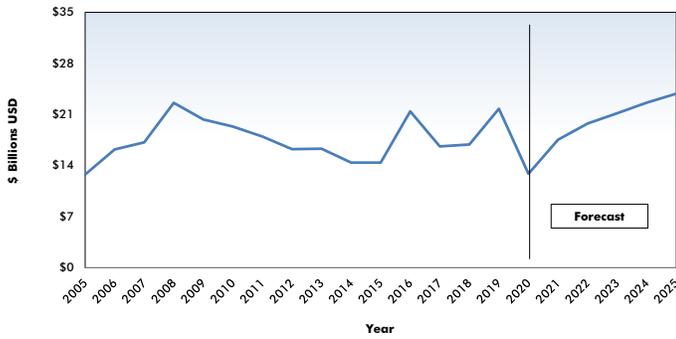
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



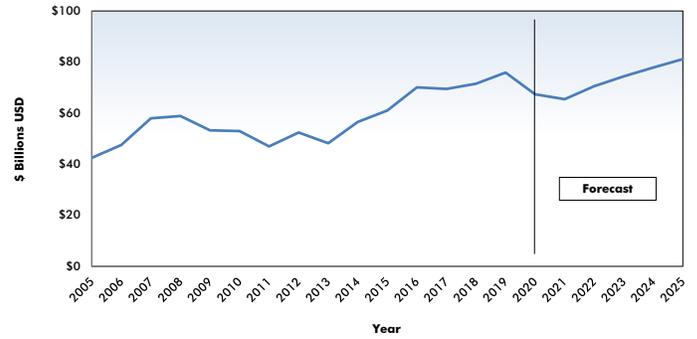
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



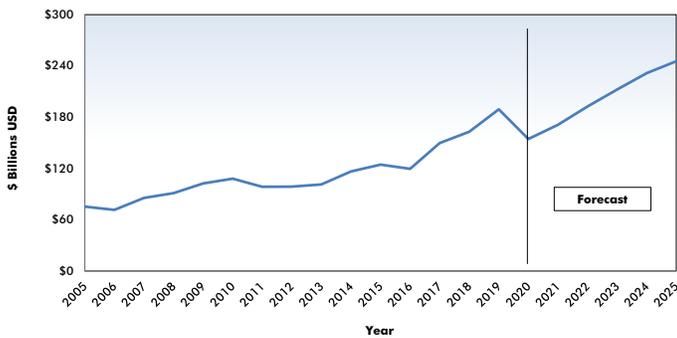
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



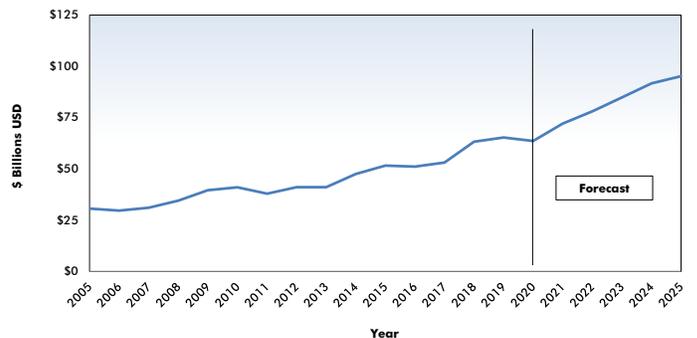
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



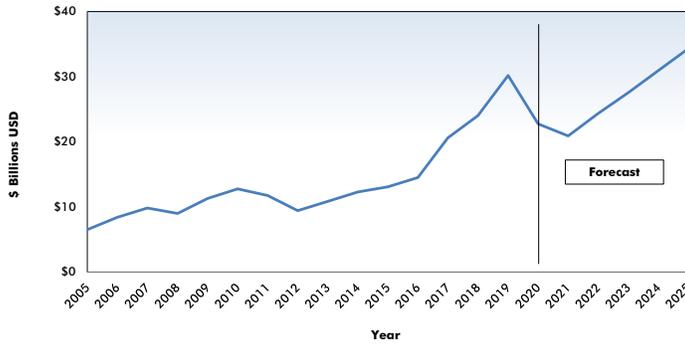
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



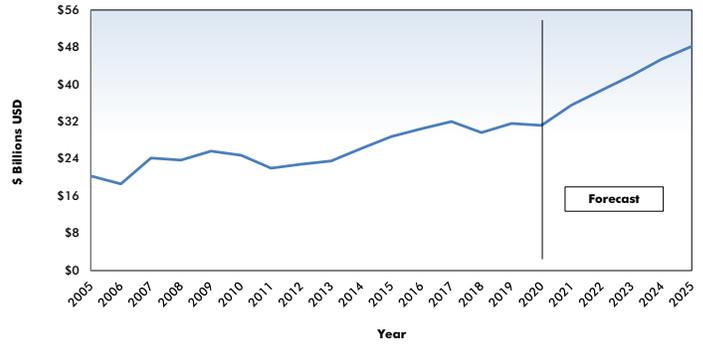
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



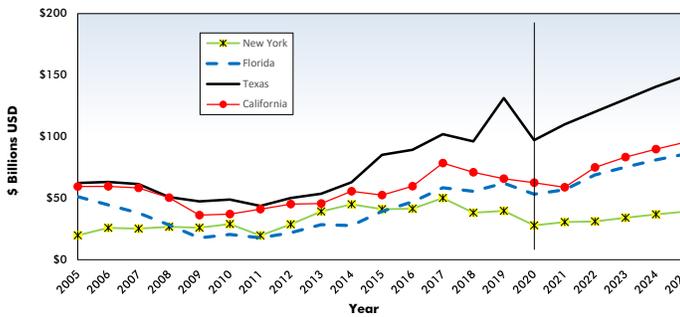
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



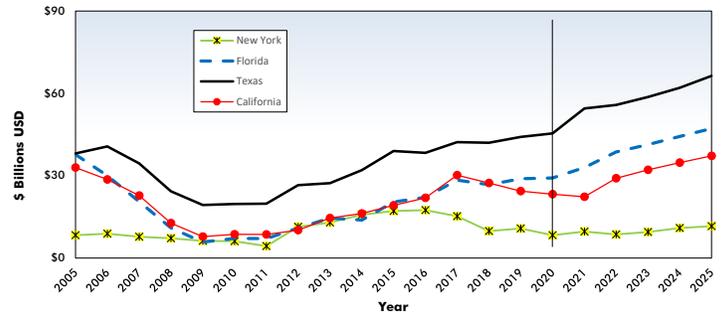
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



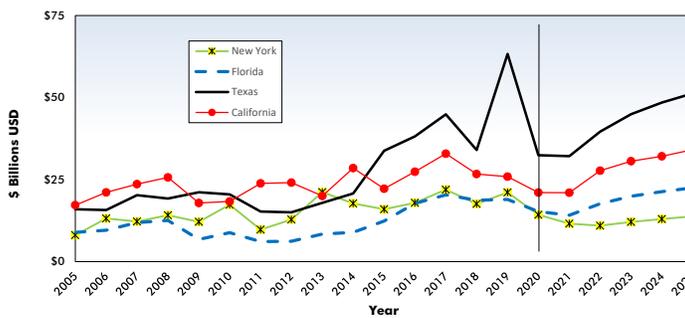
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



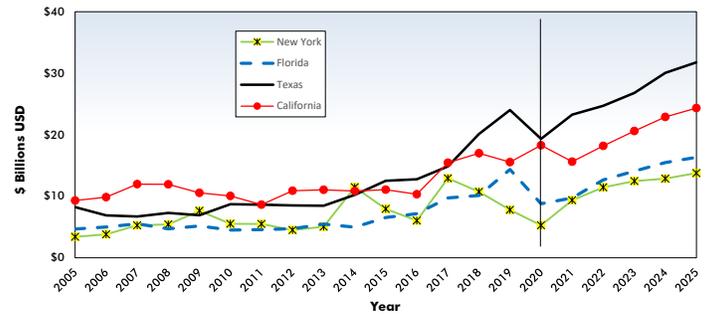
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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	13.301	17.770	18.463	18.570	19.049	19.752
Multi-family	18.717	12.972	13.225	13.703	14.938	16.160	17.114
TOTAL RESIDENTIAL	31.048	26.273	30.995	32.166	33.508	35.208	36.866
(Yr/yr % change)	4.4%	-15.4%	18.0%	3.8%	4.2%	5.1%	4.7%
Hotels/Motels	0.657	0.385	0.191	0.553	0.755	0.865	0.995
Private Offices	3.804	2.085	1.388	1.891	2.301	2.672	2.963
Governmental Offices	3.215	1.474	0.991	1.250	1.691	1.756	1.811
Shopping/Retail	2.346	0.351	0.205	0.589	0.885	1.103	1.213
Retail Miscellaneous	0.238	0.093	0.082	0.161	0.209	0.236	0.266
Parking Garages	0.383	0.143	0.085	0.127	0.149	0.169	0.191
Amusement	2.371	1.025	1.737	1.786	1.891	2.175	2.392
Warehouses	1.560	1.876	1.243	1.508	1.631	1.764	1.899
TOTAL COMMERCIAL	14.575	7.431	5.922	7.864	9.512	10.740	11.731
(Yr/yr % change)	52.9%	-49.0%	-20.3%	32.8%	21.0%	12.9%	9.2%
TOTAL INDUSTRIAL (manufacturing)	3.465	2.395	4.005	5.766	6.756	7.637	8.432
(Yr/yr % change)	-82.5%	-30.9%	67.2%	44.0%	17.2%	13.0%	10.4%
Religious	0.050	0.036	0.067	0.079	0.088	0.098	0.107
Hospitals/Clinics	3.674	3.589	6.774	5.255	5.596	5.810	5.947
MED misc	0.295	0.146	0.135	0.277	0.342	0.409	0.468
Transportation Terminals*	1.497	5.565	3.242	4.412	4.967	4.984	5.046
Police/Fire	1.028	0.836	1.073	1.141	1.210	1.290	1.371
Educational Facilities	5.270	5.234	5.451	5.772	6.092	6.409	6.622
TOTAL INSTITUTIONAL	11.814	15.405	16.743	16.936	18.295	19.000	19.562
(Yr/yr % change)	-31.4%	30.4%	8.7%	1.2%	8.0%	3.9%	3.0%
TOTAL NON-RES BUILDING	29.854	25.231	26.670	30.566	34.563	37.377	39.725
(Yr/yr % change)	-35.8%	-15.5%	5.7%	14.6%	13.1%	8.1%	6.3%
Bridges	2.280	3.665	2.321	3.251	3.548	3.733	3.782
Dams/Canal/Marine	0.714	0.605	0.633	0.725	0.801	0.845	0.895
Water & Sewage Treatment	3.886	2.987	3.698	3.979	4.260	4.540	4.821
Roads	9.701	10.169	9.312	10.080	10.894	11.621	12.193
Power Infrastructure	3.147	2.727	3.285	4.730	5.684	6.722	7.421
All Other Civil (Oil & Gas etc.)	17.492	12.218	10.746	17.177	20.861	23.219	25.268
TOTAL ENGINEERING	37.221	32.371	29.996	39.942	46.048	50.681	54.379
(Yr/yr % change)	5.6%	-13.0%	-7.3%	33.2%	15.3%	10.1%	7.3%
TOTAL NON-RESIDENTIAL	67.075	57.603	56.665	70.507	80.611	88.057	94.104
(Yr/yr % change)	-18.0%	-14.1%	-1.6%	24.4%	14.3%	9.2%	6.9%
GRAND TOTAL	98.123	83.876	87.660	102.673	114.119	123.266	130.970
(Yr/yr % change)	-12.0%	-14.5%	4.5%	17.1%	11.1%	8.0%	6.2%

* 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
Summary							
CIVIL	37.221	32.371	29.996	39.942	46.048	50.681	54.379
NON-RESIDENTIAL BUILDING	29.854	25.231	26.670	30.566	34.563	37.377	39.725
RESIDENTIAL	31.048	26.273	30.995	32.166	33.508	35.208	36.866
GRAND TOTAL	98.123	83.876	87.660	102.673	114.119	123.266	130.970
Verticals							
All Other Civil	17.492	12.218	10.746	17.177	20.861	23.219	25.268
Bridges	2.280	3.665	2.321	3.251	3.548	3.733	3.782
Dams / Canals / Marine Work	0.714	0.605	0.633	0.725	0.801	0.845	0.895
Power Infrastructure	3.147	2.727	3.285	4.730	5.684	6.722	7.421
Roads	9.701	10.169	9.312	10.080	10.894	11.621	12.193
Water and Sewage Treatment	3.886	2.987	3.698	3.979	4.260	4.540	4.821
CIVIL	37.221	32.371	29.996	39.942	46.048	50.681	54.379
(Yr/yr % change)	5.6%	-13.0%	-7.3%	33.2%	15.3%	10.1%	7.3%
Offices (private)	3.804	2.085	1.388	1.891	2.301	2.672	2.963
Parking Garages	0.383	0.143	0.085	0.127	0.149	0.169	0.191
Transportation Terminals	1.497	5.565	3.242	4.412	4.967	4.984	5.046
Commercial	5.684	7.793	4.714	6.430	7.417	7.825	8.200
(Yr/yr % change)	-38.4%	37.1%	-39.5%	36.4%	15.4%	5.5%	4.8%
Amusement	2.371	1.025	1.737	1.786	1.891	2.175	2.392
Religious	0.050	0.036	0.067	0.079	0.088	0.098	0.107
Community	2.421	1.060	1.804	1.864	1.979	2.273	2.499
(Yr/yr % change)	-8.8%	-56.2%	70.1%	3.3%	6.2%	14.8%	10.0%
Educational	5.270	5.234	5.451	5.772	6.092	6.409	6.622
(Yr/yr % change)	24.6%	-0.7%	4.2%	5.9%	5.5%	5.2%	3.3%
Fire and Police Stations	1.028	0.836	1.073	1.141	1.210	1.290	1.371
Government Offices	3.215	1.474	0.991	1.250	1.691	1.756	1.811
Government	4.243	2.310	2.065	2.391	2.901	3.046	3.181
(Yr/yr % change)	17.4%	-45.6%	-10.6%	15.8%	21.3%	5.0%	4.4%
Manufacturing	3.465	2.395	4.005	5.766	6.756	7.637	8.432
Warehouses	1.560	1.876	1.243	1.508	1.631	1.764	1.899
Industrial	5.025	4.271	5.248	7.274	8.387	9.401	10.331
(Yr/yr % change)	-76.8%	-15.0%	22.9%	38.6%	15.3%	12.1%	9.9%
Hospitals / Clinics	3.674	3.589	6.774	5.255	5.596	5.810	5.947
Medical Misc.	0.295	0.146	0.135	0.277	0.342	0.409	0.468
Medical	3.969	3.734	6.909	5.532	5.938	6.219	6.416
(Yr/yr % change)	7.7%	-5.9%	85.0%	-19.9%	7.3%	4.7%	3.2%
Hotels	0.657	0.385	0.191	0.553	0.755	0.865	0.995
Retail Misc.	0.238	0.093	0.082	0.161	0.209	0.236	0.266
Shopping	2.346	0.351	0.205	0.589	0.885	1.103	1.213
Retail	3.241	0.829	0.478	1.303	1.849	2.204	2.475
(Yr/yr % change)	120.5%	-74.4%	-42.4%	172.8%	41.9%	19.2%	12.3%
NON-RESIDENTIAL BUILDING	29.854	25.231	26.670	30.566	34.563	37.377	39.725
(Yr/yr % change)	-35.8%	-15.5%	5.7%	14.6%	13.1%	8.1%	6.3%
Multi-Family	18.717	12.972	13.225	13.703	14.938	16.160	17.114
Single-Family	12.331	13.301	17.770	18.463	18.570	19.049	19.752
RESIDENTIAL	31.048	26.273	30.995	32.166	33.508	35.208	36.866
(Yr/yr % change)	4.4%	-15.4%	18.0%	3.8%	4.2%	5.1%	4.7%
TOTAL NON-RESIDENTIAL	67.075	57.603	56.665	70.507	80.611	88.057	94.104
(Yr/yr % change)	-18.0%	-14.1%	-1.6%	24.4%	14.3%	9.2%	6.9%
GRAND TOTAL	98.123	83.876	87.660	102.673	114.119	123.266	130.970
(Yr/yr % change)	-12.0%	-14.5%	4.5%	17.1%	11.1%	8.0%	6.2%

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	\$3,619	6.6%	42.4%	14.0%	7.5%	4.3%
Quebec	\$16,686	29.6%	-21.5%	7.2%	7.8%	6.1%
Ontario	\$33,649	-19.3%	21.5%	9.0%	6.4%	5.0%
Manitoba	\$1,698	21.3%	56.9%	6.9%	4.8%	7.7%
Saskatchewan	\$1,258	60.1%	29.6%	11.0%	6.0%	6.8%
Alberta	\$12,407	25.1%	16.8%	16.0%	9.0%	7.9%
British Columbia	\$14,559	6.0%	50.7%	13.2%	10.4%	6.9%
Canada	\$83,876	4.5%	17.1%	11.1%	8.0%	6.2%

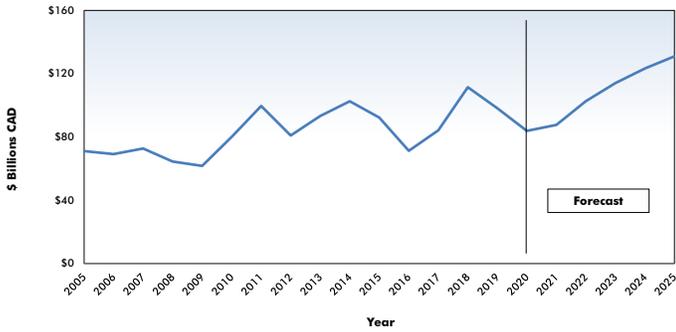
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

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

		Actuals		Forecasts				
		2019	2020	2021	2022	2023	2024	2025
Quebec	Residential	4.949	4.177	7.170	4.798	4.758	4.917	5.131
	Non-res Building	8.368	5.159	8.798	6.588	7.148	7.698	8.201
	Engineering/Civil	7.711	7.350	5.653	5.581	6.277	6.984	7.471
	Total	21.027	16.686	21.621	16.967	18.184	19.599	20.802
	(Yr vs previous yr % Change)	-4.4%	-20.6%	29.6%	-21.5%	7.2%	7.8%	6.1%
Ontario	Residential	13.562	12.783	13.447	14.457	14.950	15.668	16.362
	Non-res Building	10.138	13.629	6.663	9.823	11.171	11.820	12.343
	Engineering/Civil	7.748	7.237	7.041	8.698	9.828	10.744	11.431
	Total	31.447	33.649	27.151	32.978	35.949	38.232	40.136
	(Yr vs previous yr % Change)	-11.3%	7.0%	-19.3%	21.5%	9.0%	6.4%	5.0%
Alberta	Residential	3.973	3.078	3.675	4.076	4.274	4.566	4.797
	Non-res Building	4.147	1.925	3.541	3.965	4.782	5.197	5.638
	Engineering/Civil	9.976	7.403	8.301	10.090	11.983	13.167	14.305
	Total	18.096	12.407	15.517	18.131	21.038	22.930	24.740
	(Yr vs previous yr % Change)	5.1%	-31.4%	25.1%	16.8%	16.0%	9.0%	7.9%
British Columbia	Residential	6.657	4.499	4.927	6.615	7.157	7.595	7.981
	Non-res Building	3.770	2.655	5.344	5.770	6.367	7.218	7.790
	Engineering/Civil	8.453	7.405	5.168	10.876	12.811	14.269	15.318
	Total	18.879	14.559	15.439	23.261	26.336	29.082	31.089
	(Yr vs previous yr % Change)	-29.3%	-22.9%	6.0%	50.7%	13.2%	10.4%	6.9%

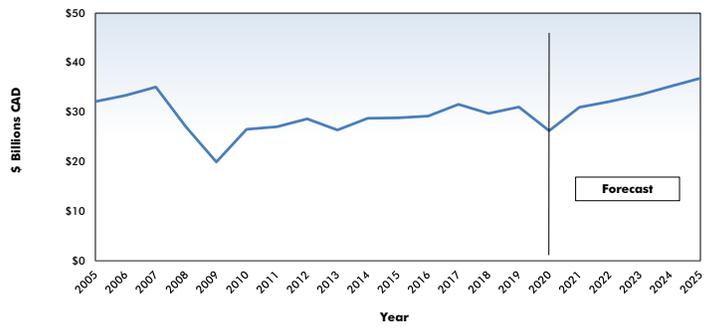
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Graph 19: Canadian Grand Total Construction Starts — ConstructConnect



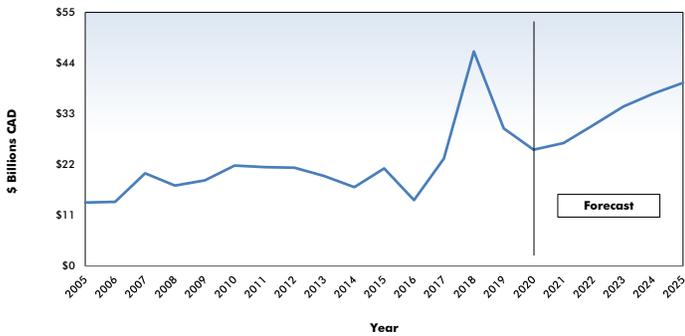
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 20: Canadian Residential Construction Starts — ConstructConnect



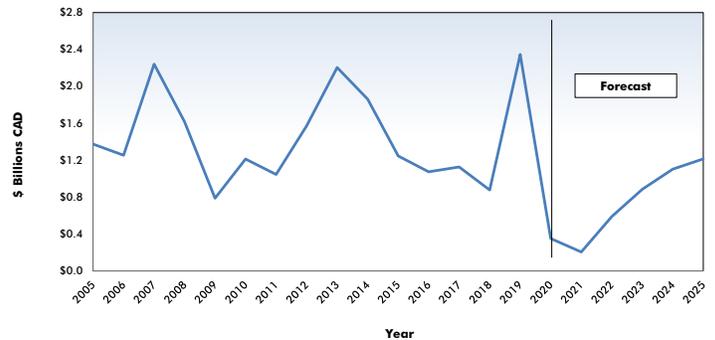
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 21: Canadian Non-Residential Building Starts — ConstructConnect



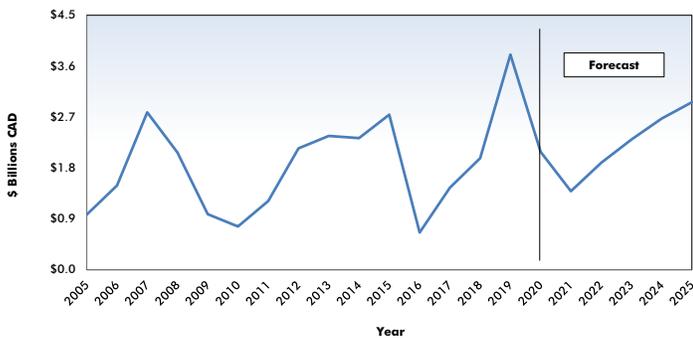
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect



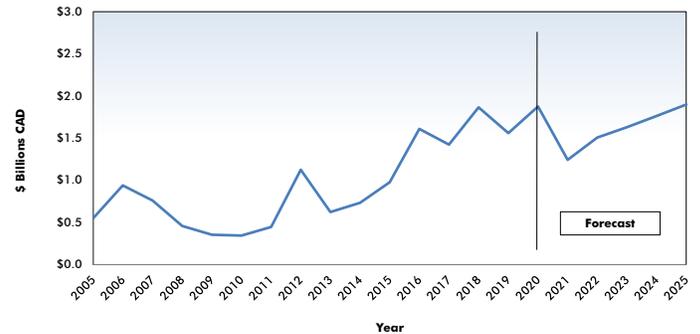
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 23: Canadian Private Offices Construction Starts — ConstructConnect



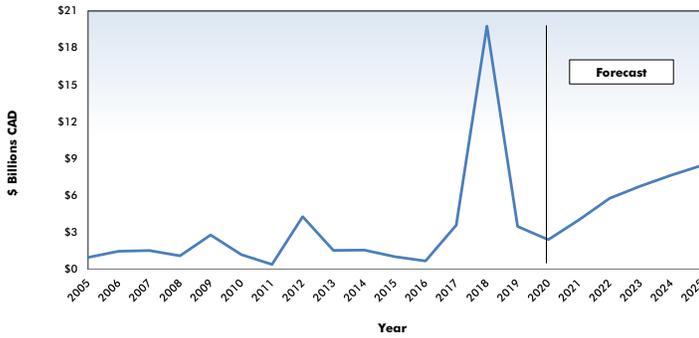
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 24: Canadian Warehouse Construction Starts — ConstructConnect



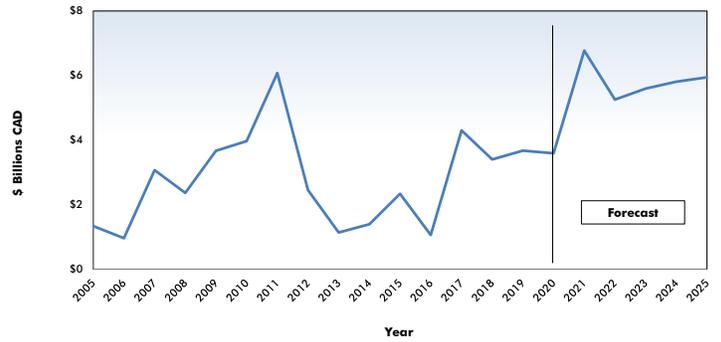
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 25: Canadian Industrial/Manufacturing Construction Starts — ConstructConnect



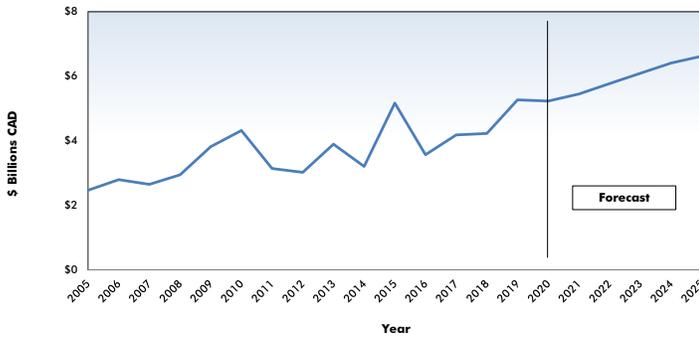
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect



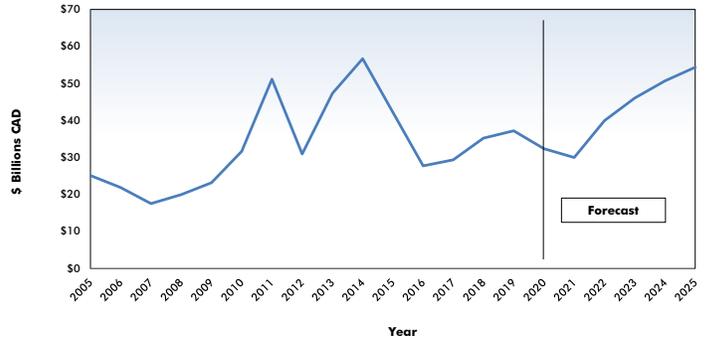
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 27: Canadian Education Construction Starts — ConstructConnect



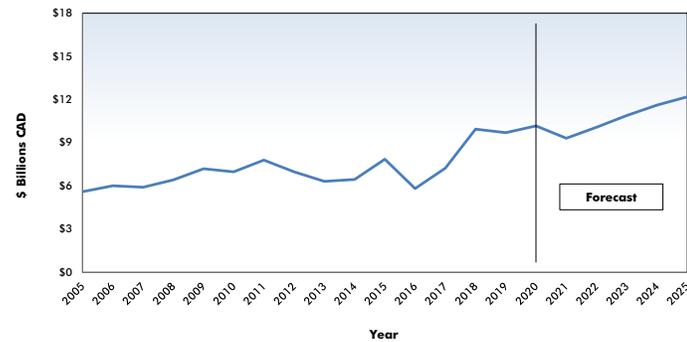
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 28: Canadian Engineering Construction Starts — ConstructConnect



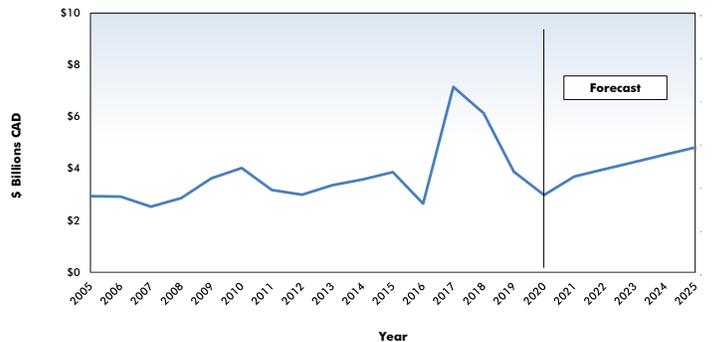
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 29: Canadian Roadwork Construction Starts — ConstructConnect



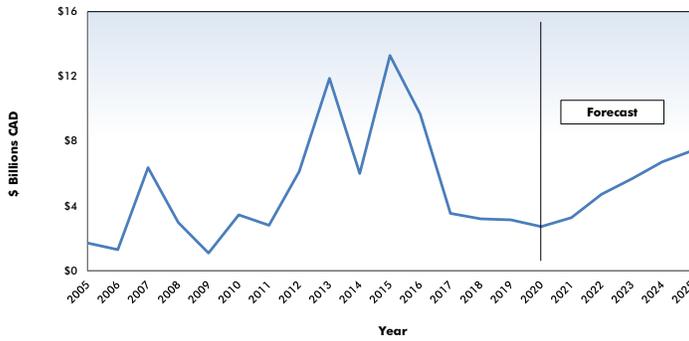
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect



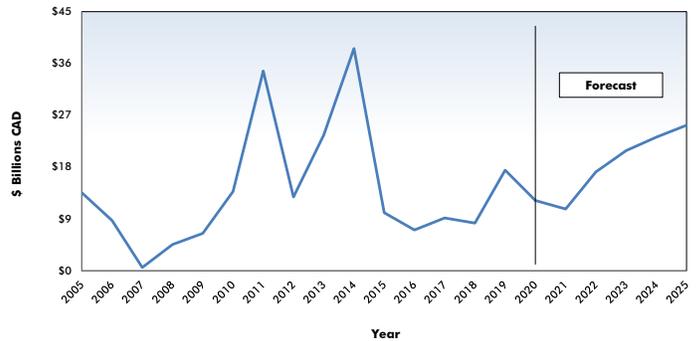
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect



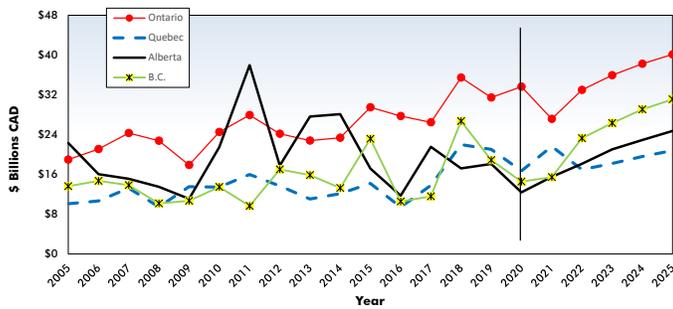
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 32: Canadian All Other Civil (Oil Sands, Pipelines, etc.) Construction Starts — ConstructConnect



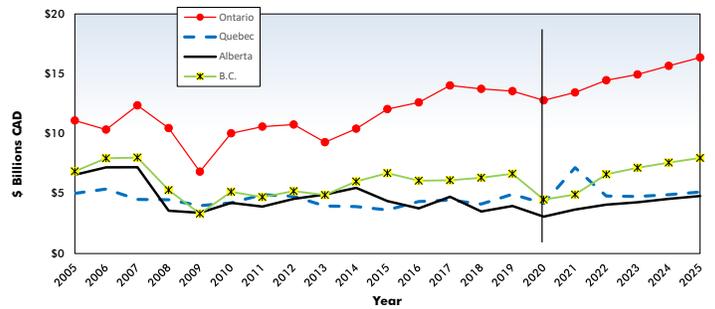
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



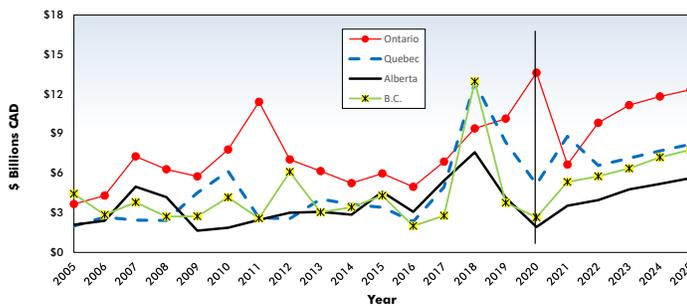
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



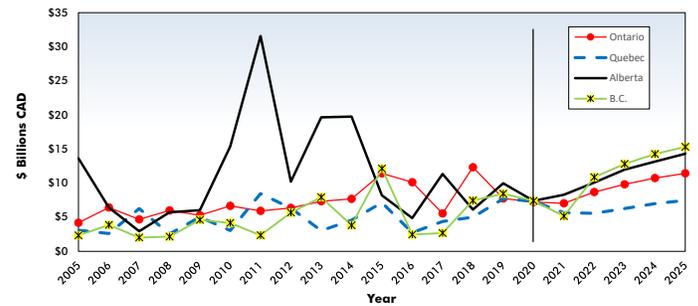
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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	1,813.2	2,109.1	2,305.4	2,467.3	2,636.7	2,798.0
Multi-family	555.0	463.7	482.9	528.3	572.5	616.7	656.4
TOTAL RESIDENTIAL	2,198.6	2,276.8	2,592.0	2,833.7	3,039.8	3,253.4	3,454.4
<i>(Yr/yr % change)</i>	<i>-0.1%</i>	<i>3.6%</i>	<i>13.8%</i>	<i>9.3%</i>	<i>7.3%</i>	<i>7.0%</i>	<i>6.2%</i>
Hotels/Motels	106.0	45.8	28.3	54.2	74.5	88.4	100.7
Shopping/Retail	69.0	50.9	55.6	68.5	73.3	79.7	85.3
Parking Garages	34.6	17.2	16.1	20.7	22.8	24.5	26.5
Amusement	23.9	21.7	22.0	23.2	24.6	25.6	26.4
Private Offices	107.8	74.6	53.6	61.5	70.5	79.3	89.0
Governmental Offices	17.2	13.3	14.8	14.6	15.9	16.7	17.1
Laboratories (Schools & Industrial)	3.5	3.1	4.0	5.2	5.7	6.1	6.6
Warehouses	207.4	227.0	195.6	226.4	249.6	262.2	274.5
Sports Stadium/Convention Center	21.0	12.6	13.0	15.7	20.5	23.5	24.8
Transportation Terminals	9.5	4.9	7.3	11.0	14.6	16.7	18.5
TOTAL COMMERCIAL	599.9	471.2	410.3	501.2	571.9	622.7	669.5
<i>(Yr/yr % change)</i>	<i>3.6%</i>	<i>-21.5%</i>	<i>-12.9%</i>	<i>22.1%</i>	<i>14.1%</i>	<i>8.9%</i>	<i>7.5%</i>
TOTAL INDUSTRIAL (manufacturing)	106.4	69.4	66.9	72.1	86.3	97.3	108.2
<i>(Yr/yr % change)</i>	<i>7.2%</i>	<i>-34.8%</i>	<i>-3.5%</i>	<i>7.7%</i>	<i>19.7%</i>	<i>12.8%</i>	<i>11.2%</i>
Religious	5.1	3.9	3.8	4.3	4.7	5.1	5.4
Hospitals/Clinics	33.4	15.1	22.9	27.9	34.6	40.9	46.4
Nursing Homes/Assisted Living	40.6	31.7	27.7	34.5	40.0	44.4	48.2
Libraries/Museums	3.2	3.4	2.7	4.0	4.6	5.0	5.2
Courthouse	1.8	3.0	3.9	4.3	4.4	4.5	4.7
Police/Fire	7.6	8.3	8.4	8.7	8.9	9.2	9.4
Prisons	2.1	2.6	2.3	2.6	2.8	3.1	3.4
Military	11.7	22.7	26.0	28.2	29.5	30.6	31.2
Educational Facilities	168.1	148.0	132.4	147.9	161.7	170.6	178.2
MED misc	19.7	15.3	14.2	15.5	16.5	17.4	18.5
TOTAL INSTITUTIONAL	293.3	253.9	244.2	277.8	307.9	330.8	350.7
<i>(Yr/yr % change)</i>	<i>2.7%</i>	<i>-13.5%</i>	<i>-3.8%</i>	<i>13.8%</i>	<i>10.8%</i>	<i>7.5%</i>	<i>6.0%</i>
Miscellaneous Non-Res Building	26.7	20.2	22.0	22.7	22.7	23.0	23.5
TOTAL NON-RES BLDG	1,026.4	814.6	743.5	873.7	988.7	1,073.8	1,151.8
<i>(Yr/yr % change)</i>	<i>3.7%</i>	<i>-20.6%</i>	<i>-8.7%</i>	<i>17.5%</i>	<i>13.2%</i>	<i>8.6%</i>	<i>7.3%</i>
RESIDENTIAL + NON-RES BLDG	3,225.0	3,091.4	3,335.5	3,707.4	4,028.6	4,327.2	4,606.2
<i>(Yr/yr % change)</i>	<i>1.1%</i>	<i>-4.1%</i>	<i>7.9%</i>	<i>11.2%</i>	<i>8.7%</i>	<i>7.4%</i>	<i>6.4%</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
Summary							
NON-RESIDENTIAL BUILDING	1,026.4	814.6	743.5	873.7	988.7	1,073.8	1,151.8
RESIDENTIAL	2,198.6	2,276.8	2,592.0	2,833.7	3,039.8	3,253.4	3,454.4
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,225.0	3,091.4	3,335.5	3,707.4	4,028.6	4,327.2	4,606.2
Verticals							
Offices (private)	107.8	74.6	53.6	61.5	70.5	79.3	89.0
Parking Garages	34.6	17.2	16.1	20.7	22.8	24.5	26.5
Transportation Terminals	9.5	4.9	7.3	11.0	14.6	16.7	18.5
Commercial	151.9	96.7	77.0	93.2	107.9	120.5	134.0
(Yr/yr % change)	19.4%	-36.3%	-20.4%	21.0%	15.7%	11.7%	11.2%
Amusement	23.9	21.7	22.0	23.2	24.6	25.6	26.4
Libraries / Museums	3.2	3.4	2.7	4.0	4.6	5.0	5.2
Religious	5.1	3.9	3.8	4.3	4.7	5.1	5.4
Sports Arenas / Convention Centers	21.0	12.6	13.0	15.7	20.5	23.5	24.8
Community	53.2	41.6	41.5	47.2	54.3	59.2	61.8
(Yr/yr % change)	3.8%	-21.9%	-0.3%	13.8%	15.1%	8.9%	4.4%
College / University	38.1	32.5	26.5	31.1	34.0	36.2	37.9
Elementary / Pre School	48.8	47.9	41.1	44.7	50.9	53.9	56.1
Jr / Sr High School	75.6	62.2	60.5	67.0	71.1	74.6	78.0
Special / Vocational	5.6	5.3	4.3	5.1	5.7	6.0	6.2
Educational	168.1	148.0	132.4	147.9	161.7	170.6	178.2
(Yr/yr % change)	7.5%	-12.0%	-10.5%	11.7%	9.4%	5.5%	4.4%
Courthouses	1.8	3.0	3.9	4.3	4.4	4.5	4.7
Fire and Police Stations	7.6	8.3	8.4	8.7	8.9	9.2	9.4
Government Offices	17.2	13.3	14.8	14.6	15.9	16.7	17.1
Prisons	2.1	2.6	2.3	2.6	2.8	3.1	3.4
Government	28.7	27.2	29.4	30.2	32.1	33.6	34.7
(Yr/yr % change)	-5.6%	-5.5%	8.2%	2.9%	6.2%	4.6%	3.2%
Industrial Labs / Labs / School Labs	3.5	3.1	4.0	5.2	5.7	6.1	6.6
Manufacturing	106.4	69.4	66.9	72.1	86.3	97.3	108.2
Warehouses	207.4	227.0	195.6	226.4	249.6	262.2	274.5
Industrial	317.4	299.4	266.5	303.7	341.5	365.6	389.4
(Yr/yr % change)	3.0%	-5.7%	-11.0%	13.9%	12.5%	7.1%	6.5%
Hospitals / Clinics	33.4	15.1	22.9	27.9	34.6	40.9	46.4
Medical Misc.	19.7	15.3	14.2	15.5	16.5	17.4	18.5
Nursing Homes	40.6	31.7	27.7	34.5	40.0	44.4	48.2
Medical	93.8	62.1	64.7	77.8	91.2	102.6	113.2
(Yr/yr % change)	0.2%	-33.8%	4.2%	20.2%	17.1%	12.6%	10.2%
Military	11.7	22.7	26.0	28.2	29.5	30.6	31.2
(Yr/yr % change)	7.8%	94.1%	14.8%	8.4%	4.7%	3.6%	2.1%
Hotels	106.0	45.8	28.3	54.2	74.5	88.4	100.7
Retail Misc.	26.7	20.2	22.0	22.7	22.7	23.0	23.5
Shopping	69.0	50.9	55.6	68.5	73.3	79.7	85.3
Retail	201.7	116.9	106.0	145.4	170.4	191.1	209.5
(Yr/yr % change)	-4.9%	-42.0%	-9.4%	37.2%	17.2%	12.1%	9.7%
NON-RESIDENTIAL BUILDING	1,026.4	814.6	743.5	873.7	988.7	1,073.8	1,151.8
(Yr/yr % change)	3.7%	-20.6%	-8.7%	17.5%	13.2%	8.6%	7.3%
Multi-Family	555.0	463.7	482.9	528.3	572.5	616.7	656.4
Single-Family	1,643.6	1,813.2	2,109.1	2,305.4	2,467.3	2,636.7	2,798.0
RESIDENTIAL	2,198.6	2,276.8	2,592.0	2,833.7	3,039.8	3,253.4	3,454.4
(Yr/yr % change)	-0.1%	3.6%	13.8%	9.3%	7.3%	7.0%	6.2%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,225.0	3,091.4	3,335.5	3,707.4	4,028.6	4,327.2	4,606.2
(Yr/yr % change)	1.1%	-4.1%	7.9%	11.2%	8.7%	7.4%	6.4%

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	114.9	153.3	159.4	160.4	164.5	170.6
Multi-family	94.7	63.8	60.7	63.0	69.5	75.5	79.9
TOTAL RESIDENTIAL	201.1	178.7	214.0	222.5	229.8	240.0	250.5
<i>(Yr/yr % change)</i>	<i>-2.3%</i>	<i>-11.2%</i>	<i>19.8%</i>	<i>3.9%</i>	<i>3.3%</i>	<i>4.4%</i>	<i>4.4%</i>
Hotels/Motels	2.6	0.9	0.7	1.7	2.2	2.5	2.9
Private Offices	11.2	5.3	6.1	8.1	9.6	11.3	12.5
Governmental Offices	2.4	1.8	0.8	1.0	1.4	1.5	1.6
Shopping/Retail	9.9	3.3	2.2	6.4	9.0	11.4	12.6
Retail Miscellaneous	1.3	0.3	0.3	0.5	0.6	0.7	0.8
Parking Garages	1.4	0.2	0.1	0.3	0.3	0.4	0.5
Amusement	4.0	1.5	2.9	2.9	3.0	3.6	4.1
Warehouses	10.5	9.6	9.0	10.0	10.7	11.6	12.4
TOTAL COMMERCIAL	43.2	22.9	22.2	30.9	37.0	43.1	47.5
<i>(Yr/yr % change)</i>	<i>10.8%</i>	<i>-46.9%</i>	<i>-3.4%</i>	<i>39.3%</i>	<i>19.8%</i>	<i>16.6%</i>	<i>10.1%</i>
TOTAL INDUSTRIAL (manufacturing)	6.4	5.0	3.8	5.1	6.1	6.8	7.2
<i>(Yr/yr % change)</i>	<i>-21.6%</i>	<i>-21.5%</i>	<i>-24.5%</i>	<i>35.2%</i>	<i>19.6%</i>	<i>11.0%</i>	<i>5.9%</i>
Religious	0.1	0.1	0.3	0.3	0.4	0.4	0.5
Hospitals/Clinics	7.6	8.7	9.9	8.6	9.0	9.3	9.5
MED misc	1.2	0.2	0.3	0.5	0.7	0.9	1.1
Transportation Terminals*	0.3	0.5	0.4	0.9	1.0	1.2	1.3
Police/Fire	1.5	1.4	1.4	1.4	1.5	1.6	1.7
Educational Facilities	12.4	10.2	11.0	11.4	12.4	13.1	13.5
TOTAL INSTITUTIONAL	23.1	21.1	23.3	23.2	25.0	26.5	27.7
<i>(Yr/yr % change)</i>	<i>-19.8%</i>	<i>-8.8%</i>	<i>10.2%</i>	<i>-0.4%</i>	<i>7.9%</i>	<i>6.1%</i>	<i>4.4%</i>
TOTAL NON-RES BLDG	72.8	49.1	49.2	59.1	68.1	76.4	82.4
<i>(Yr/yr % change)</i>	<i>-4.3%</i>	<i>-32.6%</i>	<i>0.3%</i>	<i>20.2%</i>	<i>15.1%</i>	<i>12.2%</i>	<i>7.8%</i>
RESIDENTIAL + NON-RES BLDG	273.9	227.7	263.2	281.6	297.9	316.4	332.9
<i>(Yr/yr % change)</i>	<i>-2.8%</i>	<i>-16.8%</i>	<i>15.6%</i>	<i>7.0%</i>	<i>5.8%</i>	<i>6.2%</i>	<i>5.2%</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)

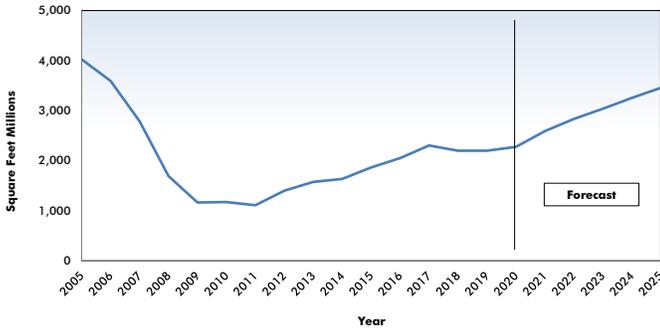
	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Summary							
NON-RESIDENTIAL BUILDING	72.8	49.1	49.2	59.1	68.1	76.4	82.4
RESIDENTIAL	201.1	178.7	214.0	222.5	229.8	240.0	250.5
RESIDENTIAL + NON-RESIDENTIAL BUILDING	273.9	227.7	263.2	281.6	297.9	316.4	332.9
Verticals							
Offices (private)	11.2	5.3	6.1	8.1	9.6	11.3	12.5
Parking Garages	1.4	0.2	0.1	0.3	0.3	0.4	0.5
Transportation Terminals	0.3	0.5	0.4	0.9	1.0	1.2	1.3
Commercial	12.9	6.0	6.6	9.2	11.0	12.9	14.4
(Yr/Yr % change)	-4.7%	-53.5%	10.9%	38.9%	19.2%	17.1%	11.7%
Amusement	4.0	1.5	2.9	2.9	3.0	3.6	4.1
Religious	0.1	0.1	0.3	0.3	0.4	0.4	0.5
Community	4.1	1.6	3.2	3.2	3.4	4.1	4.6
(Yr/Yr % change)	-23.9%	-61.0%	98.2%	2.0%	3.7%	20.6%	12.8%
Educational	12.4	10.2	11.0	11.4	12.4	13.1	13.5
(Yr/Yr % change)	3.2%	-17.7%	7.9%	3.8%	8.4%	5.9%	3.5%
Fire and Police Stations	1.5	1.4	1.4	1.4	1.5	1.6	1.7
Government Offices	2.4	1.8	0.8	1.0	1.4	1.5	1.6
Government	3.9	3.1	2.2	2.5	2.9	3.1	3.2
(Yr/Yr % change)	7.3%	-20.3%	-30.8%	12.9%	19.5%	5.5%	4.8%
Manufacturing	6.4	5.0	3.8	5.1	6.1	6.8	7.2
Warehouses	10.5	9.6	9.0	10.0	10.7	11.6	12.4
Industrial	16.9	14.7	12.8	15.1	16.8	18.4	19.7
(Yr/Yr % change)	-20.5%	-13.1%	-12.7%	18.0%	11.5%	9.4%	6.8%
Hospitals / Clinics	7.6	8.7	9.9	8.6	9.0	9.3	9.5
Medical Misc.	1.2	0.2	0.3	0.5	0.7	0.9	1.1
Medical	8.8	8.9	10.2	9.1	9.7	10.2	10.7
(Yr/Yr % change)	-16.8%	1.2%	14.2%	-10.6%	6.5%	5.3%	4.2%
Hotels	2.6	0.9	0.7	1.7	2.2	2.5	2.9
Retail Misc.	1.3	0.3	0.3	0.5	0.6	0.7	0.8
Shopping	9.9	3.3	2.2	6.4	9.0	11.4	12.6
Retail	13.8	4.6	3.2	8.6	11.9	14.7	16.3
(Yr/Yr % change)	43.6%	-66.9%	-29.2%	166.4%	38.3%	23.3%	11.1%
NON-RESIDENTIAL BUILDING	72.8	49.1	49.2	59.1	68.1	76.4	82.4
(Yr/Yr % change)	-4.3%	-32.6%	0.3%	20.2%	15.1%	12.2%	7.8%
Multi-Family	94.7	63.8	60.7	63.0	69.5	75.5	79.9
Single-Family	106.4	114.9	153.3	159.4	160.4	164.5	170.6
RESIDENTIAL	201.1	178.7	214.0	222.5	229.8	240.0	250.5
(Yr/Yr % change)	-2.3%	-11.2%	19.8%	3.9%	3.3%	4.4%	4.4%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	273.9	227.7	263.2	281.6	297.9	316.4	332.9
(Yr/Yr % change)	-2.8%	-16.8%	15.6%	7.0%	5.8%	6.2%	5.2%

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'.

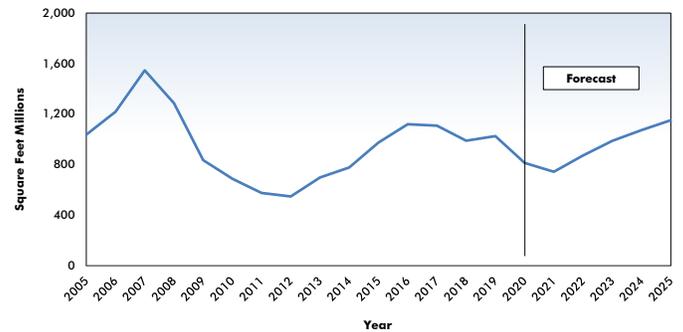
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

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



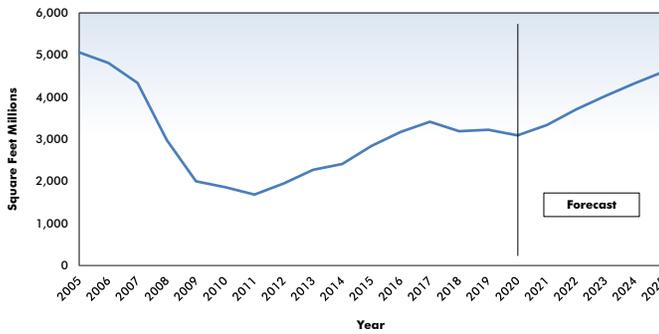
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



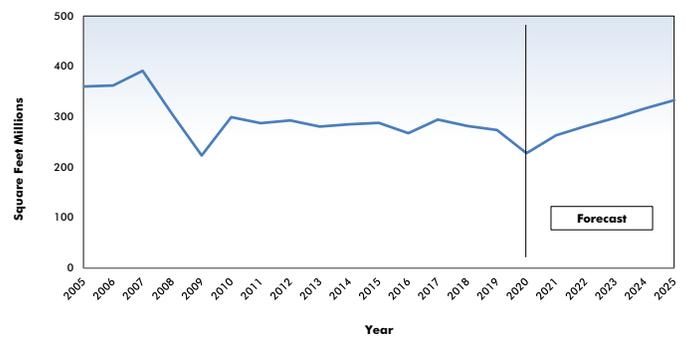
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



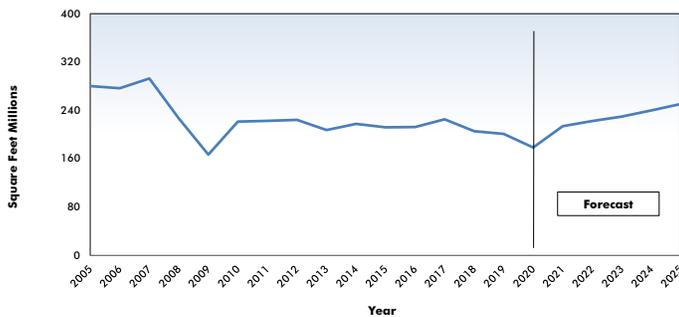
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



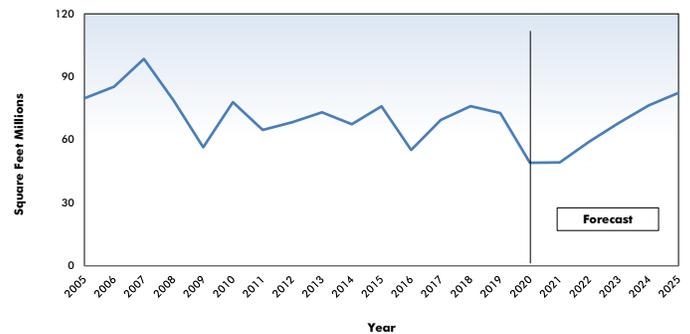
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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.

Contributors:
Oxford Economics — Abby Samp, Lead Economist; Toby Whittington, Economist / ConstructConnect — Alex Carrick, Chief Economist; Erich Falkenberg, National Production Manager