

Autumn 2023 (For August 2023 Release)

Construction Starts Forecast

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Highlights

- Total US construction starts fell by 20.1% year-on-year (y/y) and 8.5% year-to-date (ytd) in Q2 2023. Solid growth in new civil engineering projects was not enough to offset steep declines in new homebuilding and non-residential building. Part of the weakness in Q2 was due to a large value of mega-projects in the same period in 2022 dropping out of the annual calculation.
- Better-than-expected incoming data have led us to push up our GDP growth forecast in 2023 to 1.8%. However, we still think that on balance, higher borrowing costs are likely to push the economy into a shallow recession by the end of the year, and we have downgraded our 2024 outlook to 0.1% as a result. While we don't have any additional rate rises factored into our baseline forecast, the hawkish tone from the Fed means that an additional increase can't be ruled out.
- Total US construction starts are expected to fall 4.6% in 2023, before returning to growth in 2024. Homebuilding, the most interest rate-sensitive sector, is expected to post the largest decline. We expect a contraction in non-residential building after strong growth last year. New engineering activity, by contrast, is expected to grow at a solid clip, underpinned by government infrastructure spending.
- Total Canadian construction starts fell by 6.1% y/y and 4.3% ytd in Q2 2023. New engineering construction declined 5.3% y/y and 15.5% ytd, while residential construction starts fell 18.1% y/y and 18.1% ytd. By contrast, new non-residential building grew 7.2% y/y and 29.2% ytd.
- Total Canadian construction starts are forecast to decline 1.3% this year after falling in 2022 as well. A steep decline in new residential activity will more than offset a modest increase in new civil engineering projects and a stronger rise in new non-residential building. In the medium-term, Canadian building is expected to return to growth, with double-digit increases pencilled in for 2024-25.

Link to article here: <https://bit.ly/30hKlox>

Sources: ConstructConnect®/Oxford Economics.
Forecasts reflect actual starts through Q2 2023.

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Overview

New construction activity fell back in Q2 2023

Total US construction starts fell by 20.1% year-on-year (y/y) and 8.5% year-to-date (ytd) in Q2 2023. Non-residential building declined 28.4% y/y and 5.4% ytd and new residential construction fell 31.1% y/y and 27.4% ytd. New engineering construction, by contrast, grew 18.9% y/y and 23.5% ytd.

The trend of groundbreaking on mega-projects—projects that are valued at more than \$1 billion—continued in Q2 2023. There were 13 such projects started during the quarter for a total value of nearly \$24 billion, and June set a record for the number of mega-projects started in a single month (with nine such projects). However, Q2 2022 also had a bounty of mega-projects—including two projects valued at over \$10 billion—for a total value of \$45 billion. These projects dropped out of the annual calculation for starts in both y/y terms and ytd terms in Q2 2023, partly explaining last quarter’s weakness.

The mega-projects recorded in Q2 2023 were broad-based across a range of structure types. In recent quarters, mega-projects have been heavily concentrated in the manufacturing sector. While construction of four new factories did begin in Q2, other large projects included two sports stadiums, two power projects, and a single mega-project categorized in each of dams, warehouses, offices, multi-family residential, and military structures.

Despite more than \$9 billion in spending on large projects in Q2, new factory construction fell 63.9% y/y. Steep declines in new manufacturing construction is likely to be a theme throughout 2023 due to the record levels posted last year. Outside of manufacturing, there were sharp annual declines of over 50% y/y recorded in private office building, industrial labs, nursing homes and assisted living facilities, and miscellaneous medical. By contrast, five categories posted y/y growth above 25%: government offices (+31.8% y/y), courthouses (+55.5% y/y), amusement and recreation (+58% y/y), libraries and museums (+71.3% y/y), and military (+63.6% y/y).

Almost every sub-segment within engineering construction posted double-digit growth in y/y terms in Q2 2023. New bridge building was the exception as a large bridge project in New Jersey in Q2 2022 fell out of the annual growth calculation. The strongest growth—of 162%—was in the power sector, underpinned by a new plant in Texas and a power transmission project in Wyoming. A \$1.3 billion lock project in Michigan drove construction of new dams, canals, and marine work up 159% y/y.

Table 1: Summary forecasts							
(Annual percentage changes unless specified otherwise)							
	2021	2022	2023	2024	2025	2026	2027
US							
Macro variables							
GDP	5.9	2.1	1.8	0.1	2.1	2.1	2.0
Population growth	0.2	0.4	0.4	0.5	0.5	0.5	0.5
Unemployment rate (%)	5.4	3.6	3.7	5.1	5.0	4.6	4.4
Real disposable income	1.9	-6.2	3.3	2.4	2.7	1.7	1.4
Central bank rate (%)	0.1	1.7	5.1	4.7	2.9	2.0	2.0
10-year government yield (%)	1.4	3.0	3.7	3.1	2.8	2.8	2.8
Construction starts (% growth in U.S.\$)							
Total starts	10.8	22.2	-4.6	5.9	8.2	6.9	5.5
Residential	20.3	2.4	-13.9	11.3	13.1	10.1	8.5
Non-res bldg	5.5	46.2	-8.7	2.0	4.5	4.2	3.4
Civil engineering	1.1	27.7	20.5	4.4	6.6	5.9	3.7
Canada							
Macro variables							
GDP	5.0	3.4	1.0	-0.2	3.0	3.3	2.8
Population growth	0.6	1.8	1.3	1.4	1.4	1.3	1.2
Unemployment rate (%)	7.5	5.3	5.6	7.0	6.4	6.0	5.9
Real disposable income	1.0	-0.4	0.3	0.4	2.3	2.8	2.9
Central bank rate (%)	0.3	1.9	4.7	4.7	3.8	2.8	2.0
10-year government yield (%)	1.4	2.8	3.3	3.4	3.2	3.0	2.9
Exchange rate C\$ per US\$	1.25	1.30	1.33	1.31	1.26	1.19	1.18
Construction starts (% growth in C\$)							
Total starts	15.4	-5.1	-1.3	16.3	17.8	4.6	5.5
Residential	28.9	-7.2	-18.7	10.1	18.7	10.2	10.4
Non-res bldg	37.8	-8.5	13.1	5.4	9.4	-4.9	2.7
Civil engineering	-14.0	1.8	2.2	36.0	25.5	8.8	4.0

The decline in new residential construction continued apace in both the single-family (-19.7% y/y) and multi-family (-50% y/y) segments. Housing is among the most sensitive sectors to rising interest rates. The rise in mortgage rates over the last year, combined with ongoing affordability issues, has weighed on new single-family construction since the middle of 2022. However, single-family construction may be starting to stabilize—on a seasonally adjusted basis, single-family housing starts grew 11.4% on the quarter in Q2. Apartment building has been more volatile from quarter-to-quarter, and this quarter’s steep fall comes on top of almost 50% growth in the same period last year.

Put-in-place (PIP) construction, a measure of work in progress, increased by 2.4% y/y in May following five consecutive months of sequential growth in seasonally adjusted terms. PIP was led by residential activity through the course of the pandemic and in its immediate aftermath. But starting in the second half of last year, the drivers of construction have moved from residential to non-residential activity. In

May, residential PIP was down 10.6% y/y. Non-residential construction, by contrast, grew 17.1%, driven by strength in factory building. Construction starts are a leading indicator for PIP construction, so this pattern is consistent with the starts data in 2022 and early-2023. ConstructConnect, in partnership with Oxford Economics, a world-leading economic forecasting firm, has developed a service covering PIP by type of structure for US states, cities, and counties. The service includes data and forecasts and uses ConstructConnect’s starts data and forecasts to derive the PIP forecasts.

Input prices for key building materials are now firmly in deflation territory—meaning falling prices—for several major categories. Construction input costs, excluding capital, labor, and imports, fell 4.8% y/y in June, the fourth consecutive deflationary reading. Meanwhile, construction material costs—a less comprehensive input cost index—was down 3.4% y/y in June, compared to its trough of a 5.3% y/y decline in January. Of the major construction inputs, prices for lumber, metals, and

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energy are mostly deflationary, but prices are still rising for most concrete, cement, and related products although the rate of inflation in these products is easing. Final demand inflation for construction was 10.3% in June, an easing from its peak of 23.1% in July 2022. Output prices generally lag input prices by six to nine months, as it takes time for construction firms to adjust prices in response to rising input costs. But falls in input prices and a weaker economic outlook mean that output prices are also likely to ease in due course.

There are some signs that construction labor shortages may be starting to ease. The JOLTS survey of US construction job openings has been volatile in recent months, but with data through May, its average so far in 2023 is nearly 30% below its average level in 2022. The construction sector continues to add jobs, with 57,000 jobs created in Q2 2023, a mild slowdown from the 66,000 jobs per quarter created on average last year. And while sector wage inflation remains close to 5%, both weekly and hourly earnings have come down from their recent peaks towards the end of last year.

Recession delayed until Q4 as interest rates hit their highest level in 22 years

Better than expected incoming data—including upwards revisions to US GDP in Q1 and an above-expectations reading in Q2—have caused us to upgrade our 2023 GDP forecast to a 1.8% expansion, though we still expect a mild recession to take hold in Q4. As a result, we have downgraded the outlook for 2024 to just 0.1% growth. The downturn will be driven by the impact of cumulative Fed rate hikes, tighter lending conditions, and high inflation leading consumers and businesses to cut back on spending, hiring, and investment.

The latest inflation data offered encouraging news. The headline consumer price index (CPI) rose 3.0% y/y in June, with a similar rise in the personal consumption expenditures (PCE) index, the Fed’s preferred gauge. However, the trends in the core measures remained hotter than the Fed wants, with CPI up 4.8% y/y while PCE rose 4.1% y/y. We expect downward pressure from multiple factors to push inflation lower by the end of this year and into 2024. Weaker demand for goods, reduced supply-chain stress, past declines in rents, and a cooler labor market will combine to put downward pressure on inflation. However, we do not expect inflation to return to the Fed’s 2% target until late 2024.

The Fed raised the target range for the fed funds rate by 25 basis points (bps) to 5.25% to 5.5% at its July meeting, the highest level in 22 years. While we still expect this

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

to be the last hike, the central bank communication has been relatively hawkish, so we cannot rule out an additional rate hike. In 2024, our forecast is for the Fed to cut rates by 25bps at every other meeting in H1 2024, followed by a 25bps cut at each meeting thereafter until the fed funds rate returns to our estimated neutral rate of 2% by late-2025.

Job growth moderated in June and there were large downward revisions to payroll gains in April and May. However, the slowdown in job growth won’t satisfy the Fed—we estimate that trend job growth needs to be below 100k per month to be consistent with its inflation target. Average hourly earnings rose a stronger-than-expected 0.4% month-on-month (m/m), keeping the trend rate buoyant at 4.4% y/y. Meanwhile, the unemployment rate fell 0.1 percentage points to 3.6%, and the economy remains close to full employment.

Civil engineering continues to drive construction as residential and non-residential shrink

Total US construction starts are expected to fall 4.6% this year before returning to growth of 5.9% in 2024. Residential construction will continue to weigh on the sector with interest rates at decades-high levels. Housing starts are set to fall 13.9% in 2023. Meanwhile, non-residential building activity is also set for a sizable contraction of 8.7%. However, this contraction follows a particularly strong performance in 2022, so despite an annual decline, activity remains near record high levels. Conversely, the civil engineering sector is poised for growth of 20.5% this year, building on last year’s growth of 27.7%.

Construction activity in square footage terms is expected to fall 17.5% this year as a result of significant contractions in the residential and non-residential sectors. Civil

engineering projects usually do not have an associated square foot value, so the strong performance in this sector is not included. Residential activity is forecast to fall 16.8%, with single-family and multi-family both declining. Meanwhile, non-residential activity is also set to fall 19.4%. The outlook for both residential and non-residential is rosier in 2024-25, however, with volume activity expected to rise by double digits.

Elevated mortgage rates and tight credit conditions will significantly drag on the residential building sector in the near-term. Single-family homebuilding activity is expected to compound the losses of 2022 and contract a further 10.7% this year, in dollar terms. Nonetheless, the downturn in new single-family construction may be starting to turn a corner, and activity is forecast to rise 9.6% in 2024. The ongoing shortage in the single-family housing stock is likely to support construction activity despite high mortgage rates. Meanwhile, multi-family is set to fall 18.8% this year, although this comes after a rise of almost 40% in 2022. However, unlike the supply and demand factors keeping single-family house prices high, an increase in new multi-family units delivered over the past few years has put downward pressure on rents, which could limit the extent of the recovery in apartment building.

Several non-residential building sub-segments are also expected to contract in 2023. New manufacturing construction is forecast to fall consistently over 30%, but this is due to the base effect of staggering growth of over 225% in 2022. Many major projects are still getting underway, including chip factories and EV battery projects. Both segments will continue to benefit from policy support provided by the Inflation Reduction Act and the CHIPS Act.

Elsewhere in non-residential building,

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private office starts and warehouses are both set for double-digits slumps of 33.6% and 23.7% respectively. Both sectors are facing issues around overcapacity and, as a result, sluggish demand for new buildings. Private offices will continue to contend with hybrid and remote working practices that have become much more widespread since the pandemic. The US office vacancy rate currently sits at 17.1%, rising 1.8 percentage points in the last 12 months. While new office construction is expected to return to growth next year, it will not reach its pre-pandemic level by the end of our forecast period in 2027.

The forecast for new civil engineering projects remains strong, with growth of 20.5% expected this year and continued growth expected throughout the forecast period. The Infrastructure Investment and Jobs Act should support the sector and the solid pipeline of engineering projects. Bridges is set to be the only subsector to contract this year, by 0.8%, although this follows buoyant growth of 52.1% last year. Miscellaneous civil projects, which include oil and gas projects, as well as tunnels and railroads, are expected to be the driving force in the next couple of years, with activity expected to grow 84.4% this year and 28% in 2024. Construction on a new oil pipeline in Alaska already started earlier this year and new railroad and tunnel projects are planned to start over the next two years. Power infrastructure is another source of strength, with growth of 43.1% forecast this year and 10.8% growth expected in 2024. The sector is important to the green agenda, with several new wind projects in the pipeline. Elsewhere in the engineering segment, airport and road construction are both expected to continue their upward trajectory in 2023, expanding by 25.1% and 18.3% respectively. New road construction, the largest subsector in engineering, is expected to dip slightly in 2024 after three years of rapid growth. But this is expected to pick up again thereafter with a solid pipeline of projects, including road projects in a number of major cities. Water and sewage treatment is the second largest civil subsector and is forecast to build on its strong performance in 2022 by expanding 10.5% this year.

Second year of decline expected in new Canadian construction

Total Canadian construction starts fell by 6.1% y/y and 4.3% ytd in Q2 2023. New engineering construction declined 5.3% y/y and 15.5% ytd, while residential construction starts fell 18.1% y/y and 18.1% ytd. By contrast, new non-residential building grew 7.2% y/y and 29.2% ytd.

There was a significant discrepancy in the performance across non-residential building categories. New factory construction grew 337% y/y and 736% ytd. While there were no mega-projects started in Q2, there were two mid-sized projects: a \$500 million refinery projects in Newfoundland and Labrador and a \$745 million low carbon heating facility in Toronto. Hotel construction was also strong, up 397% y/y and 269% ytd. Like in industrial, there weren't any mega-projects, but a \$318 million hotel project in Ottawa underpinned sector strength. Construction of new police and fire stations was also strong in Q2, up 135% y/y and 51% ytd. By contrast, several non-residential building sectors posted more than a 50% y/y decline, including private office building, shops, miscellaneous retail, and miscellaneous medical. Office building, in particular, has been especially weak since the pandemic and subsequent recovery; in 2023 as a whole, it is forecast to be more than 85% below its pre-pandemic high in 2019. The weakness in the latter three non-residential building segments, by contrast, was likely due to base effects as there was strong growth in all three segments in the same period in 2022.

New construction of civil engineering projects declined in both y/y and ytd terms in all sectors except bridge building. New bridge construction rose 176% y/y and 133% ytd, boosted by a mega-project in Quebec. Dams, canals, and marine work projects have been especially weak, down 95% y/y and 90% ytd, but this comes off a bumper year of growth in 2022.

In the residential sector, both single-family and multi-family starts fell in Q2 in both y/y and ytd terms. Single-family construction starts contracted by 27.3% y/y and 25.6% ytd, while new apartment building fell by 10.2% y/y and 12.6% ytd.

An increase in household spending and a spring revival in resale housing activity likely helped the economy grow by a modest 0.2% q/q in Q2. However, we still expect Canada's economy to fall into recession in Q3 as highly indebted households begin to pull back and the full impacts of recent interest rate hikes materialize. We've upgraded our GDP growth forecast to 1% in 2023 due to stronger than expected outturns in the first half of the year, but we expect it to contract 0.2% in 2024.

Despite adding a surprising 60,000 jobs (+0.3% m/m) in June, labor markets showed further signs of loosening. Strong immigration-led population growth and a rise in the participation rate led to a 114,000 (+0.5% m/m) increase in the size of the labor force. This pushed the unemployment rate up 0.2% points to 5.4%, its highest level

since February 2022. Moreover, total hours worked were up only 0.1% m/m in June after falling 0.4% in May.

The BoC increased its target for the overnight rate by 25bps to 5.0% in July. We think this will likely be its last hike as inflation and labor markets continue to ease and signs of a recession build. The BoC will likely now hold the policy rate steady until mid-2024 before gradually beginning to ease rates to a neutral level by early-2027. Still, it is increasingly worried that inflation could get stuck above the 1%-3% target range. We think more rate hikes are possible this year if the economy continues to outperform expectations or inflation doesn't continue to ease.

After contracting 5.1% in 2022, construction starts in Canadian dollar terms are expected to fall by 1.3% this year. The medium-term outlook is more positive, however, with double digit growth forecast in both 2024 and 2025. In square footage terms, we expect activity to fall by 19.2%, compounding the weakness seen in 2022.

Residential construction is set to be the weakest performing major sector in 2023, slumping by 18.7%. Single-family starts are set to fall 24.4% on the year, while multi-family is forecast to fare slightly better, but still comfortably in negative territory at -13.7%. We forecast that house prices still have another 10% to fall by early-2024, driven by high interest rates, near-record levels of unaffordability, and a weak economy.

Non-residential building starts are expected to rise 13.1% in 2023, bouncing back from an 8.5% slump last year. Commercial activity is set to contract 29.7% as many of the subsectors reduce activity, including government office building, shopping and retail, and miscellaneous retail. This follows bumper growth rates last year in those sectors. Elsewhere, manufacturing construction is forecast to climb 53.9%, with a plethora of energy related projects breaking ground this year. Institutional construction is expected to expand by 23.8% this year, driven by the hospitals and clinics subsector.

The output of civil engineering projects is expected to increase 2.2% this year, building on similar growth in 2022 of 1.8%. Roads is by far the biggest civil subsector, and is set to expand 7.3%, continuing the strong trend of the past 3 years. Bridges is also set for a positive year, growing 68.9%, the strongest growth of all subsectors following the mega-project in Q2. Three sectors are expected to decline this year: power infrastructure; dams, canals and marine projects; and all other civil, including oil and gas projects.

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

	Actuals		Forecasts				
	2021	2022	2023	2024	2025	2026	2027
Single-family	257.708	224.955	200.878	220.250	248.318	273.142	296.766
Multi-family	104.818	146.283	118.795	135.548	154.202	169.956	184.148
TOTAL RESIDENTIAL	362.526	371.238	319.673	355.798	402.521	443.099	480.914
<i>(Yr/yr % change)</i>	<i>20.3%</i>	<i>2.4%</i>	<i>-13.9%</i>	<i>11.3%</i>	<i>13.1%</i>	<i>10.1%</i>	<i>8.5%</i>
Hotels/Motels	7.207	10.984	12.069	14.310	16.302	18.302	19.833
Shopping/Retail	12.885	15.324	16.394	18.064	20.376	22.336	24.849
Parking Garages	1.768	2.323	2.297	2.391	2.505	2.734	2.934
Amusement	6.555	7.820	8.947	8.604	9.031	9.502	9.978
Private Offices	20.957	23.567	15.659	19.890	23.400	26.185	28.715
Governmental Offices	11.703	13.356	14.893	14.127	15.055	15.707	16.344
Laboratories (Schools & Industrial)	2.453	4.977	3.771	3.995	4.188	4.364	4.511
Warehouses	28.230	29.710	22.656	27.461	29.549	31.071	32.463
Sports Stadium/Convention Center	6.043	6.948	8.480	10.310	8.358	8.657	8.858
Transportation Terminals	9.969	5.983	8.832	10.438	10.556	10.440	9.963
TOTAL COMMERCIAL	107.769	120.993	114.000	129.590	139.322	149.299	158.449
<i>(Yr/yr % change)</i>	<i>5.1%</i>	<i>12.3%</i>	<i>-5.8%</i>	<i>13.7%</i>	<i>7.5%</i>	<i>7.2%</i>	<i>6.1%</i>
TOTAL INDUSTRIAL (manufacturing)	35.082	114.464	78.600	70.537	68.904	66.349	63.392
<i>(Yr/yr % change)</i>	<i>61.4%</i>	<i>226.3%</i>	<i>-31.3%</i>	<i>-10.3%</i>	<i>-2.3%</i>	<i>-3.7%</i>	<i>-4.5%</i>
Religious	1.217	1.032	1.126	1.132	1.203	1.260	1.320
Hospitals/Clinics	18.730	25.791	24.770	25.817	27.663	28.761	29.958
Nursing Homes/Assisted Living	5.965	4.397	3.305	4.253	4.932	5.677	6.288
Libraries/Museums	3.591	3.578	3.620	3.729	3.871	3.998	4.115
Courthouse	2.477	1.660	1.851	2.078	2.302	2.430	2.574
Police/Fire	3.035	4.237	4.426	4.699	4.957	5.190	5.405
Prisons	2.231	2.967	2.696	2.971	3.226	3.406	3.540
Military	9.211	9.727	15.435	14.083	14.490	15.188	15.673
Educational Facilities	59.892	74.491	85.346	81.303	83.967	87.533	90.541
MED misc	7.479	13.115	8.626	10.290	11.117	11.960	12.786
TOTAL INSTITUTIONAL	113.829	140.993	151.200	150.355	157.728	165.403	172.200
<i>(Yr/yr % change)</i>	<i>-4.6%</i>	<i>23.9%</i>	<i>7.2%</i>	<i>-0.6%</i>	<i>4.9%</i>	<i>4.9%</i>	<i>4.1%</i>
Miscellaneous Non-Res Building	6.330	7.960	7.040	7.451	7.997	8.482	8.910
TOTAL NON-RES BLDG	263.010	384.410	350.840	357.933	373.951	389.533	402.951
<i>(Yr/yr % change)</i>	<i>5.5%</i>	<i>46.2%</i>	<i>-8.7%</i>	<i>2.0%</i>	<i>4.5%</i>	<i>4.2%</i>	<i>3.4%</i>
Airport	5.204	7.659	9.581	9.711	10.231	10.906	11.578
Roads	67.384	83.828	99.211	98.688	105.061	112.366	117.485
Bridges	17.994	27.362	27.132	28.259	29.857	31.298	32.407
Dams/Canal/Marine	8.541	9.421	11.298	11.701	12.768	13.511	14.060
Water & Sewage Treatment	33.868	43.325	47.883	48.441	51.724	55.360	57.727
Misc Civil (Power, etc.)	23.485	28.209	45.623	54.596	58.326	60.398	61.213
TOTAL ENGINEERING	156.475	199.805	240.727	251.396	267.966	283.840	294.470
<i>(Yr/yr % change)</i>	<i>1.1%</i>	<i>27.7%</i>	<i>20.5%</i>	<i>4.4%</i>	<i>6.6%</i>	<i>5.9%</i>	<i>3.7%</i>
TOTAL NON-RESIDENTIAL	419.486	584.215	591.566	609.329	641.917	673.373	697.421
<i>(Yr/yr % change)</i>	<i>3.8%</i>	<i>39.3%</i>	<i>1.3%</i>	<i>3.0%</i>	<i>5.3%</i>	<i>4.9%</i>	<i>3.6%</i>
GRAND TOTAL	782.012	955.453	911.239	965.127	1,044.437	1,116.472	1,178.335
<i>(Yr/yr % change)</i>	<i>10.8%</i>	<i>22.2%</i>	<i>-4.6%</i>	<i>5.9%</i>	<i>8.2%</i>	<i>6.9%</i>	<i>5.5%</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				
	2021	2022	2023	2024	2025	2026	2027
Summary							
CIVIL	156.475	199.805	240.727	251.396	267.966	283.840	294.470
NON-RESIDENTIAL BUILDING	263.010	384.410	350.840	357.933	373.951	389.533	402.951
RESIDENTIAL	362.526	371.238	319.673	355.798	402.521	443.099	480.914
GRAND TOTAL	782.012	955.453	911.239	965.127	1,044.437	1,116.472	1,178.335
Verticals							
Airport	5.204	7.659	9.581	9.711	10.231	10.906	11.578
All Other Civil	14.452	12.749	23.504	30.085	32.277	33.815	35.285
Bridges	17.994	27.362	27.132	28.259	29.857	31.298	32.407
Dams / Canals / Marine Work	8.541	9.421	11.298	11.701	12.768	13.511	14.060
Power Infrastructure	9.033	15.460	22.119	24.511	26.048	26.583	25.928
Roads	67.384	83.828	99.211	98.688	105.061	112.366	117.485
Water and Sewage Treatment	33.868	43.325	47.883	48.441	51.724	55.360	57.727
CIVIL	156.475	199.805	240.727	251.396	267.966	283.840	294.470
<i>(Yr/Yr % change)</i>	<i>1.1%</i>	<i>27.7%</i>	<i>20.5%</i>	<i>4.4%</i>	<i>6.6%</i>	<i>5.9%</i>	<i>3.7%</i>
Offices (private)	20.957	23.567	15.659	19.890	23.400	26.185	28.715
Parking Garages	1.768	2.323	2.297	2.391	2.505	2.734	2.934
Transportation Terminals	9.969	5.983	8.832	10.438	10.556	10.440	9.963
Commercial	32.694	31.873	26.789	32.719	36.462	39.359	41.612
<i>(Yr/Yr % change)</i>	<i>9.0%</i>	<i>-2.5%</i>	<i>-16.0%</i>	<i>22.1%</i>	<i>11.4%</i>	<i>7.9%</i>	<i>5.7%</i>
Amusement	6.555	7.820	8.947	8.604	9.031	9.502	9.978
Libraries / Museums	3.591	3.578	3.620	3.729	3.871	3.998	4.115
Religious	1.217	1.032	1.126	1.132	1.203	1.260	1.320
Sports Arenas / Convention Centers	6.043	6.948	8.480	10.310	8.358	8.657	8.858
Community	17.407	19.377	22.173	23.775	22.463	23.417	24.271
<i>(Yr/Yr % change)</i>	<i>7.1%</i>	<i>11.3%</i>	<i>14.4%</i>	<i>7.2%</i>	<i>-5.5%</i>	<i>4.2%</i>	<i>3.6%</i>
College / University	15.096	19.013	23.012	21.355	22.080	23.331	24.080
Elementary / Pre School	15.796	22.030	25.524	25.061	25.908	26.886	28.180
Jr / Sr High School	26.922	30.855	34.882	32.805	33.808	35.044	35.927
Special / Vocational	2.077	2.592	1.928	2.081	2.171	2.272	2.354
Educational	59.892	74.491	85.346	81.303	83.967	87.533	90.541
<i>(Yr/Yr % change)</i>	<i>-11.3%</i>	<i>24.4%</i>	<i>14.6%</i>	<i>-4.7%</i>	<i>3.3%</i>	<i>4.2%</i>	<i>3.4%</i>
Courthouses	2.477	1.660	1.851	2.078	2.302	2.430	2.574
Fire and Police Stations	3.035	4.237	4.426	4.699	4.957	5.190	5.405
Government Offices	11.703	13.356	14.893	14.127	15.055	15.707	16.344
Prisons	2.231	2.967	2.696	2.971	3.226	3.406	3.540
Government	19.446	22.220	23.867	23.875	25.540	26.733	27.864
<i>(Yr/Yr % change)</i>	<i>3.8%</i>	<i>14.3%</i>	<i>7.4%</i>	<i>0.0%</i>	<i>7.0%</i>	<i>4.7%</i>	<i>4.2%</i>
Industrial Labs / Labs / School Labs	2.453	4.977	3.771	3.995	4.188	4.364	4.511
Manufacturing	35.082	114.464	78.600	70.537	68.904	66.349	63.392
Warehouses	28.230	29.710	22.656	27.461	29.549	31.071	32.463
Industrial	65.765	149.150	105.027	101.993	102.641	101.784	100.367
<i>(Yr/Yr % change)</i>	<i>30.7%</i>	<i>126.8%</i>	<i>-29.6%</i>	<i>-2.9%</i>	<i>0.6%</i>	<i>-0.8%</i>	<i>-1.4%</i>
Hospitals / Clinics	18.730	25.791	24.770	25.817	27.663	28.761	29.958
Medical Misc.	7.479	13.115	8.626	10.290	11.117	11.960	12.786
Nursing Homes	5.965	4.397	3.305	4.253	4.932	5.677	6.288
Medical	32.175	43.303	36.701	40.361	43.712	46.399	49.032
<i>(Yr/Yr % change)</i>	<i>10.8%</i>	<i>34.6%</i>	<i>-15.2%</i>	<i>10.0%</i>	<i>8.3%</i>	<i>6.1%</i>	<i>5.7%</i>
Military	9.211	9.727	15.435	14.083	14.490	15.188	15.673
<i>(Yr/Yr % change)</i>	<i>0.0%</i>	<i>5.6%</i>	<i>58.7%</i>	<i>-8.8%</i>	<i>2.9%</i>	<i>4.8%</i>	<i>3.2%</i>
Hotels	7.207	10.984	12.069	14.310	16.302	18.302	19.833
Retail Misc.	6.330	7.960	7.040	7.451	7.997	8.482	8.910
Shopping	12.885	15.324	16.394	18.064	20.376	22.336	24.849
Retail	26.422	34.269	35.503	39.825	44.675	49.120	53.591
<i>(Yr/Yr % change)</i>	<i>-6.5%</i>	<i>29.7%</i>	<i>3.6%</i>	<i>12.2%</i>	<i>12.2%</i>	<i>9.9%</i>	<i>9.1%</i>
NON-RESIDENTIAL BUILDING	263.010	384.410	350.840	357.933	373.951	389.533	402.951
<i>(Yr/Yr % change)</i>	<i>5.5%</i>	<i>46.2%</i>	<i>-8.7%</i>	<i>2.0%</i>	<i>4.5%</i>	<i>4.2%</i>	<i>3.4%</i>
Multi-Family	104.818	146.283	118.795	135.548	154.202	169.956	184.148
Single-Family	257.708	224.955	200.878	220.250	248.318	273.142	296.766
RESIDENTIAL	362.526	371.238	319.673	355.798	402.521	443.099	480.914
<i>(Yr/Yr % change)</i>	<i>20.3%</i>	<i>2.4%</i>	<i>-13.9%</i>	<i>11.3%</i>	<i>13.1%</i>	<i>10.1%</i>	<i>8.5%</i>
GRAND TOTAL	782.012	955.453	911.239	965.127	1,044.437	1,116.472	1,178.335
<i>(Yr/Yr % change)</i>	<i>10.8%</i>	<i>22.2%</i>	<i>-4.6%</i>	<i>5.9%</i>	<i>8.2%</i>	<i>6.9%</i>	<i>5.5%</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)	2023	2024	2025	2026	2027
	2022					
Alaska - AK	\$2,176	142.4%	-56.0%	9.1%	6.9%	4.5%
Alabama - AL	\$13,804	21.3%	-5.5%	8.3%	6.1%	5.0%
Arkansas - AR	\$7,370	9.0%	3.2%	8.9%	8.5%	5.7%
Arizona - AZ	\$32,399	-28.4%	16.6%	14.9%	10.5%	6.8%
California - CA*	\$75,367	-4.4%	14.9%	9.1%	6.8%	6.8%
Colorado - CO	\$17,354	-4.0%	19.7%	12.4%	8.0%	6.9%
Connecticut - CT	\$5,966	8.2%	6.8%	8.1%	6.1%	3.8%
District Of Columbia - DC	\$3,807	-28.3%	32.0%	17.3%	1.6%	1.8%
Delaware - DE	\$3,217	-9.8%	3.2%	6.5%	6.2%	5.3%
Florida - FL*	\$73,464	-1.6%	4.7%	13.1%	10.7%	7.7%
Georgia - GA	\$34,740	-10.4%	12.5%	7.7%	6.0%	5.2%
Hawaii - HI	\$3,459	96.9%	-43.0%	8.7%	6.9%	5.5%
Iowa - IA	\$7,984	13.4%	-2.0%	7.0%	5.4%	4.2%
Idaho - ID	\$7,144	-15.7%	34.2%	8.0%	3.8%	5.3%
Illinois - IL	\$23,131	3.1%	10.5%	7.5%	5.7%	4.3%
Indiana - IN	\$20,277	14.7%	-15.9%	5.7%	4.3%	3.3%
Kansas - KS	\$7,993	46.8%	-35.7%	6.9%	5.4%	4.1%
Kentucky - KY	\$17,000	-38.8%	26.0%	6.9%	5.4%	4.7%
Louisiana - LA	\$20,717	-22.2%	43.0%	4.4%	2.4%	1.7%
Massachusetts - MA	\$16,640	6.3%	16.0%	9.0%	5.1%	4.8%
Maryland - MD	\$13,064	22.5%	-1.0%	8.8%	5.9%	5.0%
Maine - ME	\$4,700	-36.3%	24.7%	10.6%	6.6%	4.2%
Michigan - MI	\$23,435	-22.5%	7.3%	6.2%	5.4%	4.0%
Minnesota - MN	\$15,713	-9.5%	23.6%	7.1%	5.8%	4.5%
Missouri - MO	\$14,659	-15.7%	11.4%	7.7%	5.8%	4.6%
Mississippi - MS	\$5,258	3.4%	-6.0%	7.1%	5.8%	4.3%
Montana - MT	\$2,799	-7.1%	9.1%	11.4%	9.3%	5.9%
North Carolina - NC	\$43,726	-10.1%	-4.1%	5.7%	7.9%	6.5%
North Dakota - ND	\$4,576	-2.9%	11.7%	10.0%	6.4%	4.6%
Nebraska - NE	\$7,382	-1.9%	14.8%	9.0%	6.2%	4.8%
New Hampshire - NH	\$2,324	17.5%	1.0%	9.7%	8.9%	5.7%
New Jersey - NJ	\$14,365	8.2%	8.1%	8.5%	5.5%	4.0%
New Mexico - NM	\$4,766	-11.4%	-6.7%	7.2%	5.6%	4.5%
Nevada - NV	\$11,209	-25.0%	-2.5%	13.7%	10.1%	8.0%
New York - NY*	\$49,975	-15.2%	29.4%	-1.0%	0.0%	2.1%
Ohio - OH	\$21,915	33.3%	-11.3%	5.0%	3.6%	3.3%
Oklahoma - OK	\$10,355	9.2%	-0.7%	8.5%	7.1%	5.3%
Oregon - OR	\$8,868	20.6%	10.8%	10.2%	7.5%	6.2%
Pennsylvania - PA	\$24,441	-1.3%	10.7%	7.8%	5.9%	4.8%
Rhode Island - RI	\$1,776	-26.5%	17.9%	8.7%	5.6%	4.0%
South Carolina - SC	\$16,942	2.4%	-6.1%	8.3%	8.5%	6.6%
South Dakota - SD	\$5,135	-4.0%	-31.7%	8.0%	8.8%	6.1%
Tennessee - TN	\$25,969	-11.2%	4.1%	8.8%	6.9%	5.7%
Texas - TX*	\$153,030	-11.9%	-3.3%	10.6%	9.5%	6.7%
Utah - UT	\$12,534	8.0%	26.5%	12.8%	8.2%	6.2%
Virginia - VA	\$19,410	8.2%	3.3%	10.5%	7.5%	5.8%
Vermont - VT	\$1,028	-5.0%	-3.5%	7.3%	7.9%	5.3%
Washington - WA	\$21,171	-17.4%	16.9%	13.7%	9.0%	6.9%
Wisconsin - WI	\$15,410	-9.5%	13.5%	6.6%	5.0%	4.4%
West Virginia - WV	\$2,483	62.1%	-25.5%	6.9%	5.1%	3.7%
Wyoming - WY	\$3,027	66.8%	51.8%	-49.4%	5.4%	3.0%
United States	\$955,453	-4.6%	5.9%	8.2%	6.9%	5.5%

*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				
		2021	2022	2023	2024	2025	2026	2027
New York	Residential	10.816	15.900	9.330	13.974	14.739	14.498	14.740
	Non-res Building	14.452	18.641	19.463	20.763	18.589	17.731	17.977
	Engineering/Civil	8.009	15.434	13.595	20.099	20.985	22.062	22.720
	Total	33.276	49.975	42.387	54.836	54.314	54.291	55.437
	<i>(Yr vs previous yr % Change)</i>	<i>18.6%</i>	<i>50.2%</i>	<i>-15.2%</i>	<i>29.4%</i>	<i>-1.0%</i>	<i>0.0%</i>	<i>2.1%</i>
Florida	Residential	37.566	44.102	39.937	39.329	46.316	52.548	57.724
	Non-res Building	16.816	19.795	18.096	20.440	22.040	23.961	25.378
	Engineering/Civil	8.620	9.567	14.241	15.875	17.235	18.233	18.904
	Total	63.001	73.464	72.273	75.645	85.591	94.742	102.006
	<i>(Yr vs previous yr % Change)</i>	<i>18.2%</i>	<i>16.6%</i>	<i>-1.6%</i>	<i>4.7%</i>	<i>13.1%</i>	<i>10.7%</i>	<i>7.7%</i>
Texas	Residential	55.437	55.434	47.418	47.995	54.693	61.606	67.813
	Non-res Building	30.059	70.238	55.394	50.148	54.638	59.205	61.920
	Engineering/Civil	20.073	27.358	31.975	32.187	34.763	37.017	38.647
	Total	105.569	153.030	134.786	130.331	144.094	157.827	168.380
	<i>(Yr vs previous yr % Change)</i>	<i>8.1%</i>	<i>45.0%</i>	<i>-11.9%</i>	<i>-3.3%</i>	<i>10.6%</i>	<i>9.5%</i>	<i>6.7%</i>
California	Residential	24.620	30.532	22.133	26.744	30.844	34.145	38.128
	Non-res Building	26.429	29.449	28.164	33.111	34.257	35.453	36.926
	Engineering/Civil	14.501	15.386	21.762	22.946	25.269	26.880	27.992
	Total	65.550	75.367	72.059	82.801	90.371	96.478	103.046
	<i>(Yr vs previous yr % Change)</i>	<i>3.1%</i>	<i>15.0%</i>	<i>-4.4%</i>	<i>14.9%</i>	<i>9.1%</i>	<i>6.8%</i>	<i>6.8%</i>

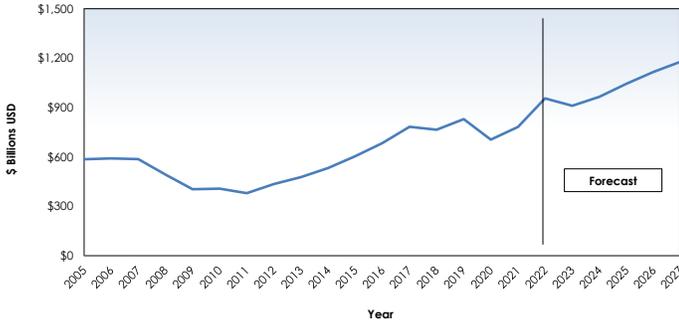
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Tweeted by ConstructConnect:

@ConstructConnx

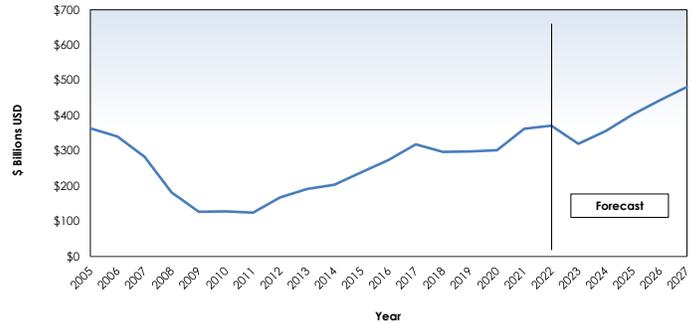
Link to article here: <https://bit.ly/3qkq7lb>

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



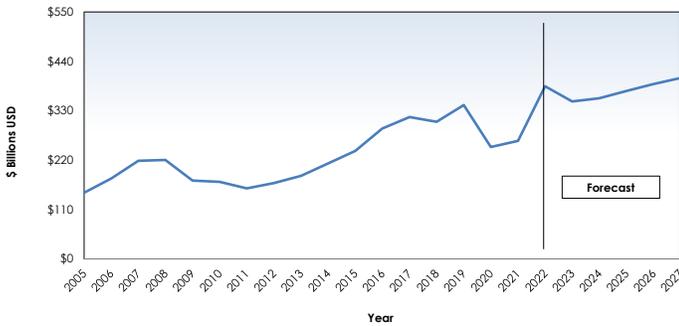
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



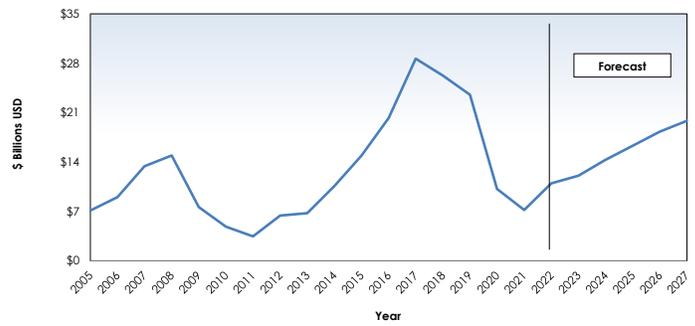
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



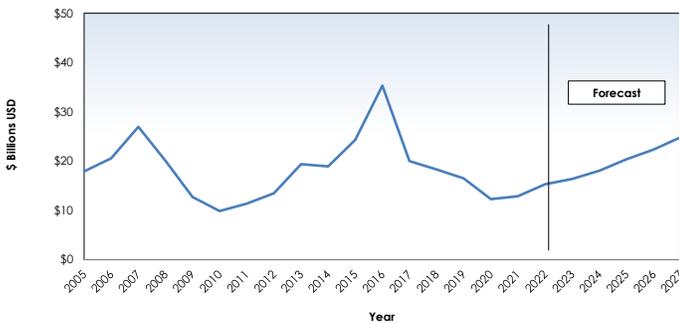
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



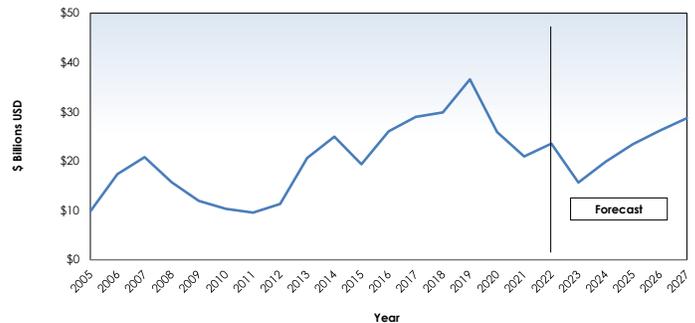
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



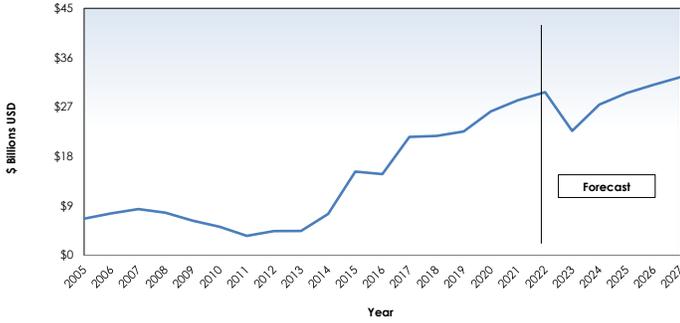
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



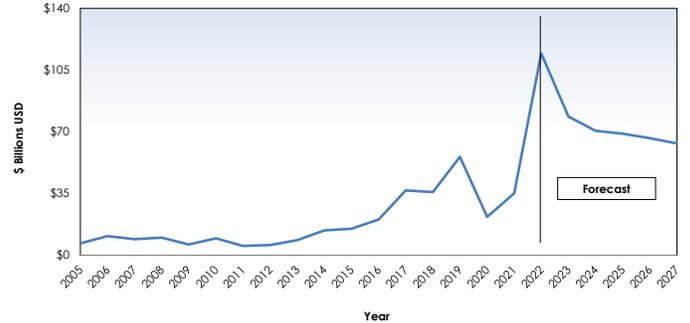
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



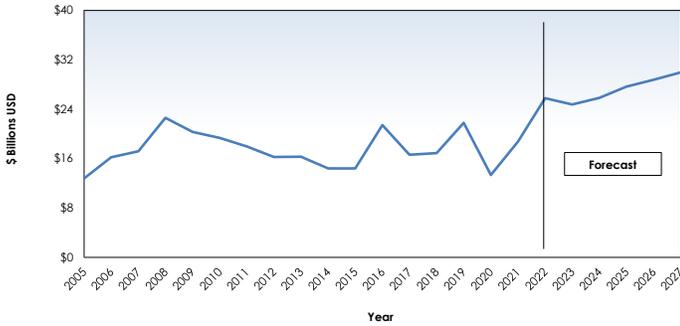
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



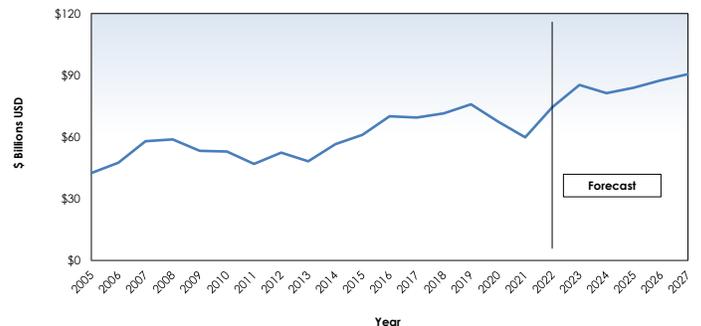
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



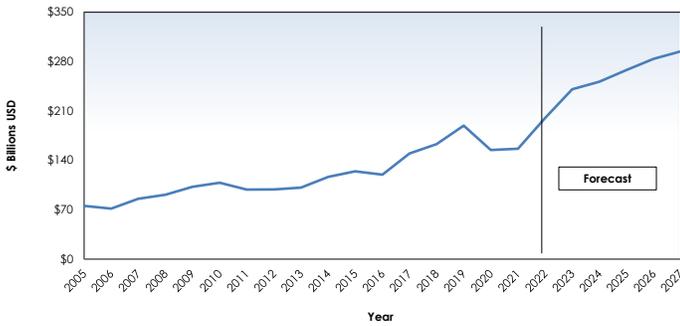
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



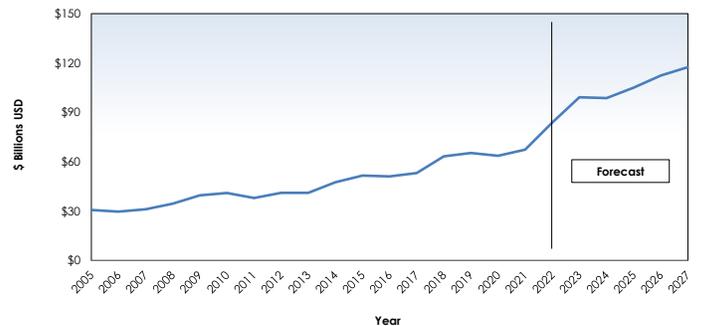
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



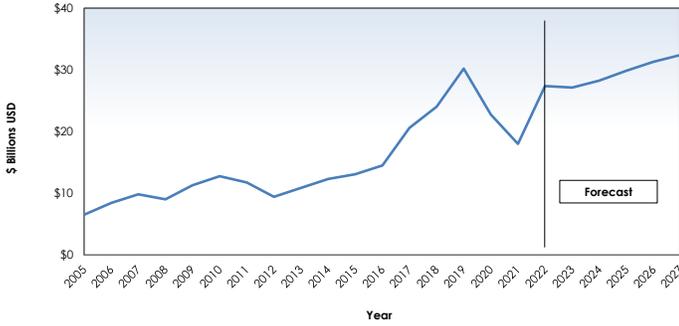
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



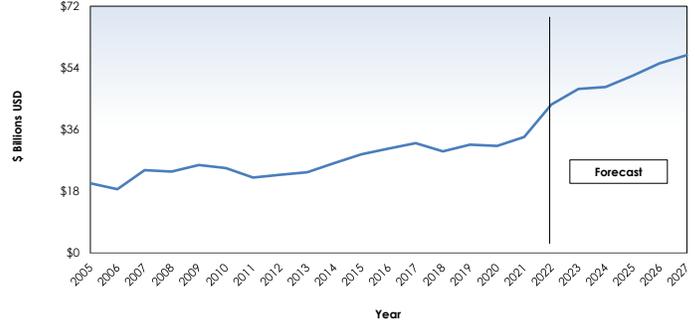
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



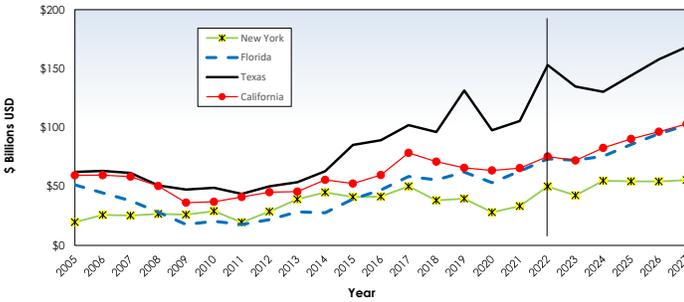
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



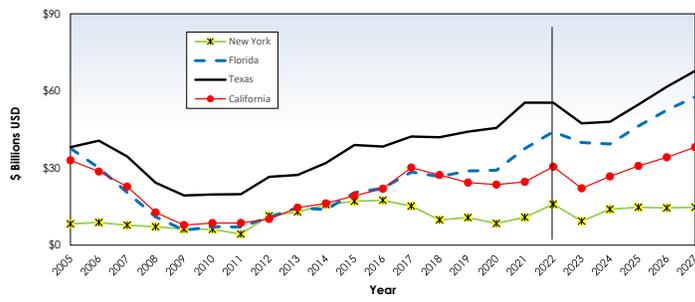
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



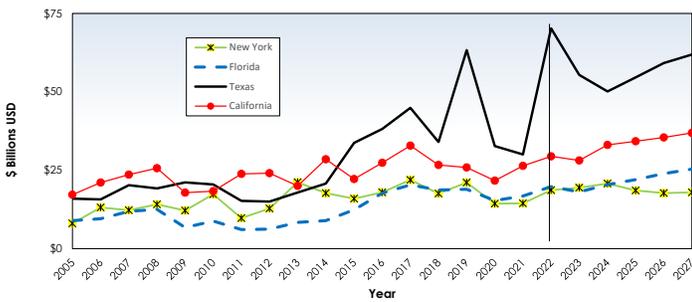
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



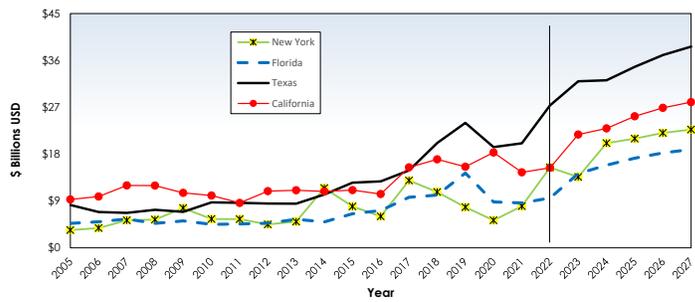
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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				
	2021	2022	2023	2024	2025	2026	2027
Single-family	17.868	15.707	11.868	13.738	15.796	17.411	19.338
Multi-family	18.741	18.271	15.760	16.679	20.294	22.361	24.568
TOTAL RESIDENTIAL	36.610	33.978	27.627	30.417	36.090	39.772	43.906
(Yr/yr % change)	28.9%	-7.2%	-18.7%	10.1%	18.7%	10.2%	10.4%
Hotels/Motels	0.143	0.131	0.474	0.397	0.468	0.658	0.771
Private Offices	1.254	0.753	0.551	0.882	1.302	1.703	2.078
Governmental Offices	1.184	5.010	2.079	2.199	2.320	2.443	2.548
Shopping/Retail	0.359	0.699	0.318	0.577	0.875	1.104	1.254
Retail Miscellaneous	0.078	0.209	0.118	0.185	0.215	0.246	0.270
Parking Garages	0.152	0.098	0.179	0.183	0.210	0.234	0.251
Amusement	2.548	2.353	2.003	2.429	2.757	3.114	3.340
Warehouses	2.354	2.224	2.347	2.489	2.625	2.749	2.870
TOTAL COMMERCIAL	8.072	11.478	8.068	9.340	10.771	12.250	13.381
(Yr/yr % change)	-3.0%	42.2%	-29.7%	15.8%	15.3%	13.7%	9.2%
TOTAL INDUSTRIAL (manufacturing)	11.709	8.406	12.933	14.988	14.989	10.329	9.913
(Yr/yr % change)	377.3%	-28.2%	53.9%	15.9%	0.0%	-31.1%	-4.0%
Religious	0.109	0.043	0.072	0.051	0.057	0.062	0.067
Hospitals/Clinics	7.968	3.716	7.328	4.475	5.427	5.981	6.445
MED misc	0.100	0.556	0.295	0.353	0.413	0.471	0.516
Transportation Terminals*	0.348	1.629	1.481	2.953	3.526	3.345	2.836
Police/Fire	1.570	1.267	1.647	1.325	1.674	1.884	2.052
Educational Facilities	7.083	6.739	6.449	6.845	7.245	7.608	7.844
TOTAL INSTITUTIONAL	17.178	13.950	17.273	16.002	18.341	19.351	19.760
(Yr/yr % change)	7.1%	-18.8%	23.8%	-7.4%	14.6%	5.5%	2.1%
TOTAL NON-RES BUILDING	36.960	33.834	38.274	40.330	44.101	41.930	43.054
(Yr/yr % change)	37.8%	-8.5%	13.1%	5.4%	9.4%	-4.9%	2.7%
Bridges	2.353	3.068	5.182	3.374	3.494	3.612	3.739
Dams/Canal/Marine	0.541	1.072	0.352	0.453	0.524	0.581	0.616
Water & Sewage Treatment	4.835	5.319	5.346	5.675	6.257	6.806	7.245
Roads	10.961	11.629	12.476	13.239	14.020	14.674	15.386
Power Infrastructure	4.403	3.094	2.833	5.968	7.677	8.366	8.690
All Other Civil (Oil & Gas etc.)	5.773	5.198	3.829	12.107	19.266	21.701	22.305
TOTAL ENGINEERING	28.866	29.381	30.019	40.816	51.239	55.741	57.979
(Yr/yr % change)	-14.0%	1.8%	2.2%	36.0%	25.5%	8.8%	4.0%
TOTAL NON-RESIDENTIAL	65.826	63.214	68.293	81.145	95.340	97.672	101.034
(Yr/yr % change)	9.0%	-4.0%	8.0%	18.8%	17.5%	2.4%	3.4%
GRAND TOTAL	102.436	97.192	95.920	111.563	131.430	137.444	144.940
(Yr/yr % change)	15.4%	-5.1%	-1.3%	16.3%	17.8%	4.6%	5.5%

* 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				
	2021	2022	2023	2024	2025	2026	2027
Summary							
CIVIL	28.866	29.381	30.019	40.816	51.239	55.741	57.979
NON-RESIDENTIAL BUILDING	36.960	33.834	38.274	40.330	44.101	41.930	43.054
RESIDENTIAL	36.610	33.978	27.627	30.417	36.090	39.772	43.906
GRAND TOTAL	102.436	97.192	95.920	111.563	131.430	137.444	144.940
Verticals							
All Other Civil	5.773	5.198	3.829	12.107	19.266	21.701	22.305
Bridges	2.353	3.068	5.182	3.374	3.494	3.612	3.739
Dams / Canals / Marine Work	0.541	1.072	0.352	0.453	0.524	0.581	0.616
Power Infrastructure	4.403	3.094	2.833	5.968	7.677	8.366	8.690
Roads	10.961	11.629	12.476	13.239	14.020	14.674	15.386
Water and Sewage Treatment	4.835	5.319	5.346	5.675	6.257	6.806	7.245
CIVIL	28.866	29.381	30.019	40.816	51.239	55.741	57.979
(Yr/yr % change)	-14.0%	1.8%	2.2%	36.0%	25.5%	8.8%	4.0%
Offices (private)	1.254	0.753	0.551	0.882	1.302	1.703	2.078
Parking Garages	0.152	0.098	0.179	0.183	0.210	0.234	0.251
Transportation Terminals	0.348	1.629	1.481	2.953	3.526	3.345	2.836
Commercial	1.754	2.481	2.211	4.017	5.038	5.282	5.165
(Yr/yr % change)	-77.9%	41.4%	-10.9%	81.6%	25.4%	4.8%	-2.2%
Amusement	2.548	2.353	2.003	2.429	2.757	3.114	3.340
Religious	0.109	0.043	0.072	0.051	0.057	0.062	0.067
Community	2.657	2.396	2.075	2.480	2.814	3.176	3.407
(Yr/yr % change)	127.4%	-9.8%	-13.4%	19.5%	13.5%	12.9%	7.3%
Educational	7.083	6.739	6.449	6.845	7.245	7.608	7.844
(Yr/yr % change)	31.1%	-4.9%	-4.3%	6.1%	5.8%	5.0%	3.1%
Fire and Police Stations	1.570	1.267	1.647	1.325	1.674	1.884	2.052
Government Offices	1.184	5.010	2.079	2.199	2.320	2.443	2.548
Government	2.754	6.277	3.726	3.524	3.994	4.327	4.600
(Yr/yr % change)	7.5%	128.0%	-40.6%	-5.4%	13.3%	8.3%	6.3%
Manufacturing	11.709	8.406	12.933	14.988	14.989	10.329	9.913
Warehouses	2.354	2.224	2.347	2.489	2.625	2.749	2.870
Industrial	14.064	10.630	15.279	17.476	17.614	13.077	12.783
(Yr/yr % change)	185.2%	-24.4%	43.7%	14.4%	0.8%	-25.8%	-2.3%
Hospitals / Clinics	7.968	3.716	7.328	4.475	5.427	5.981	6.445
Medical Misc.	0.100	0.556	0.295	0.353	0.413	0.471	0.516
Medical	8.067	4.272	7.623	4.829	5.839	6.452	6.961
(Yr/yr % change)	103.2%	-47.1%	78.5%	-36.7%	20.9%	10.5%	7.9%
Hotels	0.143	0.131	0.474	0.397	0.468	0.658	0.771
Retail Misc.	0.078	0.209	0.118	0.185	0.215	0.246	0.270
Shopping	0.359	0.699	0.318	0.577	0.875	1.104	1.254
Retail	0.580	1.039	0.910	1.159	1.557	2.008	2.295
(Yr/yr % change)	-31.5%	79.0%	-12.4%	27.4%	34.3%	28.9%	14.3%
NON-RESIDENTIAL BUILDING	36.960	33.834	38.274	40.330	44.101	41.930	43.054
(Yr/yr % change)	37.8%	-8.5%	13.1%	5.4%	9.4%	-4.9%	2.7%
Multi-Family	18.741	18.271	15.760	16.679	20.294	22.361	24.568
Single-Family	17.868	15.707	11.868	13.738	15.796	17.411	19.338
RESIDENTIAL	36.610	33.978	27.627	30.417	36.090	39.772	43.906
(Yr/yr % change)	28.9%	-7.2%	-18.7%	10.1%	18.7%	10.2%	10.4%
TOTAL NON-RESIDENTIAL	65.826	63.214	68.293	81.145	95.340	97.672	101.034
(Yr/yr % change)	9.0%	-4.0%	8.0%	18.8%	17.5%	2.4%	3.4%
GRAND TOTAL	102.436	97.192	95.920	111.563	131.430	137.444	144.940
(Yr/yr % change)	15.4%	-5.1%	-1.3%	16.3%	17.8%	4.6%	5.5%

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)				
	2022	2023	2024	2025	2026	2027
Atlantic region	\$4,314	29.4%	35.5%	-3.0%	5.0%	3.0%
Quebec	\$19,007	15.9%	-12.8%	17.9%	6.9%	6.0%
Ontario	\$38,961	-17.5%	14.3%	8.7%	5.0%	4.9%
Manitoba	\$2,723	6.9%	-2.1%	18.4%	6.6%	6.8%
Saskatchewan	\$1,597	61.5%	23.7%	24.6%	0.6%	5.9%
Alberta	\$15,874	-12.1%	41.0%	27.9%	5.0%	7.5%
British Columbia	\$14,717	13.7%	33.5%	29.9%	2.1%	4.4%
Canada	\$97,192	-1.3%	16.3%	17.8%	4.6%	5.5%

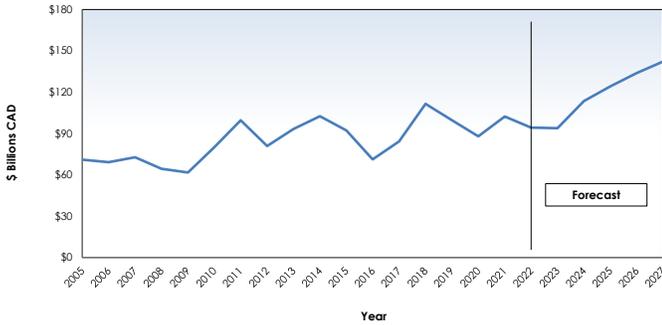
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

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

		Actuals		Forecasts				
		2021	2022	2023	2024	2025	2026	2027
Quebec	Residential	6.871	4.729		5.001	5.726	6.513	7.352
	Non-res Building	9.582	7.039	9.815	7.053	7.999	8.110	8.324
	Engineering/Civil	5.614	7.238	9.433	7.155	8.915	9.568	9.957
	Total	22.068	19.007	22.020	19.210	22.640	24.191	25.633
	(Yr vs previous yr % Change)	30.7%	-13.9%	15.9%	-12.8%	17.9%	6.9%	6.0%
Ontario	Residential	15.987	13.807	11.800	12.266	14.687	15.939	17.260
	Non-res Building	7.489	16.721	12.406	13.386	12.941	12.753	13.009
	Engineering/Civil	8.183	8.433	7.934	11.088	12.302	13.235	13.732
	Total	31.659	38.961	32.141	36.740	39.930	41.927	44.001
	(Yr vs previous yr % Change)	-11.3%	23.1%	-17.5%	14.3%	8.7%	5.0%	4.9%
Alberta	Residential	4.792	4.620	4.379	4.639	5.501	6.270	7.195
	Non-res Building	2.557	3.733	4.316	5.252	6.502	5.591	5.973
	Engineering/Civil	8.767	7.520	5.259	9.782	13.165	14.556	15.222
	Total	16.115	15.874	13.955	19.674	25.168	26.417	28.389
	(Yr vs previous yr % Change)	26.0%	-1.5%	-12.1%	41.0%	27.9%	5.0%	7.5%
British Columbia	Residential	6.274	8.140	6.651	6.690	8.060	8.722	9.492
	Non-res Building	7.384	4.073	6.869	8.749	10.120	8.998	9.081
	Engineering/Civil	1.924	2.504	3.213	6.899	10.829	11.892	12.333
	Total	15.582	14.717	16.733	22.337	29.009	29.612	30.906
	(Yr vs previous yr % Change)	-3.4%	-5.6%	13.7%	33.5%	29.9%	2.1%	4.4%

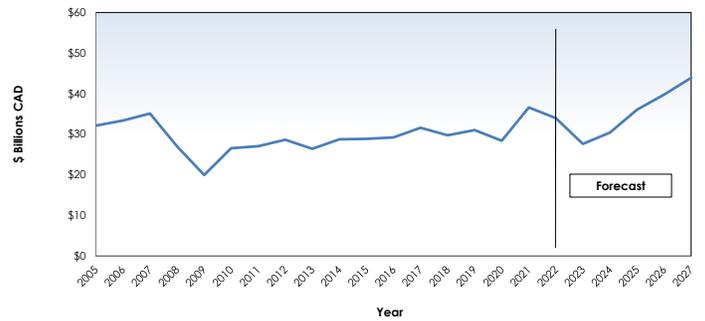
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Graph 19: Canadian Grand Total Construction Starts — ConstructConnect



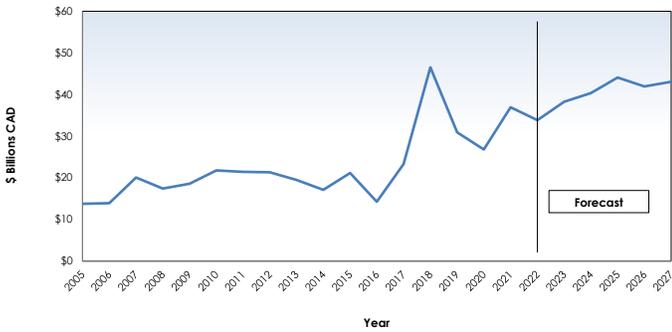
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 20: Canadian Residential Construction Starts — ConstructConnect



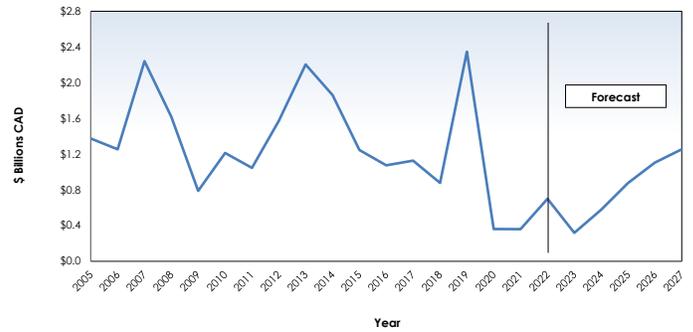
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 21: Canadian Non-Residential Building Starts — ConstructConnect



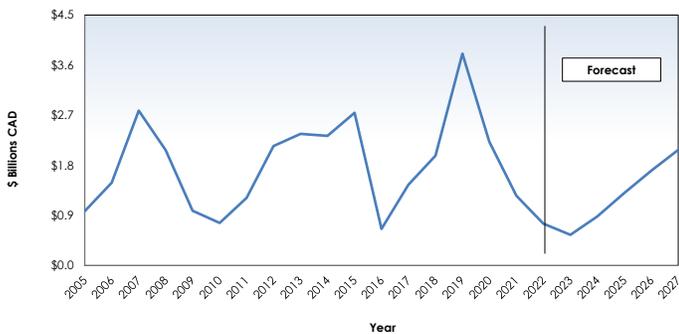
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect



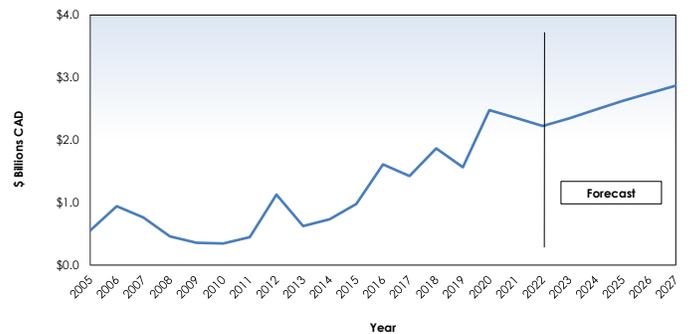
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 23: Canadian Private Offices Construction Starts — ConstructConnect



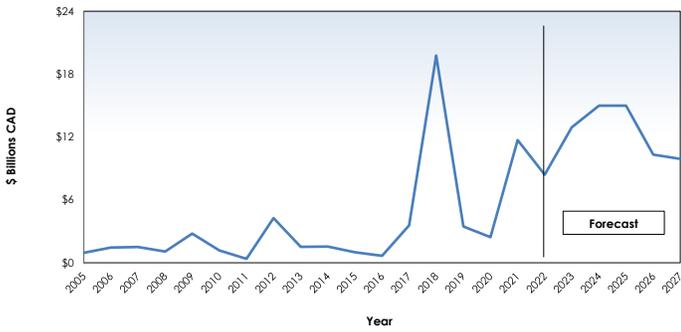
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 24: Canadian Warehouse Construction Starts — ConstructConnect



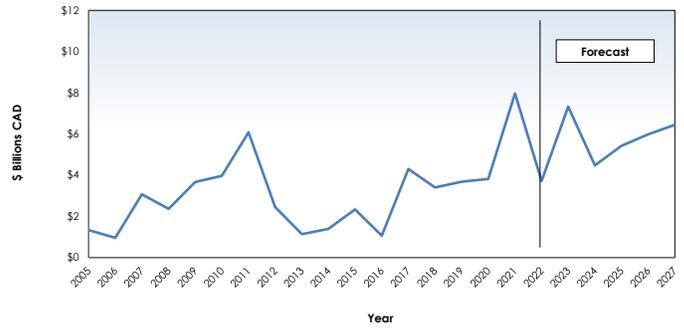
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 25: Canadian Industrial/Manufacturing Construction Starts — ConstructConnect



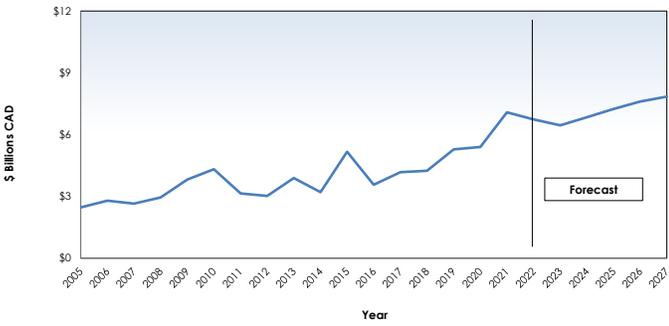
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect



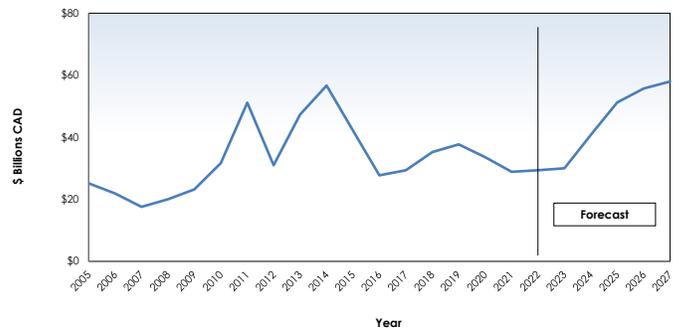
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 27: Canadian Education Construction Starts — ConstructConnect



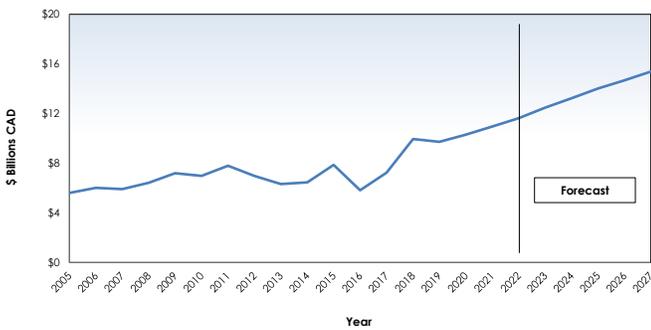
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 28: Canadian Engineering Construction Starts — ConstructConnect



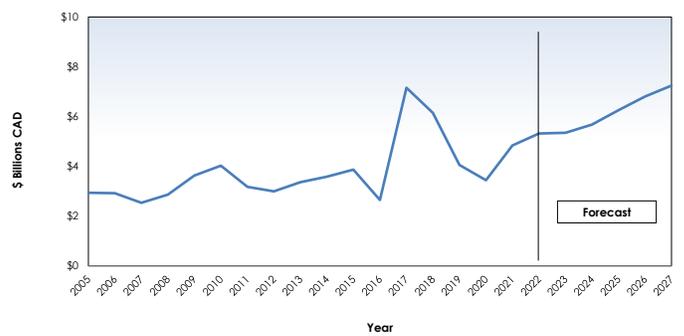
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 29: Canadian Roadwork Construction Starts — ConstructConnect



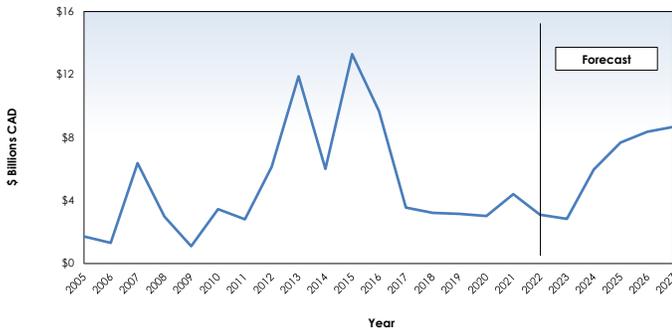
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect



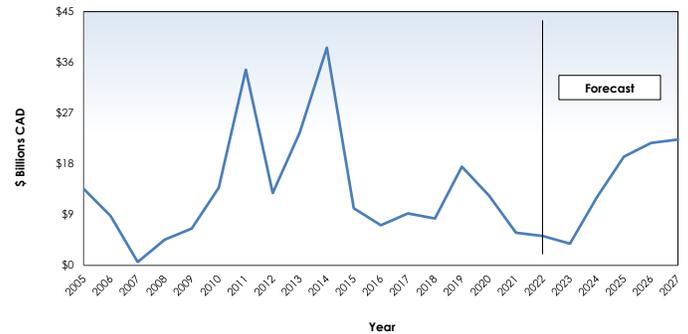
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect



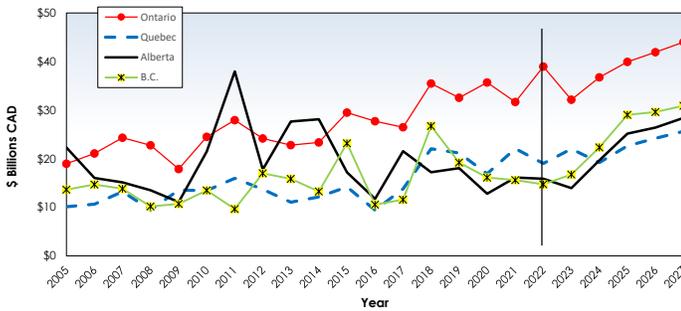
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 32: Canada All Other Civil (Oil Sands, Tunnels, RRs) Construction Starts — ConstructConnect



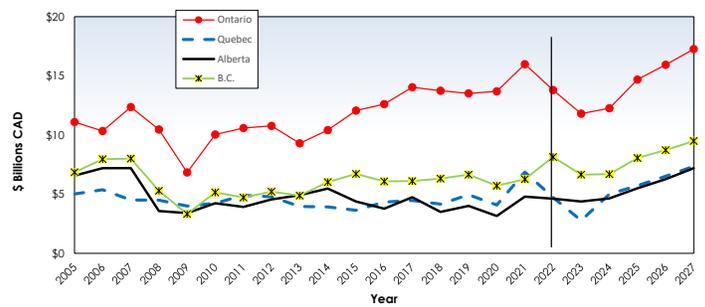
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



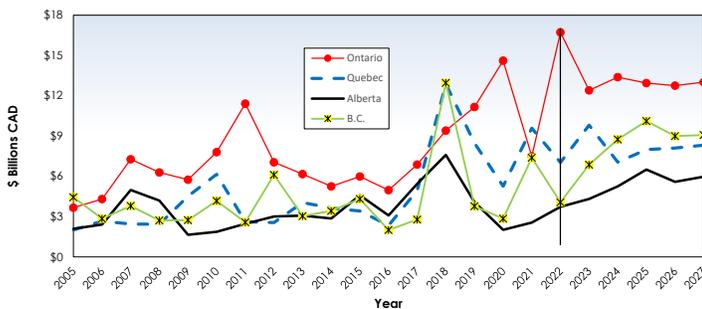
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



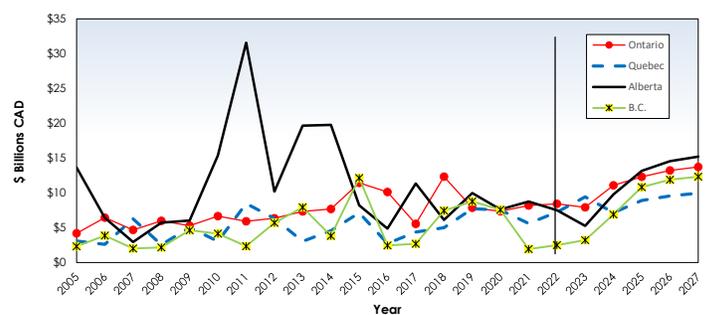
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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				
	2021	2022	2023	2024	2025	2026	2027
Single-family	2,130.8	1,860.0	1,660.9	1,821.1	2,053.2	2,258.4	2,453.8
Multi-family	575.7	751.5	511.0	620.3	731.4	813.4	883.3
TOTAL RESIDENTIAL	2,706.5	2,611.5	2,171.9	2,441.4	2,784.6	3,071.9	3,337.0
<i>(Yr/yr % change)</i>	<i>18.6%</i>	<i>-3.5%</i>	<i>-16.8%</i>	<i>12.4%</i>	<i>14.1%</i>	<i>10.3%</i>	<i>8.6%</i>
Hotels/Motels	30.8	43.6	44.7	55.4	64.8	77.0	84.6
Shopping/Retail	48.7	55.1	44.9	58.5	77.8	94.3	114.9
Parking Garages	15.0	19.1	19.5	21.0	23.4	25.3	27.1
Amusement	22.5	22.0	26.1	24.6	25.0	26.2	27.4
Private Offices	71.9	81.2	52.7	67.9	81.3	91.3	100.3
Governmental Offices	16.4	16.8	20.0	19.0	19.8	20.5	21.4
Laboratories (Schools & Industrial)	5.5	9.5	6.4	6.9	7.4	7.8	8.1
Warehouses	267.3	249.4	165.3	202.0	227.5	241.9	253.5
Sports Stadium/Convention Center	14.2	14.9	13.0	15.4	14.9	15.7	15.2
Transportation Terminals	8.2	6.3	10.2	13.5	14.2	12.8	11.9
TOTAL COMMERCIAL	500.5	518.0	402.9	484.2	556.1	612.8	664.2
<i>(Yr/yr % change)</i>	<i>5.4%</i>	<i>3.5%</i>	<i>-22.2%</i>	<i>20.2%</i>	<i>14.9%</i>	<i>10.2%</i>	<i>8.4%</i>
TOTAL INDUSTRIAL (manufacturing)	92.4	206.6	122.6	117.0	110.4	105.4	100.5
<i>(Yr/yr % change)</i>	<i>28.7%</i>	<i>123.6%</i>	<i>-40.7%</i>	<i>-4.6%</i>	<i>-5.6%</i>	<i>-4.5%</i>	<i>-4.6%</i>
Religious	3.4	3.0	3.1	3.5	3.9	4.4	4.9
Hospitals/Clinics	23.8	27.2	26.1	33.1	41.5	47.6	54.3
Nursing Homes/Assisted Living	23.4	15.8	8.5	13.5	18.6	23.8	28.9
Libraries/Museums	6.4	3.1	4.4	4.1	4.0	4.0	4.1
Courthouse	4.4	1.9	2.5	2.8	3.1	3.3	3.5
Police/Fire	7.3	8.2	8.8	9.0	9.4	9.8	10.2
Prisons	1.7	4.2	4.0	4.3	4.5	4.8	5.1
Military	20.0	10.8	25.6	20.3	20.9	21.6	22.3
Educational Facilities	122.4	140.9	149.9	150.6	156.6	163.2	168.9
MED misc	15.4	18.5	12.4	16.0	18.1	19.7	21.1
TOTAL INSTITUTIONAL	228.1	233.6	245.2	257.2	280.6	302.2	323.5
<i>(Yr/yr % change)</i>	<i>-10.5%</i>	<i>2.4%</i>	<i>5.0%</i>	<i>4.9%</i>	<i>9.1%</i>	<i>7.7%</i>	<i>7.0%</i>
Miscellaneous Non-Res Building	21.2	22.2	19.7	20.3	21.9	23.3	24.5
TOTAL NON-RES BLDG	842.1	980.4	790.4	878.7	969.0	1,043.8	1,112.7
<i>(Yr/yr % change)</i>	<i>2.5%</i>	<i>16.4%</i>	<i>-19.4%</i>	<i>11.2%</i>	<i>10.3%</i>	<i>7.7%</i>	<i>6.6%</i>
RESIDENTIAL + NON-RES BLDG	3,548.6	3,591.9	2,962.3	3,320.1	3,753.6	4,115.6	4,449.7
<i>(Yr/yr % change)</i>	<i>14.3%</i>	<i>1.2%</i>	<i>-17.5%</i>	<i>12.1%</i>	<i>13.1%</i>	<i>9.6%</i>	<i>8.1%</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				
	2021	2022	2023	2024	2025	2026	2027
Summary							
NON-RESIDENTIAL BUILDING	842.1	980.4	790.4	878.7	969.0	1,043.8	1,112.7
RESIDENTIAL	2,706.5	2,611.5	2,171.9	2,441.4	2,784.6	3,071.9	3,337.0
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,548.6	3,591.9	2,962.3	3,320.1	3,753.6	4,115.6	4,449.7
Verticals							
Offices (private)	71.9	81.2	52.7	67.9	81.3	91.3	100.3
Parking Garages	15.0	19.1	19.5	21.0	23.4	25.3	27.1
Transportation Terminals	8.2	6.3	10.2	13.5	14.2	12.8	11.9
Commercial	95.2	106.7	82.4	102.4	118.9	129.4	139.2
(Yr/yr % change)	-2.7%	12.1%	-22.8%	24.3%	16.1%	8.9%	7.6%
Amusement	22.5	22.0	26.1	24.6	25.0	26.2	27.4
Libraries / Museums	6.4	3.1	4.4	4.1	4.0	4.0	4.1
Religious	3.4	3.0	3.1	3.5	3.9	4.4	4.9
Sports Arenas / Convention Centers	14.2	14.9	13.0	15.4	14.9	15.7	15.2
Community	46.4	42.9	46.6	47.6	47.8	50.3	51.7
(Yr/yr % change)	13.1%	-7.7%	8.6%	2.3%	0.4%	5.1%	2.8%
College / University	24.9	31.0	32.4	34.8	37.0	39.2	40.4
Elementary / Pre School	35.2	43.9	50.8	51.5	53.1	55.0	57.7
Jr / Sr High School	56.4	60.7	62.7	60.2	62.2	64.5	66.1
Special / Vocational	5.9	5.3	4.1	4.2	4.3	4.5	4.7
Educational	122.4	140.9	149.9	150.6	156.6	163.2	168.9
(Yr/yr % change)	-16.7%	15.0%	6.4%	0.5%	3.9%	4.3%	3.5%
Courthouses	4.4	1.9	2.5	2.8	3.1	3.3	3.5
Fire and Police Stations	7.3	8.2	8.8	9.0	9.4	9.8	10.2
Government Offices	16.4	16.8	20.0	19.0	19.8	20.5	21.4
Prisons	1.7	4.2	4.0	4.3	4.5	4.8	5.1
Government	29.7	31.2	35.3	35.1	36.8	38.5	40.2
(Yr/yr % change)	10.5%	5.0%	13.1%	-0.5%	4.9%	4.5%	4.4%
Industrial Labs / Labs / School Labs	5.5	9.5	6.4	6.9	7.4	7.8	8.1
Manufacturing	92.4	206.6	122.6	117.0	110.4	105.4	100.5
Warehouses	267.3	249.4	165.3	202.0	227.5	241.9	253.5
Industrial	365.1	465.5	294.3	325.8	345.3	355.2	362.1
(Yr/yr % change)	19.2%	27.5%	-36.8%	10.7%	6.0%	2.9%	2.0%
Hospitals / Clinics	23.8	27.2	26.1	33.1	41.5	47.6	54.3
Medical Misc.	15.4	18.5	12.4	16.0	18.1	19.7	21.1
Nursing Homes	23.4	15.8	8.5	13.5	18.6	23.8	28.9
Medical	62.6	61.5	47.0	62.6	78.2	91.1	104.3
(Yr/yr % change)	-3.2%	-1.8%	-23.6%	33.4%	24.9%	16.4%	14.5%
Military	20.0	10.8	25.6	20.3	20.9	21.6	22.3
(Yr/yr % change)	-10.1%	-45.7%	136.4%	-20.9%	3.0%	3.4%	3.5%
Hotels	30.8	43.6	44.7	55.4	64.8	77.0	84.6
Retail Misc.	21.2	22.2	19.7	20.3	21.9	23.3	24.5
Shopping	48.7	55.1	44.9	58.5	77.8	94.3	114.9
Retail	100.6	120.9	109.3	134.2	164.5	194.6	224.0
(Yr/yr % change)	-13.0%	20.1%	-9.6%	22.8%	22.6%	18.3%	15.1%
NON-RESIDENTIAL BUILDING	842.1	980.4	790.4	878.7	969.0	1,043.8	1,112.7
(Yr/yr % change)	2.5%	16.4%	-19.4%	11.2%	10.3%	7.7%	6.6%
Multi-Family	575.7	751.5	511.0	620.3	731.4	813.4	883.3
Single-Family	2,130.8	1,860.0	1,660.9	1,821.1	2,053.2	2,258.4	2,453.8
RESIDENTIAL	2,706.5	2,611.5	2,171.9	2,441.4	2,784.6	3,071.9	3,337.0
(Yr/yr % change)	18.6%	-3.5%	-16.8%	12.4%	14.1%	10.3%	8.6%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,548.6	3,591.9	2,962.3	3,320.1	3,753.6	4,115.6	4,449.7
(Yr/yr % change)	14.3%	1.2%	-17.5%	12.1%	13.1%	9.6%	8.1%

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				
	2021	2022	2023	2024	2025	2026	2027
Single-family	154.2	135.4	101.7	118.0	136.1	150.1	166.7
Multi-family	86.6	85.4	72.8	77.4	94.0	103.5	113.7
TOTAL RESIDENTIAL	240.7	220.9	174.5	195.3	230.0	253.6	280.4
<i>(Yr/yr % change)</i>	<i>28.1%</i>	<i>-8.2%</i>	<i>-21.0%</i>	<i>12.0%</i>	<i>17.8%</i>	<i>10.2%</i>	<i>10.6%</i>
Hotels/Motels	0.7	0.5	1.3	0.9	1.4	1.9	2.2
Private Offices	5.4	2.8	1.2	2.4	3.8	5.1	6.4
Governmental Offices	1.2	1.3	1.4	1.4	1.5	1.6	1.6
Shopping/Retail	2.7	3.6	1.3	4.0	6.3	8.1	9.0
Retail Miscellaneous	0.4	0.7	0.4	0.6	0.7	0.8	0.8
Parking Garages	0.5	0.2	0.6	0.6	0.6	0.7	0.9
Amusement	3.7	3.4	2.6	3.6	4.3	5.0	5.6
Warehouses	14.3	15.4	12.9	14.5	15.7	16.5	17.3
TOTAL COMMERCIAL	28.8	27.9	21.6	27.9	34.3	39.7	43.8
<i>(Yr/yr % change)</i>	<i>13.2%</i>	<i>-3.3%</i>	<i>-22.4%</i>	<i>28.9%</i>	<i>22.9%</i>	<i>16.0%</i>	<i>10.2%</i>
TOTAL INDUSTRIAL (manufacturing)	5.6	7.1	7.5	7.8	9.0	6.6	6.4
<i>(Yr/yr % change)</i>	<i>7.9%</i>	<i>26.1%</i>	<i>5.8%</i>	<i>3.4%</i>	<i>16.2%</i>	<i>-26.6%</i>	<i>-3.5%</i>
Religious	0.4	0.1	0.1	0.2	0.3	0.3	0.3
Hospitals/Clinics	10.2	5.9	7.8	6.7	8.2	9.4	10.1
MED misc	0.2	1.3	0.3	0.5	0.7	0.8	1.0
Transportation Terminals*	0.2	1.1	0.7	2.0	2.1	1.8	1.4
Police/Fire	1.8	1.5	2.5	1.9	2.2	2.4	2.6
Educational Facilities	14.0	10.7	8.5	10.7	12.3	13.5	13.9
TOTAL INSTITUTIONAL	26.8	20.6	19.9	21.9	25.6	28.2	29.3
<i>(Yr/yr % change)</i>	<i>26.7%</i>	<i>-23.1%</i>	<i>-3.6%</i>	<i>10.3%</i>	<i>17.0%</i>	<i>10.0%</i>	<i>4.0%</i>
TOTAL NON-RES BLDG	61.3	55.6	49.0	57.6	68.9	74.5	79.5
<i>(Yr/yr % change)</i>	<i>18.2%</i>	<i>-9.3%</i>	<i>-11.9%</i>	<i>17.5%</i>	<i>19.7%</i>	<i>8.2%</i>	<i>6.6%</i>
RESIDENTIAL + NON-RES BLDG	302.0	276.5	223.5	252.9	298.9	328.1	359.9
<i>(Yr/yr % change)</i>	<i>26.0%</i>	<i>-8.5%</i>	<i>-19.2%</i>	<i>13.2%</i>	<i>18.2%</i>	<i>9.8%</i>	<i>9.7%</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)

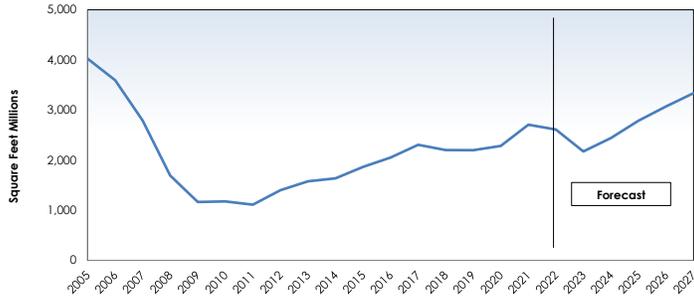
	Actuals		Forecasts				
	2021	2022	2023	2024	2025	2026	2027
Summary							
NON-RESIDENTIAL BUILDING	61.3	55.6	49.0	57.6	68.9	74.5	79.5
RESIDENTIAL	240.7	220.9	174.5	195.3	230.0	253.6	280.4
RESIDENTIAL + NON-RESIDENTIAL BUILDING	302.0	276.5	223.5	252.9	298.9	328.1	359.9
Verticals							
Offices (private)	5.4	2.8	1.2	2.4	3.8	5.1	6.4
Parking Garages	0.5	0.2	0.6	0.6	0.6	0.7	0.9
Transportation Terminals	0.2	1.1	0.7	2.0	2.1	1.8	1.4
Commercial	6.1	4.2	2.5	4.9	6.4	7.7	8.7
(Yr/Yr % change)	-4.7%	-31.6%	-39.8%	96.3%	31.0%	19.0%	13.4%
Amusement	3.7	3.4	2.6	3.6	4.3	5.0	5.6
Religious	0.4	0.1	0.1	0.2	0.3	0.3	0.3
Community	4.1	3.5	2.7	3.8	4.5	5.3	5.9
(Yr/Yr % change)	135.2%	-14.3%	-23.7%	41.0%	20.0%	16.5%	11.8%
Educational	14.0	10.7	8.5	10.7	12.3	13.5	13.9
(Yr/Yr % change)	34.0%	-23.3%	-20.5%	25.0%	15.4%	9.9%	3.1%
Fire and Police Stations	1.8	1.5	2.5	1.9	2.2	2.4	2.6
Government Offices	1.2	1.3	1.4	1.4	1.5	1.6	1.6
Government	3.0	2.7	3.8	3.3	3.7	4.0	4.2
(Yr/Yr % change)	-15.8%	-8.9%	40.5%	-12.5%	10.1%	7.3%	6.5%
Manufacturing	5.6	7.1	7.5	7.8	9.0	6.6	6.4
Warehouses	14.3	15.4	12.9	14.5	15.7	16.5	17.3
Industrial	19.9	22.5	20.4	22.2	24.7	23.2	23.7
(Yr/Yr % change)	18.9%	13.0%	-9.5%	9.1%	11.2%	-6.3%	2.3%
Hospitals / Clinics	10.2	5.9	7.8	6.7	8.2	9.4	10.1
Medical Misc.	0.2	1.3	0.3	0.5	0.7	0.8	1.0
Medical	10.5	7.2	8.1	7.2	8.8	10.2	11.0
(Yr/Yr % change)	25.7%	-31.2%	12.4%	-11.3%	23.2%	15.3%	8.4%
Hotels	0.7	0.5	1.3	0.9	1.4	1.9	2.2
Retail Misc.	0.4	0.7	0.4	0.6	0.7	0.8	0.8
Shopping	2.7	3.6	1.3	4.0	6.3	8.1	9.0
Retail	3.7	4.8	3.0	5.5	8.4	10.8	12.0
(Yr/Yr % change)	-19.7%	27.8%	-36.7%	81.2%	53.8%	28.0%	11.6%
NON-RESIDENTIAL BUILDING	61.3	55.6	49.0	57.6	68.9	74.5	79.5
(Yr/Yr % change)	18.2%	-9.3%	-11.9%	17.5%	19.7%	8.2%	6.6%
Multi-Family	86.6	85.4	72.8	77.4	94.0	103.5	113.7
Single-Family	154.2	135.4	101.7	118.0	136.1	150.1	166.7
RESIDENTIAL	240.7	220.9	174.5	195.3	230.0	253.6	280.4
(Yr/Yr % change)	28.1%	-8.2%	-21.0%	12.0%	17.8%	10.2%	10.6%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	302.0	276.5	223.5	252.9	298.9	328.1	359.9
(Yr/Yr % change)	26.0%	-8.5%	-19.2%	13.2%	18.2%	9.8%	9.7%

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'.

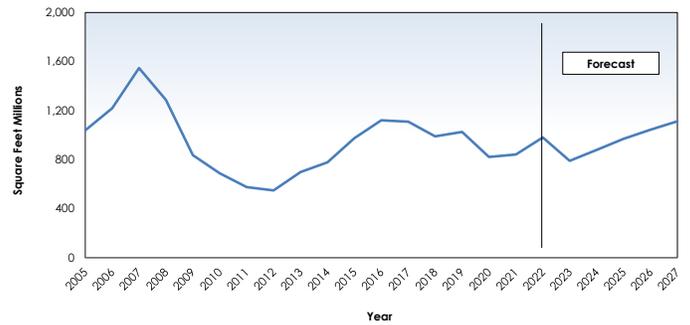
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

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



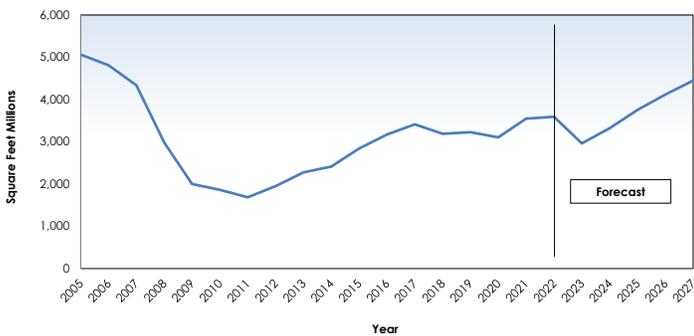
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Chart: ConstructConnect.

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



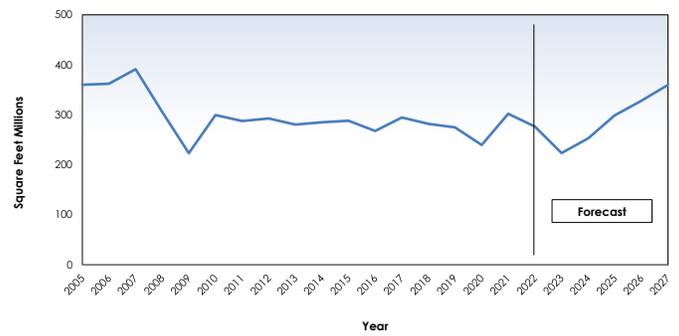
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Chart: ConstructConnect.

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



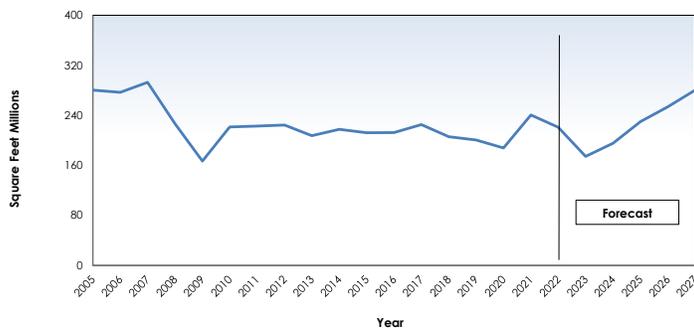
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Chart: ConstructConnect.

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



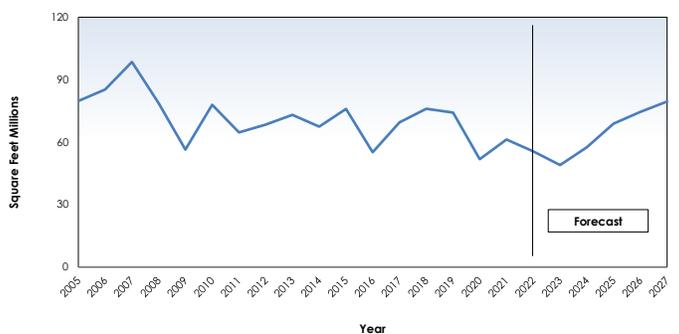
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Chart: ConstructConnect.

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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