Fall 2022 (For August 2022 Release)

Construction Starts Forecast

Contents

In 'current' dollar terms (i.e., not adjusted for inflation), the U.S. has moved up to become a $25 trillion economy.

Link to article here: https://bit.ly/3PVkOXm

Sources: ConstructConnect®/Oxford Economics.
Forecast reflects actual starts through Q2 2022.

Highlights

- Total US construction starts in dollar terms increased by 22.2% year-on-year (y/y) in Q2 2022 and 14.8% year-to-date (ytd) driven by 12 mega projects for a combined value of $45 billion. However, construction was much weaker in square footage terms, a volume metric, reflecting both the impact of inflation and the relatively strong performance of manufacturing and engineering projects, which often do not have an associated area.
- GDP declined at an annual pace of 0.9% in Q2 marking the second consecutive quarter of negative growth. A strong labor market suggests that the economy is unlikely to be currently in a recession, but the hawkish Fed stance increases the likelihood, especially in 2023. We expect GDP to grow by 1.9% in 2022 and 1.1% in 2023. After two consecutive 75 basis point (bp) rises in the Federal Reserve's target rate in June and July, we expect an additional 75bp rise in September, with smaller 25 bp increases pencilled towards the end of the year.
- Total construction starts, in current US dollar terms, are expected to rise 10.9% in 2022 before slowing in 2023. Non-residential building and engineering projects are expected to lead growth this year, with residential construction expected to slow, a reversal of the trend seen since the global pandemic.
- Total Canadian construction starts by fell 23.7% y/y and 21.8% ytd in Q2 2022. The decline was broadly based, as all three subsectors decreased in both y/y and ytd terms. Unlike in the US, there was not a significant gap between the value and volume construction metrics.
- Total Canadian constructions starts are forecast to decrease by 11% in 2022. This reflects double-digit declines in both residential and non-residential building, which are expected to more than offset a small increase in engineering construction. Growth is predicted to resume in 2023, with starts expected to increase by 19.3%.

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Overview

Deluge of mega-projects boosts construction starts in Q2

Total US construction starts in dollar terms increased by 22.2% year-on-year (y/y) in Q2 2022 and by 14.8% year-to-date (ytd). Unlike in Q1, new construction activity in Q2 was underpinned by a large number of mega projects—projects that are valued at more than $1 billion. While construction began on only one such project in Q1, Q2 had 12 mega projects for a combined value of $45 billion. By contrast, new construction in square footage terms, a volume metric, fell 0.1% ytd. One reason is that most engineering projects and some large manufacturing projects do not have an associated square footage, but rising prices are also likely playing a role in the divergence between the value and volume metric of construction.

Total non-residential building posted the strongest growth in Q2, up 57.6% y/y and 29% ytd. New factory construction saw the biggest rise, with four mega projects registered in Q2 and two of those projects valued above $10 billion: a $15 billion Texas Instrument semiconductor fab in Texas, a $10 billion LNG facility in Louisiana, a $5.8 billion Ford battery factory in Kentucky, and a $1 billion industrial park in Florida. New hospital construction was another sector in which multiple mega projects began: a $1.9 billion project in Pennsylvania and a $1.6 billion dollar project in Indiana. Construction in that sector was up 89.1% y/y, but thanks to strong growth in Q1 2021, it was broadly flat in ytd terms (-0.8%). Other large projects included in non-residential building in Q2 were a $1.7 billion naval yard in Maine, a $1.1 billion university project in California, and a $1.5 billion transport project at JFK Airport in New York.

Elsewhere in non-residential building, some consistently weak categories related to travel, entertainment, and office work have finally returned to growth in ytd terms, although all remain significantly below pre-pandemic levels. These include private office building, parking garages, hotels & motels, and amusement facilities. Warehouse construction, by contrast, fell by 27.2% y/y and 26% ytd. Starts in this sector had held steady during the peak of the pandemic due to the shifts in trade and consumption patterns, but there are now concerns of overcapacity.

New engineering construction increased by 26.4% y/y and 24.4% ytd. Like the non-residential sector, the sector was underpinned by mega projects. A $1 billion gas facility in Texas boosted construction in the power sector, but a high level of construction in the same period last year left the sector down 1.6% y/y. Ytd construction growth was stronger, up 17.2%, also boosted by a $2 billion wind farm in New York last quarter. A $1.6 billion bridge project in New Jersey underpinned a 76.8% y/y and a 46.6% ytd rise in that sector. The trend in most other engineering sectors has also been healthy, with every sector except for miscellaneous civil rising at a double-digit pace in ytd terms in Q2.

New residential building fell by 4.1% y/y but grew by 0.7% ytd in Q2. Both the single-family and multi-family segments have weakened over the last quarter. Single-family starts fell 1% y/y, although ytd growth was still positive at 1.3%. Apartment building fell by 12.3% y/y and 1% ytd. The weakness in multi-family construction is all the more striking as groundbreaking started on a $2.7 billion residential complex in California.

Put-in-place (PIP) construction, a measure of work-in-progress, increased by 8.3% y/y in June, and on a seasonally adjusted basis, the series declined from the previous month. Both residential and non-residential PIP decreased in June, but the residential sector appears to be losing momentum more quickly. ConstructConnect, in partnership with Oxford Economics, a world-leading economic forecasting firm, have 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.

Soaring prices for construction and building materials have played a key role in US construction since early-2021. While input cost inflation remains high, it has started to slow from its heady pace earlier this year. Prices for construction building materials grew by 15.1% y/y in June, down from a high of over 24% y/y in January and February this year. Lumber prices have eased significantly and were even in deflationary territory in June, although base effects from June 2021 likely overstate the magnitude of the deflation. Inflation in metals inputs has started to slow, and an easing in base metals prices should put further downward pressure on these costs in the coming months. Meanwhile, inflation in final demand for construction rose to a

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Table 1: Summary forecasts
(Annual percentage changes unless specified otherwise)

	2020	2021	2022	2023	2024	2025	2026
US							
Macro variables							
GDP	-3.4	5.7	1.9	1.1	2.1	2.8	2.5
Population growth	0.4	0.1	0.2	0.4	0.5	0.5	0.5
Unemployment rate (%)	8.1	5.4	3.6	3.8	3.8	3.7	3.6
Real disposable income	6.2	2.3	-5.5	2.3	3.0	2.2	1.9
Central bank rate (%)	0.4	0.1	1.6	3.5	1.8	2.0	2.0
10-year government yield (%)	0.9	1.4	2.9	3.3	2.9	2.8	2.8
Construction starts (% growth in U.S.$)							
Total starts	-15.0	9.7	10.9	3.7	8.0	8.8	7.0
Residential	1.2	18.9	4.8	4.2	8.6	9.6	7.9
Non-res bldg	-27.2	3.9	14.3	0.3	6.8	8.0	6.4
Civil engineering	-18.3	1.0	19.5	8.2	8.3	8.4	5.8
Canada							
Macro variables							
GDP	-5.2	4.5	3.4	1.1	1.6	2.7	2.6
Population growth	1.2	0.5	1.2	1.1	1.0	1.0	1.0
Unemployment rate (%)	9.6	7.4	5.5	6.5	6.8	6.6	6.3
Real disposable income	8.4	0.1	-1.3	1.2	1.9	1.7	1.9
Central bank rate (%)	0.6	0.3	1.5	2.8	2.0	2.0	2.0
10-year government yield (%)	0.8	1.4	2.9	3.2	2.9	2.9	2.9
Exchange rate C$ per US$	1.34	1.25	1.28	1.31	1.27	1.22	1.18
Construction starts (% growth in C$)							
Total starts	-11.7	14.0	-11.0	19.3	12.4	7.0	6.1
Residential	-11.7	29.6	-12.0	2.6	9.3	8.2	5.8
Non-res bldg	-11.2	32.3	-25.2	31.9	4.6	2.1	4.8
Civil engineering	-12.3	-13.7	7.7	25.3	22.0	10.0	7.3

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record high of 19.2% in June, suggesting that construction firms are now better able to pass on higher costs.

Labor shortages are another constraint, especially since the sector is relatively labor-intensive. The JOLTS survey of job openings has been hovering around record highs in recent months, and wages are rising faster than the economy-wide average. Annual growth in weekly earnings was 5.8% in June, compared to 4.2% for all private sector employment.

Inflation to spur aggressive Fed policy tightening

GDP declined at an annual pace of 0.9% in Q2 marking the second consecutive quarter of negative growth. Although we doubt that the economy is in a recession given labor market strength, aggressive and front-loaded Fed rate hikes increase the odds of a recession, especially in 2023. However, we continue to believe that recession is not inevitable, and we expect the economy to grow 1.9% this year before slowing to 1.1% in 2023.

The labor market remains robust, although job growth has slowed from its heady pace in Q1. The average monthly employment increase was 375,000 in Q2, representing a healthy cooling from the Q1 average gain of 539,000. Encouragingly, average hourly earnings rose 0.3% month-on-month in June, and y/y growth eased to 5.1% from 5.3% in May and the recent peak of 5.6% in March. Labor demand is poised to ease further later this year, which should help bring worker demand and supply closer into balance.

Household spending lost momentum in Q2 as higher prices hit real incomes and consumer confidence. Consumers cut back on goods purchases and spent moderately on services. However, we still see some pent-up demand for services such as dining out, travel, and entertainment, which should support consumer spending over the summer.

Headline inflation rose to a 40-year high of 9.1% in June, and we expect it to remain above 8.5% through September and only recede to around 7% by the year-end. The Federal Open Market Committee (FOMC) raised interest rates by 75 bp in each of June and July, and with high inflation expected to persist, we forecast a further 75 bp increase in September. Thereafter, we expect the Fed to scale back the pace of rate hikes to 25 bps at each of the upcoming November, December, and January meetings, lifting the policy rate to a cycle peak of 3.75%-4%. We then see the policy rate on hold until July 2023, at which point we look for policymakers to start cutting the policy rate amid falling inflation and weaker GDP growth.

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

US construction seen slowing in 2023

Total construction starts, in current US dollar terms, are expected to rise by 10.9% in 2022 before slowing to 3.7% growth next year. Non-residential building and engineering projects are expected to lead growth this year, with residential construction seen slowing, a reversal of the trend seen since the global pandemic.

Growth in square foot construction, however, is expected to be more modest at 3% this year before rising to 3.6% in 2023. Under normal circumstances, construction in both value and square footage terms tend to move broadly in line with one another, but there are a number of factors underpinning divergent outcomes this year. First, construction in value terms includes both the impact of prices and volumes, so are therefore impacted by higher inflation. By contrast, square foot construction is a volume metric, meaning that it does not increase when prices rise. Furthermore, most engineering projects and some industrial projects do not expand the square footage. These two segments are key drivers of construction growth in 2022 in particular.

New engineering projects are expected to rise by 19.5% in 2022, with continued steady growth expected throughout the forecast period. The sector was boosted by the passage of the $1.2 trillion bipartisan Infrastructure Investment and Jobs Act in November 2021, which includes about $550 billion of new federal spending on infrastructure projects. While additional fiscal stimulus is no longer included in our baseline forecast, recent commentary from Senator Manchin regarding the newly renamed Inflation Reduction Act suggests there could be some additional upsides to sector construction.

All sectors except for dams, canals, & marine work and miscellaneous civil are expected to see a double-digit increase in growth this year. Next year, we expect slower growth in sectors that posted a bumper pace of growth this year, with more rapid growth in some of the laggards in 2022. The miscellaneous civil engineering sector stands out as a growth leader in 2023-25. The sector includes a range of projects, including railroad and tunnel projects, for which there are a number of large projects in the pipeline in 2023 in particular. It also includes some oil and gas projects, which could see a near-term boost due to the recent increase in prices and a diversification away from Russian energy by the West. Construction of new power infrastructure is also expected to increase at a double-digit pace throughout the forecast period. Several large windfarm and a nuclear project are already in the pipeline, and the sector will benefit from the adoption of green technologies which will require upgrades to the power grid and implementation of electric vehicle charging infrastructure.

Non-residential building is expected to grow by 14.3% this year before slowing significantly in 2023. Growth dynamics over the next few years will be heavily driven by developments in the industrial sector, where a number of mega projects are classified. Although there is still more construction expected in sectors like semiconductors, car batteries, LNG terminals, and oil and gas refineries, the very large projects started in 2022 are expected to fall out of the annual calculation, leading to an

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annual decline next year.

Sectors related to office work, travel, and entertainment were hit especially hard during the pandemic. Office work is slowly resuming, and there is significant pent-up demand for entertainment and travel services. In the later part of the forecast period, we expect a double-digit pace of growth in sectors such as private office building, retail, amusement, and hotels & motels. Despite this, none of these sectors are expected to reach their previous peaks over the forecast period to 2026.

By contrast, warehouse construction grew strongly during the pandemic, but with household demand for goods weakening, the need for new warehousing and logistics space is likely past its peak. New construction is expected to shrink this year and stagnate in 2023.

New residential construction will be most heavily impacted by rising inflation and interest rates. Mortgage interest rates are now over 5%, up from about 3% at the end of last year. While house price inflation remains elevated, both new and existing home sales are declining. New single-family housing starts are likely to be weaker than apartment building. Construction of multi-family units will be supported by younger millennials and Gen Z returning to cities after spending much of the pandemic outside of urban centres. Rising rents suggest a mismatch in the balance of supply and demand in that segment, and there are some large multi-family unit projects in the pipeline.

Canadian construction expected to shrink in 2022

Total Canadian construction starts fell by 23.7% y/y and 21.8% ytd in Q2 2022. All three subsectors decreased in both y/y and ytd terms. Residential building fell by 17.8% y/y and 12.7% ytd, non-residential building decreased by 46% y/y and 44.9% ytd, while civil engineering fell by 5.8% y/y and 5.6% ytd. Unlike in the US, there was not as large a gap between construction in value and square footage terms, mostly due to the extreme weakness in value terms.

In the non-residential sector, there were significant divergences in the outcomes across the sub-sectors. The only sectors to grow in Q2 (in both y/y and ytd terms) were government offices, shopping & retail, miscellaneous retail, warehouses, miscellaneous medical, and transportation terminals. While there were no mega projects valued over C$1 billion, both the government offices and miscellaneous medical segments posted a level of construction higher than recent activity. The other sectors to grow were mostly coming off of very low levels in 2021. The biggest declines were in hospitals & clinics, religious buildings, and especially in manufacturing, which fell by 90.9% y/y and 91.7% ytd.

Most sectors in the engineering segment declined in Q2 in both y/y and ytd terms. Construction of dams, canals, & marine work was the only sector to grow in both y/y and ytd terms, up 358% y/y and 183% ytd. Power infrastructure increased in y/y terms, but declined in ytd, while the opposite was true for the miscellaneous civil sector.

In the residential sector, both single-family and multi-family starts fell in Q2. Single-family construction contracted by 14.1% y/y and 15.2% ytd, while apartment building dropped by 21.7% y/y and 10% ytd. Single-family construction had been growing strongly until the start of this year, while apartment building has generally been more volatile.

The easing of public health restrictions provided a boost to economic activity in Q2 2022. Goods spending continued to be constrained by supply chain issues, but the release of pent-up demand for services supported strong consumption growth and underpinned a pick-up in GDP growth in Q2. Beyond Q2, economic growth is forecast to slow sharply as momentum from the reopening of the economy fades and several threats weigh on growth. Chief among these are aggressive monetary policy tightening by the Bank of Canada, a correction in the housing market, decades-high inflation, falling real incomes, eroding consumer and business confidence, and heightened geopolitical uncertainty. An unexpected 100 bp increase in the Bank of Canada's policy rate in July took it to 2.5%—the middle of its neutral rate range. Further policy tightening risks aggravating Canada's household debt and housing imbalances, potentially plunging the economy into recession. We believe the Bank should be more cautious as it raises rates to avoid aggravating these underlying vulnerabilities. Our forecast assumes the overnight rate will peak at 3% later this year, but the recent aggressive rate hike and hawkish rhetoric by the Bank pose a risk to this outlook.

Total Canadian constructions starts are expected fall by 11% in 2022, before rising to 19.3% growth in 2023. A small increase in new engineering construction in 2022 will be more than offset by double-digit declines in both residential and non-residential building.

Residential construction starts are forecast to decline 12% this year and post growth of just 2.6% in 2023. A correction in house prices is already underway—home sales in May were already 37% below their peak in February. In June, ahead of the Bank of Canada's recent aggressive tightening, a 5-year mortgage rate had risen above 5%, and since short-term fixed rates dominate in Canada, housing demand is especially sensitive to rising rates. Over the forecast period, we expect growth in apartment building to outpace single-family construction as younger millennials and Gen Zs return to urban centres.

New non-residential building is expected to shrink by 25.2% this year before returning to growth of 31.9% in 2023. Factory building is expected to post the largest decline this year, down 42.4%, but this follows bumper growth in 2021 due to the construction of a large potash mine in Saskatchewan. Strong growth is expected to resume next year, with several large LNG and battery projects in the pipeline. Similarly, hospital construction increased at a triple-digit pace last year, so a decline of more than 40% is pencilled in for this year. Recent data in the commercial sectors that were hit hard by the pandemic, such as hotels, parking garages, and private office building have been disappointing, with growth in these sectors not expected to resume until next year.

New engineering projects are expected to grow by 7.7% this year before accelerating to 25.3% growth in 2023. Double-digit growth is expected in this year in the dams, canals & marine works and miscellaneous civil segments, with slower growth expected in new road construction. From next year, construction in new power infrastructure and miscellaneous civil engineering—sectors most closely associated with the energy transition—are expected to lead growth.

Table 3: U.S. Type-of-Structure Forecasts

($ Billions USD)

	Actuals		Forecasts				
	2020	2021	2022	2023	2024	2025	2026
Single-family	219.284	257.699	268.512	275.624	293.087	320.534	348.530
Multi-family	82.135	100.789	107.268	116.071	132.489	145.734	154.784
TOTAL RESIDENTIAL	301.419	358.488	375.780	391.695	425.576	466.268	503.314
(Yr/yr % change)	*1.2%*	*18.9%*	*4.8%*	*4.2%*	*8.6%*	*9.6%*	*7.9%*
Hotels/Motels	10.194	7.162	7.634	11.004	15.824	19.083	20.862
Shopping/Retail	12.279	12.839	14.475	15.452	17.863	20.302	21.871
Parking Garages	1.740	1.733	1.921	2.046	2.357	2.726	3.150
Amusement	6.300	6.558	6.850	7.052	7.764	8.919	9.621
Private Offices	25.893	19.702	20.081	22.449	26.547	29.590	32.620
Govenmental Offices	10.663	11.772	12.523	12.759	13.469	14.049	14.432
Laboratories (Schools & Industrial)	2.351	2.500	3.153	2.934	3.120	3.306	3.452
Warehouses	26.219	27.874	23.140	23.240	24.278	25.803	26.950
Sports Stadium/Convention Center	4.516	5.971	5.658	8.686	7.447	8.118	8.527
Transportation Terminals	2.361	9.970	11.216	11.679	11.252	10.043	9.868
TOTAL COMMERCIAL	102.516	106.081	106.652	117.302	129.921	141.939	151.353
(Yr/yr % change)	*-29.2%*	*3.5%*	*0.5%*	*10.0%*	*10.8%*	*9.2%*	*6.6%*
TOTAL INDUSTRIAL (manufacturing)	21.741	33.643	64.269	47.421	42.654	44.118	47.589
(Yr/yr % change)	*-61.0%*	*54.7%*	*91.0%*	*-26.2%*	*-10.1%*	*3.4%*	*7.9%*
Religious	1.623	1.022	0.981	1.049	1.183	1.310	1.376
Hospitals/Clinics	13.352	18.274	19.308	20.454	22.400	24.532	25.788
Nursing Homes/Assisted Living	7.485	5.900	4.603	5.062	6.256	7.405	8.524
Libraries/Museums	3.807	3.577	3.710	3.903	4.372	4.779	4.967
Courthouse	2.376	2.514	1.815	2.020	2.277	2.576	2.855
Police/Fire	3.313	3.048	3.248	3.286	3.466	3.637	3.782
Prisons	2.389	2.236	2.318	2.447	2.700	2.923	3.014
Military	9.207	9.294	9.096	10.592	11.703	12.570	13.398
Educational Facilities	67.540	59.955	66.408	68.671	74.218	78.852	82.467
MED misc	8.212	7.378	7.307	8.060	9.226	10.916	12.086
TOTAL INSTITUTIONAL	119.305	113.198	118.794	125.542	137.801	149.499	158.257
(Yr/yr % change)	*-11.3%*	*-5.1%*	*4.9%*	*5.7%*	*9.8%*	*8.5%*	*5.9%*
Miscellaneous Non-Res Building	5.794	6.238	6.472	6.700	6.926	7.215	7.487
TOTAL NON-RES BLDG	249.356	259.159	296.187	296.965	317.303	342.771	364.686
(Yr/yr % change)	*-27.2%*	*3.9%*	*14.3%*	*0.3%*	*6.8%*	*8.0%*	*6.4%*
Airport	6.028	5.203	6.052	6.516	7.291	8.039	8.588
Roads	63.653	67.366	82.167	85.792	90.862	96.155	100.314
Bridges	22.761	17.985	26.179	26.506	27.397	29.096	30.281
Dams/Canal/Marine	8.283	8.566	8.500	10.033	10.916	11.769	12.323
Water & Sewage Treatment	31.247	33.918	38.251	40.439	43.746	47.441	50.262
Misc Civil (Power, etc.)	22.727	23.141	25.419	32.649	38.388	44.559	49.148
TOTAL ENGINEERING	154.699	156.179	186.569	201.935	218.600	237.059	250.915
(Yr/yr % change)	*-18.3%*	*1.0%*	*19.5%*	*8.2%*	*8.3%*	*8.4%*	*5.8%*
TOTAL NON-RESIDENTIAL	404.055	415.338	482.755	498.900	535.903	579.830	615.601
(Yr/yr % change)	*-24.0%*	*2.8%*	*16.2%*	*3.3%*	*7.4%*	*8.2%*	*6.2%*
GRAND TOTAL	705.474	773.826	858.535	890.595	961.479	1,046.098	1,118.915
(Yr/yr % change)	*-15.0%*	*9.7%*	*10.9%*	*3.7%*	*8.0%*	*8.8%*	*7.0%*

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				
	2020	2021	2022	2023	2024	2025	2026
Summary							
CIVIL	154.699	156.179	186.569	201.935	218.600	237.059	250.915
NON-RESIDENTIAL BUILDING	249.356	259.159	296.187	296.965	317.303	342.771	364.686
RESIDENTIAL	301.419	358.488	375.780	391.695	425.576	466.268	503.314
GRAND TOTAL	705.474	773.826	858.535	890.595	961.479	1,046.098	1,118.915
Verticals							
Airport	6.028	5.203	6.052	6.516	7.291	8.039	8.588
All Other Civil	18.166	14.125	15.013	19.749	23.082	26.786	28.539
Bridges	22.761	17.985	26.179	26.506	27.397	29.096	30.281
Dams / Canals / Marine Work	8.283	8.566	8.500	10.033	10.916	11.769	12.323
Power Infrastructure	4.560	9.017	10.406	12.900	15.306	17.773	20.608
Roads	63.653	67.366	82.167	85.792	90.862	96.155	100.314
Water and Sewage Treatment	31.247	33.918	38.251	40.439	43.746	47.441	50.262
CIVIL	154.699	156.179	186.569	201.935	218.600	237.059	250.915
(Yr/yr % change)	*-18.3%*	*1.0%*	*19.5%*	*8.2%*	*8.3%*	*8.4%*	*5.8%*
Offices (private)	25.893	19.702	20.081	22.449	26.547	29.590	32.620
Parking Garages	1.740	1.733	1.921	2.046	2.357	2.726	3.150
Transportation Terminals	2.361	9.970	11.216	11.679	11.252	10.043	9.868
Commercial	29.994	31.406	33.218	36.175	40.157	42.359	45.638
(Yr/yr % change)	*-40.6%*	*4.7%*	*5.8%*	*8.9%*	*11.0%*	*5.5%*	*7.7%*
Amusement	6.300	6.558	6.850	7.052	7.764	8.919	9.621
Libraries / Museums	3.807	3.577	3.710	3.903	4.372	4.779	4.967
Religious	1.623	1.022	0.981	1.049	1.183	1.310	1.376
Sports Arenas / Convention Centers	4.516	5.971	5.658	8.686	7.447	8.118	8.527
Community	16.246	17.128	17.199	20.690	20.766	23.126	24.491
(Yr/yr % change)	*-30.5%*	*5.4%*	*0.4%*	*20.3%*	*0.4%*	*11.4%*	*5.9%*
College / University	17.920	15.129	18.076	18.944	19.972	20.534	21.601
Elementary / Pre School	19.834	15.847	19.040	19.556	20.959	22.587	23.538
Jr / Sr High School	27.830	26.924	27.489	28.194	31.056	33.335	34.862
Special / Vocational	1.955	2.055	1.803	1.977	2.232	2.396	2.466
Educational	67.540	59.955	66.408	68.671	74.218	78.852	82.467
(Yr/yr % change)	*-11.0%*	*-11.2%*	*10.8%*	*3.4%*	*8.1%*	*6.2%*	*4.6%*
Courthouses	2.376	2.514	1.815	2.020	2.277	2.576	2.855
Fire and Police Stations	3.313	3.048	3.248	3.286	3.466	3.637	3.782
Government Offices	10.663	11.772	12.523	12.759	13.469	14.049	14.432
Prisons	2.389	2.236	2.318	2.447	2.700	2.923	3.014
Government	18.742	19.570	19.904	20.511	21.913	23.185	24.083
(Yr/yr % change)	*0.3%*	*4.4%*	*1.7%*	*3.0%*	*6.8%*	*5.8%*	*3.9%*
Industrial Labs / Labs / School Labs	2.351	2.500	3.153	2.934	3.120	3.306	3.452
Manufacturing	21.741	33.643	64.269	47.421	42.654	44.118	47.589
Warehouses	26.219	27.874	23.140	23.240	24.278	25.803	26.950
Industrial	50.312	64.016	90.562	73.595	70.053	73.227	77.991
(Yr/yr % change)	*-37.7%*	*27.2%*	*41.5%*	*-18.7%*	*-4.8%*	*4.5%*	*6.5%*
Hospitals / Clinics	13.352	18.274	19.308	20.454	22.400	24.532	25.788
Medical Misc.	8.212	7.378	7.307	8.060	9.226	10.916	12.086
Nursing Homes	7.485	5.900	4.603	5.062	6.256	7.405	8.524
Medical	29.048	31.551	31.218	33.575	37.882	42.853	46.399
(Yr/yr % change)	*-28.7%*	*8.6%*	*-1.1%*	*7.6%*	*12.8%*	*13.1%*	*8.3%*
Military	9.207	9.294	9.096	10.592	11.703	12.570	13.398
(Yr/yr % change)	*82.4%*	*0.9%*	*-2.1%*	*16.4%*	*10.5%*	*7.4%*	*6.6%*
Hotels	10.194	7.162	7.634	11.004	15.824	19.083	20.862
Retail Misc.	5.794	6.238	6.472	6.700	6.926	7.215	7.487
Shopping	12.279	12.839	14.475	15.452	17.863	20.302	21.871
Retail	28.267	26.238	28.581	33.156	40.612	46.600	50.220
(Yr/yr % change)	*-40.8%*	*-7.2%*	*8.9%*	*16.0%*	*22.5%*	*14.7%*	*7.8%*
NON-RESIDENTIAL BUILDING	249.356	259.159	296.187	296.965	317.303	342.771	364.686
(Yr/yr % change)	*-27.2%*	*3.9%*	*14.3%*	*0.3%*	*6.8%*	*8.0%*	*6.4%*
Multi-Family	82.135	100.789	107.268	116.071	132.489	145.734	154.784
Single-Family	219.284	257.699	268.512	275.624	293.087	320.534	348.530
RESIDENTIAL	301.419	358.488	375.780	391.695	425.576	466.268	503.314
(Yr/yr % change)	*1.2%*	*18.9%*	*4.8%*	*4.2%*	*8.6%*	*9.6%*	*7.9%*
GRAND TOTAL	705.474	773.826	858.535	890.595	961.479	1,046.098	1,118.915
(Yr/yr % change)	*-15.0%*	*9.7%*	*10.9%*	*3.7%*	*8.0%*	*8.8%*	*7.0%*

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 (Level in $ Millions USD) 2021	Forecasts (Year versus previous year % change) 2022	2023	2024	2025	2026
Alaska - AK	$1,814	12.8%	5.0%	9.0%	9.6%	7.0%
Alabama - AL	$12,598	1.2%	13.6%	8.8%	9.5%	6.9%
Arkansas - AR	$6,579	21.8%	5.3%	8.2%	9.5%	7.2%
Arizona - AZ	$31,188	-25.9%	16.8%	10.5%	11.1%	9.4%
California - CA*	$65,047	8.3%	10.1%	9.2%	7.9%	7.7%
Colorado - CO	$19,544	3.3%	19.1%	9.5%	9.6%	7.9%
Connecticut - CT	$4,094	3.3%	21.9%	28.3%	8.8%	6.0%
District Of Columbia - DC	$2,333	15.7%	7.3%	12.1%	1.2%	5.0%
Delaware - DE	$2,772	-7.0%	3.4%	5.1%	8.4%	5.9%
Florida - FL*	$62,183	8.4%	10.7%	7.7%	10.6%	7.5%
Georgia - GA	$25,709	10.5%	15.5%	6.7%	9.7%	7.2%
Hawaii - HI	$3,918	-47.4%	69.7%	10.4%	7.7%	7.3%
Iowa - IA	$7,649	-0.8%	0.9%	8.4%	9.0%	6.4%
Idaho - ID	$5,358	28.1%	11.1%	7.4%	9.5%	5.6%
Illinois - IL	$18,488	16.9%	6.3%	8.7%	8.5%	5.5%
Indiana - IN	$15,452	23.6%	-6.8%	4.8%	8.5%	6.3%
Kansas - KS	$5,870	25.4%	-8.4%	7.5%	8.8%	6.5%
Kentucky - KY	$8,782	65.8%	-37.1%	9.3%	9.4%	7.0%
Louisiana - LA	$12,130	88.1%	-31.4%	7.2%	8.5%	5.8%
Massachusetts - MA	$15,671	-16.8%	39.1%	9.1%	5.9%	5.7%
Maryland - MD	$10,636	2.8%	-15.7%	9.3%	8.2%	7.4%
Maine - ME	$4,386	10.7%	-29.7%	6.1%	11.0%	6.1%
Michigan - MI	$13,812	13.2%	12.4%	6.6%	8.6%	6.6%
Minnesota - MN	$17,682	-7.7%	12.1%	7.1%	8.6%	6.5%
Missouri - MO	$14,083	-0.7%	5.3%	8.6%	8.8%	6.1%
Mississippi - MS	$4,986	-2.4%	-2.2%	7.6%	9.0%	6.4%
Montana - MT	$2,227	16.8%	1.4%	8.7%	13.2%	7.2%
North Carolina - NC	$34,628	10.9%	-8.0%	6.5%	7.6%	8.0%
North Dakota - ND	$2,638	59.8%	-18.1%	9.9%	8.9%	7.1%
Nebraska - NE	$5,567	5.6%	-4.4%	9.0%	8.8%	6.4%
New Hampshire - NH	$2,567	-13.3%	32.0%	10.1%	12.0%	7.1%
New Jersey - NJ	$12,766	9.7%	16.1%	-3.3%	9.8%	5.5%
New Mexico - NM	$3,237	13.0%	0.5%	7.5%	8.9%	6.2%
Nevada - NV	$9,010	3.3%	-5.7%	7.7%	10.4%	8.0%
New York - NY*	$32,715	8.1%	19.7%	7.5%	-3.5%	3.2%
Ohio - OH	$22,311	22.0%	-6.1%	4.5%	8.0%	6.4%
Oklahoma - OK	$8,894	8.7%	10.0%	9.7%	11.1%	7.0%
Oregon - OR	$10,055	-0.6%	10.2%	8.9%	11.1%	7.9%
Pennsylvania - PA	$21,217	3.6%	12.8%	7.4%	9.4%	6.6%
Rhode Island - RI	$1,499	-15.1%	7.2%	9.7%	9.3%	5.8%
South Carolina - SC	$15,960	-4.3%	2.4%	9.1%	11.2%	7.6%
South Dakota - SD	$3,054	39.3%	-26.8%	8.9%	9.1%	7.0%
Tennessee - TN	$22,659	-4.2%	3.6%	7.9%	10.1%	7.7%
Texas - TX*	$103,859	31.6%	-8.1%	7.3%	10.3%	7.4%
Utah - UT	$12,695	9.3%	24.3%	9.7%	10.6%	7.7%
Virginia - VA	$19,052	1.9%	15.3%	11.1%	9.8%	6.8%
Vermont - VT	$809	5.9%	-2.7%	9.0%	11.3%	7.3%
Washington - WA	$17,128	9.6%	12.0%	9.0%	11.1%	7.8%
Wisconsin - WI	$13,163	4.5%	0.5%	9.3%	8.4%	5.4%
West Virginia - WV	$1,895	29.7%	8.1%	8.7%	9.2%	5.8%
Wyoming - WY	$1,455	45.9%	2.8%	9.3%	10.1%	7.2%
United States	$773,826	10.9%	3.7%	8.0%	8.8%	7.0%

*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				
		2020	2021	2022	2023	2024	2025	2026
New York	Residential	8.432	10.764	8.586	12.353	15.580	15.104	15.072
	Non-res Building	14.357	13.938	15.849	17.304	16.862	15.336	15.934
	Engineering/Civil	5.280	8.013	10.939	12.674	13.080	13.484	14.338
	Total	28.069	32.715	35.373	42.331	45.523	43.925	45.344
(Yr vs previous yr % Change)		*-29.2%*	*16.6%*	*8.1%*	*19.7%*	*7.5%*	*-3.5%*	*3.2%*
Florida	Residential	29.171	37.029	41.273	44.098	46.885	51.976	56.307
	Non-res Building	15.329	16.530	16.193	17.489	19.358	21.643	23.138
	Engineering/Civil	8.806	8.624	9.950	13.071	14.168	15.346	16.201
	Total	53.306	62.183	67.415	74.657	80.411	88.966	95.647
(Yr vs previous yr % Change)		*-14.3%*	*16.7%*	*8.4%*	*10.7%*	*7.7%*	*10.6%*	*7.5%*
Texas	Residential	45.589	54.776	59.680	57.158	59.458	65.661	71.611
	Non-res Building	32.705	29.067	52.822	43.139	47.039	52.068	55.267
	Engineering/Civil	19.360	20.015	24.219	25.408	28.326	31.016	32.809
	Total	97.653	103.859	136.722	125.705	134.822	148.745	159.686
(Yr vs previous yr % Change)		*-25.7%*	*6.4%*	*31.6%*	*-8.1%*	*7.3%*	*10.3%*	*7.4%*
California	Residential	23.581	24.164	30.395	29.576	33.333	36.539	39.533
	Non-res Building	21.696	26.390	24.339	29.232	30.578	31.986	34.449
	Engineering/Civil	18.305	14.493	15.727	18.778	20.810	22.867	24.451
	Total	63.582	65.047	70.461	77.586	84.721	91.393	98.433
(Yr vs previous yr % Change)		*-3.4%*	*2.3%*	*8.3%*	*10.1%*	*9.2%*	*7.9%*	*7.7%*

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

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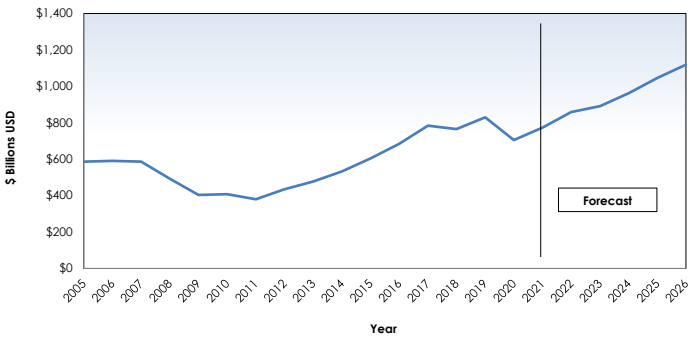
@ConstructConnx

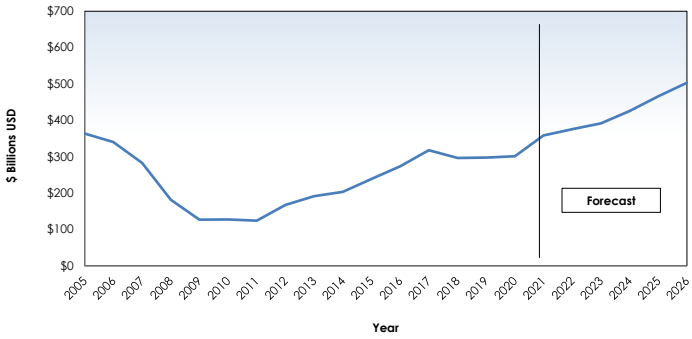
Link to article here: https://bit.ly/3BEsp8f

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



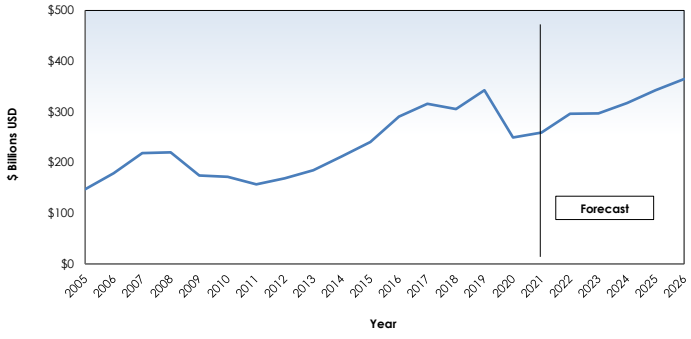
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



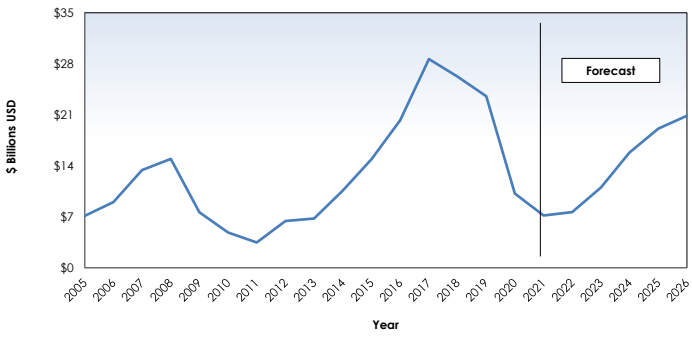
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



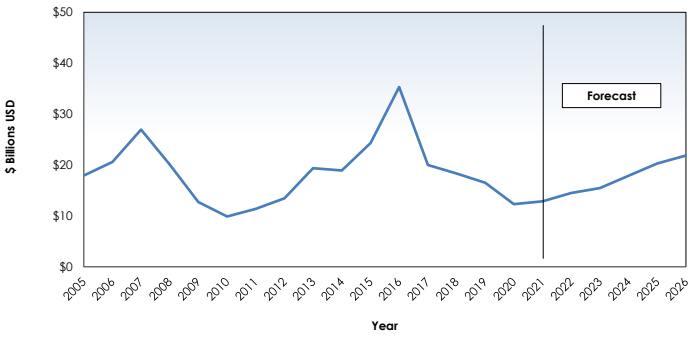
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



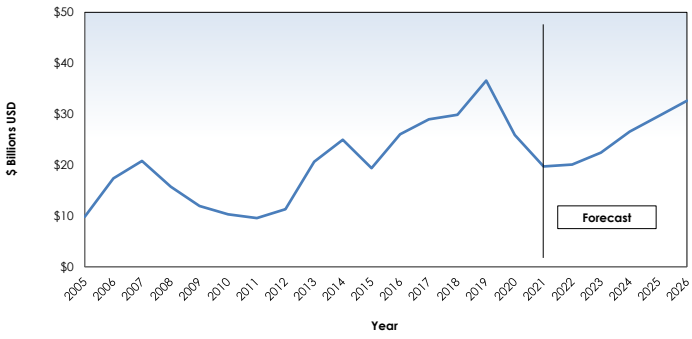
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



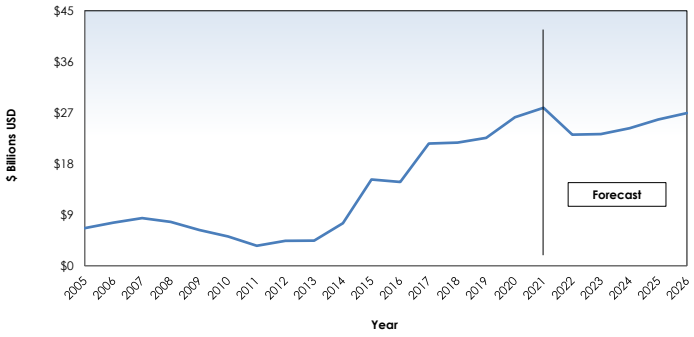
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



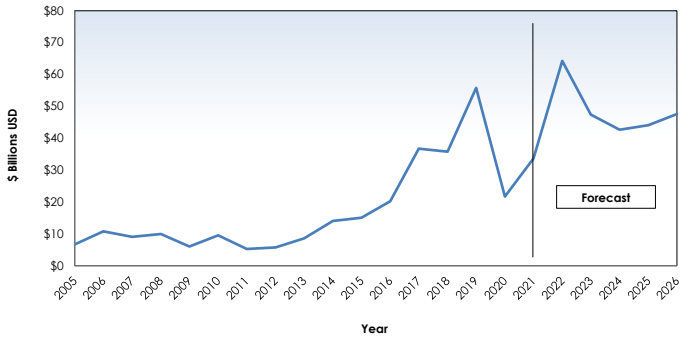
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



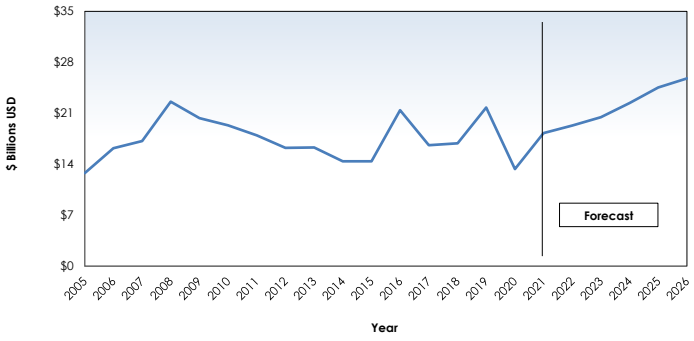
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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

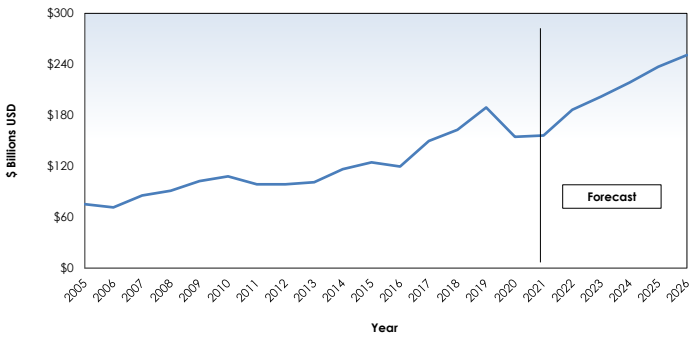


Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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

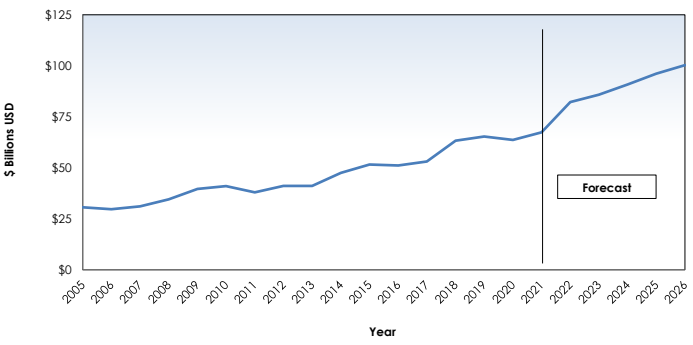
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



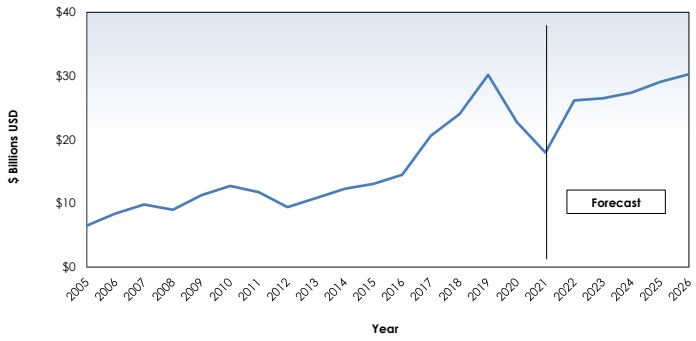
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



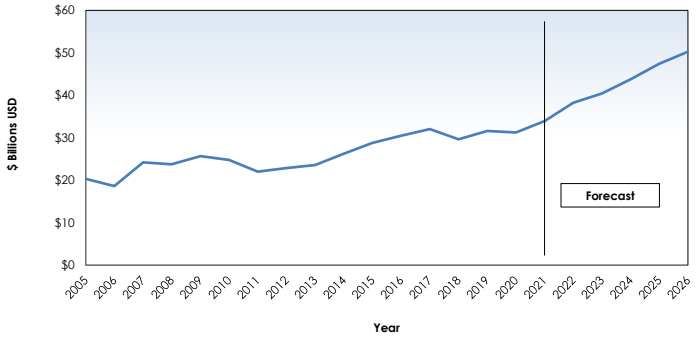
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



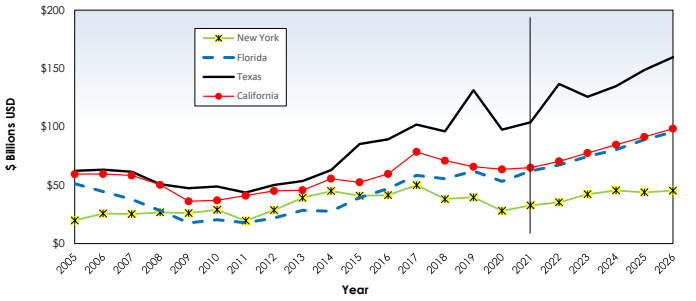
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



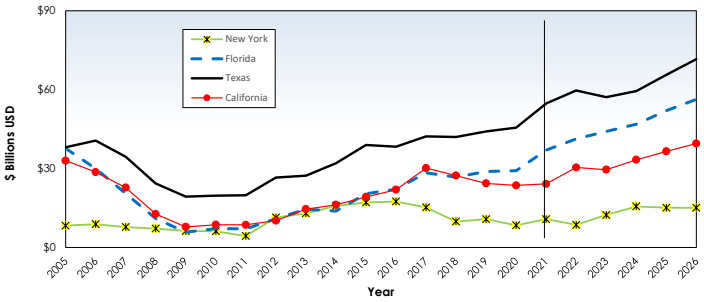
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



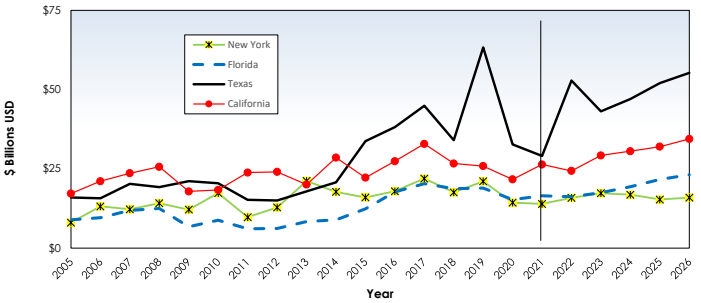
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



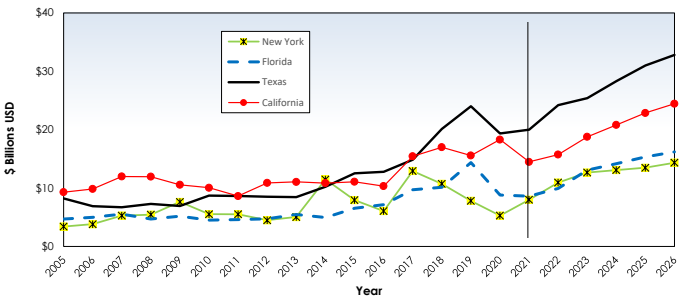
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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				
	2020	2021	2022	2023	2024	2025	2026
Single-family	13.301	17.868	15.883	16.128	17.149	18.094	18.936
Multi-family	14.069	17.596	15.332	15.896	17.857	19.767	21.135
TOTAL RESIDENTIAL	27.370	35.465	31.215	32.025	35.006	37.861	40.071
(Yr/yr % change)	*-11.7%*	*29.6%*	*-12.0%*	*2.6%*	*9.3%*	*8.2%*	*5.8%*
Hotels/Motels	0.385	0.143	0.130	0.240	0.406	0.549	0.712
Private Offices	2.122	1.043	0.793	1.107	1.551	2.003	2.378
Govenmental Offices	1.505	1.160	1.547	2.207	1.849	1.938	2.021
Shopping/Retail	0.362	0.280	0.384	0.537	0.783	1.050	1.225
Retail Miscellaneous	0.101	0.067	0.201	0.196	0.227	0.258	0.286
Parking Garages	0.144	0.154	0.112	0.133	0.169	0.215	0.242
Amusement	1.117	2.457	2.036	2.119	2.538	2.819	3.046
Warehouses	2.478	1.822	1.995	2.002	2.045	2.228	2.411
TOTAL COMMERCIAL	8.214	7.126	7.199	8.541	9.567	11.059	12.320
(Yr/yr % change)	-44.1%	-13.2%	1.0%	18.6%	12.0%	15.6%	11.4%
TOTAL INDUSTRIAL (manufacturing)	2.404	11.197	6.450	9.149	8.445	6.200	6.000
(Yr/yr % change)	*-30.6%*	*365.8%*	*-42.4%*	*41.8%*	*-7.7%*	*-26.6%*	*-3.2%*
Religious	0.042	0.095	0.067	0.069	0.079	0.087	0.096
Hospitals/Clinics	3.812	7.945	4.582	4.807	5.594	7.087	8.000
MED misc	0.153	0.105	0.447	0.330	0.382	0.447	0.493
Transportation Terminals*	5.566	0.305	0.610	4.410	4.050	3.250	2.450
Police/Fire	1.050	1.540	1.331	1.457	1.624	1.814	2.008
Educational Facilities	5.400	6.927	5.689	6.030	6.647	7.213	7.555
TOTAL INSTITUTIONAL	16.022	16.917	12.726	17.103	18.376	19.898	20.602
(Yr/yr % change)	*35.2%*	*5.6%*	*-24.8%*	*34.4%*	*7.4%*	*8.3%*	*3.5%*
TOTAL NON-RES BUILDING	26.640	35.241	26.375	34.792	36.388	37.157	38.922
(Yr/yr % change)	*-11.2%*	*32.3%*	*-25.2%*	*31.9%*	*4.6%*	*2.1%*	*4.8%*
Bridges	3.677	2.327	1.981	2.435	2.918	3.411	3.885
Dams/Canal/Marine	0.723	0.539	0.984	0.723	0.836	0.920	0.993
Water & Sewage Treatment	3.096	4.813	4.532	4.696	5.027	5.414	5.822
Roads	10.301	10.788	11.173	11.504	12.876	13.780	14.582
Power Infrastructure	2.894	4.320	3.169	4.885	6.866	7.857	8.652
All Other Civil (Oil & Gas etc.)	12.379	5.764	8.902	14.282	18.495	20.354	21.591
TOTAL ENGINEERING	*33.071*	*28.552*	*30.741*	*38.524*	*47.017*	*51.735*	*55.525*
(Yr/yr % change)	*-12.3%*	*-13.7%*	*7.7%*	*25.3%*	*22.0%*	*10.0%*	*7.3%*
TOTAL NON-RESIDENTIAL	59.711	63.792	57.115	73.317	83.405	88.892	94.446
(Yr/yr % change)	*-11.8%*	*6.8%*	*-10.5%*	*28.4%*	*13.8%*	*6.6%*	*6.2%*
GRAND TOTAL	87.081	99.257	88.331	105.341	118.411	126.753	134.518
(Yr/yr % change)	*-11.7%*	*14.0%*	*-11.0%*	*19.3%*	*12.4%*	*7.0%*	*6.1%*

* 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				
	2020	2021	2022	2023	2024	2025	2026
Summary							
CIVIL	33.071	28.552	30.741	38.524	47.017	51.735	55.525
NON-RESIDENTIAL BUILDING	26.640	35.241	26.375	34.792	36.388	37.157	38.922
RESIDENTIAL	27.370	35.465	31.215	32.025	35.006	37.861	40.071
GRAND TOTAL	87.081	99.257	88.331	105.341	118.411	126.753	134.518
Verticals							
All Other Civil	12.379	5.764	8.902	14.282	18.495	20.354	21.591
Bridges	3.677	2.327	1.981	2.435	2.918	3.411	3.885
Dams / Canals / Marine Work	0.723	0.539	0.984	0.723	0.836	0.920	0.993
Power Infrastructure	2.894	4.320	3.169	4.885	6.866	7.857	8.652
Roads	10.301	10.788	11.173	11.504	12.876	13.780	14.582
Water and Sewage Treatment	3.096	4.813	4.532	4.696	5.027	5.414	5.822
CIVIL	33.071	28.552	30.741	38.524	47.017	51.735	55.525
(Yr/yr % change)	*-12.3%*	*-13.7%*	*7.7%*	*25.3%*	*22.0%*	*10.0%*	*7.3%*
Offices (private)	2.122	1.043	0.793	1.107	1.551	2.003	2.378
Parking Garages	0.144	0.154	0.112	0.133	0.169	0.215	0.242
Transportation Terminals	5.566	0.305	0.610	4.410	4.050	3.250	2.450
Commercial	7.832	1.502	1.515	5.650	5.770	5.467	5.070
(Yr/yr % change)	*37.7%*	*-80.8%*	*0.9%*	*272.9%*	*2.1%*	*-5.2%*	*-7.3%*
Amusement	1.117	2.457	2.036	2.119	2.538	2.819	3.046
Religious	0.042	0.095	0.067	0.069	0.079	0.087	0.096
Community	1.158	2.552	2.104	2.188	2.617	2.906	3.141
(Yr/yr % change)	*-52.5%*	*120.3%*	*-17.6%*	*4.0%*	*19.6%*	*11.1%*	*8.1%*
Educational	5.400	6.927	5.689	6.030	6.647	7.213	7.555
(Yr/yr % change)	*2.2%*	*28.3%*	*-17.9%*	*6.0%*	*10.2%*	*8.5%*	*4.7%*
Fire and Police Stations	1.050	1.540	1.331	1.457	1.624	1.814	2.008
Government Offices	1.505	1.160	1.547	2.207	1.849	1.938	2.021
Government	2.555	2.700	2.879	3.664	3.472	3.752	4.029
(Yr/yr % change)	*-39.9%*	*5.7%*	*6.6%*	*27.3%*	*-5.2%*	*8.1%*	*7.4%*
Manufacturing	2.404	11.197	6.450	9.149	8.445	6.200	6.000
Warehouses	2.478	1.822	1.995	2.002	2.045	2.228	2.411
Industrial	4.882	13.019	8.445	11.151	10.490	8.427	8.411
(Yr/yr % change)	*-2.9%*	*166.7%*	*-35.1%*	*32.0%*	*-5.9%*	*-19.7%*	*-0.2%*
Hospitals / Clinics	3.812	7.945	4.582	4.807	5.594	7.087	8.000
Medical Misc.	0.153	0.105	0.447	0.330	0.382	0.447	0.493
Medical	3.964	8.050	5.028	5.137	5.976	7.534	8.493
(Yr/yr % change)	*-0.5%*	*103.0%*	*-37.5%*	*2.2%*	*16.3%*	*26.1%*	*12.7%*
Hotels	0.385	0.143	0.130	0.240	0.406	0.549	0.712
Retail Misc.	0.101	0.067	0.201	0.196	0.227	0.258	0.286
Shopping	0.362	0.280	0.384	0.537	0.783	1.050	1.225
Retail	0.848	0.491	0.715	0.973	1.416	1.857	2.223
(Yr/yr % change)	*-74.5%*	*-42.1%*	*45.7%*	*36.1%*	*45.5%*	*31.2%*	*19.7%*
NON-RESIDENTIAL BUILDING	26.640	35.241	26.375	34.792	36.388	37.157	38.922
(Yr/yr % change)	*-11.2%*	*32.3%*	*-25.2%*	*31.9%*	*4.6%*	*2.1%*	*4.8%*
Multi-Family	14.069	17.596	15.332	15.896	17.857	19.767	21.135
Single-Family	13.301	17.868	15.883	16.128	17.149	18.094	18.936
RESIDENTIAL	27.370	35.465	31.215	32.025	35.006	37.861	40.071
(Yr/yr % change)	*-11.7%*	*29.6%*	*-12.0%*	*2.6%*	*9.3%*	*8.2%*	*5.8%*
TOTAL NON-RESIDENTIAL	59.711	63.792	57.115	73.317	83.405	88.892	94.446
(Yr/yr % change)	*-11.8%*	*6.8%*	*-10.5%*	*28.4%*	*13.8%*	*6.6%*	*6.2%*
GRAND TOTAL	87.081	99.257	88.331	105.341	118.411	126.753	134.518
(Yr/yr % change)	*-11.7%*	*14.0%*	*-11.0%*	*19.3%*	*12.4%*	*7.0%*	*6.1%*

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) 2021	Forecasts (Year versus previous year % change) 2022	2023	2024	2025	2026
Atlantic region	$4,104	20.2%	19.7%	12.2%	6.8%	6.3%
Quebec	$21,088	-21.7%	27.0%	11.4%	7.4%	5.1%
Ontario	$30,674	-4.3%	6.9%	11.3%	7.1%	6.6%
Manitoba	$2,521	8.8%	4.9%	6.7%	7.7%	6.2%
Saskatchewan	$10,352	-79.1%	46.0%	5.1%	3.9%	6.3%
Alberta	$15,761	4.1%	20.7%	14.2%	9.5%	7.5%
British Columbia	$14,755	10.0%	31.1%	15.2%	4.8%	5.1%
Canada	$99,257	-11.0%	19.3%	12.4%	7.0%	6.1%

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

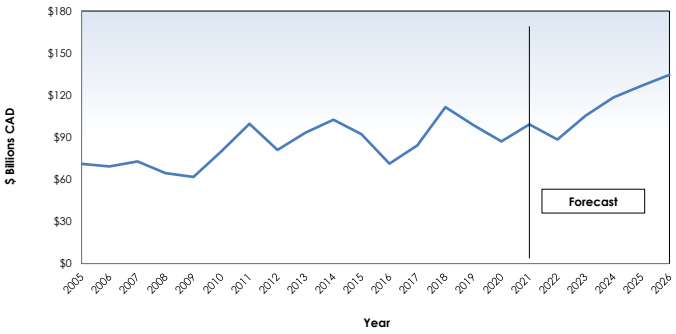
Table 10: Canada Four Largest Provinces: Type-of-Structure Forecasts

($ Billions CAD)

		Actuals 2020	2021	Forecasts 2022	2023	2024	2025	2026
Quebec	Residential	4.237	6.835	5.169	6.269	6.700	7.238	7.696
	Non-res Building	5.256	8.720	5.930	7.907	8.477	8.767	8.899
	Engineering/Civil	7.380	5.533	5.415	6.798	8.184	9.094	9.775
	Total	16.873	21.088	16.513	20.975	23.361	25.099	26.370
(Yr vs previous yr % Change)		*-20.2%*	*25.0%*	*-21.7%*	*27.0%*	*11.4%*	*7.4%*	*5.1%*
Ontario	Residential	13.343	15.392	12.440	12.803	14.256	15.528	16.543
	Non-res Building	14.513	7.165	8.196	10.000	10.406	10.650	11.265
	Engineering/Civil	7.352	8.117	8.716	8.562	10.262	11.212	12.045
	Total	35.208	30.674	29.351	31.365	34.923	37.390	39.853
(Yr vs previous yr % Change)		*11.6%*	*-12.9%*	*-4.3%*	*6.9%*	*11.3%*	*7.1%*	*6.6%*
Alberta	Residential	3.158	4.720	4.578	4.508	4.809	5.214	5.577
	Non-res Building	2.000	2.357	3.702	4.711	4.789	5.135	5.580
	Engineering/Civil	7.615	8.685	8.120	10.573	13.013	14.415	15.471
	Total	12.773	15.761	16.401	19.793	22.611	24.764	26.628
(Yr vs previous yr % Change)		*-29.4%*	*23.4%*	*4.1%*	*20.7%*	*14.2%*	*9.5%*	*7.5%*
British Columbia	Residential	4.866	5.842	6.814	6.273	6.909	7.406	7.683
	Non-res Building	2.798	7.074	5.258	7.107	7.443	7.120	7.331
	Engineering/Civil	7.581	1.838	4.155	7.887	10.151	11.145	11.955
	Total	15.244	14.755	16.226	21.268	24.503	25.670	26.968
(Yr vs previous yr % Change)		*-20.7%*	*-3.2%*	*10.0%*	*31.1%*	*15.2%*	*4.8%*	*5.1%*

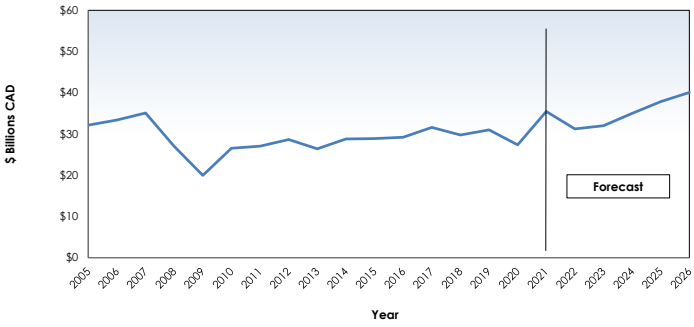
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Graph 19: Canadian Grand Total Construction Starts — ConstructConnect



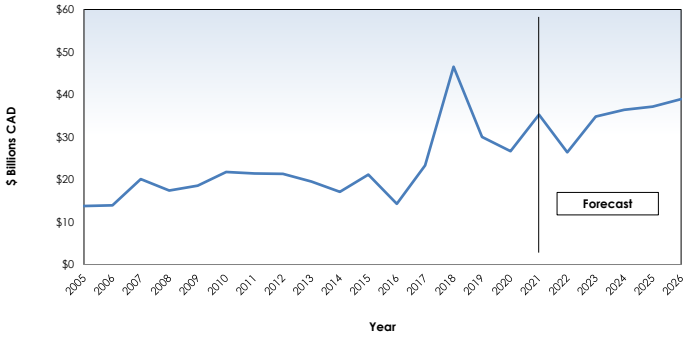
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 20: Canadian Residential Construction Starts — ConstructConnect



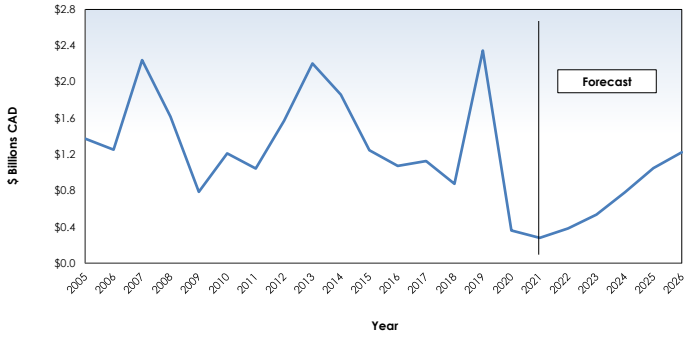
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 21: Canadian Non-Residential Building Starts — ConstructConnect



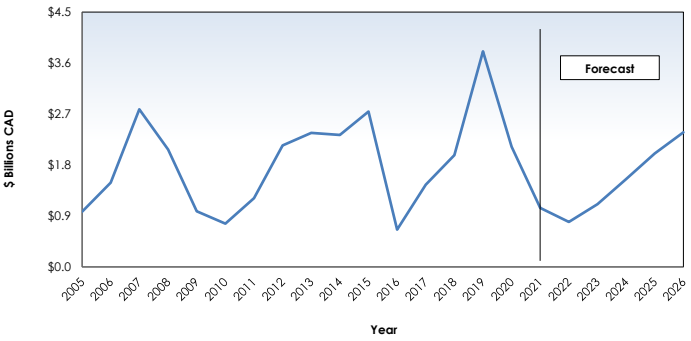
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect



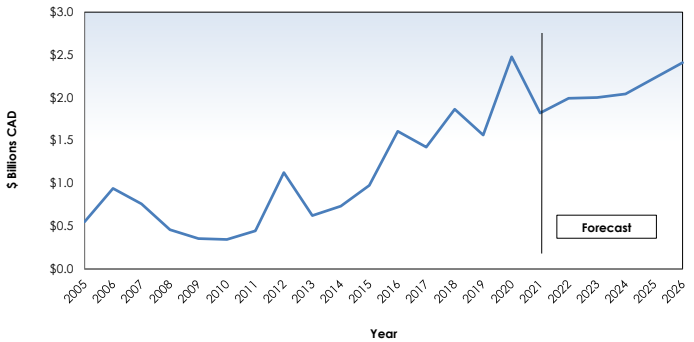
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 23: Canadian Private Offices Construction Starts — ConstructConnect



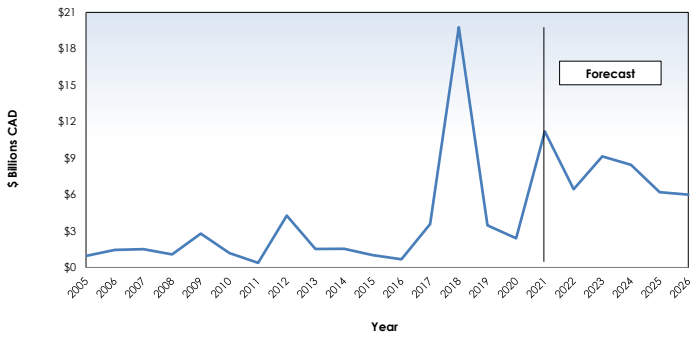
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 24: Canadian Warehouse Construction Starts — ConstructConnect



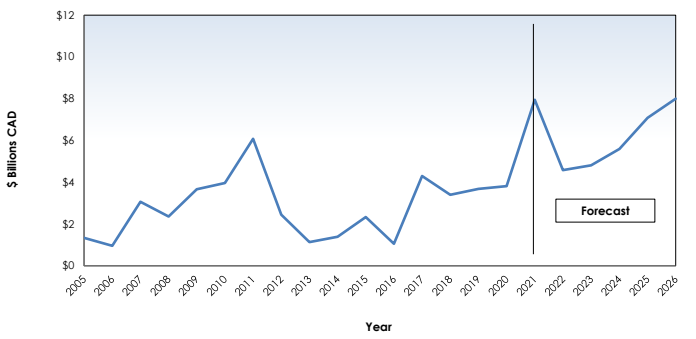
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 25: Canadian Industrial/Manufacturing Construction Starts — ConstructConnect



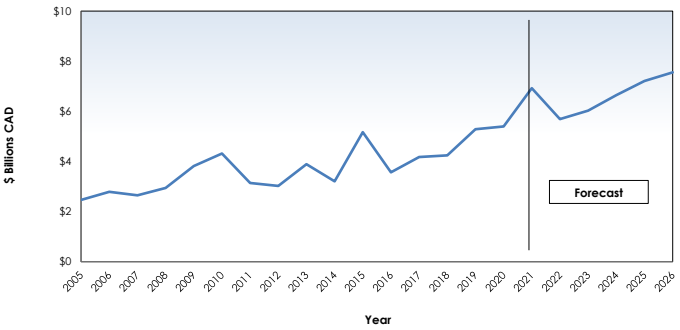
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect



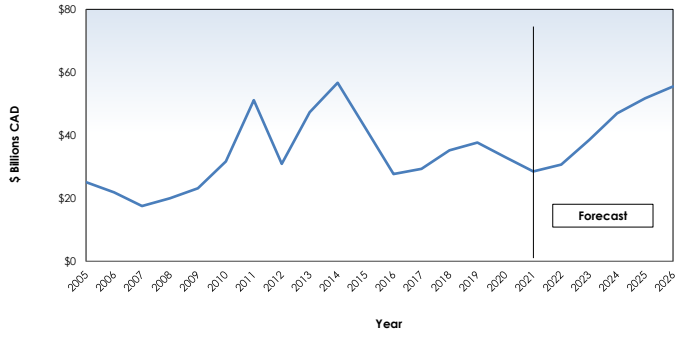
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 27: Canadian Education Construction Starts — ConstructConnect



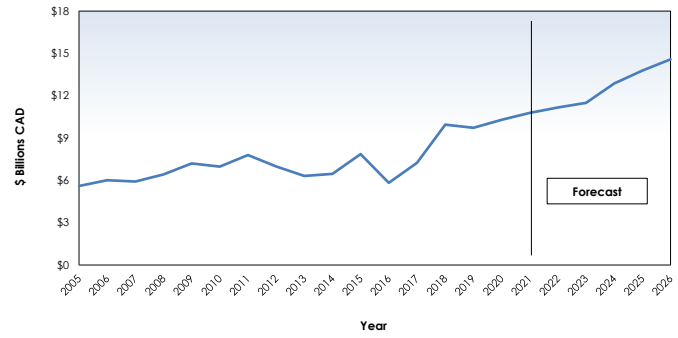
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 28: Canadian Engineering Construction Starts — ConstructConnect



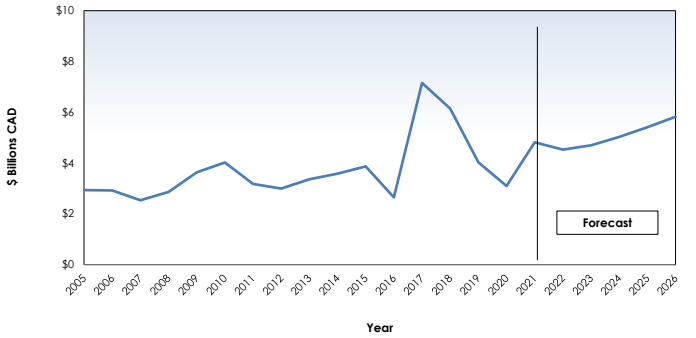
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 29: Canadian Roadwork Construction Starts — ConstructConnect



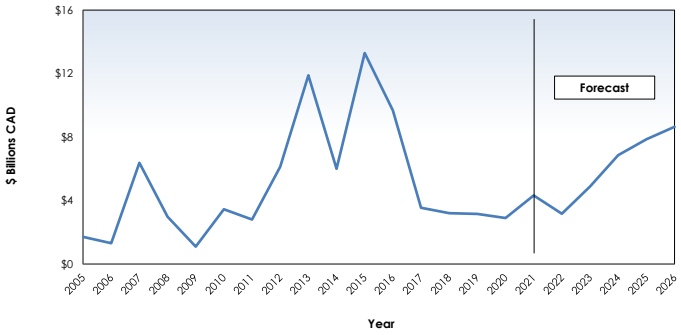
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect



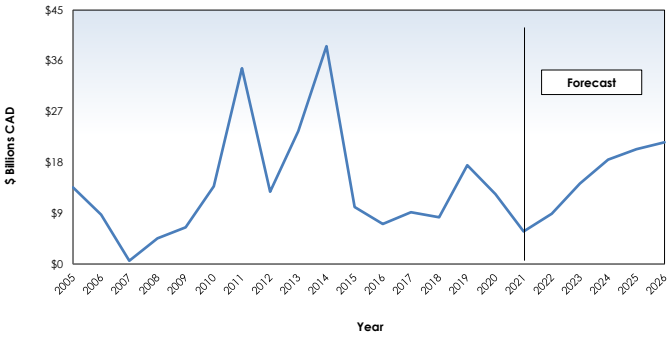
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect



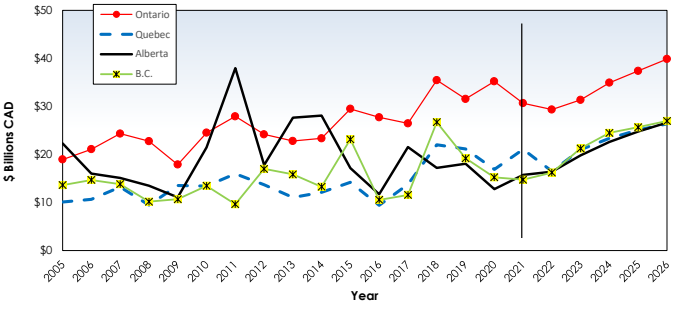
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



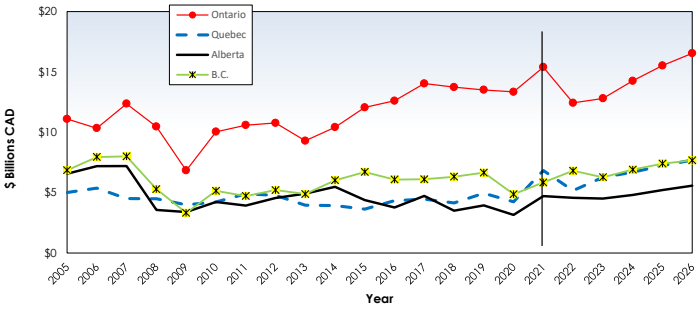
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



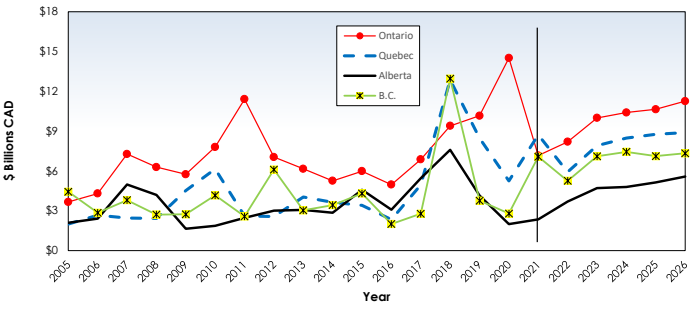
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



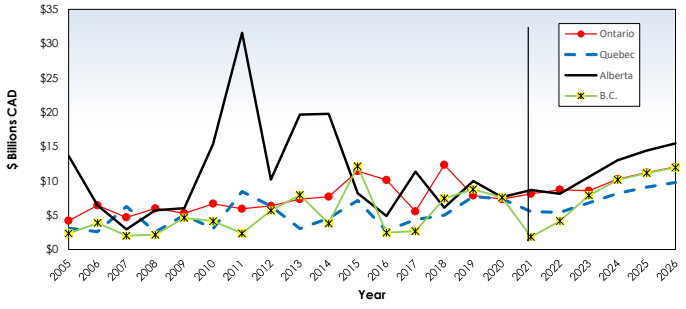
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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				
	2020	2021	2022	2023	2024	2025	2026
Single-family	1,813.1	2,130.8	2,220.2	2,279.0	2,423.3	2,650.3	2,881.8
Multi-family	475.0	574.3	616.8	669.2	770.3	848.9	902.1
TOTAL RESIDENTIAL	2,288.1	2,705.0	2,836.9	2,948.2	3,193.6	3,499.2	3,783.9
(Yr/yr % change)	*4.1%*	*18.2%*	*4.9%*	*3.9%*	*8.3%*	*9.6%*	*8.1%*
Hotels/Motels	45.1	31.2	35.2	50.9	72.6	87.4	95.5
Shopping/Retail	51.0	49.2	47.4	57.7	71.5	86.0	100.9
Parking Garages	17.1	15.3	15.8	16.9	19.0	21.8	25.1
Amusement	21.6	23.2	17.6	21.0	23.6	26.9	29.0
Private Offices	76.4	67.5	59.4	65.8	80.8	90.9	100.5
Govenmental Offices	13.3	16.6	18.3	17.3	18.5	19.3	19.9
Laboratories (Schools & Industrial)	3.1	5.6	6.7	6.0	6.4	6.9	7.3
Warehouses	232.1	263.1	222.8	228.1	237.3	248.1	256.4
Sports Stadium/Convention Center	12.7	14.5	14.4	14.9	16.3	17.5	18.5
Transportation Terminals	4.9	8.4	8.1	11.9	13.0	13.3	11.9
TOTAL COMMERCIAL	477.1	494.7	445.9	490.5	559.0	618.2	665.0
(Yr/yr % change)	*-20.5%*	*3.7%*	*-9.9%*	*10.0%*	*14.0%*	*10.6%*	*7.6%*
TOTAL INDUSTRIAL (manufacturing)	72.1	87.7	125.2	84.4	84.3	92.0	98.6
(Yr/yr % change)	*-32.3%*	*21.7%*	*42.8%*	*-32.6%*	*-0.2%*	*9.2%*	*7.2%*
Religious	3.8	2.9	2.6	2.8	3.4	4.0	4.5
Hospitals/Clinics	17.1	23.8	21.4	24.5	30.6	37.9	46.4
Nursing Homes/Assisted Living	32.4	23.7	15.7	18.2	23.7	28.4	32.8
Libraries/Museums	3.4	6.6	4.8	4.4	5.2	5.7	5.9
Courthouse	3.0	4.5	2.1	2.6	3.0	3.4	3.8
Police/Fire	8.3	7.6	7.7	7.7	8.0	8.3	8.6
Prisons	2.6	1.8	2.6	3.1	3.4	3.6	3.6
Military	22.5	21.0	15.7	16.9	18.9	21.8	24.5
Educational Facilities	148.7	126.1	134.4	139.8	152.7	163.0	170.5
MED misc	15.7	15.4	13.1	15.0	17.2	20.4	22.6
TOTAL INSTITUTIONAL	257.4	233.2	220.1	235.1	266.0	296.5	323.3
(Yr/yr % change)	*-12.3%*	*-9.4%*	*-5.6%*	*6.8%*	*13.1%*	*11.5%*	*9.0%*
Miscellaneous Non-Res Building	20.4	21.3	19.6	20.8	21.9	22.9	23.8
TOTAL NON-RES BLDG	827.0	836.9	810.8	830.8	931.1	1,029.6	1,110.7
(Yr/yr % change)	*-19.4%*	*1.2%*	*-3.1%*	*2.5%*	*12.1%*	*10.6%*	*7.9%*
RESIDENTIAL + NON-RES BLDG	3,115.1	3,541.9	3,647.7	3,779.0	4,124.7	4,528.8	4,894.6
(Yr/yr % change)	*-3.4%*	*13.7%*	*3.0%*	*3.6%*	*9.1%*	*9.8%*	*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'.

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				
	2020	2021	2022	2023	2024	2025	2026
Summary							
NON-RESIDENTIAL BUILDING	827.0	836.9	810.8	830.8	931.1	1,029.6	1,110.7
RESIDENTIAL	2,288.1	2,705.0	2,836.9	2,948.2	3,193.6	3,499.2	3,783.9
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,115.1	3,541.9	3,647.7	3,779.0	4,124.7	4,528.8	4,894.6
Verticals							
Offices (private)	76.4	67.5	59.4	65.8	80.8	90.9	100.5
Parking Garages	17.1	15.3	15.8	16.9	19.0	21.8	25.1
Transportation Terminals	4.9	8.4	8.1	11.9	13.0	13.3	11.9
Commercial	98.3	91.3	83.3	94.6	112.7	126.0	137.5
(Yr/yr % change)	*-35.2%*	*-7.1%*	*-8.8%*	*13.6%*	*19.1%*	*11.8%*	*9.1%*
Amusement	21.6	23.2	17.6	21.0	23.6	26.9	29.0
Libraries / Museums	3.4	6.6	4.8	4.4	5.2	5.7	5.9
Religious	3.8	2.9	2.6	2.8	3.4	4.0	4.5
Sports Arenas / Convention Centers	12.7	14.5	14.4	14.9	16.3	17.5	18.5
Community	41.5	47.1	39.3	43.1	48.5	54.1	58.0
(Yr/yr % change)	*-22.0%*	*13.5%*	*-16.5%*	*9.6%*	*12.5%*	*11.7%*	*7.1%*
College / University	32.8	25.4	35.6	34.5	34.8	35.5	37.2
Elementary / Pre School	48.1	36.6	35.2	38.5	43.3	47.2	49.3
Jr / Sr High School	62.3	58.2	59.3	61.9	69.0	74.3	77.7
Special / Vocational	5.4	5.9	4.4	4.9	5.6	6.0	6.2
Educational	148.7	126.1	134.4	139.8	152.7	163.0	170.5
(Yr/yr % change)	*-11.5%*	*-15.2%*	*6.6%*	*4.0%*	*9.2%*	*6.7%*	*4.6%*
Courthouses	3.0	4.5	2.1	2.6	3.0	3.4	3.8
Fire and Police Stations	8.3	7.6	7.7	7.7	8.0	8.3	8.6
Government Offices	13.3	16.6	18.3	17.3	18.5	19.3	19.9
Prisons	2.6	1.8	2.6	3.1	3.4	3.6	3.6
Government	27.2	30.4	30.7	30.7	32.8	34.7	35.9
(Yr/yr % change)	*-5.5%*	*11.8%*	*1.1%*	*0.0%*	*7.0%*	*5.6%*	*3.6%*
Industrial Labs / Labs / School Labs	3.1	5.6	6.7	6.0	6.4	6.9	7.3
Manufacturing	72.1	87.7	125.2	84.4	84.3	92.0	98.6
Warehouses	232.1	263.1	222.8	228.1	237.3	248.1	256.4
Industrial	307.2	356.4	354.8	318.4	328.0	347.0	362.3
(Yr/yr % change)	*-3.2%*	*16.0%*	*-0.5%*	*-10.3%*	*3.0%*	*5.8%*	*4.4%*
Hospitals / Clinics	17.1	23.8	21.4	24.5	30.6	37.9	46.4
Medical Misc.	15.7	15.4	13.1	15.0	17.2	20.4	22.6
Nursing Homes	32.4	23.7	15.7	18.2	23.7	28.4	32.8
Medical	65.1	62.8	50.2	57.8	71.5	86.7	101.8
(Yr/yr % change)	*-30.5%*	*-3.6%*	*-20.0%*	*15.1%*	*23.8%*	*21.2%*	*17.4%*
Military	22.5	21.0	15.7	16.9	18.9	21.8	24.5
(Yr/yr % change)	*92.9%*	*-6.6%*	*-25.3%*	*7.6%*	*11.6%*	*15.5%*	*12.3%*
Hotels	45.1	31.2	35.2	50.9	72.6	87.4	95.5
Retail Misc.	20.4	21.3	19.6	20.8	21.9	22.9	23.8
Shopping	51.0	49.2	47.4	57.7	71.5	86.0	100.9
Retail	116.4	101.7	102.3	129.4	166.0	196.3	220.2
(Yr/yr % change)	*-42.3%*	*-12.6%*	*0.5%*	*26.5%*	*28.3%*	*18.3%*	*12.2%*
NON-RESIDENTIAL BUILDING	827.0	836.9	810.8	830.8	931.1	1,029.6	1,110.7
(Yr/yr % change)	*-19.4%*	*1.2%*	*-3.1%*	*2.5%*	*12.1%*	*10.6%*	*7.9%*
Multi-Family	475.0	574.3	616.8	669.2	770.3	848.9	902.1
Single-Family	1,813.1	2,130.8	2,220.2	2,279.0	2,423.3	2,650.3	2,881.8
RESIDENTIAL	2,288.1	2,705.0	2,836.9	2,948.2	3,193.6	3,499.2	3,783.9
(Yr/yr % change)	*4.1%*	*18.2%*	*4.9%*	*3.9%*	*8.3%*	*9.6%*	*8.1%*
RESIDENTIAL + NON-RESIDENTIAL BUILDING	3,115.1	3,541.9	3,647.7	3,779.0	4,124.7	4,528.8	4,894.6
(Yr/yr % change)	*-3.4%*	*13.7%*	*3.0%*	*3.6%*	*9.1%*	*9.8%*	*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				
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Single-family	114.9	154.2	134.8	138.2	147.6	155.9	163.2
Multi-family	69.5	80.8	72.7	74.1	83.0	91.9	98.2
TOTAL RESIDENTIAL	184.4	235.0	207.5	212.3	230.6	247.8	261.4
(Yr/yr % change)	*-8.2%*	*27.4%*	*-11.7%*	*2.3%*	*8.6%*	*7.4%*	*5.5%*
Hotels/Motels	0.9	0.7	0.4	0.8	1.5	2.0	2.7
Private Offices	5.5	4.3	2.5	3.7	5.5	7.2	8.6
Govenmental Offices	1.8	1.2	1.0	1.2	1.4	1.6	1.8
Shopping/Retail	3.4	2.3	2.0	3.3	5.7	7.9	9.6
Retail Miscellaneous	0.4	0.3	0.7	0.6	0.7	0.9	1.0
Parking Garages	0.2	0.5	0.4	0.5	0.7	0.9	1.0
Amusement	1.6	3.6	2.4	2.7	3.5	4.2	4.9
Warehouses	11.5	13.1	14.3	13.7	14.1	15.3	16.5
TOTAL COMMERCIAL	25.3	25.8	23.7	26.6	33.1	40.0	46.0
(Yr/yr % change)	*-42.2%*	*2.2%*	*-8.1%*	*12.2%*	*24.4%*	*20.7%*	*15.1%*
TOTAL INDUSTRIAL (manufacturing)	5.1	3.7	2.4	4.7	5.0	4.7	4.3
(Yr/yr % change)	*-20.4%*	*-27.9%*	*-35.9%*	*100.8%*	*4.8%*	*-5.9%*	*-7.7%*
Religious	0.1	0.3	0.1	0.2	0.3	0.3	0.4
Hospitals/Clinics	8.1	10.1	5.8	6.4	7.0	9.8	11.4
MED misc	0.2	0.3	0.8	0.4	0.5	0.6	0.6
Transportation Terminals*	0.5	0.2	0.4	2.0	2.0	1.4	1.2
Police/Fire	1.7	1.7	1.4	1.5	1.8	2.0	2.2
Educational Facilities	10.5	13.6	8.0	9.3	10.8	12.1	12.8
TOTAL INSTITUTIONAL	21.1	26.2	16.5	19.8	22.3	26.1	28.6
(Yr/yr % change)	*-9.3%*	*23.9%*	*-37.1%*	*20.3%*	*12.8%*	*17.0%*	*9.4%*
TOTAL NON-RES BLDG	51.5	55.7	42.6	51.2	60.4	70.8	79.0
(Yr/yr % change)	*-29.8%*	*8.1%*	*-23.6%*	*20.2%*	*18.1%*	*17.1%*	*11.5%*
RESIDENTIAL + NON-RES BLDG	235.9	290.6	250.1	263.5	291.1	318.6	340.3
(Yr/yr % change)	*-14.0%*	*23.2%*	*-13.9%*	*5.4%*	*10.5%*	*9.4%*	*6.8%*

* 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)

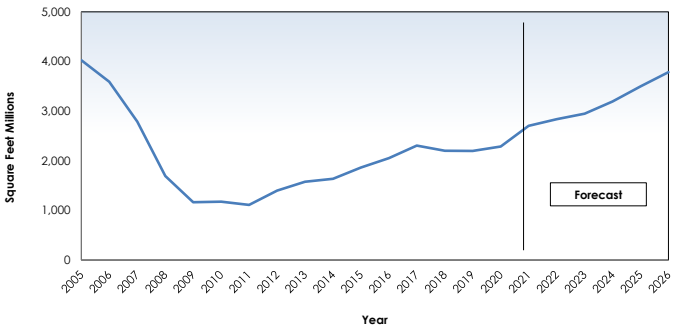
	Actuals		Forecasts				
	2020	2021	2022	2023	2024	2025	2026
Summary							
NON-RESIDENTIAL BUILDING	51.5	55.7	42.6	51.2	60.4	70.8	79.0
RESIDENTIAL	184.4	235.0	207.5	212.3	230.6	247.8	261.4
RESIDENTIAL + NON-RESIDENTIAL BUILDING	235.9	290.6	250.1	263.5	291.1	318.6	340.3
Verticals							
Offices (private)	5.5	4.3	2.5	3.7	5.5	7.2	8.6
Parking Garages	0.2	0.5	0.4	0.5	0.7	0.9	1.0
Transportation Terminals	0.5	0.2	0.4	2.0	2.0	1.4	1.2
Commercial	6.2	5.0	3.3	6.2	8.2	9.6	10.8
(Yr/yr % change)	*-52.3%*	*-19.0%*	*-34.1%*	*89.3%*	*32.0%*	*16.4%*	*13.2%*
Amusement	1.6	3.6	2.4	2.7	3.5	4.2	4.9
Religious	0.1	0.3	0.1	0.2	0.3	0.3	0.4
Community	1.7	3.9	2.5	2.9	3.8	4.5	5.3
(Yr/yr % change)	*-58.9%*	*127.9%*	*-34.7%*	*13.6%*	*29.8%*	*21.0%*	*16.3%*
Educational	10.5	13.6	8.0	9.3	10.8	12.1	12.8
(Yr/yr % change)	*-15.4%*	*29.8%*	*-40.9%*	*16.2%*	*16.2%*	*11.3%*	*6.4%*
Fire and Police Stations	1.7	1.7	1.4	1.5	1.8	2.0	2.2
Government Offices	1.8	1.2	1.0	1.2	1.4	1.6	1.8
Government	3.5	2.9	2.4	2.7	3.1	3.6	4.0
(Yr/yr % change)	*-12.4%*	*-18.6%*	*-17.1%*	*12.9%*	*16.8%*	*13.4%*	*11.5%*
Manufacturing	5.1	3.7	2.4	4.7	5.0	4.7	4.3
Warehouses	11.5	13.1	14.3	13.7	14.1	15.3	16.5
Industrial	16.6	16.8	16.6	18.5	19.0	19.9	20.8
(Yr/yr % change)	*-1.5%*	*0.7%*	*-0.7%*	*11.0%*	*3.1%*	*4.7%*	*4.4%*
Hospitals / Clinics	8.1	10.1	5.8	6.4	7.0	9.8	11.4
Medical Misc.	0.2	0.3	0.8	0.4	0.5	0.6	0.6
Medical	8.3	10.3	6.6	6.8	7.5	10.3	12.0
(Yr/yr % change)	*-6.2%*	*24.4%*	*-36.6%*	*3.6%*	*10.2%*	*38.0%*	*16.0%*
Hotels	0.9	0.7	0.4	0.8	1.5	2.0	2.7
Retail Misc.	0.4	0.3	0.7	0.6	0.7	0.9	1.0
Shopping	3.4	2.3	2.0	3.3	5.7	7.9	9.6
Retail	4.7	3.3	3.1	4.8	8.0	10.8	13.2
(Yr/yr % change)	*-67.0%*	*-30.2%*	*-4.0%*	*52.5%*	*66.8%*	*35.7%*	*22.6%*
NON-RESIDENTIAL BUILDING	51.5	55.7	42.6	51.2	60.4	70.8	79.0
(Yr/yr % change)	*-29.8%*	*8.1%*	*-23.6%*	*20.2%*	*18.1%*	*17.1%*	*11.5%*
Multi-Family	69.5	80.8	72.7	74.1	83.0	91.9	98.2
Single-Family	114.9	154.2	134.8	138.2	147.6	155.9	163.2
RESIDENTIAL	184.4	235.0	207.5	212.3	230.6	247.8	261.4
(Yr/yr % change)	*-8.2%*	*27.4%*	*-11.7%*	*2.3%*	*8.6%*	*7.4%*	*5.5%*
RESIDENTIAL + NON-RESIDENTIAL BUILDING	235.9	290.6	250.1	263.5	291.1	318.6	340.3
(Yr/yr % change)	*-14.0%*	*23.2%*	*-13.9%*	*5.4%*	*10.5%*	*9.4%*	*6.8%*

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'.

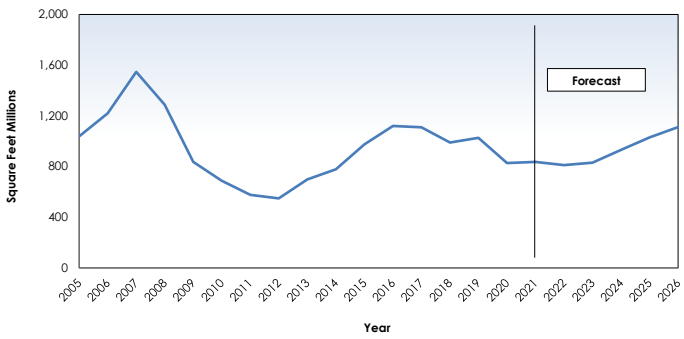
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

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



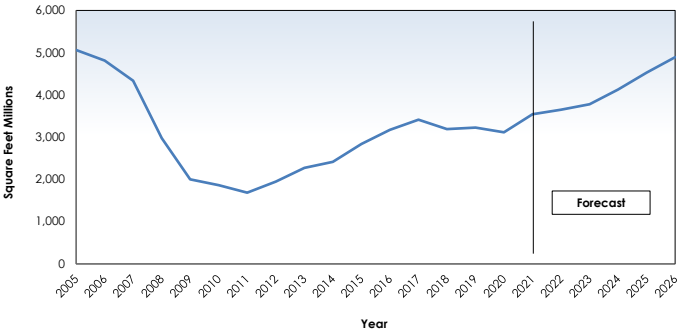
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



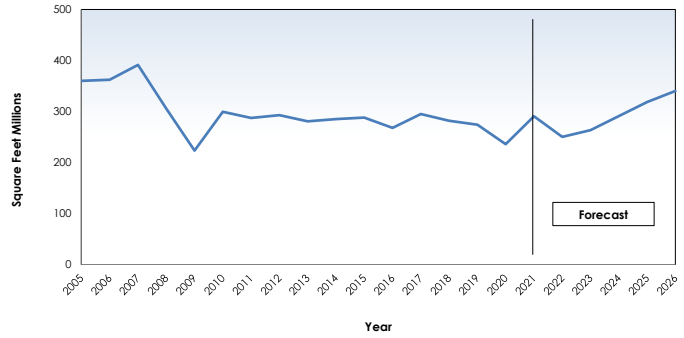
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



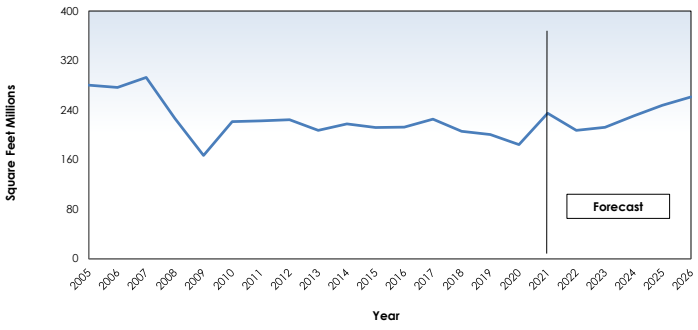
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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



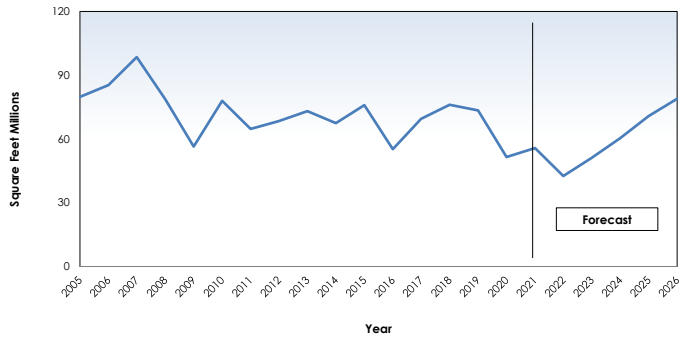
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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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