

Construction Starts Forecast

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The jobless rate in the U.S. in September tightened to 4.2% from 4.4% in August. Furthermore, the improvement was realized despite a ‘participation rate’ that rose to 63.1% from 62.9% the month prior.



Highlights

- US construction starts grew by 8.6% year-on-year in Q3, the third consecutive quarter of positive starts growth. The uptick in the civil engineering subcategory was most marked, 21.2% year-on-year, amid broad growth across civil engineering segments. Residential starts grew by 10.9% year-on-year. Non-residential starts were essentially unchanged relative to a year ago, slipping by 0.2%.
- US GDP grew by 3.1% annualised in Q2, buoyed by resurgent consumer spending and strengthening business investment. Inflation climbed to 2.1% in September, the first time above the Fed's 2% target since April. The Fed meanwhile left its policy rate unchanged at 1-1.25% during its September meeting and announced that its balance sheet reduction would begin in October. Employment surprisingly fell by 33,000 jobs in September, though we think this is a one-off, with the labor market still moving in a positive direction.
- The headline construction starts forecast has been raised to 7.9% for 2017, slowing to 4% by the end of the decade. The residential sector will remain the major driver of US construction going forward as pent-up demand for housing continues to drive new starts. Civil engineering starts are also set to see robust growth as long-needed investments in US infrastructure start to be realized. The Trump administration has made much of the importance of infrastructure investment, and though we suspect these claims to be slightly overbaked, there remains significant political support for increased spending in this area.
- Canadian headline starts fell by 22% year-on-year in Q3. Declines were present in all three construction subsectors. Residential starts witnessed the sharpest drop, falling by 28.5%; civil engineering starts fell by 19.5%; non-residential starts fell by 10.2%.
- Looking forward, Canadian starts are set to rebound in 2018 as the economy adjusts to the lower oil price. Returning business investment will see non-residential starts grow at a double-digit pace in 2018, while the scope for catch-up activity in civil engineering will ensure fast-paced growth over the coming years.

Overview

US non-residential building starts flat, civil engineering booming

Total construction starts grew by 8.6% year-on-year in Q3, marking the third consecutive quarter of US starts growth. The most significant annual growth occurred in the civil engineering sector, 21.2% year-on-year, followed by the residential sector, 10.9% year-on-year. Conversely, non-residential starts continued to disappoint, falling by 0.2% from a year earlier.

The strength of civil engineering starts was re-enforced by a number of mega-projects in the third quarter. An ExxonMobil petrochemical plant in Texas worth \$10bn, a new Delta Airlines Terminal at LaGuardia Airport in New York worth \$4bn and the Atlantic Sunrise natural gas pipeline in Pennsylvania, worth \$3bn were all notable contributors. Nonetheless, the general trends within civil engineering are all currently pointing towards fast growth, as evidenced by across-the-board starts growth in all civil engineering sectors bar roads and water, sewage & treatment.

Non-residential starts maintained their disappointing trend in Q3. Private office starts fell by 33.7% year-on-year, educational facilities starts fell by 10.7%, and government offices fell by 21.5%. One positive note came from the industrial sector where the Exxon-Mobil megaproject was classified.

Other indicators of construction activity show a slowdown. The Census Bureau's put-in-place construction data show total construction growth continued to slow in Q2, dropping to 4.3% year-on-year, the slowest rate of growth since 2011. The Census Bureau's data shows the non-residential sector as being the major drag on overall construction, whereas the residential sector continues to expand at a double-digit pace, largely in line with our own data. Construction employment appears robust in the latest JOLTS labor market survey, with new hires growing by 17% year-on-year in Q2.

GDP growth prospects remain positive...

GDP growth rose to an annualised rate of 3.1% in Q2, as consumer spending

Table 1: Summary forecasts							
(Annual percentage changes unless specified otherwise)							
	2015	2016	2017	2018	2019	2020	2021
US							
Macro variables							
GDP	2.9	1.5	2.1	2.4	1.7	1.6	1.5
Population growth	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Unemployment rate (%)	5.3	4.8	4.4	4.2	4.2	4.2	4.2
Real disposable income	4.2	1.4	1.4	2.5	1.8	1.6	1.5
Central bank rate (%)	0.1	0.4	1.0	1.7	2.3	2.7	2.8
10-year government yield (%)	2.1	1.8	2.3	2.6	2.9	3.1	3.4
Construction starts (y/y % change of \$ volumes)							
Total starts	13.5	13.2	7.9	4.8	5.6	4.3	3.8
Residential	17.5	14.5	10.1	6.7	6.7	6.4	5.8
Non-res bldg	13.2	20.8	-0.5	1.9	2.6	1.8	1.1
Civil engineering	6.9	-3.9	23.1	6.6	9.0	4.6	4.3
Canada							
Macro variables							
GDP	0.9	1.5	3.0	2.0	1.9	1.8	1.7
Population growth	0.9	1.1	1.2	1.1	1.0	0.9	0.9
Unemployment rate (%)	6.9	7.0	6.5	6.4	6.3	6.3	6.4
Real disposable income	3.3	2.8	3.1	1.8	1.5	1.4	1.7
Central bank rate (%)	0.6	0.5	0.7	1.3	2.0	2.8	3.0
10-year government yield (%)	1.5	1.3	1.8	2.6	3.1	3.5	3.6
Exchange rate C\$ per US\$	1.28	1.33	1.30	1.28	1.28	1.28	1.27
Construction starts (y/y % change of \$ volumes)							
Total starts	-10.1	-22.9	-12.6	9.4	13.7	8.2	9.8
Residential	0.4	1.0	-6.1	8.7	6.3	5.5	4.6
Non-res bldg	23.7	-32.8	7.4	14.3	9.8	7.2	5.6
Civil engineering	-25.5	-34.4	-29.7	6.6	27.5	12.0	18.6

rebounded by 3.3% after a soft start to the year. Business investment also saw rapid growth against a backdrop of firm domestic activity and robust global growth.

Manufacturing and non-manufacturing PMI indices surged in September, indicating rebounding business investment activity and ongoing consumer spending momentum. However, we note that supply chain disruptions in August may have artificially boosted the readings, and higher input costs may curb activity in the future.

Inflation rose to 2.1% in September, having trailed the Fed's 2% target for the past four months. The Fed left its policy rate unchanged at 1-1.25% at its September meeting and announced that its balance sheet reduction would begin in October. The Fed continues to signal a further rate hike

in 2017, with an additional three rates hikes forecast in 2018. This more hawkish tone from the Fed has led the markets to reprice the odds of a December rate hike from about 30% to 85%.

Non-farm employment surprisingly fell by 33,000 in September, the first such decline since September 2010. On a more positive note, strong growth in wages, at 2.9% year-on-year, lower unemployment, at 4.2% and a rising participation rate, to 63.1%, all point to a strong underlying labor market.

Policy momentum picked up with the release of the Republicans' tax policy framework. There is an increased chance of a modest fiscal package, but we believe the potential package will be highly regressive and much smaller than what is currently being discussed.

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For 2017 as a whole, we forecast the economy to grow by 2.1%, with consumer spending moderating slightly from its 2016 pace, but with business investment and exports rising. The 2018 stimulus package (assumed to be \$500bn over the next decade) will help boost growth to 2.4% in 2018. Over the next five years, we expect moderate growth of just under 2%. Key drivers of growth will be ongoing consumer spending strength, underscored by the healthy, albeit, maturing labor market, and an ongoing revival in business investment.

...but construction starts are expected to gradually slow

The outlook for construction in 2017 has been raised since the previous iteration of this report. Total starts are now forecast to grow by 7.9% this year. Civil engineering is forecast to grow by 23% this year, slowing to 6.6% in 2018. The residential sector remains the workhorse for US construction, forecast to grow by 10% this year, before stabilising between 6-7% over the next four years. Non-residential starts growth will be far slower, with a forecast decline of 0.5% this year, followed by low growth of between 1-2% over the next five years.

The major emphasis underpinning US construction continues to come from the residential sector. Homebuilding is forecast to grow at double digit pace this year as ongoing demand for new homes rises. As of 2018, we forecast the growth rate to slow to the 6½% range, though this will still be ahead of the other construction sectors.

Within residential construction, the single-family sector will spearhead growth going forward. The reasons for this are manifold, but chiefly among them is the fact that single-family accommodation fell the most sharply during the sub-prime crisis, and thus has the greatest potential for catch-up growth going forward. Beyond this, the rise in incomes and employment are empowering potential homebuyers to afford the typically more expensive single-family housing, rather than urban-based multi-family properties. Indeed, the latter type of housing abounded in popularity during the long slump following the financial crisis as incomes were more constrained

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

and potential homeowners elected to rent apartments rather than buy their own properties. Finally, demographic shifts are set to further strengthen demand for single-family housing as the large millennial generation reaches family-bearing age and increasingly moves away from the city into suburban housing.

The non-residential sector will see far slower growth over the forecast period, averaging less than 2%. This year, non-residential starts growth has disappointed amid broad based slowdowns across the sector, resulting in overall starts being forecast to fall by 0.5%.

The one point of strength within the non-residential sector this year comes from the industrial sector which, due to a \$10bn petrochemical plant in Texas and some other projects, is forecast to grow 35%. Though we are forecasting a decline next year (a natural contraction following such strong growth in 2017), we expect the industrial sector to grow at a comfortable 7% pace over the remainder of the decade. The US maintains significant advantages within the global manufacturing sphere, stemming from advanced technologies, relatively competitive labor markets, cheap and plentiful energy and a large and wealthy domestic market to sell into.

The civil engineering sector is set for the most impressive growth in 2017 amid strong starts growth in the year-to-date. Beyond the immediate future, the outlook

for civil engineering is likewise positive, with annual growth at slightly below 5% by the end of the decade. Increasing recognition of the need for focused new investment in the area, which crosses party lines, will drive a slew of new funding rounds notwithstanding the slow start to President Trump's ambitious goals.

Among the most important of the civil engineering categories is the all other civil classification, which contains civil engineering projects within the US's ever-expanding energy sector. The Trump administration's plan to expand the capacity of US energy production will underpin significant investments in the country's oil & gas infrastructure. The Keystone XL and Dakota Access pipelines were both approved by executive order within the first few days of Mr. Trump coming to power, giving some sense of the administration's commitment to this sector.

Beyond oil & gas, the Trump administration's general infrastructure plan, if fully implemented, will generate a significant upswing in civil engineering. The plan has stressed the importance of partnering with private capital to create revenue generating new projects. This most easily gives way to construction projects such as roads and bridges, which can be tolled and hence can deliver financial returns to private investors.

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Second consecutive year of decline in Canada in 2017

Total Canadian construction starts fell by 22.1% year-on-year in Q3, marking two consecutive quarters of falling starts in year-on-year terms. Declining starts were witnessed across all major sub-categories of construction. Residential starts fell most sharply, 28.5% year-on-year. Similarly, the civil engineering sector witnessed starts falling by 19.5% as demand for new projects has not yet fully resumed following the 2014 oil price slump, though signs from the general economy are that things are slowly improving. Non-residential starts declined by the least of the major subsectors, 10.2% year-on-year, as falls in commercial and industrial starts impacted on activity.

The Canadian economy continues to grow at a rapid pace, expanding by 4.5% annualized in Q2, making it the fastest growing G7 country of 2017 so far. Business investment rose for a second consecutive quarter, up 7.1%, on the back of broad-based gains in machinery & equipment and intellectual property. These gains come after several years of lacklustre capital spending in the Canadian economy resulting from the late-2014 oil price decline that cut into profitability. The structural adjustment to oil prices appears to be nearing completion in the broader economy, though downbeat oil prices may cause challenges to linger in the oil & gas sector itself. In addition, rising external demand will provide a mild boost over the coming quarters. Overall, we fore-

cast total investment to grow by 1.7% this year, after falling 4.6% and 3.1% in 2015 and 2016 respectively. The Bank of Canada raised the overnight rate by 25bp to 1% in September. Going forward, we expect the BoC to proceed more cautiously as policy makers observe whether the higher rate affects consumer and business spending, particularly given the high levels of household debt.

Canadian starts are forecast to decline this year, after the disappointing data so far in 2017. This will mark the third consecutive year of declining starts in Canada. The major cause stems from the civil engineering sector, which is again set to decline by nearly 30% this year after similar declines in 2015 and 2016. Non-residential starts mark the one area that is forecast to expand amid renewed business investment across the economy. Looking ahead to the rest of the decade, headline growth will average roughly 10% per annum, though this strong growth should be viewed in the context of the past three years of decline. Despite this rebound, total starts will still be below their 2014 peak by 2021.

Canadian residential starts are forecast to fall by 6.1% this year, before rebounding by 8.7% in 2018. Potential catch-up growth is far more limited compared to the US, particularly with the multi-family segment which is near historic highs. The nationwide housing market continues to grow at a firm pace, despite a summer slowdown in Toronto house prices, indicating that there is ongoing demand for Canadian housing.

Non-residential is the only construction subsector where starts are expected to grow

this year. Stronger business investment and rebounding confidence have helped drive up starts growth this year. Industrial starts are set for particularly strong growth as manufacturers benefit from a gradually improving export environment and the impact of low oil prices on capital spending begins to fade. We expect these dynamics to remain over the forecast period, leading industrial spending to be one of the major drivers of non-residential starts going forward. Starts growth in the hospitals/clinics segment is forecast for similar strong growth amid the aging dynamics of the Canadian populace and strong government support. Beyond the healthcare system, the Trudeau government's fiscal spending plan will see investment centred on the transportation and water systems.

The civil engineering sector is forecast to see starts shrink for the third year running. Starts are set to decline across all civil engineering segments bar water & sewage treatment and roads this year. Of most significant note is the sharp decline in the all other civil segment, which encompasses construction activity in the oil & gas sector and is still witnessing the effects of the 2014 oil price drop.

Nonetheless, we expect 2017 to be the last year of declining civil engineering starts as the Canadian economy finally appears to have adjusted to the lower oil price environment. This is seen most starkly within the all other civil category, with starts forecast to more than double in 2018 and grow at more than 50% in 2019 and 2020, though we note that headline civil engineering starts will remain below their 2014 peak level.

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

	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Single-family	173.165	186.757	204.790	222.849	240.323	259.047	276.696
Multi-family	65.866	86.923	96.477	98.481	102.381	105.535	109.039
TOTAL RESIDENTIAL	239.031	273.680	301.267	321.330	342.704	364.582	385.735
(Yr/yr % change)	17.5%	14.5%	10.1%	6.7%	6.7%	6.4%	5.8%
Hotels/Motels	14.907	20.239	27.828	27.311	25.571	23.983	22.226
Shopping/Retail	24.295	35.308	17.951	17.145	16.940	16.976	17.483
Parking Garages	3.252	4.549	2.785	3.231	3.412	3.477	3.525
Amusement	12.804	6.467	7.102	7.411	7.785	8.202	8.425
Private Offices	19.370	26.052	25.324	28.061	29.431	28.374	27.193
Governmental Offices	10.516	13.102	11.753	12.129	12.435	12.746	12.942
Laboratories (Schools & Industrial)	2.332	3.918	2.499	2.720	2.843	2.980	3.072
Warehouses	15.229	14.785	17.988	18.836	19.626	20.367	20.883
Sports Stadium/Convention Center	9.265	8.022	11.995	11.770	12.103	12.451	12.761
Transportation Terminals	7.091	4.608	3.874	4.641	5.138	5.755	6.044
TOTAL COMMERCIAL	119.061	137.050	129.099	133.255	135.285	135.311	134.556
(Yr/yr % change)	21.6%	15.1%	-5.8%	3.2%	1.5%	0.0%	-0.6%
TOTAL INDUSTRIAL (manufacturing)	15.048	20.204	27.279	23.527	25.187	26.925	28.077
(Yr/yr % change)	7.2%	34.3%	35.0%	-13.8%	7.1%	6.9%	4.3%
Religious	1.697	1.738	2.042	2.057	2.105	2.127	2.136
Hospitals/Clinics	14.409	21.431	18.056	18.580	19.377	20.109	20.662
Nursing Homes/Assisted Living	5.665	9.731	9.952	10.534	10.969	11.482	11.943
Libraries/Museums	3.006	3.213	3.421	3.477	3.558	3.638	3.704
Courthouse	1.183	1.276	2.583	2.840	3.058	3.262	3.427
Police/Fire	1.983	2.864	2.975	3.182	3.335	3.454	3.579
Prisons	2.910	1.858	2.561	2.679	2.899	3.094	3.255
Military	5.813	4.679	5.023	5.810	6.346	6.749	7.090
Educational Facilities	61.053	70.112	68.433	71.283	72.666	73.805	74.735
MED misc	3.897	7.820	10.000	9.971	10.139	10.343	10.369
TOTAL INSTITUTIONAL	101.616	124.721	125.046	130.411	134.451	138.064	140.900
(Yr/yr % change)	5.3%	22.7%	0.3%	4.3%	3.1%	2.7%	2.1%
Miscellaneous Non-Res Building	4.884	8.654	7.839	7.638	7.712	7.793	7.945
TOTAL NON-RES BLDG	240.609	290.630	289.263	294.830	302.635	308.093	311.478
(Yr/yr % change)	13.2%	20.8%	-0.5%	1.9%	2.6%	1.8%	1.1%
Airport	4.508	6.659	11.818	10.528	10.923	11.187	11.441
Roads	51.611	51.114	58.224	61.641	65.096	68.390	70.871
Bridges	13.084	14.504	19.806	21.822	26.382	24.842	25.783
Dams/Canal/Marine	6.265	3.740	4.489	4.877	5.084	5.225	5.327
Water & Sewage Treatment	28.816	30.466	32.690	35.044	38.123	41.568	43.755
Misc Civil (Power, etc.)	20.253	13.171	20.222	23.012	25.362	27.593	29.265
TOTAL ENGINEERING	124.538	119.654	147.248	156.923	170.969	178.804	186.441
(Yr/yr % change)	6.9%	-3.9%	23.1%	6.6%	9.0%	4.6%	4.3%
TOTAL NON-RESIDENTIAL	365.147	410.283	436.511	451.754	473.605	486.898	497.919
(Yr/yr % change)	11.0%	12.4%	6.4%	3.5%	4.8%	2.8%	2.3%
GRAND TOTAL	604.178	683.963	737.778	773.084	816.309	851.480	883.654
(Yr/yr % change)	13.5%	13.2%	7.9%	4.8%	5.6%	4.3%	3.8%

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				
	2015	2016	2017	2018	2019	2020	2021
Summary							
CIVIL	124.538	119.654	147.248	156.923	170.969	178.804	186.441
NON-RESIDENTIAL BUILDING	240.609	290.630	289.263	294.830	302.635	308.093	311.478
RESIDENTIAL	239.031	273.680	301.267	321.330	342.704	364.582	385.735
GRAND TOTAL	604.178	683.963	737.778	773.084	816.309	851.480	883.654
Verticals							
Airport	4.508	6.659	11.818	10.528	10.923	11.187	11.441
All Other Civil	18.774	11.528	13.707	17.301	19.018	20.597	21.833
Bridges	13.084	14.504	19.806	21.822	26.382	24.842	25.783
Dams / Canals / Marine Work	6.265	3.740	4.489	4.877	5.084	5.225	5.327
Power Infrastructure	1.478	1.644	6.515	5.711	6.344	6.996	7.432
Roads	51.611	51.114	58.224	61.641	65.096	68.390	70.871
Water and Sewage Treatment	28.816	30.466	32.690	35.044	38.123	41.568	43.755
CIVIL	124.538	119.654	147.248	156.923	170.969	178.804	186.441
(Yr/Yr % change)	6.9%	-3.9%	23.1%	6.6%	9.0%	4.6%	4.3%
Offices (private)	19.370	26.052	25.324	28.061	29.431	28.374	27.193
Parking Garages	3.252	4.549	2.785	3.231	3.412	3.477	3.525
Transportation Terminals	7.091	4.608	3.874	4.641	5.138	5.755	6.044
Commercial	29.713	35.208	31.983	35.933	37.981	37.606	36.763
(Yr/Yr % change)	-8.6%	18.5%	-9.2%	12.4%	5.7%	-1.0%	-2.2%
Amusement	12.804	6.467	7.102	7.411	7.785	8.202	8.425
Libraries / Museums	3.006	3.213	3.421	3.477	3.558	3.638	3.704
Religious	1.697	1.738	2.042	2.057	2.105	2.127	2.136
Sports Arenas / Convention Centers	9.265	8.022	11.995	11.770	12.103	12.451	12.761
Community	26.771	19.441	24.560	24.714	25.551	26.418	27.027
(Yr/Yr % change)	44.7%	-27.4%	26.3%	0.6%	3.4%	3.4%	2.3%
College / University	21.137	24.668	22.499	23.438	23.912	24.207	24.463
Elementary / Pre School	18.901	20.326	19.462	20.706	21.216	21.541	21.753
Jr / Sr High School	19.579	23.468	24.856	25.457	25.796	26.250	26.657
Special / Vocational	1.436	1.650	1.615	1.681	1.741	1.807	1.861
Educational	61.053	70.112	68.433	71.283	72.666	73.805	74.735
(Yr/Yr % change)	7.9%	14.8%	-2.4%	4.2%	1.9%	1.6%	1.3%
Courthouses	1.183	1.276	2.583	2.840	3.058	3.262	3.427
Fire and Police Stations	1.983	2.864	2.975	3.182	3.335	3.454	3.579
Government Offices	10.516	13.102	11.753	12.129	12.435	12.746	12.942
Prisons	2.910	1.858	2.561	2.679	2.899	3.094	3.255
Government	16.593	19.099	19.872	20.830	21.726	22.556	23.203
(Yr/Yr % change)	8.3%	15.1%	4.0%	4.8%	4.3%	3.8%	2.9%
Industrial Labs / Labs / School Labs	2.332	3.918	2.499	2.720	2.843	2.980	3.072
Manufacturing	15.048	20.204	27.279	23.527	25.187	26.925	28.077
Warehouses	15.229	14.785	17.988	18.836	19.626	20.367	20.883
Industrial	32.609	38.907	47.767	45.083	47.657	50.273	52.032
(Yr/Yr % change)	36.3%	19.3%	22.8%	-5.6%	5.7%	5.5%	3.5%
Hospitals / Clinics	14.409	21.431	18.056	18.580	19.377	20.109	20.662
Medical Misc.	3.897	7.820	10.000	9.971	10.139	10.343	10.369
Nursing Homes	5.665	9.731	9.952	10.534	10.969	11.482	11.943
Medical	23.970	38.981	38.008	39.084	40.485	41.935	42.974
(Yr/Yr % change)	12.1%	62.6%	-2.5%	2.8%	3.6%	3.6%	2.5%
Military	5.813	4.679	5.023	5.810	6.346	6.749	7.090
(Yr/Yr % change)	-46.1%	-19.5%	7.3%	15.7%	9.2%	6.4%	5.1%
Hotels	14.907	20.239	27.828	27.311	25.571	23.983	22.226
Retail Misc.	4.884	8.654	7.839	7.638	7.712	7.793	7.945
Shopping	24.295	35.308	17.951	17.145	16.940	16.976	17.483
Retail	44.086	64.202	53.618	52.094	50.223	48.752	47.655
(Yr/Yr % change)	31.7%	45.6%	-16.5%	-2.8%	-3.6%	-2.9%	-2.3%
NON-RESIDENTIAL BUILDING	240.609	290.630	289.263	294.830	302.635	308.093	311.478
(Yr/Yr % change)	13.2%	20.8%	-0.5%	1.9%	2.6%	1.8%	1.1%
Multi-Family	65.866	86.923	96.477	98.481	102.381	105.535	109.039
Single-Family	173.165	186.757	204.790	222.849	240.323	259.047	276.696
RESIDENTIAL	239.031	273.680	301.267	321.330	342.704	364.582	385.735
(Yr/Yr % change)	17.5%	14.5%	10.1%	6.7%	6.7%	6.4%	5.8%
GRAND TOTAL	604.178	683.963	737.778	773.084	816.309	851.480	883.654
(Yr/Yr % change)	13.5%	13.2%	7.9%	4.8%	5.6%	4.3%	3.8%

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

Actuals (Level in \$ Millions USD)		Forecasts (Year versus previous year % change)				
States (alphabetical by 2-letter code)	2016	2017	2018	2019	2020	2021
Alaska	\$2,000	11.2%	-25.0%	6.2%	4.5%	3.3%
Alabama	\$8,721	8.4%	14.5%	7.3%	6.1%	4.4%
Arkansas	\$6,268	-14.0%	15.8%	6.7%	6.2%	4.6%
Arizona	\$15,018	2.9%	6.9%	6.3%	4.9%	4.0%
California*	\$59,656	28.1%	-0.3%	5.1%	5.3%	3.4%
Colorado	\$14,718	2.2%	-1.9%	4.3%	4.8%	4.2%
Connecticut	\$4,776	49.3%	-1.8%	4.0%	3.2%	2.4%
District Of Columbia	\$3,709	-2.0%	10.4%	3.3%	6.0%	4.0%
Delaware	\$2,121	27.1%	-6.8%	5.7%	5.7%	4.1%
Florida*	\$47,068	16.1%	25.2%	5.7%	3.1%	3.7%
Georgia	\$26,614	-11.0%	15.8%	5.1%	4.9%	3.9%
Hawaii	\$4,250	-46.9%	78.5%	3.4%	3.0%	1.7%
Iowa	\$7,487	-2.4%	-11.6%	4.9%	4.6%	3.4%
Idaho	\$4,069	2.6%	4.3%	2.5%	4.7%	3.9%
Illinois	\$18,765	28.8%	9.2%	4.9%	6.4%	5.2%
Indiana	\$12,047	-0.6%	23.1%	4.8%	5.4%	3.5%
Kansas	\$5,947	-15.6%	14.9%	5.4%	4.5%	3.3%
Kentucky	\$9,573	-24.9%	18.8%	4.6%	4.9%	3.4%
Louisiana	\$10,795	-10.9%	4.9%	6.7%	4.5%	4.0%
Massachusetts	\$14,531	3.7%	20.6%	3.1%	2.8%	2.2%
Maryland	\$14,013	-26.8%	15.2%	4.7%	3.8%	2.8%
Maine	\$1,930	13.2%	-4.0%	4.3%	4.2%	2.9%
Michigan	\$14,601	36.9%	-22.4%	23.7%	-9.0%	5.8%
Minnesota	\$13,263	-2.3%	0.3%	4.0%	4.3%	3.4%
Missouri	\$11,645	-3.3%	-3.5%	3.6%	4.2%	3.1%
Mississippi	\$4,975	-7.2%	25.6%	6.7%	6.0%	4.4%
Montana	\$1,957	-12.8%	25.5%	4.8%	5.0%	3.8%
North Carolina	\$27,485	0.1%	4.5%	5.8%	6.1%	5.1%
North Dakota	\$2,917	-27.1%	11.5%	9.5%	6.4%	4.7%
Nebraska	\$4,273	8.0%	0.3%	5.3%	5.2%	3.8%
New Hampshire	\$2,666	-27.4%	50.6%	6.5%	3.8%	3.2%
New Jersey	\$13,372	3.8%	4.1%	5.0%	4.7%	3.4%
New Mexico	\$3,099	-3.0%	27.4%	5.7%	4.6%	3.7%
Nevada	\$7,378	-4.6%	17.3%	7.6%	3.8%	2.8%
New York*	\$41,442	21.0%	-13.8%	4.5%	3.5%	2.5%
Ohio	\$18,376	5.7%	0.1%	4.9%	4.9%	3.0%
Oklahoma	\$8,572	7.4%	3.0%	8.1%	5.9%	4.5%
Oregon	\$8,699	11.1%	15.5%	4.8%	4.4%	3.8%
Pennsylvania	\$18,971	25.4%	-5.4%	4.3%	3.9%	2.9%
Rhode Island	\$1,127	52.8%	3.7%	5.0%	3.5%	2.3%
South Carolina	\$13,925	2.9%	-4.6%	5.3%	5.8%	4.3%
South Dakota	\$2,126	10.4%	-22.6%	5.8%	5.6%	4.2%
Tennessee	\$16,480	6.8%	-2.4%	4.2%	5.4%	4.2%
Texas*	\$89,270	7.6%	8.8%	6.3%	4.7%	4.6%
Utah	\$9,643	-0.9%	-5.3%	3.1%	5.4%	4.4%
Virginia	\$18,785	4.5%	15.1%	4.8%	3.5%	2.9%
Vermont	\$1,243	2.0%	-1.1%	5.9%	5.9%	4.0%
Washington	\$18,776	15.9%	-4.8%	4.5%	4.6%	3.8%
Wisconsin	\$11,206	10.9%	-22.3%	3.4%	4.0%	2.9%
West Virginia	\$1,652	13.4%	53.7%	6.7%	5.1%	3.5%
Wyoming	\$1,965	-28.4%	14.0%	7.7%	5.6%	3.6%
United States	\$683,964	7.9%	4.8%	5.6%	4.3%	3.8%

*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				
		2015	2016	2017	2018	2019	2020	2021
New York	Residential	17.110	17.446	13.452	14.926	15.703	16.469	17.153
	Non-res Building	15.978	17.942	23.641	19.309	19.781	20.008	20.081
	Engineering/Civil	7.935	6.054	13.033	8.993	9.668	10.274	10.683
	Total	41.022	41.442	50.126	43.228	45.152	46.751	47.916
	(Yr vs previous yr % Change)	-8.9%	1.0%	21.0%	-13.8%	4.5%	3.5%	2.5%
Florida	Residential	20.420	22.177	27.274	35.573	38.262	40.008	42.172
	Non-res Building	12.384	17.726	18.606	21.926	22.383	22.168	22.261
	Engineering/Civil	6.545	7.164	8.766	10.895	11.648	12.341	12.826
	Total	39.350	47.068	54.646	68.394	72.293	74.517	77.259
	(Yr vs previous yr % Change)	41.9%	19.6%	16.1%	25.2%	5.7%	3.1%	3.7%
Texas	Residential	38.988	38.328	41.427	49.556	54.022	58.145	62.280
	Non-res Building	33.767	38.165	40.425	36.569	37.296	37.081	37.400
	Engineering/Civil	12.515	12.777	14.224	18.403	19.793	21.086	22.006
	Total	85.270	89.270	96.075	104.529	111.110	116.312	121.687
	(Yr vs previous yr % Change)	35.4%	4.7%	7.6%	8.8%	6.3%	4.7%	4.6%
California	Residential	19.197	21.916	28.293	27.985	28.792	29.821	30.966
	Non-res Building	22.215	27.414	31.827	30.618	32.500	34.272	34.864
	Engineering/Civil	11.075	10.326	16.273	17.580	18.777	20.223	21.324
	Total	52.487	59.656	76.393	76.182	80.069	84.316	87.153
	(Yr vs previous yr % Change)	-5.6%	13.7%	28.1%	-0.3%	5.1%	5.3%	3.4%

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

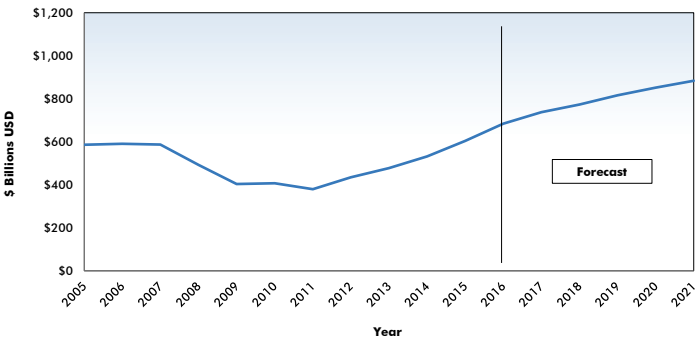
Tweeted by ConstructConnect:

@ConstructConnx

In five non-residential type-of-structure categories, U.S. material input costing hikes ranged from a low of +2.7% y/y for both 'new office buildings' and 'new health care buildings' to a high of +4.5% y/y for 'new industrial buildings'.

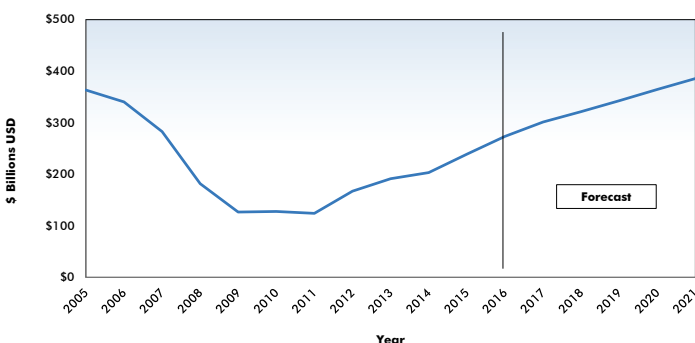


Graph 1: U.S. Grand Total Construction Starts — ConstructConnect



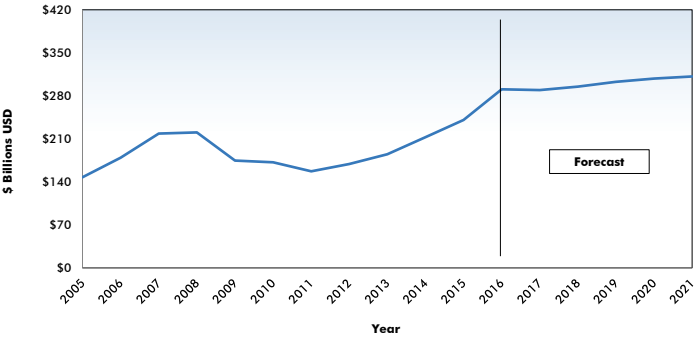
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



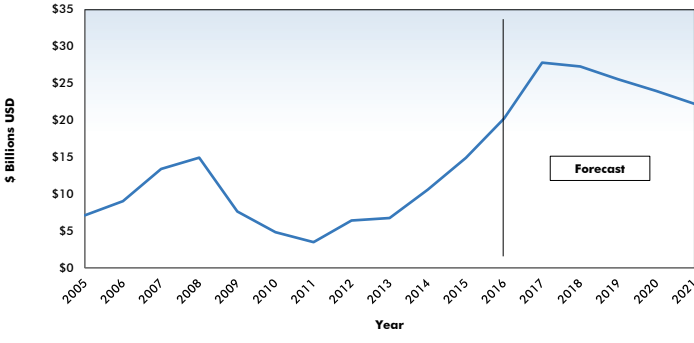
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



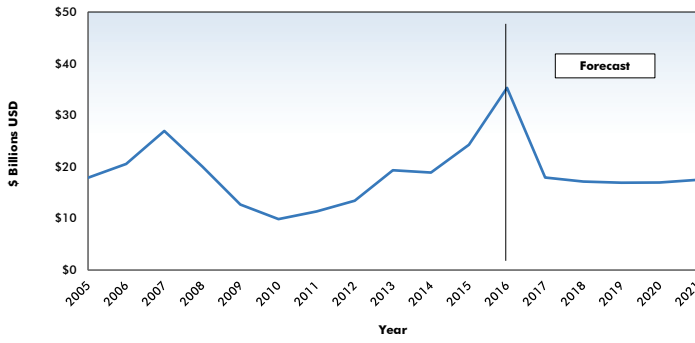
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



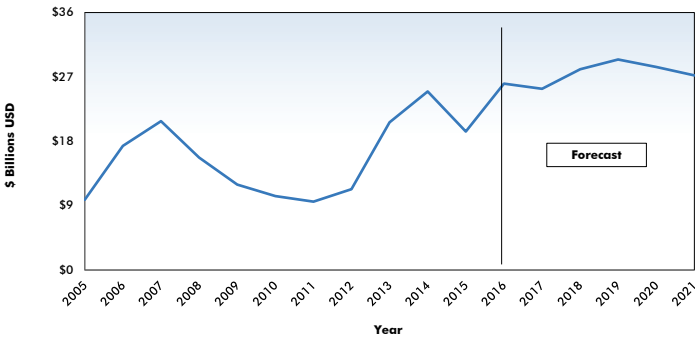
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



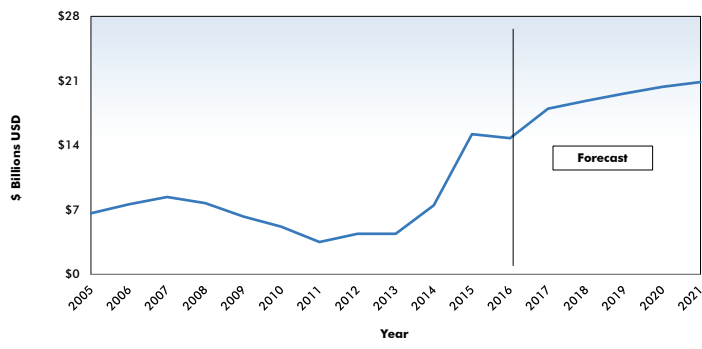
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



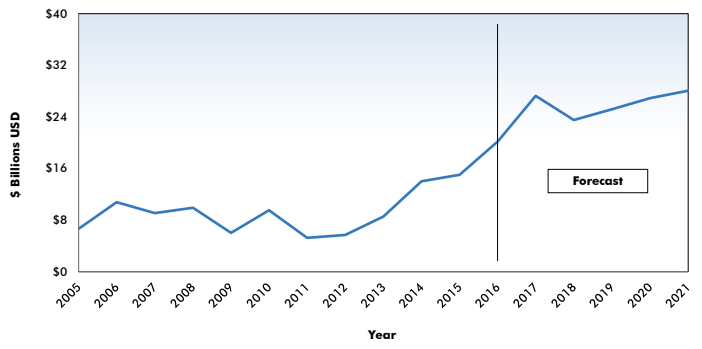
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



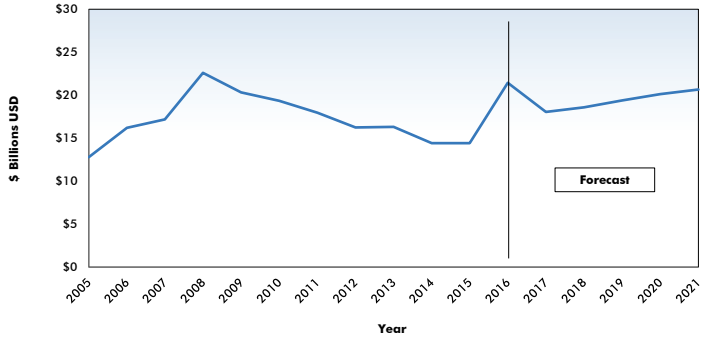
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



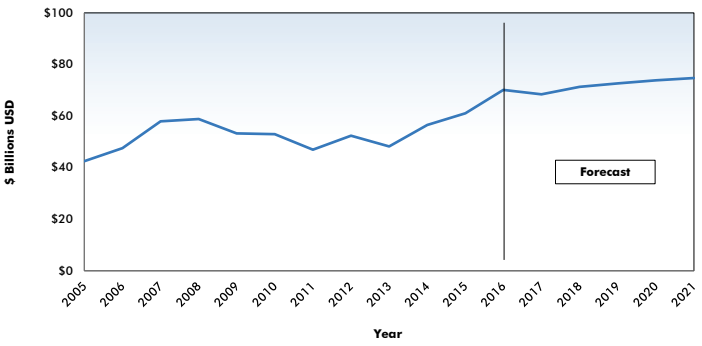
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



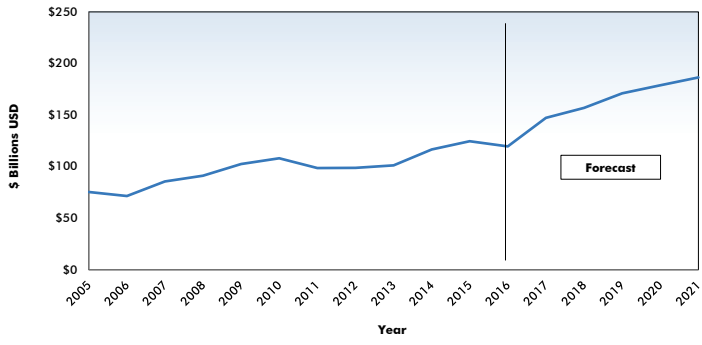
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



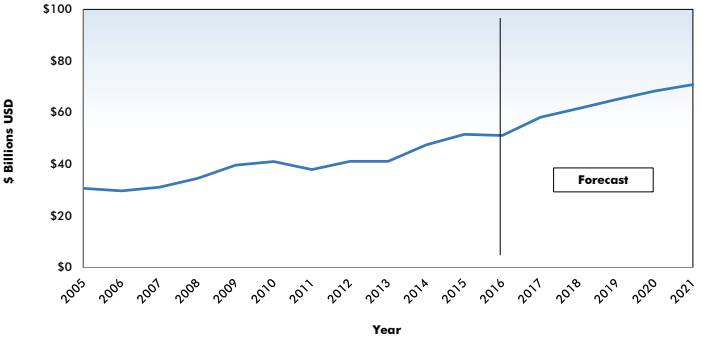
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



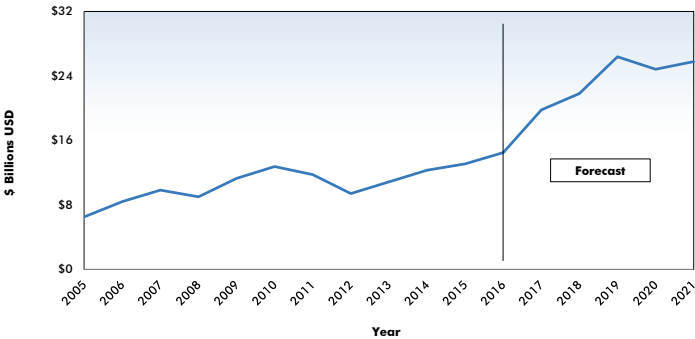
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



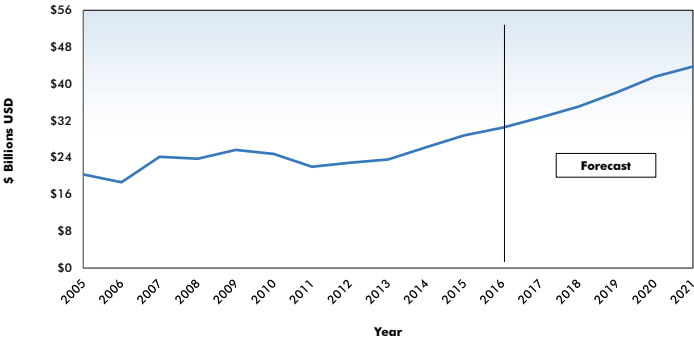
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



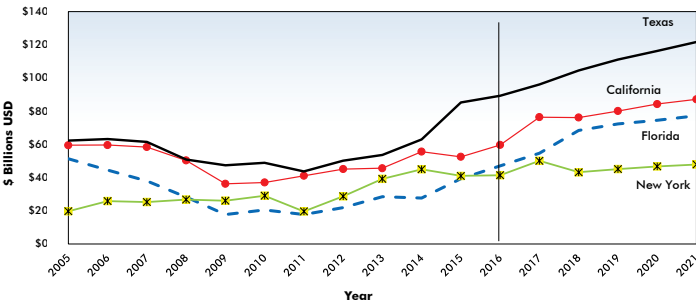
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



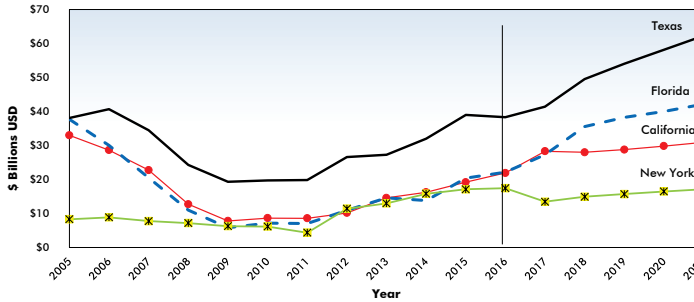
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



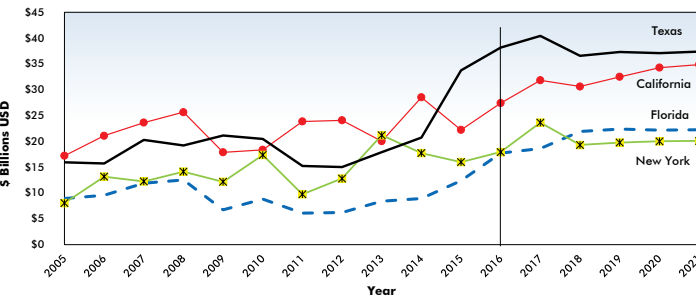
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



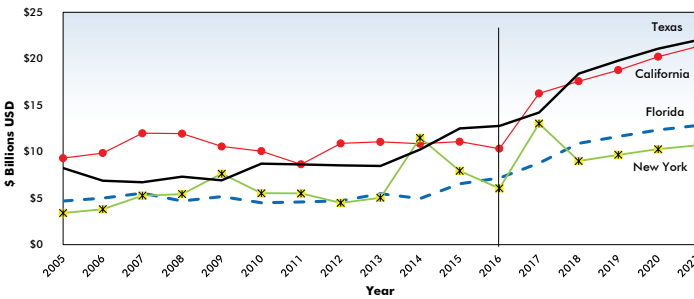
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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				
	2015	2016	2017	2018	2019	2020	2021
Single-family	14.920	16.052	17.156	18.095	19.292	20.303	21.232
Multi-family	13.957	13.108	10.219	11.665	12.344	13.080	13.687
TOTAL RESIDENTIAL	28.876	29.160	27.375	29.759	31.636	33.382	34.919
(Yr/yr % change)	0.4%	1.0%	-6.1%	8.7%	6.3%	5.5%	4.6%
Hotels/Motels	1.077	0.592	0.540	0.719	0.805	0.749	0.671
Private Offices	2.743	0.658	0.631	0.931	1.144	1.341	1.506
Governmental Offices	0.834	1.450	1.209	1.390	1.462	1.540	1.595
Shopping/Retail	1.246	1.073	0.765	0.764	0.767	0.768	0.770
Retail Miscellaneous	0.722	0.450	0.276	0.274	0.274	0.285	0.293
Parking Garages	0.166	0.108	0.142	0.145	0.155	0.164	0.169
Amusement	2.383	1.819	1.684	1.877	2.031	2.104	2.172
Warehouses	0.977	1.609	1.927	1.926	1.975	2.004	2.025
TOTAL COMMERCIAL	10.149	7.761	7.174	8.026	8.614	8.957	9.202
(Yr/yr % change)	11.6%	-23.5%	-7.6%	11.9%	7.3%	4.0%	2.7%
TOTAL INDUSTRIAL (manufacturing)	1.014	0.667	1.015	1.264	1.506	1.772	1.973
(Yr/yr % change)	-34.4%	-34.3%	52.2%	24.5%	19.2%	17.6%	11.3%
Religious	0.169	0.131	0.099	0.116	0.122	0.125	0.128
Hospitals/Clinics	2.335	1.058	1.536	1.886	2.335	2.710	3.150
MED misc	0.893	0.533	0.473	0.510	0.536	0.552	0.568
Transportation Terminals*	0.807	0.190	0.316	0.753	0.877	1.004	1.058
Police/Fire	0.613	0.366	0.721	0.639	0.676	0.701	0.718
Educational Facilities	5.169	3.515	3.941	4.259	4.505	4.729	4.913
TOTAL INSTITUTIONAL	9.986	5.793	7.086	8.163	9.050	9.821	10.536
(Yr/yr % change)	54.6%	-42.0%	22.3%	15.2%	10.9%	8.5%	7.3%
TOTAL NON-RES BUILDING	21.149	14.221	15.274	17.453	19.170	20.550	21.710
(Yr/yr % change)	23.7%	-32.8%	7.4%	14.3%	9.8%	7.2%	5.6%
Bridges	6.413	1.869	1.399	1.733	3.485	2.144	2.299
Dams/Canal/Marine	0.686	0.620	0.454	0.529	0.568	0.600	0.621
Water & Sewage Treatment	3.866	2.651	7.757	4.343	4.466	4.648	4.816
Roads	7.860	5.823	6.169	6.781	7.334	7.823	8.185
Power Infrastructure	13.294	9.641	2.167	4.019	5.071	5.832	6.520
All Other Civil (Oil & Gas etc.)	10.106	7.102	1.520	3.347	5.545	8.598	12.711
TOTAL ENGINEERING	42.226	27.705	19.466	20.752	26.468	29.645	35.153
(Yr/yr % change)	-25.5%	-34.4%	-29.7%	6.6%	27.5%	12.0%	18.6%
TOTAL NON-RESIDENTIAL	63.375	41.926	34.740	38.205	45.638	50.195	56.863
(Yr/yr % change)	-14.1%	-33.8%	-17.1%	10.0%	19.5%	10.0%	13.3%
GRAND TOTAL	92.252	71.086	62.115	67.964	77.274	83.577	91.782
(Yr/yr % change)	-10.1%	-22.9%	-12.6%	9.4%	13.7%	8.2%	9.8%

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

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

Table 8 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

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 Table: ConstructConnect.

Table 8: Canada Type-of-Structure Forecasts

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

	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Summary							
CIVIL	42.226	27.705	19.466	20.752	26.468	29.645	35.153
NON-RESIDENTIAL BUILDING	21.149	14.221	15.274	17.453	19.170	20.550	21.710
RESIDENTIAL	28.876	29.160	27.375	29.759	31.636	33.382	34.919
GRAND TOTAL	92.252	71.086	62.115	67.964	77.274	83.577	91.782
Verticals							
All Other Civil	10.106	7.102	1.520	3.347	5.545	8.598	12.711
Bridges	6.413	1.869	1.399	1.733	3.485	2.144	2.299
Dams / Canals / Marine Work	0.686	0.620	0.454	0.529	0.568	0.600	0.621
Power Infrastructure	13.294	9.641	2.167	4.019	5.071	5.832	6.520
Roads	7.860	5.823	6.169	6.781	7.334	7.823	8.185
Water and Sewage Treatment	3.866	2.651	7.757	4.343	4.466	4.648	4.816
CIVIL	42.226	27.705	19.466	20.752	26.468	29.645	35.153
(Yr/yr % change)	-25.5%	-34.4%	-29.7%	6.6%	27.5%	12.0%	18.6%
Offices (private)	2.743	0.658	0.631	0.931	1.144	1.341	1.506
Parking Garages	0.166	0.108	0.142	0.145	0.155	0.164	0.169
Transportation Terminals	0.807	0.190	0.316	0.753	0.877	1.004	1.058
Commercial	3.716	0.956	1.089	1.829	2.176	2.509	2.733
(Yr/yr % change)	31.8%	-74.3%	13.9%	68.0%	18.9%	15.3%	8.9%
Amusement	2.383	1.819	1.684	1.877	2.031	2.104	2.172
Religious	0.169	0.131	0.099	0.116	0.122	0.125	0.128
Community	2.552	1.950	1.783	1.994	2.153	2.229	2.300
(Yr/yr % change)	-9.8%	-23.6%	-8.6%	11.8%	8.0%	3.5%	3.2%
Educational	5.169	3.515	3.941	4.259	4.505	4.729	4.913
(Yr/yr % change)	61.2%	-32.0%	12.1%	8.1%	5.8%	5.0%	3.9%
Fire and Police Stations	0.613	0.366	0.721	0.639	0.676	0.701	0.718
Government Offices	0.834	1.450	1.209	1.390	1.462	1.540	1.595
Government	1.447	1.816	1.930	2.030	2.138	2.242	2.314
(Yr/yr % change)	17.6%	25.5%	6.2%	5.2%	5.3%	4.9%	3.2%
Manufacturing	1.014	0.667	1.015	1.264	1.506	1.772	1.973
Warehouses	0.977	1.609	1.927	1.926	1.975	2.004	2.025
Industrial	1.991	2.276	2.941	3.189	3.482	3.776	3.997
(Yr/yr % change)	-12.7%	14.3%	29.2%	8.4%	9.2%	8.5%	5.9%
Hospitals / Clinics	2.335	1.058	1.536	1.886	2.335	2.710	3.150
Medical Misc.	0.893	0.533	0.473	0.510	0.536	0.552	0.568
Medical	3.229	1.591	2.009	2.395	2.871	3.262	3.719
(Yr/yr % change)	59.5%	-50.7%	26.3%	19.2%	19.8%	13.6%	14.0%
Hotels	1.077	0.592	0.540	0.719	0.805	0.749	0.671
Retail Misc.	0.722	0.450	0.276	0.274	0.274	0.285	0.293
Shopping	1.246	1.073	0.765	0.764	0.767	0.768	0.770
Retail	3.045	2.116	1.581	1.757	1.846	1.803	1.735
(Yr/yr % change)	12.4%	-30.5%	-25.3%	11.1%	5.1%	-2.3%	-3.8%
NON-RESIDENTIAL BUILDING	21.149	14.221	15.274	17.453	19.170	20.550	21.710
(Yr/yr % change)	23.7%	-32.8%	7.4%	14.3%	9.8%	7.2%	5.6%
Multi-Family	13.957	13.108	10.219	11.665	12.344	13.080	13.687
Single-Family	14.920	16.052	17.156	18.095	19.292	20.303	21.232
RESIDENTIAL	28.876	29.160	27.375	29.759	31.636	33.382	34.919
(Yr/yr % change)	0.4%	1.0%	-6.1%	8.7%	6.3%	5.5%	4.6%
TOTAL NON-RESIDENTIAL	63.375	41.926	34.740	38.205	45.638	50.195	56.863
(Yr/yr % change)	-14.1%	-33.8%	-17.1%	10.0%	19.5%	10.0%	13.3%
GRAND TOTAL	92.252	71.086	62.115	67.964	77.274	83.577	91.782
(Yr/yr % change)	-10.1%	-22.9%	-12.6%	9.4%	13.7%	8.2%	9.8%

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

Table 8 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

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

Table 9: Canadian Provinces, Total Construction Starts — ConstructConnect

Regions/Provinces (East to West)	Actuals (Level in \$ Millions CAD)	Forecasts (Year versus previous year % change)				
	2016	2017	2018	2019	2020	2021
Atlantic region	\$3,273	-15.3%	8.8%	22.0%	18.2%	19.6%
Quebec	\$9,419	19.0%	-16.2%	10.4%	9.8%	6.7%
Ontario	\$27,651	-22.0%	22.8%	14.5%	2.7%	6.7%
Manitoba	\$6,932	-69.2%	122.7%	8.2%	7.4%	8.0%
Saskatchewan	\$1,605	24.0%	-5.5%	13.0%	14.9%	8.3%
Alberta	\$11,735	6.5%	-5.4%	17.7%	15.8%	17.6%
British Columbia	\$10,470	-5.1%	6.6%	10.4%	7.6%	8.1%
Canada	\$71,086	-12.6%	9.4%	13.7%	8.2%	9.8%

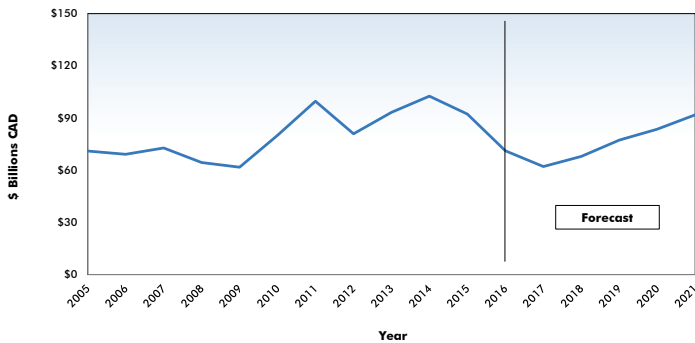
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Table: ConstructConnect.

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

		Actuals		Forecasts				
		2015	2016	2017	2018	2019	2020	2021
Quebec	Residential	3.636	4.336	3.881	3.565	3.733	3.920	4.032
	Non-res Building	3.411	2.339	3.454	3.091	3.309	3.575	3.741
	Engineering/Civil	7.152	2.744	3.876	2.736	3.323	3.883	4.364
	Total	14.199	9.419	11.212	9.391	10.365	11.377	12.137
	(Yr vs previous yr % Change)	17.1%	-33.7%	19.0%	-16.2%	10.4%	9.8%	6.7%
Ontario	Residential	12.061	12.611	11.796	12.326	12.955	13.528	14.094
	Non-res Building	5.988	4.936	4.775	6.044	6.498	6.809	7.033
	Engineering/Civil	11.436	10.105	5.004	8.126	10.886	10.830	12.134
	Total	29.485	27.651	21.576	26.497	30.339	31.166	33.261
	(Yr vs previous yr % Change)	26.2%	-6.2%	-22.0%	22.8%	14.5%	2.7%	6.7%
Alberta	Residential	4.378	3.772	4.223	3.979	4.358	4.661	4.970
	Non-res Building	4.585	3.083	2.710	2.949	3.363	3.681	4.003
	Engineering/Civil	8.213	4.880	5.563	4.899	6.200	7.779	9.981
	Total	17.176	11.735	12.495	11.827	13.920	16.121	18.954
	(Yr vs previous yr % Change)	-38.9%	-31.7%	6.5%	-5.4%	17.7%	15.8%	17.6%
British Columbia	Residential	6.713	6.020	5.095	5.927	6.391	6.806	7.124
	Non-res Building	4.311	1.992	2.378	2.648	2.868	3.002	3.187
	Engineering/Civil	12.130	2.458	2.458	2.016	2.433	2.779	3.294
	Total	23.154	10.470	9.931	10.591	11.693	12.587	13.605
	(Yr vs previous yr % Change)	74.5%	-54.8%	-5.1%	6.6%	10.4%	7.6%	8.1%

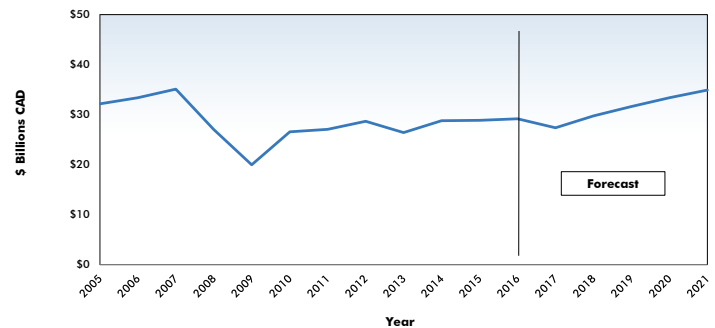
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
 Table: ConstructConnect.

Graph 19: Canadian Grand Total Construction Starts — ConstructConnect



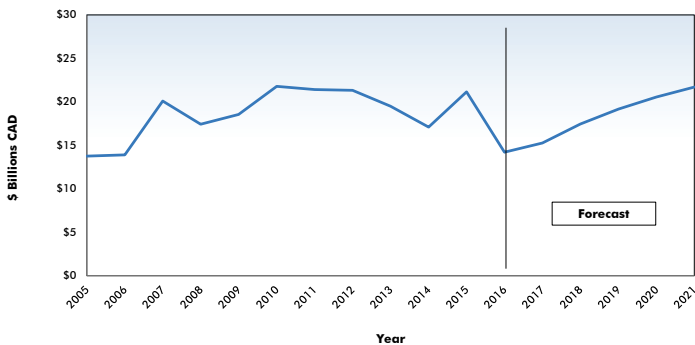
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 20: Canadian Residential Construction Starts — ConstructConnect



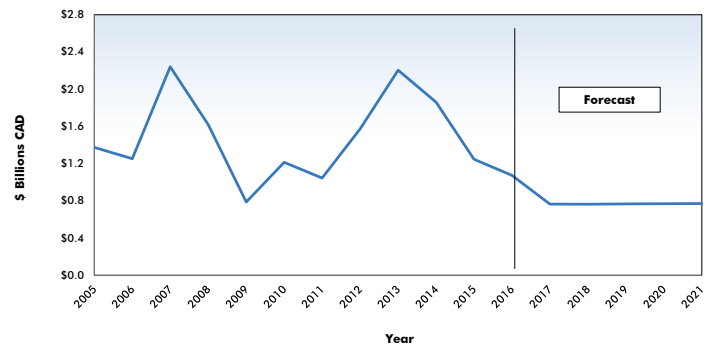
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 21: Canadian Non-Residential Building Starts — ConstructConnect



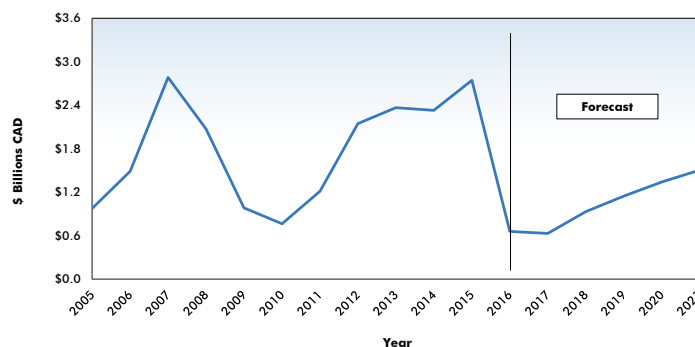
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect



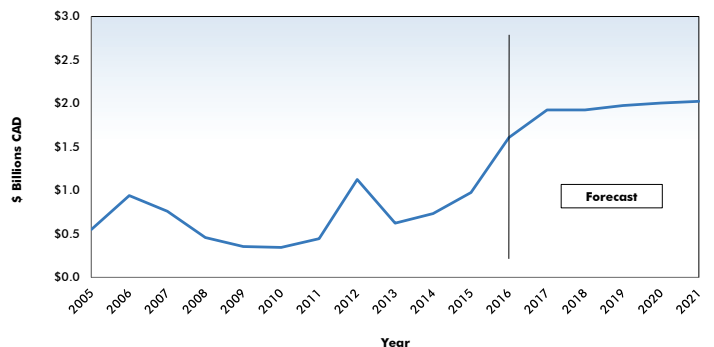
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 23: Canadian Private Offices Construction Starts — ConstructConnect



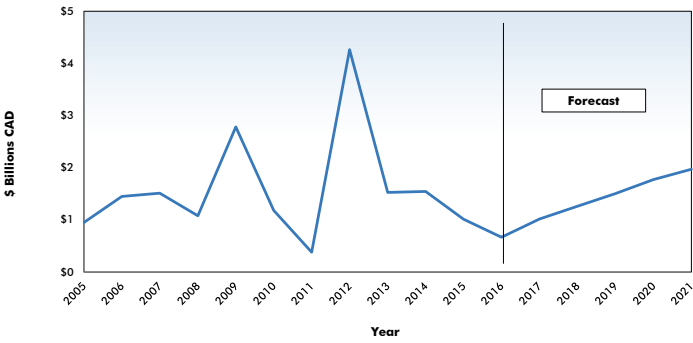
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 24: Canadian Warehouse Construction Starts — ConstructConnect



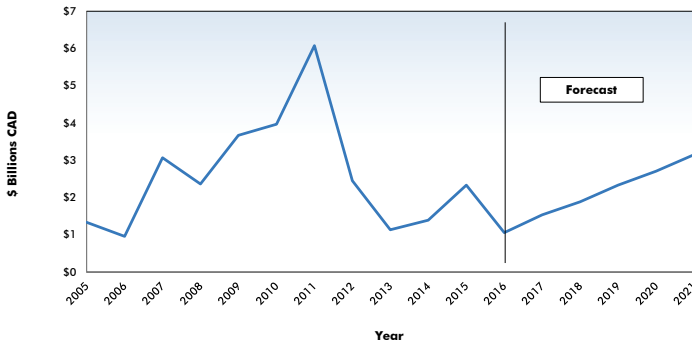
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 25: Canadian Manufacturing Construction Starts — ConstructConnect



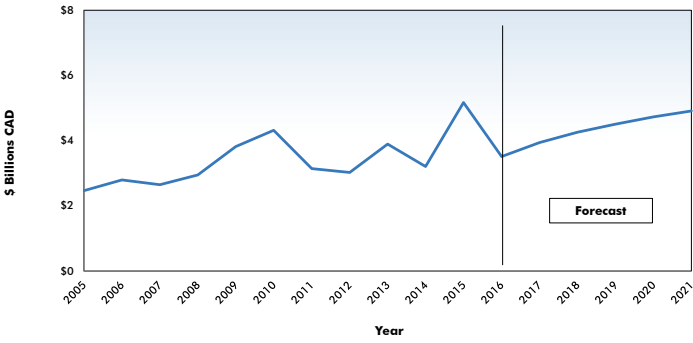
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect



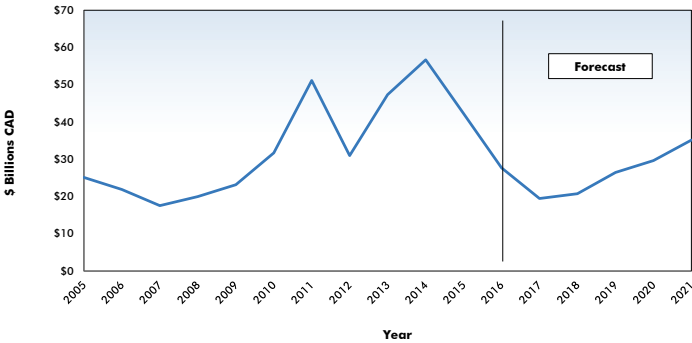
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 27: Canadian Education Construction Starts — ConstructConnect



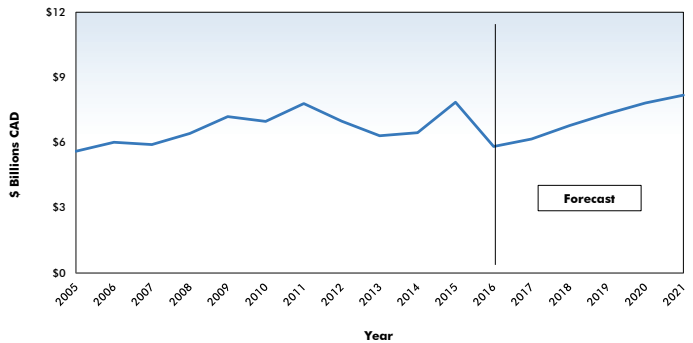
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 28: Canadian Engineering Construction Starts — ConstructConnect



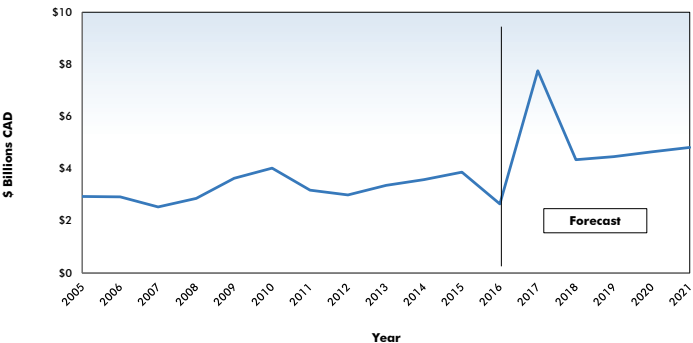
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 29: Canadian Roadwork Construction Starts — ConstructConnect



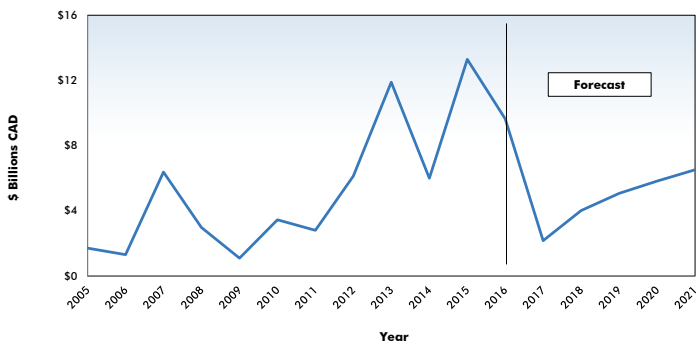
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect



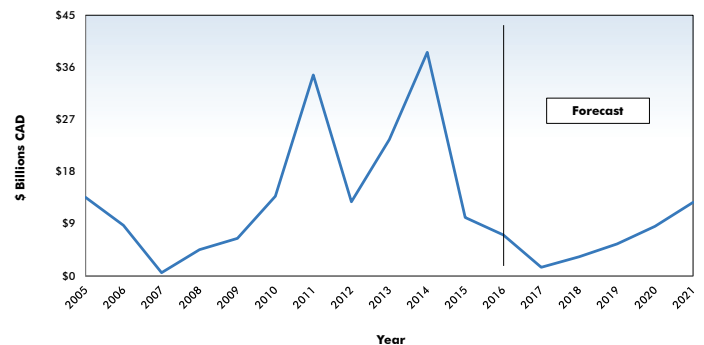
Source of actuals: ConstructConnect “Insight” / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect



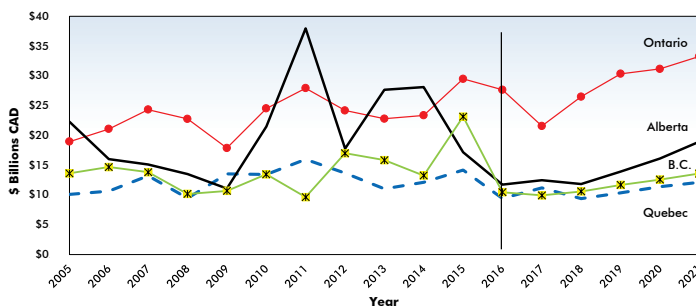
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 32: Canadian Oil and Gas Plants, Pipelines Construction Starts — ConstructConnect



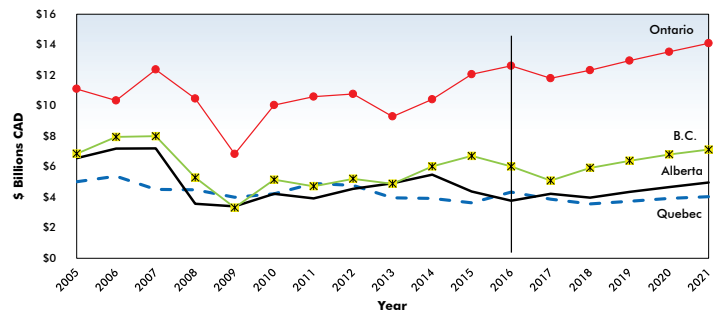
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



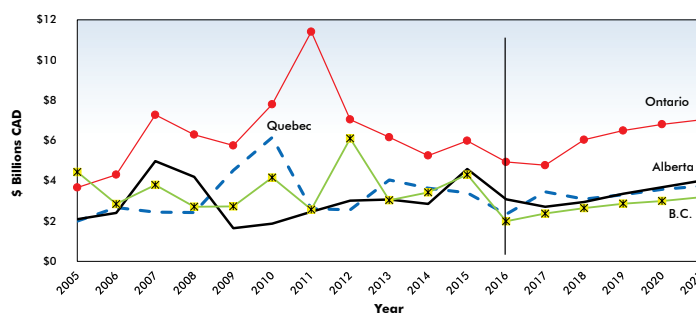
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



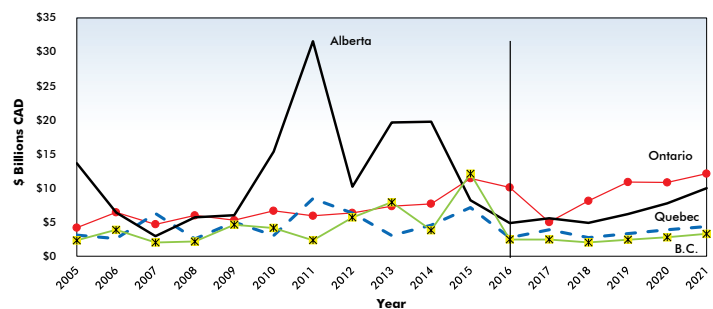
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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				
	2015	2016	2017	2018	2019	2020	2021
Single-family	1,454.8	1,544.2	1,688.8	1,838.8	1,986.1	2,141.6	2,287.8
Multi-family	410.2	508.3	542.5	565.4	556.3	566.0	583.0
TOTAL RESIDENTIAL	1,865.0	2,052.5	2,231.3	2,404.3	2,542.4	2,707.6	2,870.7
(Yr/yr % change)	14.0%	10.1%	8.7%	7.8%	5.7%	6.5%	6.0%
Hotels/Motels	58.7	113.2	163.1	154.0	140.6	131.0	121.3
Shopping/Retail	150.3	188.9	73.4	71.1	74.2	75.4	78.0
Parking Garages	26.6	27.7	24.0	28.6	30.6	31.3	31.8
Amusement	36.4	21.2	24.1	24.3	24.7	25.8	26.5
Private Offices	91.0	112.1	93.6	112.3	116.1	111.5	106.8
Governmental Offices	13.6	19.5	16.8	16.9	17.9	18.5	18.8
Laboratories (Schools & Industrial)	8.0	6.3	5.5	5.6	6.2	6.6	6.8
Warehouses	201.3	155.7	191.5	196.8	199.4	205.6	210.5
Sports Stadium/Convention Center	28.3	27.5	26.0	25.3	25.6	25.6	26.1
Transportation Terminals	11.5	7.6	6.5	9.0	10.3	11.6	12.2
TOTAL COMMERCIAL	625.6	679.6	624.6	643.8	645.6	643.1	638.8
(Yr/yr % change)	47.2%	8.6%	-8.1%	3.1%	0.3%	-0.4%	-0.7%
TOTAL INDUSTRIAL (manufacturing)	87.2	104.2	71.1	74.0	82.0	90.1	100.0
(Yr/yr % change)	-16.6%	19.5%	-31.7%	4.1%	10.8%	9.8%	11.0%
Religious	6.7	5.9	7.5	7.3	7.1	7.1	7.1
Hospitals/Clinics	23.5	37.8	26.7	28.5	31.9	35.3	38.6
Nursing Homes/Assisted Living	36.7	46.2	47.6	49.7	49.8	51.7	53.7
Libraries/Museums	3.7	4.2	3.1	2.9	3.0	3.1	3.1
Courthouse	1.7	1.9	2.2	2.3	2.5	2.6	2.8
Police/Fire	5.0	7.1	7.9	8.1	8.3	8.5	8.8
Prisons	3.6	2.8	5.1	5.1	5.2	5.5	5.7
Military	3.6	8.9	14.6	15.0	15.6	16.4	17.2
Educational Facilities	144.0	170.4	157.3	166.4	170.9	174.0	176.3
MED misc	14.0	19.1	27.0	26.2	24.6	24.6	24.6
TOTAL INSTITUTIONAL	242.7	304.2	299.1	311.6	318.8	328.7	337.8
(Yr/yr % change)	4.1%	25.4%	-1.7%	4.2%	2.3%	3.1%	2.8%
Miscellaneous Non-Res Building	19.2	32.7	28.3	26.3	27.3	27.8	28.4
TOTAL NON-RES BLDG	974.7	1,120.7	1,023.1	1,055.7	1,073.8	1,089.7	1,105.0
(Yr/yr % change)	25.3%	15.0%	-8.7%	3.2%	1.7%	1.5%	1.4%
RESIDENTIAL + NON-RES BLDG	2,839.7	3,173.1	3,254.5	3,460.0	3,616.1	3,797.3	3,975.7
(Yr/yr % change)	17.6%	11.7%	2.6%	6.3%	4.5%	5.0%	4.7%

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				
	2015	2016	2017	2018	2019	2020	2021
Summary							
NON-RESIDENTIAL BUILDING	974.7	1,120.7	1,023.1	1,055.7	1,073.8	1,089.7	1,105.0
RESIDENTIAL	1,865.0	2,052.5	2,231.3	2,404.3	2,542.4	2,707.6	2,870.7
RESIDENTIAL + NON-RESIDENTIAL BUILDING	2,839.7	3,173.1	3,254.5	3,460.0	3,616.1	3,797.3	3,975.7
Verticals							
Offices (private)	91.0	112.1	93.6	112.3	116.1	111.5	106.8
Parking Garages	26.6	27.7	24.0	28.6	30.6	31.3	31.8
Transportation Terminals	11.5	7.6	6.5	9.0	10.3	11.6	12.2
Commercial	129.1	147.3	124.1	149.9	157.0	154.5	150.8
(Yr/yr % change)	13.0%	14.0%	-15.7%	20.8%	4.7%	-1.6%	-2.4%
Amusement	36.4	21.2	24.1	24.3	24.7	25.8	26.5
Libraries / Museums	3.7	4.2	3.1	2.9	3.0	3.1	3.1
Religious	6.7	5.9	7.5	7.3	7.1	7.1	7.1
Sports Arenas / Convention Centers	28.3	27.5	26.0	25.3	25.6	25.6	26.1
Community	75.2	58.7	60.7	59.8	60.3	61.6	62.8
(Yr/yr % change)	36.3%	-21.9%	3.3%	-1.4%	0.9%	2.0%	2.0%
College / University	41.1	54.3	48.7	50.4	51.7	52.4	53.0
Elementary / Pre School	51.3	52.5	45.1	49.4	52.6	54.0	54.6
Jr / Sr High School	47.5	57.4	57.5	60.6	60.5	61.4	62.3
Special / Vocational	4.1	6.2	6.0	6.1	6.1	6.2	6.4
Educational	144.0	170.4	157.3	166.4	170.9	174.0	176.3
(Yr/yr % change)	-2.2%	18.3%	-7.7%	5.8%	2.7%	1.8%	1.3%
Courthouses	1.7	1.9	2.2	2.3	2.5	2.6	2.8
Fire and Police Stations	5.0	7.1	7.9	8.1	8.3	8.5	8.8
Government Offices	13.6	19.5	16.8	16.9	17.9	18.5	18.8
Prisons	3.6	2.8	5.1	5.1	5.2	5.5	5.7
Government	23.9	31.4	32.0	32.4	33.8	35.1	36.1
(Yr/yr % change)	12.9%	31.4%	2.0%	1.3%	4.3%	3.7%	2.9%
Industrial Labs / Labs / School Labs	8.0	6.3	5.5	5.6	6.2	6.6	6.8
Manufacturing	87.2	104.2	71.1	74.0	82.0	90.1	100.0
Warehouses	201.3	155.7	191.5	196.8	199.4	205.6	210.5
Industrial	296.4	266.2	268.2	276.3	287.7	302.3	317.4
(Yr/yr % change)	49.9%	-10.2%	0.8%	3.0%	4.1%	5.1%	5.0%
Hospitals / Clinics	23.5	37.8	26.7	28.5	31.9	35.3	38.6
Medical Misc.	14.0	19.1	27.0	26.2	24.6	24.6	24.6
Nursing Homes	36.7	46.2	47.6	49.7	49.8	51.7	53.7
Medical	74.3	103.1	101.4	104.4	106.3	111.6	116.8
(Yr/yr % change)	17.3%	38.8%	-1.6%	2.9%	1.8%	5.0%	4.7%
Military	3.6	8.9	14.6	15.0	15.6	16.4	17.2
(Yr/yr % change)	2.5%	148.4%	64.1%	2.7%	4.1%	5.2%	4.8%
Hotels	58.7	113.2	163.1	154.0	140.6	131.0	121.3
Retail Misc.	19.2	32.7	28.3	26.3	27.3	27.8	28.4
Shopping	150.3	188.9	73.4	71.1	74.2	75.4	78.0
Retail	228.2	334.8	264.8	251.4	242.1	234.3	227.6
(Yr/yr % change)	29.9%	46.7%	-20.9%	-5.1%	-3.7%	-3.2%	-2.8%
NON-RESIDENTIAL BUILDING	974.7	1,120.7	1,023.1	1,055.7	1,073.8	1,089.7	1,105.0
(Yr/yr % change)	25.3%	15.0%	-8.7%	3.2%	1.7%	1.5%	1.4%
Multi-Family	410.2	508.3	542.5	565.4	556.3	566.0	583.0
Single-Family	1,454.8	1,544.2	1,688.8	1,838.8	1,986.1	2,141.6	2,287.8
RESIDENTIAL	1,865.0	2,052.5	2,231.3	2,404.3	2,542.4	2,707.6	2,870.7
(Yr/yr % change)	14.0%	10.1%	8.7%	7.8%	5.7%	6.5%	6.0%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	2,839.7	3,173.1	3,254.5	3,460.0	3,616.1	3,797.3	3,975.7
(Yr/yr % change)	17.6%	11.7%	2.6%	6.3%	4.5%	5.0%	4.7%

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.

Appendix A: Square Footage Forecasts

Table 13: Canada Type-of-Structure Forecasts

(Square Feet Millions)

	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Single-family	128.3	138.1	148.6	156.4	166.1	174.7	182.7
Multi-family	83.9	74.0	52.9	62.2	69.6	74.8	78.5
TOTAL RESIDENTIAL	212.1	212.1	201.5	218.5	235.7	249.5	261.2
(Yr/yr % change)	-2.5%	0.0%	-5.0%	8.4%	7.9%	5.8%	4.7%
Hotels/Motels	2.9	2.4	2.2	2.4	2.7	2.5	2.3
Private Offices	10.7	3.1	3.0	4.2	5.4	6.4	7.2
Governmental Offices	2.2	3.0	2.3	3.4	3.6	3.7	3.9
Shopping/Retail	13.2	10.8	4.9	5.0	5.0	5.1	5.1
Retail Miscellaneous	3.2	1.6	1.7	1.7	1.7	1.8	1.9
Parking Garages	0.8	0.2	1.3	1.3	1.2	1.2	1.2
Amusement	5.9	5.5	4.0	4.6	5.3	5.6	5.8
Warehouses	7.2	10.1	10.5	10.8	11.1	11.4	12.0
TOTAL COMMERCIAL	46.0	36.6	30.0	33.5	36.1	37.8	39.4
(Yr/yr % change)	4.7%	-20.4%	-18.1%	11.8%	7.6%	4.8%	4.2%
TOTAL INDUSTRIAL (manufacturing)	5.4	2.7	2.7	3.0	3.7	4.5	5.0
(Yr/yr % change)	-2.4%	-49.0%	-2.8%	14.4%	22.6%	20.2%	11.9%
Religious	0.7	0.4	0.4	0.6	0.6	0.6	0.7
Hospitals/Clinics	3.8	2.2	5.1	5.2	5.6	5.9	6.2
MED misc	2.7	1.6	1.0	1.5	1.6	1.6	1.7
Transportation Terminals*	0.6	0.2	0.8	1.2	1.2	1.3	1.4
Police/Fire	0.9	0.6	1.8	1.6	1.6	1.7	1.7
Educational Facilities	15.7	10.6	8.1	9.3	9.9	10.5	10.9
TOTAL INSTITUTIONAL	24.6	15.6	17.2	19.3	20.6	21.7	22.6
(Yr/yr % change)	36.4%	-36.4%	10.1%	12.4%	6.6%	5.2%	4.0%
TOTAL NON-RES BLDG	76.0	55.0	49.8	55.9	60.4	64.0	67.0
(Yr/yr % change)	12.6%	-27.6%	-9.3%	12.1%	8.1%	5.9%	4.7%
RESIDENTIAL + NON-RES BLDG	288.1	267.1	251.4	274.4	296.1	313.5	328.2
(Yr/yr % change)	1.0%	-7.3%	-5.9%	9.2%	7.9%	5.9%	4.7%

* 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)

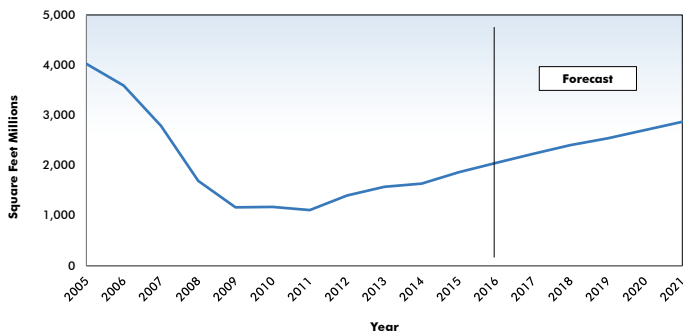
	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Summary							
NON-RESIDENTIAL BUILDING	76.0	55.0	49.8	55.9	60.4	64.0	67.0
RESIDENTIAL	212.1	212.1	201.5	218.5	235.7	249.5	261.2
RESIDENTIAL + NON-RESIDENTIAL BUILDING	288.1	267.1	251.4	274.4	296.1	313.5	328.2
Verticals							
Offices (private)	10.7	3.1	3.0	4.2	5.4	6.4	7.2
Parking Garages	0.8	0.2	1.3	1.3	1.2	1.2	1.2
Transportation Terminals	0.6	0.2	0.8	1.2	1.2	1.3	1.4
Commercial	12.1	3.5	5.1	6.7	7.8	8.9	9.8
(Yr/Yr % change)	21.4%	-70.7%	44.7%	30.1%	17.4%	13.9%	10.2%
Amusement	5.9	5.5	4.0	4.6	5.3	5.6	5.8
Religious	0.7	0.4	0.4	0.6	0.6	0.6	0.7
Community	6.6	5.9	4.4	5.2	5.9	6.2	6.5
(Yr/Yr % change)	-3.4%	-11.6%	-25.4%	18.7%	14.3%	5.0%	3.5%
Educational	15.7	10.6	8.1	9.3	9.9	10.5	10.9
(Yr/Yr % change)	47.6%	-32.8%	-23.3%	14.7%	6.2%	6.0%	4.2%
Fire and Police Stations	0.9	0.6	1.8	1.6	1.6	1.7	1.7
Government Offices	2.2	3.0	2.3	3.4	3.6	3.7	3.9
Government	3.1	3.6	4.1	5.0	5.2	5.4	5.6
(Yr/Yr % change)	-24.1%	15.3%	15.4%	19.8%	4.9%	4.3%	2.8%
Manufacturing	5.4	2.7	2.7	3.0	3.7	4.5	5.0
Warehouses	7.2	10.1	10.5	10.8	11.1	11.4	12.0
Industrial	12.6	12.8	13.2	13.8	14.8	15.9	17.0
(Yr/Yr % change)	0.9%	1.6%	2.8%	5.0%	7.0%	7.3%	7.2%
Hospitals / Clinics	3.8	2.2	5.1	5.2	5.6	5.9	6.2
Medical Misc.	2.7	1.6	1.0	1.5	1.6	1.6	1.7
Medical	6.5	3.9	6.1	6.7	7.2	7.6	7.9
(Yr/Yr % change)	31.8%	-41.0%	57.5%	10.9%	7.7%	4.4%	4.2%
Hotels	2.9	2.4	2.2	2.4	2.7	2.5	2.3
Retail Misc.	3.2	1.6	1.7	1.7	1.7	1.8	1.9
Shopping	13.2	10.8	4.9	5.0	5.0	5.1	5.1
Retail	19.2	14.7	8.8	9.2	9.5	9.4	9.3
(Yr/Yr % change)	4.5%	-23.5%	-40.0%	4.0%	3.4%	-0.5%	-1.8%
NON-RESIDENTIAL BUILDING	76.0	55.0	49.8	55.9	60.4	64.0	67.0
(Yr/Yr % change)	12.6%	-27.6%	-9.3%	12.1%	8.1%	5.9%	4.7%
Multi-Family	83.9	74.0	52.9	62.2	69.6	74.8	78.5
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RESIDENTIAL	212.1	212.1	201.5	218.5	235.7	249.5	261.2
(Yr/Yr % change)	-2.5%	0.0%	-5.0%	8.4%	7.9%	5.8%	4.7%
RESIDENTIAL + NON-RESIDENTIAL BUILDING	288.1	267.1	251.4	274.4	296.1	313.5	328.2
(Yr/Yr % change)	1.0%	-7.3%	-5.9%	9.2%	7.9%	5.9%	4.7%

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'.

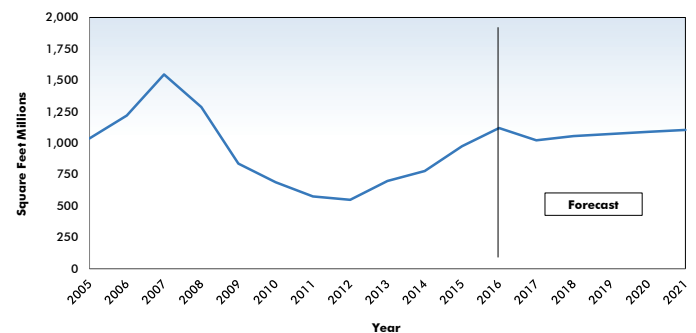
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

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



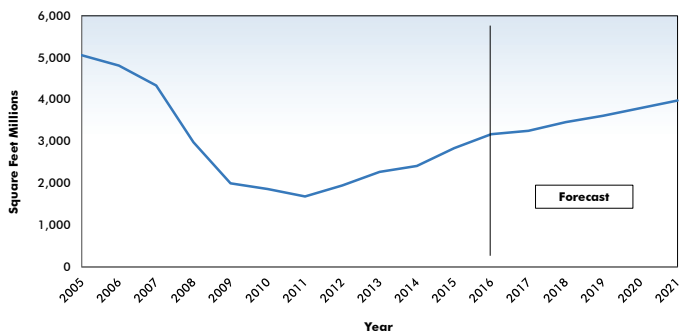
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



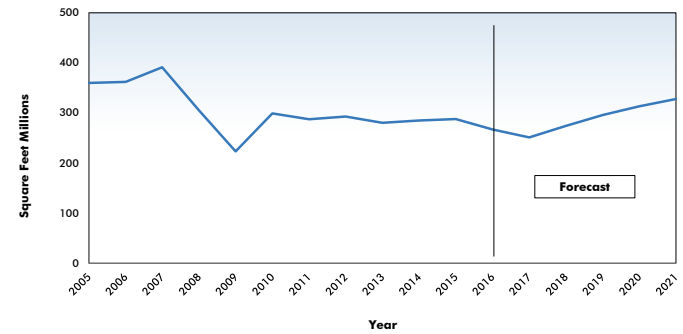
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



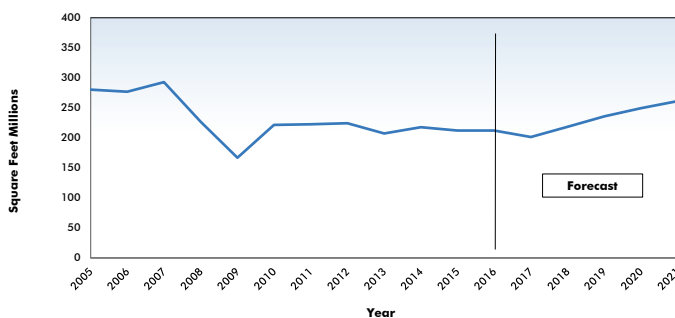
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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



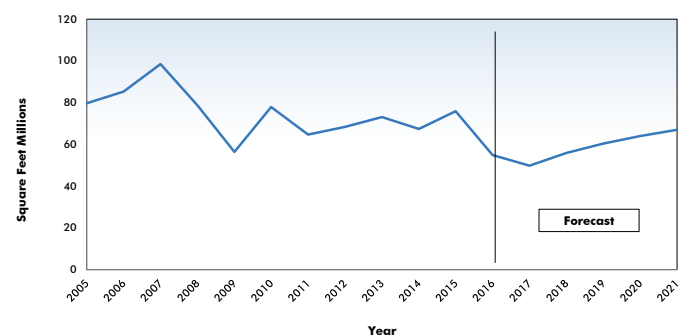
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

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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