



CONSTRUCTION & MAINTENANCE LOOKING FORWARD

ONTARIO

Besieged on multiple fronts, Ontario's construction workforce struggles to keep up with rising demands

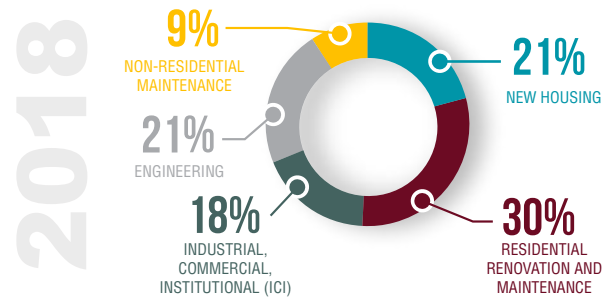
HIGHLIGHTS 2018-2027

Ontario's construction industry has been on a steady rise since the early 2000s, growing by 50 percent between 2002 and 2017. Current employment is estimated at 413,600 jobs, and is nearly evenly split between residential and non-residential construction.

The 2018-2027 outlook sees overall demands continue to strengthen at a moderate pace over the decade, driven primarily by rising public transportation and infrastructure projects across the province combined with major nuclear refurbishment projects in the Greater Toronto Area and Southwestern Ontario. For the residential sector, the pace of construction activity may moderate, but to what extent will be largely based on government policies (i.e., immigration levels, interest rates, mortgage rules, etc.) and interprovincial migration. With one fifth of the province's current construction workforce retiring over the next 10 years, sustaining industry capacity through more aggressive recruitment and training efforts will remain a high priority for industry leaders.

As the workforce ages over the coming decade, an estimated 87,300 workers will retire, or nearly 20 percent of the overall Ontario construction workforce. Although the industry is expected to attract 84,300 new entrant workers locally, when demand for future construction services is considered, the industry will need to attract an additional 23,200 workers above the local supply of new entrant workers from outside the industry by 2027.

DISTRIBUTION OF CONSTRUCTION EMPLOYMENT IN 2018, ONTARIO



10-YEAR WORKFORCE OUTLOOK FOR ONTARIO



AVERAGE UNEMPLOYMENT RATE 6.1%

HIGHLIGHTS

- Increasing levels of immigration remain a strong driver of population growth and housing demands across the province.
- Housing starts increased in 2017, surpassing 80,000 units province-wide. The sharp increase for a second consecutive year drove demands beyond the available workforce for some trades and occupations.
- Major nuclear refurbishment project demands will overlap starting in 2020, while other infrastructure and major transportation project demands rise, raising engineering construction employment to historically high levels.
- Retirements are estimated at 87,000 over the coming decade, requiring the recruitment of workers from outside Ontario's construction industry to meet anticipated workforce requirements.

BuildForce's LMI System

BuildForce Canada uses a scenario-based forecasting system to assess future construction labour requirements in the heavy industrial, residential, and non-residential construction markets. This labour market information (LMI) system tracks 34 trades and occupations. To further improve the robustness of the system, BuildForce consults with industry stakeholders, including owners, contractors, and labour groups, to validate the scenario assumptions and construction project lists, and seeks input from government on related analysis. The information is then distilled into labour market condition rankings to help industry employers with the management of their respective human resources.

ONTARIO CONSTRUCTION OUTLOOK

Ontario construction demands have risen steadily over the past five years, expanding construction’s workforce requirements by close to 50,000 workers. The expansion, initially driven by large infrastructure and other engineering projects, extended to commercial and major residential condo starts in the Greater Toronto Area (GTA) over the last few years. Strong population growth, fuelled by elevated levels of immigration, a strengthening economy, rising housing prices, land constraints, and improved rail commuter service between the GTA and surrounding regions has contributed to growth in communities around the GTA. The breadth of the expansion underway – across all segments and regions of the province – is changing traditional mobility patterns, and labour market challenges have emerged for some trades and occupations. At the same time, an aging workforce and expected retirements continue to force industry to focus on recruitment and training needs.

The 2018–2027 *Construction and Maintenance Looking Forward* scenario for Ontario anticipates overall near-term construction demands to continue to strengthen across most regions, as major public transportation and other engineering project and ICI (industrial, commercial, institutional) building requirements rise to a peak in 2020. Major projects, including an international bridge in Windsor, numerous transit projects in the GTA, Hamilton, and Ottawa, and overlapping demands from two major nuclear refurbishment projects in the GTA and Southwestern Ontario, present significant and persistent workforce requirements for trades and occupations.

Overall total provincial non-residential employment is anticipated to rise by close to 15,000 jobs over the coming decade, with gains concentrated between 2018 and 2020. Population growth is expected to ease, but should sustain minor increases for institutional and commercial building construction over the next 10 years. Modest manufacturing growth and new industrial expansion projects in the Sarnia area will also add to industrial building requirements between 2018 and 2020.

New housing construction should recede from the record levels recorded in 2017, but housing starts should remain at high levels and overall residential employment is expected to surpass 2017 levels by 2021, driven by growth in renovation activity. Immigration set against limited land availability will continue to drive multi-family, mid- and high-rise projects in and around the GTA across the scenario period, while single-family and semi-detached housing construction remains dominant in other regions. Over the latter half of the decade, however, slowing population growth should drive construction activity back to more historically normal levels.

While the pace of growth slows compared to the recent past, sustaining capacity over the latter half of the scenario period will be made more difficult by the expected retirement of 87,000 workers over the decade. Retirements are expected to account for eight in 10 new hires over the decade, making recruitment progressively more challenging, even during periods of slower growth.

Table 1: Change in employment across Ontario’s regions

REGION	% CHANGE 2018–2022	% CHANGE 2023–2027
Total employment – Ontario	3.4%	0.3%
Central Ontario	2.3%	-1.0%
Eastern Ontario	0.2%	-3.7%
Greater Toronto Area	5.9%	3.2%
Northern Ontario	0.2%	-1.6%
Southwestern Ontario	1.7%	-2.8%

Source: Statistics Canada, BuildForce Canada

Growth and labour requirements across the scenario period are not evenly distributed across the five regions. The strongest growth is in the GTA, and mobility is key to meeting regional labour market demands.

Table 1 summarizes the percent change in employment by region across two five-year periods: 2018 to 2022 and 2023 to 2027.

THE AVAILABLE WORKFORCE

Construction unemployment rates have been driven down to levels not experienced since before the 2008 economic downturn a decade ago. Four consecutive years of construction expansion that spanned all sectors and regions in the province, combined with an aging workforce and growing retirements, have kept the labour force from keeping up with demand.

Workers returning from Alberta and other provinces added to supply in 2015 and 2016, but the flow of workers to Ontario has slowed, and drawing any additional workers will become increasingly difficult as labour market demands outside the province strengthen.

Looking forward, an aging workforce and retirements will account for a higher share of new job openings over the next decade. While the age profile of the Ontario population is growing older, natural population growth (births less deaths) plus immigration and migration to the province, should help sustain overall population growth across the scenario period. Nevertheless, the pool of available local youth entering the workforce is in decline while retirements are on the rise.

Labour requirements are not distributed evenly across Ontario’s regions or over the years of the scenario period. Peak demands are expected to be concentrated between 2018 and 2020, with demand easing thereafter in most regions as some major projects wind down and new housing construction requirements slow. This should return labour markets to balance, except for a few selected trades with specialized skills and experience that will remain under pressure due to the start of the two nuclear refurbishment projects in 2020.

The BuildForce LMI system tracks residential and non-residential supply and accounts for the change in the available labour force, including retirements, new entrants¹, and net in-mobility².

RESIDENTIAL SECTOR

In the residential sector, the industry must contend with an estimated 44,400 retirements over the coming decade, despite modest workforce declines later in the scenario period. This exceeds the estimated number of first-time new entrants expected to be drawn from the local population aged 30 and younger available to the workforce.

Table 2 provides a summary of changes in the residential workforce in 2017, the five-year period between 2018 and 2022, and across the full scenario period.

Table 2: Change in the residential workforce, Ontario

RESIDENTIAL WORKFORCE ADJUSTMENT		2017	5 years 2018–2022	10 years 2018–2027
	Employment	10,300	1,500	100
Demand	Labour force change	8,600	5,100	3,100
	Retirements	4,200	21,800	44,400
Supply	New entrants	4,300	20,300	39,900
	Net mobility	8,400	6,700	7,700
Excess supply/(demand)		(1,700)	3,600	3,000

Source: BuildForce Canada

Table 3: Change in the non-residential workforce, Ontario

NON-RESIDENTIAL WORKFORCE ADJUSTMENT		2017	5 years 2018–2022	10 years 2018–2027
	Employment	2,500	12,500	14,900
Demand	Labour force change	1,600	14,800	16,900
	Retirements	4,200	21,300	42,900
Supply	New entrants	4,500	22,600	44,400
	Net mobility	1,400	13,500	15,500
Excess supply/(demand)		(900)	2,300	2,000

Source: BuildForce Canada

¹ **New entrants** are measured by applying the traditional proportion of the provincial workforce that enters the construction industry. The projected estimate across the scenario period assumes that the construction industry is able to recruit this group in competition with other industries.

² **In-mobility** refers to the arrival of workers from outside the local construction industry. In-mobility includes the interprovincial employee workforce described above. Many members of this group will move quickly out of the province as work declines and this out-mobility, even if it is a very short-term change, signals a weak market.

REGIONAL INSIGHTS

The following sections provide region-specific outlooks and market conditions for Ontario’s five regions: Central, Eastern, Greater Toronto Area (GTA), Northern, and Southwestern. The 2018 BuildForce LMI system provides an overview of market drivers and detailed occupational demand and supply-side analysis of labour market conditions in both the residential and non-residential sectors for 34 trades and occupations tracked by BuildForce.

CENTRAL ONTARIO

The pace of construction employment growth in Central Ontario³ is expected to ease over the near term, but overall employment is expected to be sustained near current levels over the next decade.

Moderate declines in residential construction in 2018 and 2019 are partly offset by a continued strengthening in institutional and commercial building construction, while major investment in public transportation and other infrastructure projects should sustain high levels of engineering-construction-related employment.

Across the scenario period, anticipated shifts from residential to ICI building construction requirements contribute to generally balanced labour market conditions in the region. Rising demands in the GTA and Southwestern Ontario, however, may draw labour to these markets creating workforce challenges locally.

RESIDENTIAL SECTOR

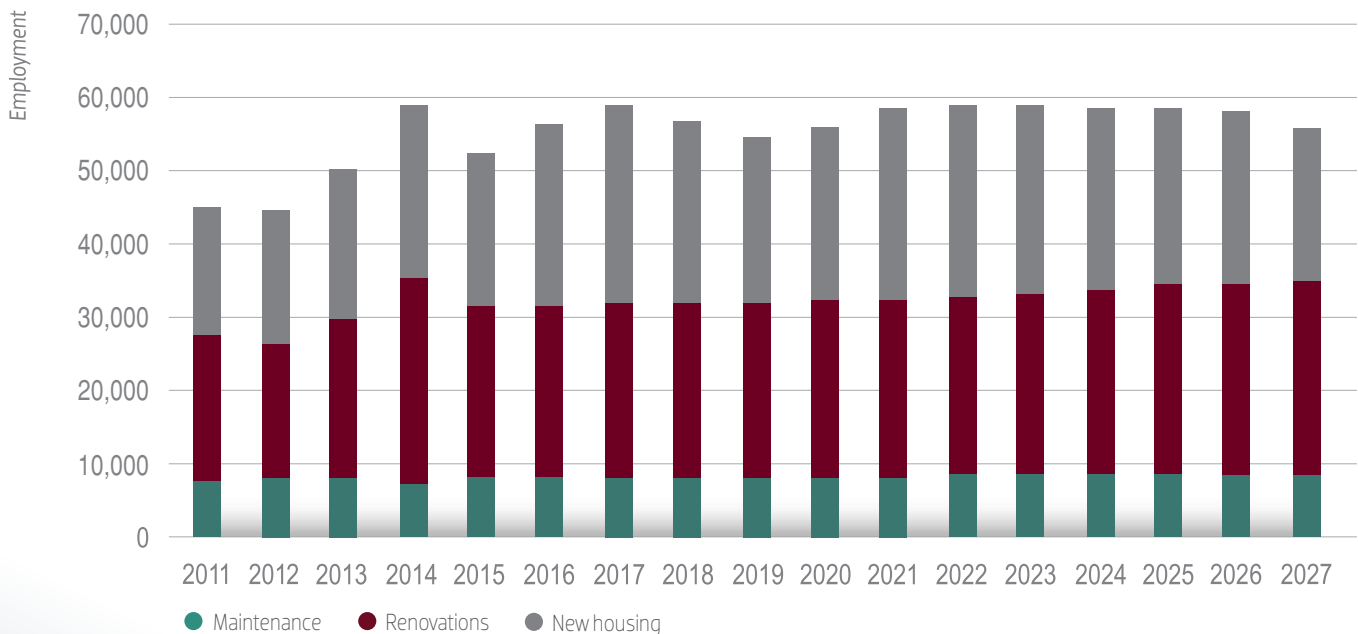
New housing construction has risen significantly in many parts of Central Ontario, propelled by a growing population. Growth is expected to be facilitated by expanded rail commuter service between Toronto and the Central region, including new systems to Hamilton, Oshawa, Kitchener, and Barrie. Across the region, housing starts grew to 18,500 units in 2017, up from 10,500 in 2013.

Looking forward, anticipated lower rates of population growth and household formation⁴ should temper the pace of new housing construction in the region, though new housing construction is expected to remain at relatively high levels of activity.

Rising renovation activity may offset modest declines in new housing construction, sustaining the overall residential construction workforce near current levels. Figure 1 shows the region’s employment trends by sector for residential construction.

The BuildForce ranking system isolates market conditions specific to residential construction. The results are summarized in Table 4.

Figure 1: Residential construction employment growth outlook, Central Ontario



Source: Statistics Canada, BuildForce Canada

³ **The Central region** includes the economic regions of Muskoka-Kawartha, Kitchener-Waterloo-Barrie and Hamilton-Niagara Peninsula as defined by Statistics Canada, which includes the Census Metropolitan Areas (CMAs) of St. Catharines-Niagara, Hamilton and Kitchener-Waterloo. The region includes such cities as Peterborough, Orangeville, Guelph, Barrie, and Brantford.

⁴ **Household formation** refers to the change in the number of households (persons living under one roof or occupying a separate housing unit) from one year to the next. It is how population growth is transformed into demand for new housing.

RESIDENTIAL HIGHLIGHTS, CENTRAL ONTARIO

- Near-term residential employment declines by a modest 7 percent by 2019, before gradually returning to 2017 levels by 2023.
- The expected shift in employment opportunities from new housing construction to renovation activity is expected to contribute to maintaining generally balanced labour market conditions across the scenario period.

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net in-mobility, and adjustments based on industry input. The rankings reflect residential market conditions unique to Central Ontario based on current and proposed construction activity. In addition, assumptions on regional economic and population growth, new entrants to the labour force, and migration patterns (interprovincial and international) are built into the forecast scenario and included in the ranking assessment.

For Central Ontario, residential rankings are reported for 25 of the 34 covered trades and occupations.

Table 4 shows residential rankings for Central Ontario. Tighter rankings for selected trades in 2017 reflect consecutive years of rising labour demands related to new housing construction. Momentum should sustain construction activity into 2018, with labour markets returning to balance as the pace of new housing slows. A further decline is expected by 2019, as demand for new housing moderately declines again. Over the scenario period, steady levels of renovation activity contribute to maintaining generally balanced labour markets, signalled by a rank of 3, until slower population growth weakens housing demands toward the end of the decade.

MARKET RANKINGS

1

Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other current working conditions. Excess supply is apparent and there is a risk of losing workers to other markets.

2

Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other working conditions.

3

The availability of workers meeting employer qualifications in the local market may be limited by large projects, plant shutdowns or other short-term increases in demand. Employers may need to compete to attract needed workers. Established patterns of recruiting and mobility are sufficient to meet job requirements.

4

Workers meeting employer qualifications are generally not available in local markets to meet any increase. Employers will need to compete to attract additional workers. Recruiting and mobility may extend beyond traditional sources and practices.

5

Needed workers meeting employer qualifications are not available in local markets to meet current demand so that projects or production may be delayed or deferred. There is excess demand, competition is intense and recruiting reaches to remote markets.

Table 4: Residential market rankings, Central Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	4	4	3	3	3	3	3	3	3	3	2
Carpenters	4	3	2	3	3	3	3	3	3	3	2
Concrete finishers	3	3	3	3	3	3	3	3	3	3	2
Construction estimators	4	3	2	3	3	3	3	3	3	3	2
Construction managers	4	3	3	3	4	3	3	2	3	2	3
Contractors and supervisors	4	3	3	3	3	3	3	3	3	3	3
Electricians	4	3	2	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	3	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	4	3	2	3	3	3	3	3	3	3	2
Glaziers	4	3	2	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	2	3	3	3	3	3	3	3	2
Home building and renovation managers	4	3	3	3	3	3	3	3	3	3	4
Insulators	4	3	2	3	3	3	3	3	3	3	2
Ironworkers and structural metal fabricators	4	3	2	3	3	3	3	3	3	3	2
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	4	3	2	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	3	2	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	3	2	3	3	3	3	3	3	3	2
Tiles setters	4	3	2	3	3	3	3	3	3	3	2
Trades helpers and labourers	4	3	2	3	4	3	3	3	3	3	2
Truck drivers	3	3	3	3	3	3	3	3	3	3	2

Source: BuildForce Canada

NON-RESIDENTIAL SECTOR

Non-residential ICI (industrial, commercial, institutional) building construction is expected to strengthen and emerge as a stable source of construction employment over the next decade.

Engineering construction should recede from its recent peak following the completion of the Kitchener-Waterloo light rail transit (LRT) project. New major public transportation projects and ongoing infrastructure requirements, however, should sustain demand near current levels.

Overall non-residential employment requirements are expected to rise at a modest pace over the coming decade, adding a further 4,400 jobs in the region – an 8 percent increase from the 2017 starting point.

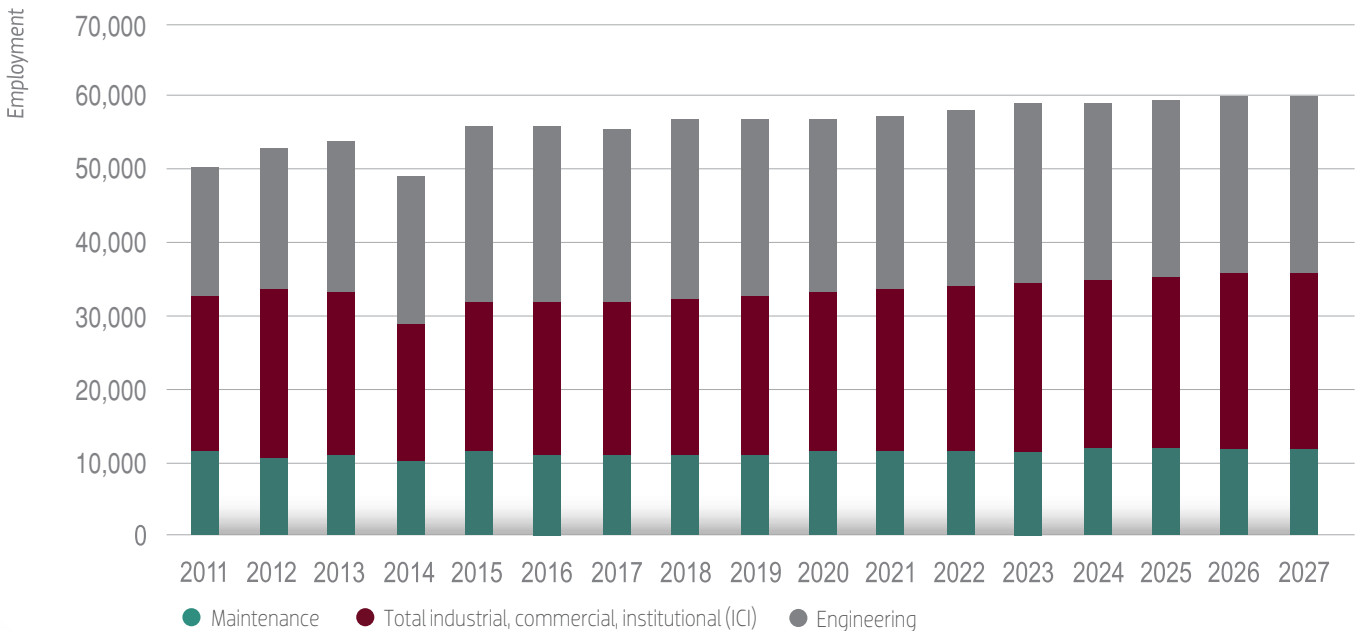
Figure 2 shows the employment trends by sector for non-residential construction in Central Ontario.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Table 5 shows generally balanced non-residential labour markets, signalled by a rank of 3, across the scenario period for Central Ontario. Rising demand in the GTA and other regions may impact the availability of workers in the Central region.

For Central Ontario, non-residential rankings are reported for 31 of the 34 covered trades and occupations.

Figure 2: Non-residential construction employment growth outlook, Central Ontario



Source: Statistics Canada, BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, CENTRAL ONTARIO

- Non-residential building construction follows recent population growth and strength in the region's residential sector to emerge as a stable source of construction employment in Central Ontario over the next decade.

- Overall non-residential employment requirements add 4,400 jobs in the region – an 8 percent increase from the 2017 starting point.
- The modest pace of growth sustains generally balanced labour market conditions across the scenario period, but competing demands from the GTA and other regions, and the expected retirement of 11,000 workers contribute to sustaining low regional unemployment rates.

Table 5: Non-residential market rankings, Central Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	4	3	3	3	3	3	3	3	3	3	3
Bricklayers	3	3	3	3	3	3	3	3	3	3	3
Carpenters	4	3	3	3	3	3	3	3	3	3	3
Concrete finishers	3	3	3	3	2	3	3	3	3	3	3
Construction estimators	3	4	3	3	3	3	3	3	3	3	3
Construction managers	3	4	3	3	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	3	3	3	3	3	3	3	3	3	3	3
Contractors and supervisors	3	3	3	3	3	3	3	3	3	3	3
Crane operators	3	3	4	3	2	3	3	3	3	3	3
Drillers and blasters	3	3	3	3	3	3	3	3	3	3	3
Electrical power line and cable workers	3	3	2	3	4	3	3	3	3	3	3
Electricians	3	3	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	3	3	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	3	3	3	3	3	3	3	3	3	3
Glaziers	3	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	3	3	3	3	3	3	3	3	3	3	3
Insulators	3	3	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	4	3	2	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	3	3	3	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	3	3	3	3	3	3
Truck drivers	3	3	3	3	3	3	3	3	3	3	3
Welders and related machine operators	3	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

EASTERN ONTARIO

Rising non-residential building construction requirements are expected to be the dominant driver of construction growth in Eastern Ontario⁵ over the next few years, as new housing construction recedes from recent high levels. Stable levels of non-residential construction employment, coupled with moderate declines in residential investment over the latter half of the scenario period, is likely to result in more stable levels of employment with generally balanced labour market conditions over much of the coming decade.

Retirement demands should loom large in Eastern Ontario. Hiring requirements in the region are primarily driven by the expected retirement of 10,900 workers, which should exceed the estimated 9,200 first-time new entrants aged 30 and younger expected to be available and drawn from the local population.

RESIDENTIAL SECTOR

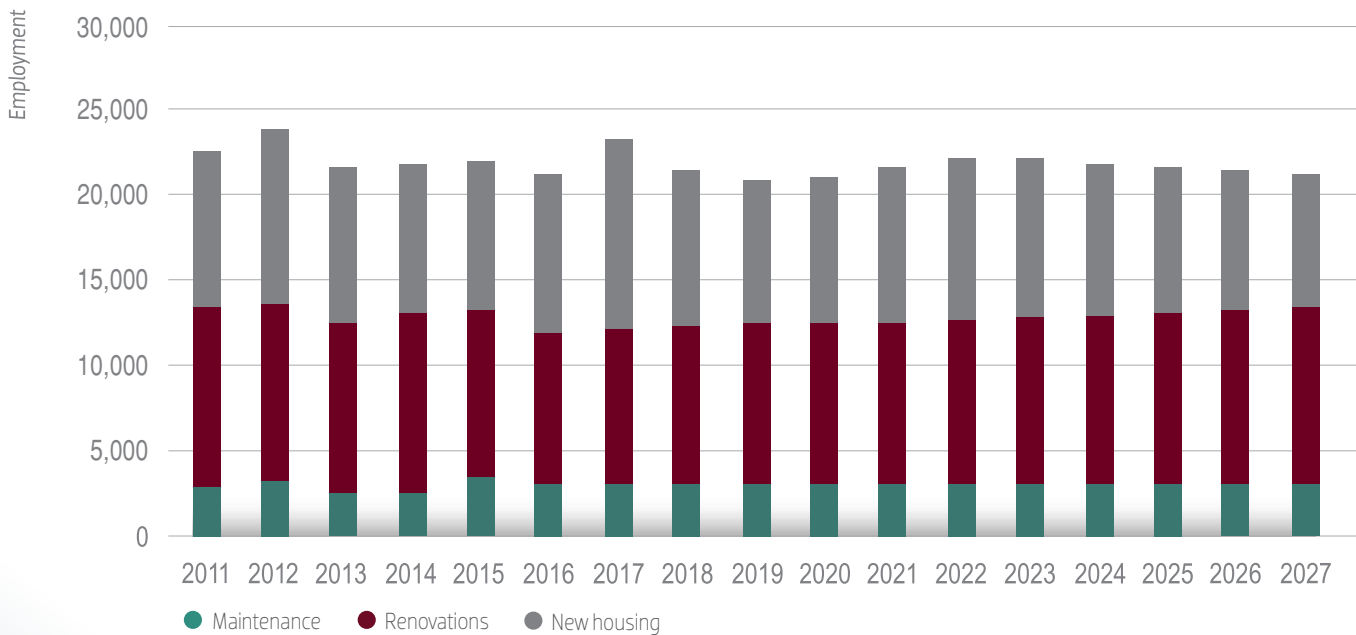
Residential construction was constrained by declining new housing starts until a brief upturn in 2016, buoyed by increases in government employment and rising consumer confidence. Housing activity accelerated in 2017, driven by increased starts, tightening labour market conditions for many trades.

Looking ahead, slowing population growth is expected to lead new housing demands lower in 2018 and 2019 from recent peaks, but housing starts should remain at high levels, and declines in residential employment are expected to be moderate.

Momentum is likely to carry high levels of construction activity into 2018, but total residential employment should recede from the 2017 peak, as new starts decline. Steady increases in renovation work account for a larger share of workforce requirements later in the scenario period.

Figure 3 shows the employment trends by sector for residential construction in Eastern Ontario.

Figure 3: Residential construction employment growth outlook, Eastern Ontario



Source: Statistics Canada, BuildForce Canada

RESIDENTIAL HIGHLIGHTS, EASTERN ONTARIO

- Housing starts have risen above 10,000 units for the first time since 2010 – a 45 percent increase compared to recent lows in 2015. Starts are expected to fall to 8,100 units by 2019 before rising back toward 10,000 units by 2022.

- Total residential employment should cycle in line with housing starts, falling by 2,500 jobs by 2019, then rising to a near-term peak in 2023. Employment recedes over the latter half of the scenario period.
- Steady increases in renovation work account for a larger share of the residential workforce later in the scenario period.
- Modest cycles in demand requirements sustain generally balanced labour market conditions after 2017, but retirements continue to elevate labour demands.

⁵ The Eastern Ontario region includes the economic regions of both Ottawa and Kingston-Pembroke, including the Census Metropolitan Areas (CMAs) of Ottawa and Kingston. Cities include Cornwall, Brockville, Belleville, and Petawawa.

Table 6: Residential market rankings, Eastern Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	4	4	3	3	3	3	3	3	3	3	3
Carpenters	4	4	3	3	3	3	3	3	3	3	3
Concrete finishers	4	3	3	3	3	3	3	3	3	3	3
Construction estimators	4	3	3	3	3	3	3	3	3	3	3
Construction managers	5	4	3	3	3	4	3	3	3	3	3
Contractors and supervisors	4	3	3	3	3	3	3	3	3	3	3
Electricians	4	3	3	3	3	3	3	3	3	3	3
Floor covering installers	4	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	3	3	3	3	3	3	3	3	3
Home building and renovation managers	4	4	3	3	3	3	3	3	3	3	3
Insulators	4	3	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	3	3	3	3	3	3	3	3	3
Plumbers	4	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	3	2	3	3	3	3	3	3	3	3
Tilesetters	4	3	2	3	3	3	3	3	3	3	3
Trades helpers and labourers	4	4	2	3	3	3	3	3	3	3	3
Truck drivers	4	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Table 6 shows tighter residential labour markets in 2017 and 2018, signalling recruitment challenges for many trades working in the sector. These conditions reflect the rapid, recent increase in new housing construction. Market conditions for trades involved heavily in new construction are expected to return to balance in 2018 and 2019 as the pace of new housing recedes. Across the scenario period, older age demographics and expected retirements should contribute to lower levels of unemployment, with generally balanced labour market conditions, even during periods of moderate employment declines.

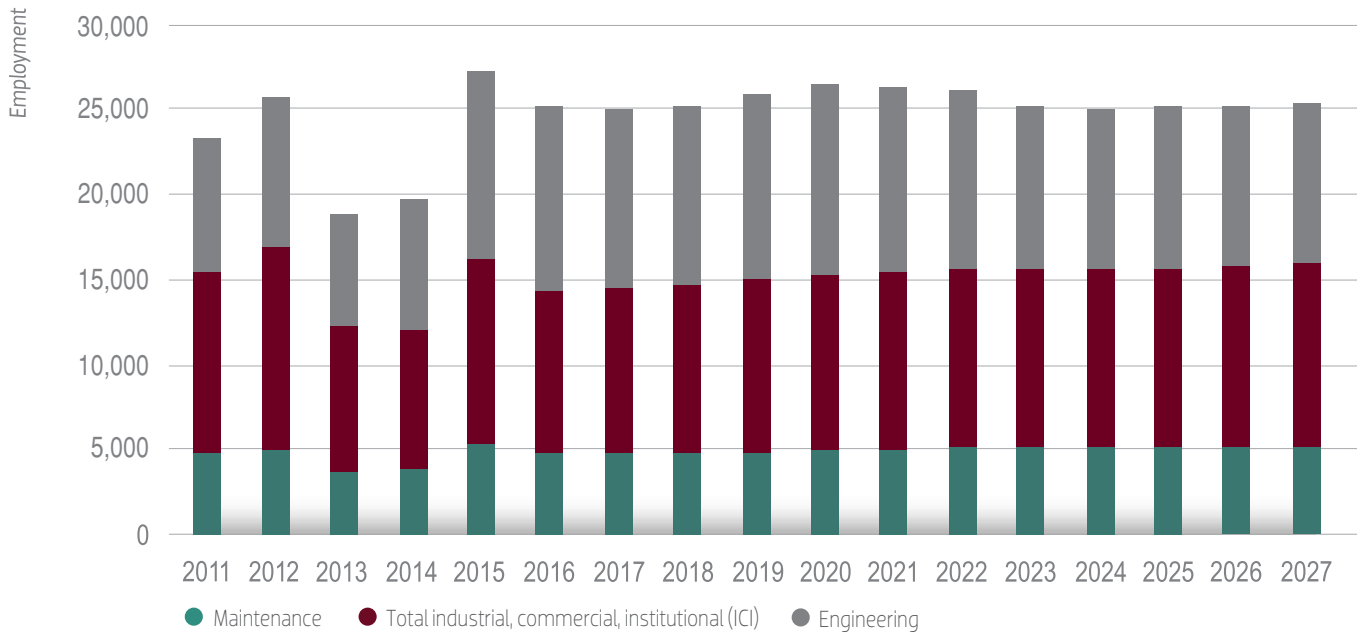
For Eastern Ontario, residential rankings are reported for 20 of the 34 covered trades and occupations.

NON-RESIDENTIAL SECTOR

Non-residential demands are a dominant driver of construction employment over the coming decade, but declines in engineering construction after 2020 leave overall employment mostly unchanged at the end of the scenario period in 2027 compared to 2017.

Institutional construction is an important driver of construction employment in the region. Investment in the sector rose modestly in 2017 following four years of declines. The upward trend is expected to strengthen through 2020, contributing to an increase of close to 500 jobs in the ICI (industrial, commercial, institutional) sector. The Ottawa light rail transit (LRT) project and other engineering construction investments bolstered non-residential construction employment between 2014 and 2016. The completion of some core infrastructure projects and declines from peak construction of the

Figure 4: Non-residential construction employment growth outlook, Eastern Ontario



Source: Statistics Canada, BuildForce Canada

first stage of the Ottawa LRT reduced employment for some trades in 2017. The second phase of LRT construction, alongside rising infrastructure investment, is expected to raise again construction demand in 2018 and should drive related employment increases to a near-term peak by 2020.

Figure 4 shows the employment trends by sector for non-residential construction in Eastern Ontario.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net in-mobility, and adjustments based on industry input. The rankings reflect non-residential market conditions unique to Eastern Ontario based on current and proposed construction activity. In addition, assumptions on regional economic and population growth, new entrants to the labour force, and migration patterns (interprovincial and international) are built into the forecast scenario and included in the ranking assessment.

The rankings for some trades working in the non-residential sector are suppressed due to the small size of the workforce (<100 workers) and limited statistical reliability when assessing labour market conditions at the sector level. Trades may also be excluded because they typically do not work in the sector being assessed (e.g., home building and renovation managers in non-residential).

For Eastern Ontario, non-residential rankings are reported for 26 of the 34 covered trades and occupations.

Table 7 provides non-residential labour market rankings for Eastern Ontario. Construction labour markets strengthened significantly in 2017 with higher levels of ICI building investment. Continued growth in non-residential ICI building construction is expected to sustain tighter near-term market conditions. The completion of major transportation projects should weaken labour market conditions temporarily in 2023 for selected trades and occupations.

Table 7: Non-residential market rankings, Eastern Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	3	3	3	3	3	3	3	3	3	3	3
Carpenters	4	3	3	3	3	3	3	3	3	3	3
Concrete finishers	3	3	3	3	3	3	2	3	3	3	3
Construction estimators	3	3	4	3	3	3	2	3	3	3	3
Construction managers	4	3	4	4	3	3	2	3	3	3	3
Construction millwrights and industrial mechanics	3	3	3	3	3	3	2	3	3	3	3
Contractors and supervisors	4	4	4	4	3	3	2	3	3	3	3
Crane operators	4	3	3	3	4	3	2	3	3	3	3
Electricians	4	3	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	3	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	4	3	3	3	3	3	3	3	3	3	3
Glaziers	4	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	2	3	3	3	3
Insulators	3	3	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	3	3	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	3	2	3	3	3	3
Truck drivers	3	3	3	3	3	3	2	3	3	3	3
Welders and related machine operators	3	3	3	3	3	3	2	3	3	3	3

Source: BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, EASTERN ONTARIO

- Engineering-construction-related employment crests in 2020 following the anticipated timing of the Ottawa LRT project.
- Construction demands levels off over the latter half of the scenario period, but demands are sustained by steady levels of ICI building and infrastructure requirements.
- Total non-residential employment rises 6 percent to a peak in 2020, and then recedes with the completion of major projects. At the end of the decade, employment is mostly unchanged compared to 2017.

GREATER TORONTO AREA (GTA)

Construction demands in the GTA⁶, Ontario's largest construction market, expanded for a third consecutive year in 2017. Sustained growth in new housing construction, alongside rising non-residential industrial, commercial and institutional (ICI) building and major infrastructure project demands drove unemployment to critically low levels despite drawing in large numbers of workers from outside the region. Persistent recruitment challenges have emerged in both residential and non-residential labour markets for many trades and occupations.

The 2018–2027 *Construction and Maintenance Looking Forward* scenario for the GTA projects that overall construction employment will continue to rise over the decade, with the largest gains driven by rising non-residential demands between 2018 and 2020. Modest near-term declines in new housing construction set against rising residential renovation activity and steady growth in ICI building demands adds 16,000 construction jobs over the decade – a 9 percent increase from 2017 levels.

New residential activity is expected to slow marginally in 2018, but labour market pressures are likely to persist. Moderate rates of immigration-driven population growth should sustain a steady upward trend in new housing construction from 2019 across the scenario period.

Engineering construction requirements, driven by nuclear refurbishment, public transportation, and other major infrastructure investments, are expected to propel non-residential employment to a new plateau by 2020.

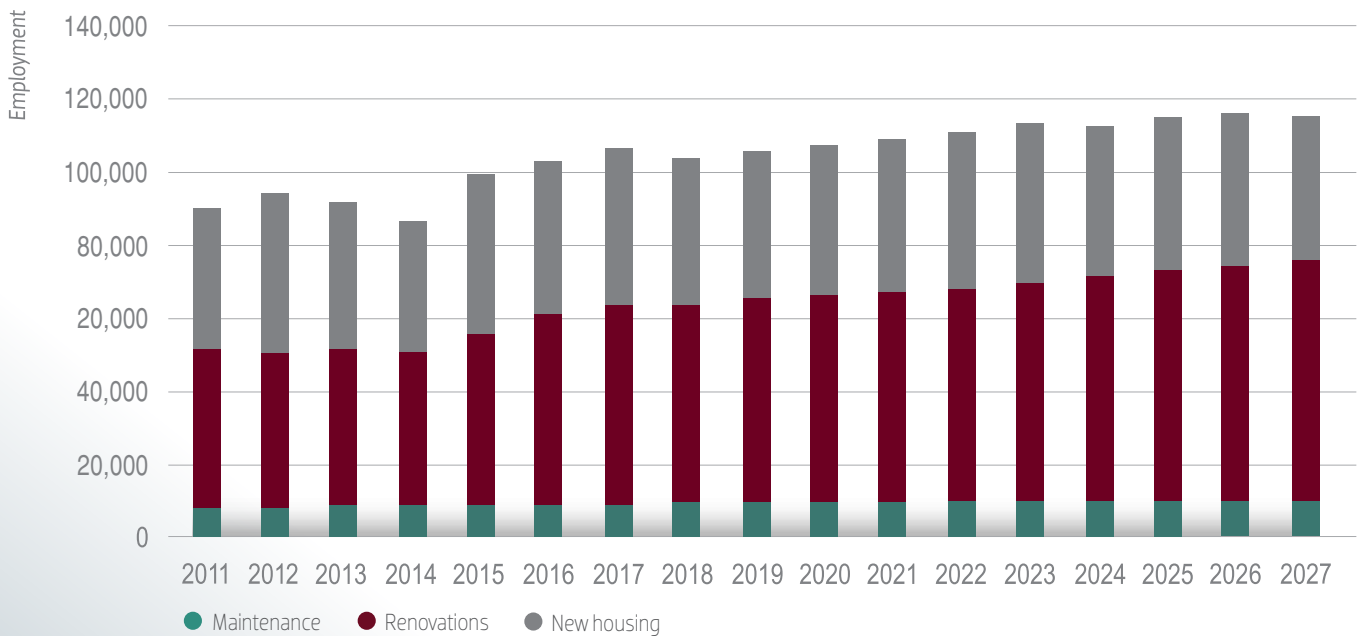
The strong pace of employment growth combined with industry replacement (retirement and mortality) demands maintain unemployment rates at critically low levels through the 2020 peak. Looking ahead, demands continue to rise at a more modest pace, but industry must contend with the expected retirement of nearly 40,000 workers, or 22 percent of the current labour force, over the coming decade.

RESIDENTIAL SECTOR

Residential demands surged in 2017, driven by an acceleration in low-rise housing starts and strong renovation investment, tightening labour market conditions for many trades and occupations in the region. Growth in 2017 caps a nearly one-quarter (24 percent) expansion in residential employment since 2014. The pace of new housing construction is expected to moderate in 2018, but employment requirements should continue on an upward trend, driven by further growth in multi-family, mid- and high-rise housing and increases in renovation work.

Figure 5 shows the employment trends by sector for residential construction in the GTA.

Figure 5: Residential construction employment growth outlook, Greater Toronto Area



Source: Statistics Canada, BuildForce Canada

⁶ The GTA includes the municipalities of Ajax, Aurora, Bradford West Gwillimbury, Brampton, Brock, Caledon, Clarington, East Gwillimbury, Georgina, Georgina Island, Halton Hills, King, Markham, Milton, Mississauga, Newmarket, Oakville, Oshawa, Pickering, Richmond Hill, Scugog, Toronto, Uxbridge, Vaughan, Whitby, and Whitchurch-Stouffville.

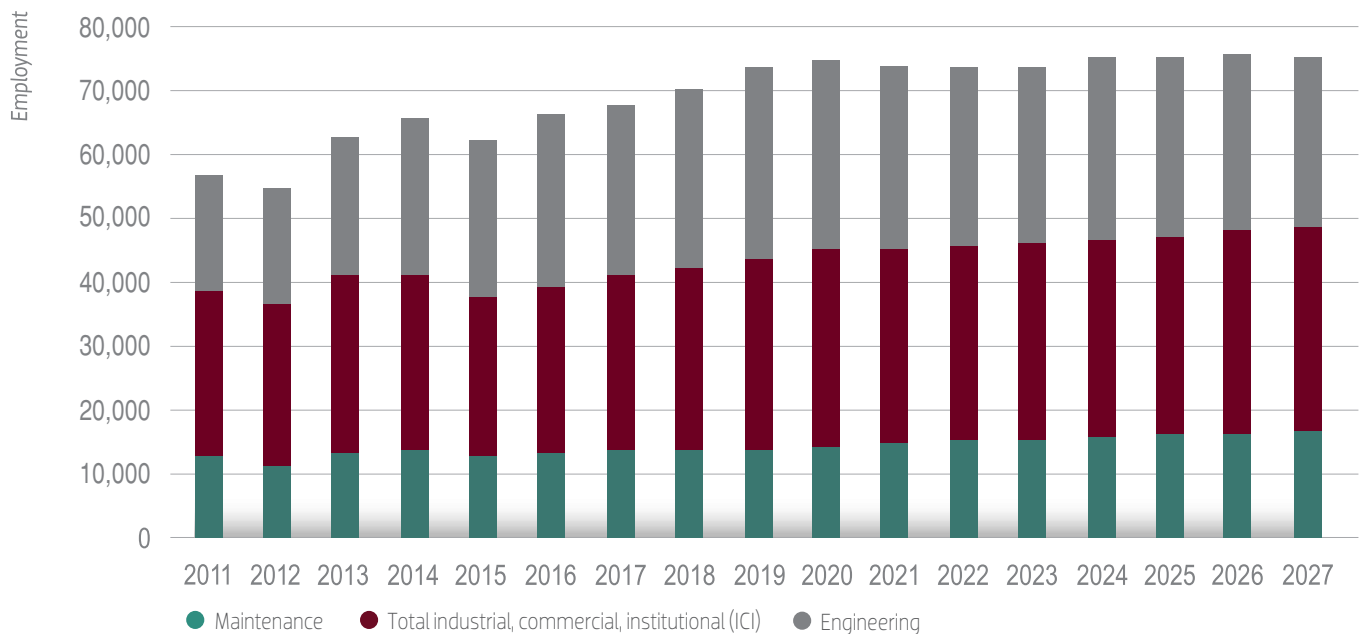
Table 8: Residential market rankings, Greater Toronto Area

TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	5	4	4	4	4	3	4	3	4	3	3
Carpenters	4	4	4	3	3	3	3	3	3	3	3
Concrete finishers	4	3	4	3	3	3	3	3	3	3	3
Construction estimators	4	3	3	3	3	3	4	3	4	3	3
Construction managers	5	4	3	4	3	3	4	3	3	3	3
Contractors and supervisors	5	4	3	3	3	3	3	3	3	3	3
Crane operators	4	3	3	3	3	3	4	3	3	3	3
Electricians	4	4	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	3	4	4	4	3	4	3	3	3	3
Floor covering installers	4	4	3	3	3	3	4	3	3	3	3
Gasfitters	4	3	3	3	3	3	4	3	4	3	3
Glaziers	4	3	3	4	3	3	4	3	3	3	3
Heavy equipment operators (except crane)	4	3	4	3	3	3	3	3	3	3	3
Home building and renovation managers	4	3	4	4	4	4	4	3	4	4	3
Insulators	4	3	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	4	4	4	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	5	4	4	3	3	3	3	3	3	3	3
Plumbers	4	4	3	3	3	3	4	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	3	3	3	4	3	3	3	3
Residential and commercial installers and servicers	4	4	4	3	3	3	3	3	3	3	3
Roofers and shinglers	4	4	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	3	3	3	4	3	3	3	3
Tilesetters	4	4	3	3	4	3	4	3	4	3	3
Trades helpers and labourers	4	3	3	3	3	3	3	3	3	3	3
Truck drivers	4	3	4	3	3	3	3	3	3	3	3
Welders and related machine operators	4	3	4	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS, GREATER TORONTO AREA

- Housing starts are expected to recede in 2018 before rising to a peak of 46,000 units by 2023.
- Renovation work, which accounted for just over half (51 percent) of total residential employment in the GTA in 2017, rises to 57 percent by 2027.
- Overall employment rises by 8,800 jobs – an 8 percent increase from the 2017 starting point.

Figure 6: Non-residential construction employment growth outlook, Greater Toronto Area

Source: Statistics Canada, BuildForce Canada

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

The rise in both new housing and renovation activity tightened labour market conditions for most residential trades and occupations in 2017, as reflected in Table 8. Recruiting challenges for some trades and occupations in 2017 have resulted in project delays, which carries work into 2018 and sustains strong employment demands, even as overall housing starts recede. Tighter market conditions for trades and occupations with older age profiles, including bricklayers and construction managers, may persist across the scenario period. Markets for trades that traditionally rely on mobility between the residential and non-residential sectors, such as carpenters, face added recruiting challenges due to competing demands across both market segments. Even with moderate rates of growth, it will remain a challenge for industry to keep pace with the recruiting and training requirements for new workers.

For the GTA, residential rankings are reported for 27 of the 34 covered trades and occupations.

NON-RESIDENTIAL SECTOR

Non-residential market demands are expected to continue to experience strong growth through 2020. Driven by major transportation and other infrastructure projects combined with a major nuclear refurbishment project, high construction demand will span the entire scenario period.

ICI (industrial, commercial, institutional) building construction requirements follow steady population growth and recent residential expansion in the GTA, contributing 3,400 new non-residential jobs between 2018 and 2020.

Employment related to major engineering and infrastructure projects, including the Eglinton Crosstown LRT (light rail transit), Finch and Hurontario LRTs, Gardiner Expressway rehabilitation, and Darlington nuclear refurbishment, should push demand to a near-term peak in 2019, increasing workforce requirements by an additional 3,000 workers over the next two years.

Overall, non-residential employment requirements are expected to rise by 7,400 jobs between 2017 and 2027 – an 11 percent increase.

Figure 6 shows the employment trends by sector for non-residential construction in the GTA.

Table 9: Non-residential market rankings, Greater Toronto Area

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	5	4	4	4	4	5	4	4	3	3	3
Bricklayers	4	4	4	3	3	3	3	3	3	3	3
Carpenters	4	4	4	3	3	3	3	3	3	3	3
Concrete finishers	3	4	4	3	3	3	3	3	3	3	3
Construction estimators	4	4	4	3	3	3	3	3	3	3	3
Construction managers	4	3	4	4	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	3	3	3	3	3	3	3	4	3	3	3
Contractors and supervisors	3	4	4	3	3	3	3	3	3	3	3
Crane operators	4	4	4	3	3	3	3	3	3	3	3
Electrical power line and cable workers	3	4	4	3	3	3	3	3	3	3	3
Electricians	3	4	4	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	4	4	4	3	3	3	3	3	3	3
Floor covering installers	4	4	4	4	3	3	3	3	3	3	3
Gasfitters	3	4	4	3	3	3	3	3	3	3	3
Glaziers	4	4	4	4	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	4	4	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	4	4	4	4	3	3	3	3	3	3	3
Insulators	4	4	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	4	3	3	3	3	4	3	3	3
Painters and decorators (except interior decorators)	4	4	4	4	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	4	4	3	3	3	3	3	3	3
Plumbers	3	4	4	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	4	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	3	4	3	3	3	3	3	3	3	3
Roofers and shinglers	3	4	4	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	3	4	4	3	3	3	3	3	3	3	3
Tiles setters	4	4	4	4	3	3	3	3	3	3	3
Trades helpers and labourers	3	4	4	3	3	3	3	3	3	3	3
Truck drivers	3	4	4	3	3	3	3	3	3	3	3
Welders and related machine operators	4	4	4	4	3	3	3	3	3	3	3

Source: BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, GREATER TORONTO AREA

- Overall employment in the non-residential sector adds 7,400 jobs over the decade, most of which are concentrated between 2018 and 2020.

- Low levels of unemployment and an aging workforce maintain recruitment challenges even during periods of slower growth later in the scenario period.
- Heavy industrial activity, including a nuclear refurbishment project, sustains engineering employment across the decade.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Table 9 provides a summary of non-residential labour market rankings for the GTA. Labour market conditions are expected to remain tight over the near term as the workforce struggles to keep up with persistent employment increases. Large numbers of workers have been drawn in to meet local demands, but mobility is potentially impeded by higher living and commuting costs in the GTA.

Market conditions for trades and occupations that traditionally rely on mobility between the residential and non-residential sectors, such as carpenters, face unique recruitment challenges due to simultaneous competing demands across multiple market segments. Trades and occupations with specialized skills and experience, including boilermakers, will continue to be required in large numbers to meet nuclear refurbishment requirements. Labour market challenges may emerge as a second nuclear refurbishment project in Southwestern Ontario starts in 2020 and continues across the scenario period.

For the GTA, non-residential rankings are reported for 31 of the 34 covered trades and occupations.

NORTHERN ONTARIO

Increased industrial activity and a recovery in housing construction contributed to a second consecutive year of employment growth in Ontario's Northern region⁷, following several years of contraction.

Looking forward, construction requirements are expected to strengthen in 2018 and 2019, as infrastructure projects overlap with projects still underway and residential demands continue to rise. Modest-sized mining expansion projects, the planned Wataynikaneyap Transmission Project, and other smaller infrastructure projects are the dominant drivers of non-residential employment.

New housing demand is expected to continue on a modest upward trend through 2020, but this follows several years of declines. Rising levels of residential and industrial investment are expected to support modest growth in overall ICI (industrial, commercial, institutional) construction, maintaining employment near 2017 levels.

Labour market conditions are expected to remain generally balanced across the scenario period. Recruitment challenges are anticipated during peak periods, however, due to the relatively small size of the Northern Ontario workforce, the remote location of some major projects, and an older workforce.

The uncertain commodity price outlook has delayed final investment decisions for many proposed resource development projects. Any significant new investments would likely induce demands well ahead of the available workforce, requiring active workforce recruitment and training strategies

Ongoing challenges to retain and attract young workers also poses a potential risk to the region's capacity to meet labour requirements, even during periods of slower growth.

RESIDENTIAL SECTOR

Residential construction has been on a downward trend since 2011, and employment requirements have fallen by nearly half since then. A modest recovery in new housing construction, alongside growth in renovations, is expected to raise related employment requirements to a high in 2020. Continued declines in population growth and lower housing starts constrain the long-term growth outlook, but employment remains slightly above 2017 levels over the scenario period.

Figure 7 shows the employment trends by sector for residential construction in Northern Ontario.

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

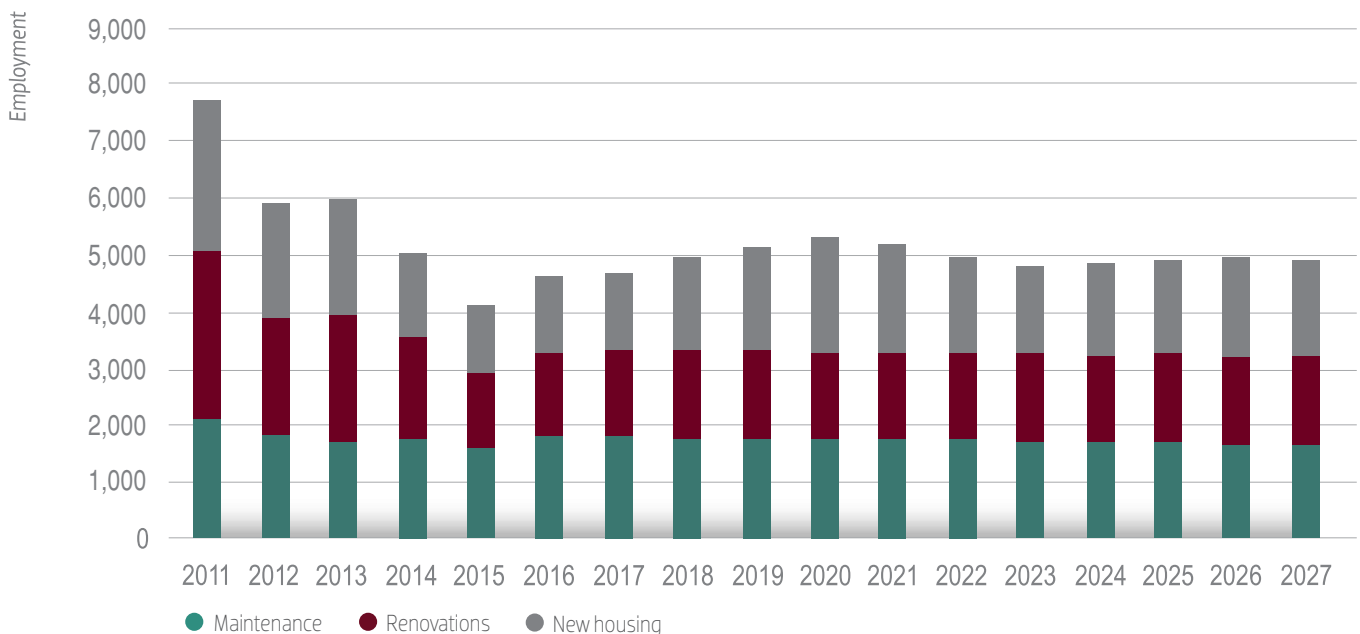
Table 10 shows that over the near term, residential labour market conditions for Northern Ontario are generally balanced, signalled by a rank of 3. A further rise in new housing construction expected between 2018 and 2020 is likely to result in recruitment challenges for some trades and occupations more concentrated in new construction.

Older age demographics and expected retirements contribute to lower natural rates of unemployment, maintaining balanced market conditions at lower levels of employment over the latter half of the scenario period as new housing activity slows.

For Northern Ontario, residential rankings are reported for 11 of the 34 covered trades and occupations.

⁷ The Northern region includes the economic regions of the Northeast and Northwest as defined by Statistics Canada, including the Census Metropolitan Areas (CMAs) of Thunder Bay and Sudbury. Cities include Sault Ste. Marie, Timmins, Kirkland Lake, Dryden, Kenora and Fort Frances.

Figure 7: Residential construction employment growth outlook, Northern Ontario



Source: Statistics Canada, BuildForce Canada

Table 10: Residential market rankings, Northern Ontario

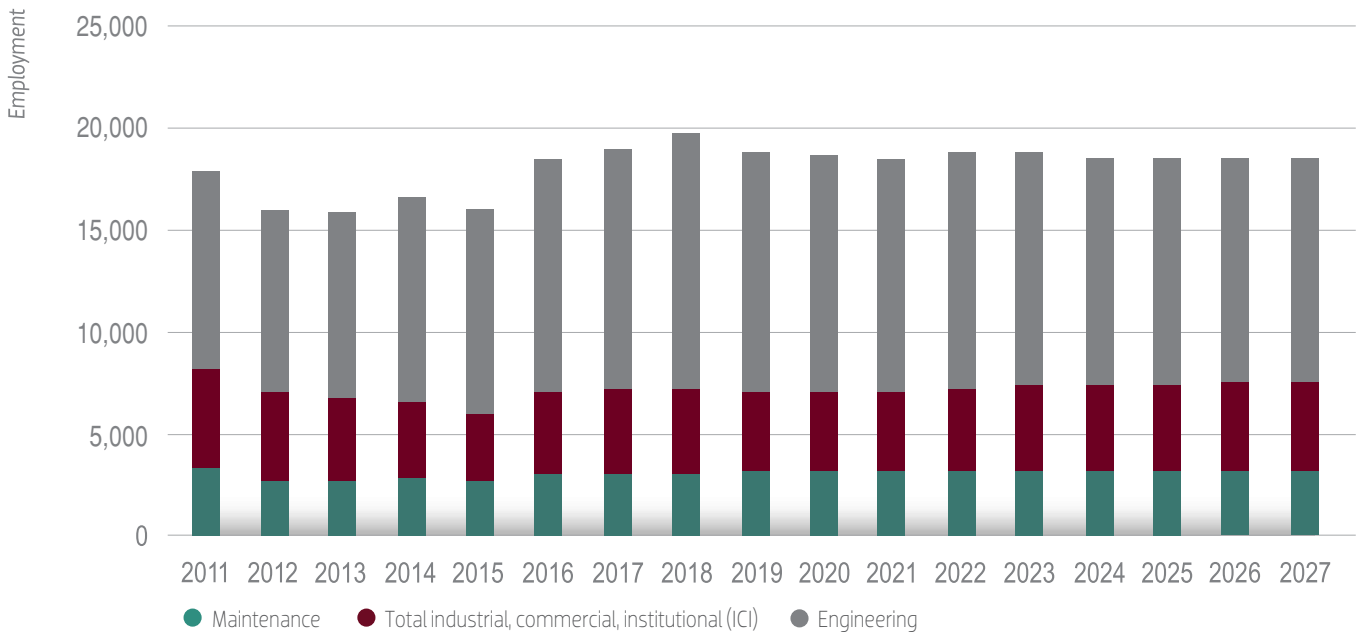
TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	4	4	3	3	3	2	3	3	3	3	3
Carpenters	3	4	4	4	3	2	3	3	3	3	3
Construction managers	4	5	4	5	3	2	3	3	4	4	3
Contractors and supervisors	3	4	3	3	3	3	3	3	3	3	3
Floor covering installers	3	4	3	3	3	3	3	3	3	3	3
Home building and renovation managers	4	4	4	3	4	3	4	4	4	4	4
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	4	3	3	3	2	3	3	3	3	3
Residential and commercial installers and servicers	3	4	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	4	3	4	3	2	2	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS, NORTHERN ONTARIO

- Housing starts recovered to above 1,000 units in 2017 and are expected to average between 1,300 units over the scenario period.
- The largest increases are expected between 2018 and 2020.
- Renovation and maintenance work accounted for seven in 10 residential jobs in 2017.

Figure 8: Non-residential construction employment growth outlook, Northern Ontario



Source: Statistics Canada, BuildForce Canada

NON-RESIDENTIAL SECTOR

Engineering investment has grown significantly in Northern Ontario. Related employment requirements are expected to strengthen further in the near term, as the timing of infrastructure projects overlaps with projects still underway. The planned start of the Wataynikaneyap Transmission Project and other smaller infrastructure projects should help to sustain employment over the medium term.

Overall non-residential employment requirements are expected to slow across the scenario period, leaving employment lower by 550 jobs by 2027.

Figure 8 shows the employment trends by sector for non-residential construction in Northern Ontario.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Table 11 shows non-residential labour market rankings for Northern Ontario. Major projects are expected to tighten market conditions for some trades and occupations in 2018. The completion of current major projects will release workers temporarily, loosening market conditions for selected trades and occupations in 2019. The timing of major projects can have a significant impact on Northern Ontario’s relatively small labour market. In addition, an older workforce and expected retirements may create recruiting challenges, even during periods of slower growth.

For Northern Ontario, non-residential rankings are reported for 25 of the 34 covered trades and occupations.

NON-RESIDENTIAL HIGHLIGHTS, NORTHERN ONTARIO

- Moderate growth in ICI (industrial, commercial, institutional) building construction requirements contributes to sustaining overall non-residential construction demands over the latter half of the scenario period.
- An uncertain outlook for commodity prices has delayed final investment decisions for many proposed resource development projects, but a proposed new all-weather access road may renew resource development plans.

Table 11: Non-residential market rankings, Northern Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	3	4	3	3	3	3	3	3	3	3	3
Bricklayers	3	3	2	3	3	3	3	3	3	3	3
Carpenters	3	3	2	3	3	3	3	3	3	3	3
Construction estimators	3	4	2	3	3	3	3	2	3	3	3
Construction managers	4	4	3	3	3	4	3	3	3	3	3
Construction millwrights and industrial mechanics	3	4	3	3	3	3	3	2	3	3	3
Contractors and supervisors	4	4	3	3	3	3	3	3	3	3	3
Electricians	3	4	3	3	3	3	3	2	3	3	3
Gasfitters	3	3	3	3	3	3	3	3	3	3	3
Glaziers	3	3	3	3	3	4	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	2	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	4	4	3	3	3	3	3	3	3	3	3
Insulators	3	3	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	2	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	2	3	3	4	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	3	2	3	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	2	3	3	3	3	3	3	3	3
Truck drivers	4	3	2	3	3	3	3	3	3	3	3
Welders and related machine operators	3	3	2	3	3	3	3	3	3	3	3

Source: BuildForce Canada

SOUTHWESTERN ONTARIO

Back-to-back years of strong construction employment growth in Southwestern Ontario⁸, following years of weakness and out-mobility, contributed to the emergence of recruitment challenges for many trades and occupations in 2017.

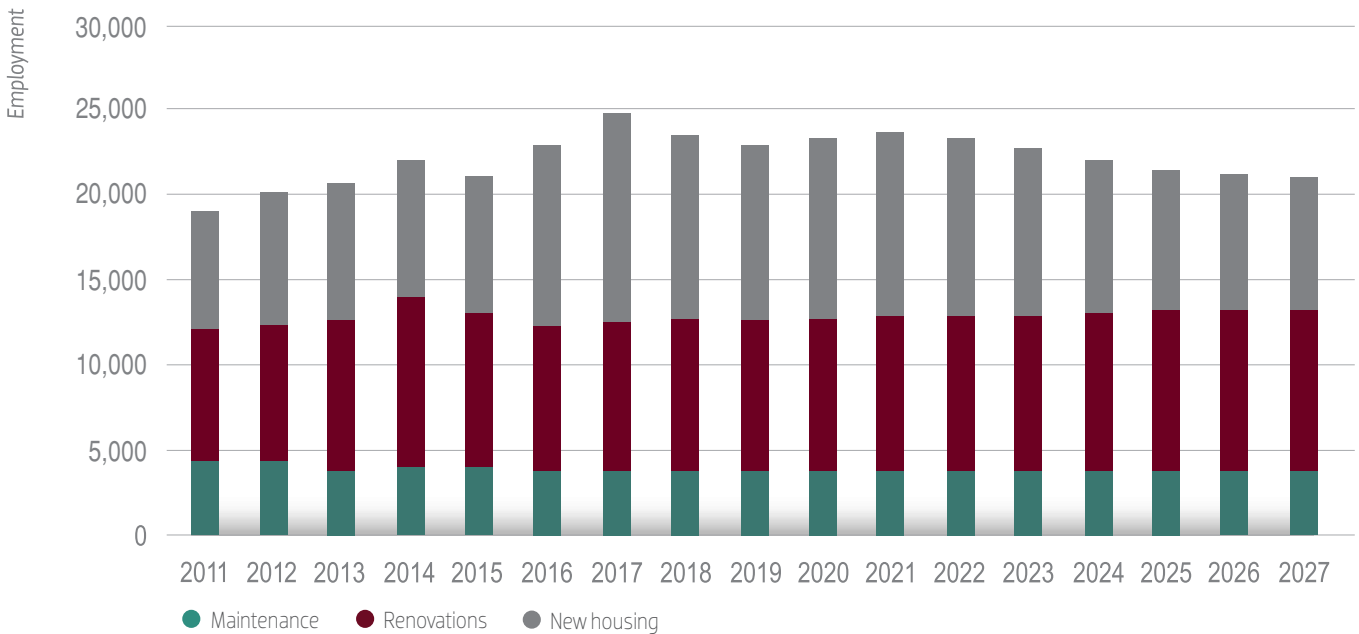
Construction demands are expected to rise further over the near term, driven by new industrial investment and a ramp-up in engineering construction demands. Over the longer term, continued moderate declines in residential construction demands are partly offset by sustained higher levels of engineering construction and rising ICI (industrial, commercial, institutional) building investment.

Total construction employment is expected to rise a further 6 percent by 2020, adding an estimated 3,300 new jobs, before receding back toward 2017 levels. Meeting rising requirements for specialized trades over the next three years may be difficult given competing demands from neighbouring regions and an aging workforce.

Diverging trends between residential and non-residential demands over the latter half of the scenario period may present opportunities for recruiting residential workers, depending on skills and experience, to transition to non-residential construction.

The anticipated retirement of close to 10,000 workers over the coming decade is expected to be met by an estimated 11,700 first-time new entrants aged 30 and younger expected to be drawn from the local population.

Figure 9: Residential construction employment growth outlook, Southwestern Ontario



Source: Statistics Canada, BuildForce Canada

RESIDENTIAL HIGHLIGHTS, SOUTHWESTERN ONTARIO

- Housing starts topped 8,000 units in 2017 – double the 2011 levels.

- Overall residential employment declines by 3,900 jobs by the end of the scenario period, as new housing activity slows and is only partially offset by moderate increases in renovation and maintenance work.
- An aging workforce and renovation activity are expected to maintain balanced labour market conditions for most trades and occupations over the scenario period.

⁸ The Southwestern region includes the economic regions of London, Windsor-Sarnia, and Stratford-Bruce Peninsula as defined by Statistics Canada, including the Census Metropolitan Areas (CMAs) of London and Windsor. Cities include Chatham, Ingersoll, Sarnia, Stratford, Goderich, and Owen Sound.

Table 12: Residential market rankings, Southwestern Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	5	4	3	3	3	3	3	3	3	3	3
Carpenters	5	3	3	3	3	3	3	2	3	3	3
Concrete finishers	4	3	3	3	3	3	3	3	3	3	3
Construction estimators	4	3	3	3	3	3	3	2	3	3	3
Construction managers	5	4	3	4	3	3	3	2	3	3	3
Contractors and supervisors	4	4	3	3	3	3	3	3	3	3	3
Electricians	4	4	3	3	3	3	3	2	3	3	3
Floor covering installers	4	4	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	3	3	3	3	3	3	3	3	3
Home building and renovation managers	5	4	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	3	3	3	3	3	3	3	3	3
Plumbers	4	4	3	3	3	3	3	2	3	3	3
Residential and commercial installers and servicers	4	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Tilesetters	5	2	2	4	4	3	3	2	3	3	3
Trades helpers and labourers	4	4	3	3	3	3	3	2	2	3	3
Truck drivers	4	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL SECTOR

Overall residential construction activity receded in 2017 following a 71 percent rise in housing starts since 2015. By 2021, residential construction should peak again. Slowing rates of population growth should pull housing starts and related employment requirements lower over the latter half of the decade, though employment is likely to remain at relatively high levels supported by rising renovation activity.

An aging workforce and rising renovation activity are expected to maintain balanced labour market conditions for most trades and occupations over the scenario period.

Figure 9 shows the employment trends by sector for residential construction in Southwestern Ontario.

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Table 12 shows that new housing construction demands raised recruitment requirements above the available regional workforce

in 2017. Labour market conditions for trades and occupations involved in new construction are expected to return to balance in 2018 as housing starts recede. Over the scenario period, aging workforce demographics and rising renovation demands should contribute to maintaining balanced labour market conditions, even at lower levels of employment.

For Southwestern Ontario, residential rankings are reported for 18 of the 34 covered trades and occupations.

NON-RESIDENTIAL SECTOR

Rising engineering construction and new industrial investments in the Sarnia area, major bridge work, and other infrastructure demands alongside an up-cycle in ICI building construction demands are expected to maintain significant market challenges in Southwestern Ontario through 2020.

Overall non-residential employment should rise by 4,800 jobs by 2020, and remain above 30,000 over the scenario period. The start of a major nuclear refurbishment project in 2020 is expected to sustain employment for several specialized trades across

NON-RESIDENTIAL HIGHLIGHTS, SOUTHWESTERN ONTARIO

- ICI building construction requirements raise demands by 2,600 jobs before cycling down in 2021.

- An international bridge and rising industrial demands in the Sarnia area require additional skilled workers between 2018 and 2020.
- The start of a major nuclear refurbishment project in 2020 sustains demands across the remainder of the scenario period for a selected group of trades.

the decade. A new chemical facility in Sarnia and increasing commercial building construction should increase workforce demands by 2,600 jobs before cycling down in 2021.

Figure 10 shows the employment trends by sector for non-residential construction in Southwestern Ontario.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

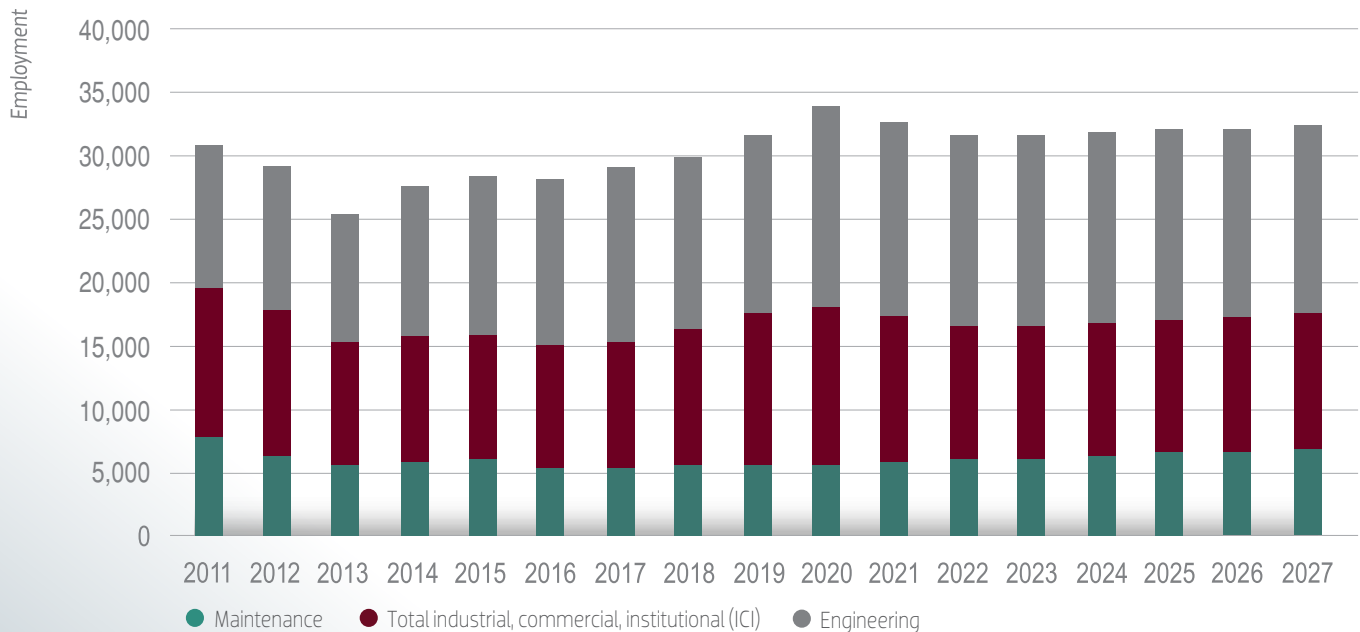
Ongoing projects requiring specialized skills are likely to sustain recruitment challenges for many trades and occupations, especially over the near term. Labour market conditions are broadly balanced over the latter half of the scenario period, but recruitment challenges are likely to persist for trades and

occupations with older age demographics and specialized skills required for a major nuclear refurbishment project expected to commence in 2020 and continuing out to 2027. There will be two nuclear refurbishment projects underway throughout most of the entire scenario period.

For Southwestern Ontario, non-residential rankings are reported for 28 of the 34 covered trades and occupations.

Table 13 shows non-residential rankings for Southwestern Ontario. Labour markets are generally balanced across the scenario period, with overall activity and employment sustained at high levels. The start and completion of major projects creates sporadic tight and loose market conditions for several trades and occupation at various times across the decade.

Figure 10: Non-residential construction employment growth outlook, Southwestern Ontario



Source: Statistics Canada, BuildForce Canada

Table 13: Non-residential market rankings, Southwestern Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	4	3	4	5	4	3	3	3	3	3	3
Bricklayers	4	3	3	4	3	3	3	3	3	3	3
Carpenters	5	4	3	3	2	3	3	3	3	3	3
Concrete finishers	4	4	3	3	3	3	3	3	3	3	3
Construction estimators	5	3	3	4	4	3	4	4	4	3	3
Construction managers	4	4	5	4	3	2	3	3	3	3	3
Construction millwrights and industrial mechanics	3	3	4	5	4	3	3	3	3	2	3
Contractors and supervisors	4	3	4	4	3	3	3	3	3	3	3
Crane operators	4	4	3	3	3	3	3	3	3	3	3
Electricians	3	3	4	4	3	3	3	3	3	3	3
Floor covering installers	3	4	4	4	3	2	3	3	3	3	3
Gasfitters	3	3	4	4	3	3	3	3	3	3	3
Glaziers	4	4	4	4	3	2	3	3	3	3	3
Heavy equipment operators (except crane)	4	4	4	3	2	2	3	3	3	3	3
Heavy-duty equipment mechanics	4	4	4	4	3	3	4	4	4	3	3
Insulators	4	3	4	4	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	4	4	5	4	3	3	4	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	4	4	3	2	3	3	3	3	3
Plumbers	3	3	4	4	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	5	4	2	2	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	2	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	4	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	4	5	5	5	3	3	4	3	3	3	3
Trades helpers and labourers	4	3	3	3	2	3	3	3	3	3	3
Truck drivers	4	4	3	3	2	3	3	3	3	3	3
Welders and related machine operators	3	3	3	5	4	3	4	4	4	4	4

Source: BuildForce Canada

REPLENISHING A RETIRING WORKFORCE

While Ontario’s construction industry is anticipated to grow at a more moderate pace over the coming decade, it is still faced with an aging workforce. Sustaining elevated levels of employment may become increasingly difficult as the province contends with replenishing a retiring workforce. Retirements are expected to draw an estimated 87,300 workers from the province’s construction industry over the next 10 years. Such a shift in the workforce creates the potential for a significant skills vacuum that requires proactive planning.

Although construction employment growth is expected to moderate, labour force growth is limited by a declining rate of population growth, which will require active recruiting by industry leaders. Across the scenario period, population growth averages 1 percent per year, slightly below the 1.1 percent per year experienced over the past decade. Ontario’s natural rate of population growth (births less deaths) is anticipated to decline over the coming decade due to the aging of the population. Net in-migration, which propped up population growth to elevated levels in 2016 and 2017, is expected to recede from peak levels as international migration returns to more normal levels. Over the coming decade, net in-migration is expected to play a key role in Ontario’s population growth.

Figure 11 shows the components of population growth for Ontario.

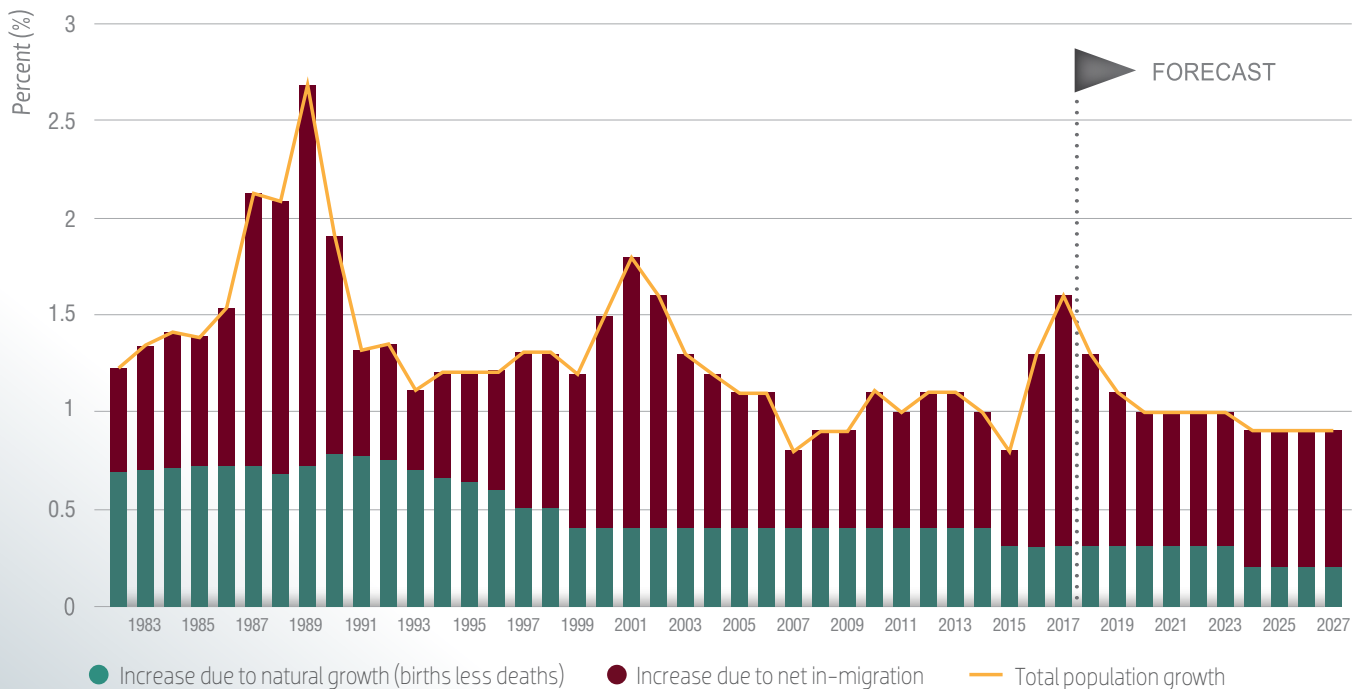
Table 14: Population age distribution (%), Ontario

AGES	2017	2027
0–14	15.9	15.9
15–24	12.6	10.4
25–54	41.2	40.0
55–64	13.6	12.7
65+	16.7	21.0

Source: BuildForce Canada

An aging population continues to be a source of concern for Ontario and all Canadian provinces. Table 14 shows Ontario’s population age distribution. By 2027, the share of the population in prime working age (25-54 years old) is expected to decline, and at the same time, the share of the population in older age brackets (65 years and over) is expected to increase. Simultaneously, the share of the population that is potentially available to enter the workforce (15-24 years old) is expected to continue declining.

Figure 11: Sources of population growth (%), Ontario



Source: Statistics Canada, BuildForce Canada (2018–2027)

This trend indicates that the share of the population that is potentially retiring or has a lower labour force participation rate (the percent of the population 15 years and older in the labour force) is expected to continue increasing, while the share of the population that is potentially available to enter the workforce is expected to decline.

Labour force participation by older individuals is much lower than for those in their prime working years. As a considerable share of the population moves into the older age brackets, the labour force participation rate is expected to fall steadily.

Replenishing a retiring workforce and meeting future demands will depend on construction's ability to increase its share of new entrants.

In the scenario period, the retiring workforce (87,300 workers) exceeds the available youth coming into the industry. Based on historical hiring trends, the province's construction industry is only expected to draw an estimated 84,300 first-time new entrants from the local population aged 30 and younger over the next 10 years. Such market pressure will require industry to acquire workers from outside of the province or from other industries, or find new ways to improve its share of new entrants.

Increasing the number of new entrants will require industry leaders to increase initiatives to engage underrepresented sources of labour, including Indigenous people and women.

Canada's Indigenous population has the country's highest rate of population growth and a higher propensity to choose construction as their career choice. Ontario is home to most Indigenous people in Canada, with more than a quarter (26 percent) of all Indigenous people residing in the province. Currently, Indigenous people account for about 1.9 percent of the construction workforce in Ontario, representing a significant opportunity for the industry.

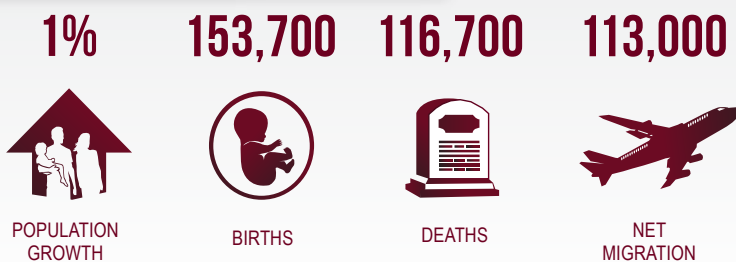
Although female participation in construction has increased over the past few years, women continue to be underrepresented in Ontario's construction industry. The province's construction workforce is made up of approximately 13 percent women, of which about 26 percent work directly on construction projects, while the remaining 74 percent work primarily in administrative and management-related occupations in the construction industry. This translates into an on-site participation rate of only 4.4 percent working in direct trades and occupations.

Figure 12 shows the share of female employment in direct trades and occupations for Ontario.

While female participation in the construction industry had been stagnant since the mid 1990s, recent increases in construction activity has raised their representation, driven by increased wages and positive job prospects. High levels of activity carried over the near term are expected to maintain female representation at relatively higher levels, but as employment growth weakens, it is expected to discourage women from a career in the construction trades. Over the long run, however, the share of women in direct construction trades and occupations is expected to stabilize at above historical levels as Ontario's construction employment is sustained at elevated levels.

Table 15 illustrates the employment outlook for men and women in direct construction trades and occupations in Ontario.

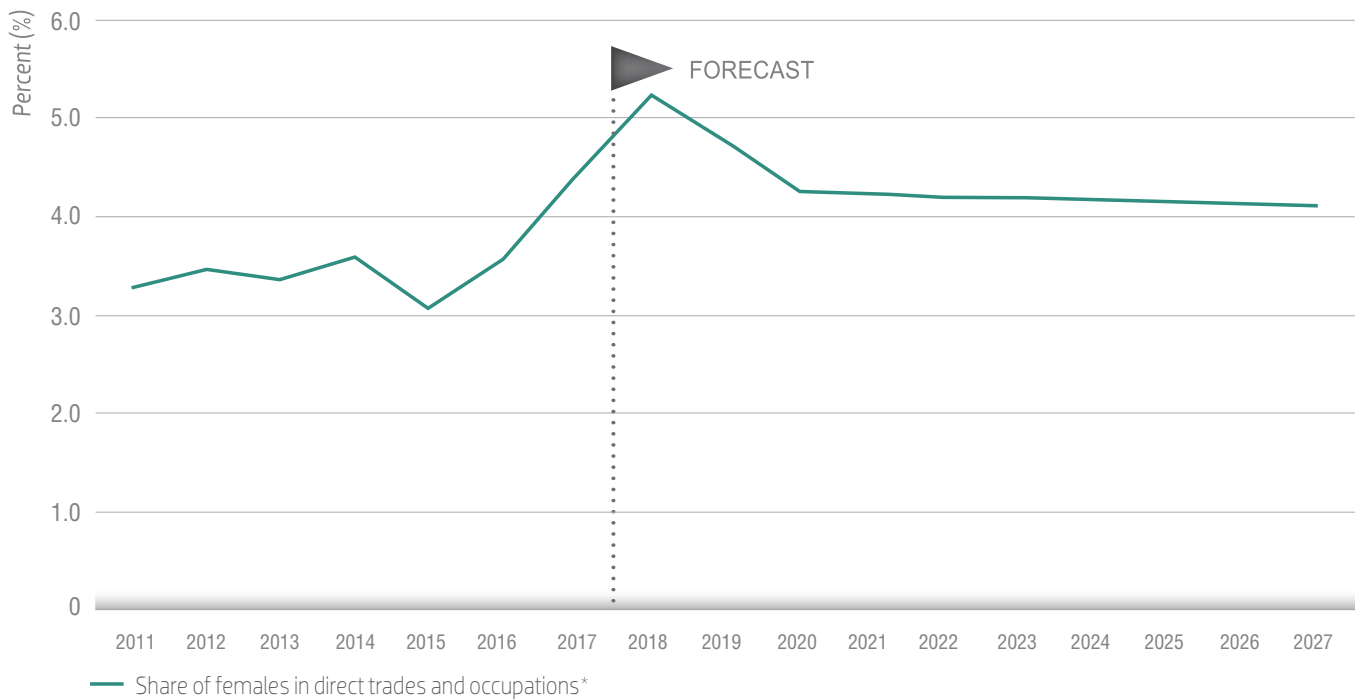
10-YEAR AVERAGE



BY 2027





Figure 12: Share of women in direct trades and occupations, Ontario



* **Direct trades and occupations** refers to the 34 trades and occupations tracked by BuildForce Canada, which excludes administrative-type occupations.

Source: BuildForce Canada calculations based on Statistics Canada’s Labour Force Survey (LFS) and 2011 National Household Survey (NHS)

Table 15: Construction employment by gender, Ontario (total direct trades and occupations)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	395,300	390,300	395,200	404,600	407,500	409,600	411,800	410,700	413,800	414,400	411,000
	18,300	21,600	19,900	18,000	18,000	18,000	18,000	17,900	17,900	17,900	17,600

Source: BuildForce Canada calculations based on Statistics Canada’s Labour Force Survey (LFS) and 2011 National Household Survey (NHS)

CONCLUSIONS AND IMPLICATIONS

Ontario's construction industry is amid strong cycles in both the residential and non-residential sectors. Meeting peak demand requirements will depend on mobility across sectors and regions.

Non-residential construction should continue on a steady upward trajectory, with investment expected to peak in 2020 driven by several transportation (public transit, roads, highways and bridges), utility (including nuclear refurbishment), and industrial projects. Beyond 2020, investment is expected to decline modestly from the peak, though employment is anticipated to remain well above historical levels.

In the residential sector, strong activity is expected to carry through to 2018. Increasing levels of immigration should remain a strong driver of population growth. Changes to mortgage eligibility rules, possible increases in interest rates, and the implementation of new building code changes could slow the pace of new housing construction between 2019 and 2020. Across the scenario period, renovation activity should rise steadily, and new homebuilding may

become relatively stable at currently historically high levels. While total residential employment may recede moderately, it should remain at near current levels across most regions over the scenario period.

Adding to market challenges is an aging workforce. While the pace of growth slows compared to the recent past, sustaining capacity over the latter half of the scenario period will be made more difficult by the expected retirement of 87,000 workers over the coming decade. Attracting new workers to the industry will be crucial in meeting long-term needs.

The industry scenario-based approach developed by BuildForce Canada to assess future labour market conditions provides a powerful planning tool for industry, government, and other stakeholders to better track labour market conditions and identify potential pressure points. The anticipated labour market conditions reflect the current industry expectations of population growth and schedules for proposed major projects. Any changes to these assumptions presents risks and potentially alters anticipated market conditions.

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