

Transportation Engineer

Design the roads, intersections, transit lines and signals that decide how a city moves.

TYPICAL PAY

\$101,000

a year, full time

PAY RANGE

\$67k to \$150k

starting to experienced

TIME TO QUALIFY

4 to 8 years

after high school

DEMAND

Good

job outlook

LICENCE NEEDED

Yes

regulated job

WHERE YOU WORK

**Consulting firms, city halls,
provincial ministries, transit agen...**

How you get there

- 1 High school** Grades 11 and 12
Calculus, Advanced Functions, Physics and Chemistry, usually with a minimum around 70% in each.
- 2 Accredited civil engineering degree** 4 to 5 years with co-op
Take the transportation stream: traffic, highway design, pavements, transit planning.
- 3 Work terms** During the degree
Traffic counts, construction inspection, drafting. Most consulting firms hire their juniors out of their own co-op pool.
- 4 Engineer-in-training** About 4 years
About four years of supervised experience registered with your provincial regulator.
- 5 P.Eng (professional engineer) licence** After about 4 years
Pass the law and ethics exam, submit your experience record, and you can seal road and intersection designs.

Pros and cons

- + You can drive past your work and see people using it
- + Safety improvements measurably reduce injuries and deaths
- + Steady demand from every city and province in the country
- Public meetings can get personal and loud
- Projects take years and politics can cancel them late
- Budgets force you to design the second best option

Good to know

Canada has about a million kilometres of road

For a country with a small population, that is an enormous network to design, maintain and rebuild. Most of it is managed by municipalities rather than the federal government.

One book sets every sign

The manual of uniform traffic control devices for Canada is why a stop sign in Halifax looks the same as one in Victoria. Transportation engineers apply it on nearly every project.

Optional boosts

Traffic signal operations. Road safety audits. Transit and active transportation. Traffic modelling software.

Where these numbers come from

Job Bank: Transportation engineer, wages (updated Nov 2025)
Transportation Association of Canada
Engineers Canada
University of Waterloo: Civil Engineering

Numbers checked September 2026. Pay figures are typical full-time annual amounts in Canadian dollars, based on Government of Canada Job Bank wage data and published salary grids. They vary by province, employer and experience. Tuition is for domestic students. Sources, links and the click-through version: <https://career.help/ca/careers/transportation-engineer>



Scan for the full clicker