

BRADLEY CARVER

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EDUCATION

University of British Columbia

Bachelor of Applied Science in Civil Engineering | CGPA: 94.4%

- Trek Excellence Scholarship (Top 5%) – 2023, 2024, 2025

Vancouver, BC

Expected April 2028

EXPERIENCE

Transportation Engineering Co-op

May 2025 – December 2025

Urban Systems Ltd.

Vancouver, BC

- Designed municipal corridor upgrades focused on active transportation and complete streets, producing drawings from concept to construction for bike lanes, multi-use paths, and traffic calming along major corridors in Metro Vancouver.
- Developed roadway geometry and created plan/profile sheets using Civil3D alignments, surface, and corridor modeling, integrating AutoTURN swept path analyses to validate design feasibility.
- Led production of design drawings for the 2026 BC Active Transportation Design Guide, ensuring clear illustration of updated standards. Reviewed local and international guidelines to identify gaps and ensure drawings aligned with guidance.
- Modeled and analyzed traffic conditions using Synchro, SimTraffic and Excel to inform intersection design, signal/crossing warrants, signal timing, and traffic studies.
- Analyzed transportation network gaps using GIS tools & open data to visualize network connectivity, accessibility, and safety, drafting planning documents for municipal transportation plans and TransLink service improvements.

Structural Engineering Co-op

May 2026 – August 2026

Read Jones Christoffersen Ltd.

Vancouver, BC

- Designed and modeled structures and components in SAP2000, ETABS, WoodWorks Sizer, spColumn, and Hilti Profis according to Canadian steel, timber, concrete, and building codes.
- Developed Python apps and Excel tools to streamline and accelerate design processes.

PROJECTS/LEADERSHIP

Vancouver Transit Pulse | Python, QGIS, Pandas, GeoPandas, NetworkX, Shiny, Folium, Scikit-Learn

January 2026

- Developed a geospatial transit connectivity simulator displaying 'travel bubbles' for Metro Vancouver using Translink GTFS data to model how infrastructure failures, weather events, and budget cuts impact city-wide transit connectivity.
- Engineered a time-dependent routing engine using NetworkX and Scikit-Learn (BallTree), utilizing Dijkstra's algorithm to generate dynamic accessibility isochrones from over 2 million transit schedule records.
- Built an interactive Shiny for Python dashboard featuring reactive Folium maps that allow users to stress-test network resilience and accessibility via infrastructure, speed, frequency, and user base adjustments.

UBC ITE Student Chapter

Vancouver, BC

Co-President

June 2026 – Present

Treasurer

June 2025 – May 2026

- Managed annual budget of over \$10,000, overseeing sponsorship funding and expense tracking for a team of over 20.
- Coordinated sponsors, guests, food, and venue for the UBC ITE Industry Night, with attendance of over 200.
- Achieved 1st place at the ITE Canada Collegiate Traffic Bowl, a transportation-themed trivia competition!

UBC Steel Bridge

Vancouver, BC

Design and Analysis Lead

June 2025 – May 2026

Various Roles

September 2023 – May 2025

- Led design of competition truss in AutoCAD and Altair S-FRAME, ensuring competitive structural efficiency and compliance with project constraints, leading to the team's all-time best performance at ASCE Nationals (9th of 216 teams).
- Spearheaded a full workflow overhaul by adopting the RFEM platform, then engineered an API-driven application that automated manual processes end-to-end. ([project link](#))
- Applied FEA and topology optimization to refine truss and joint designs using Inventor Nastran and Altair Inspire.
- Produced industry-standard, fabrication-ready drafting packages and models of truss and joints using AutoCAD and Inventor.

SKILLS

Technical: Civil3D, AutoTURN, Synchro, QGIS, Bluebeam Revu, Excel, VBA, Python, Pandas, GeoPandas

Engineering: Intersection & Roadway Design, Corridor Modeling, MMCD Standards, Cost Estimation, Traffic Modeling