

## Grant Waldie, P.Eng., PE

### PROJECT MANAGER – STRUCTURAL REHABILITATION

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Grant Waldie's previous experience in the construction industry has given him the capability to apply practical solutions to technical problems. Grant has been involved in the inspection of over 1,200 bridges, culverts, and marine structures. He has worked to develop reconstruction strategies and provided construction site services for a large number of rehabilitation projects.

In the realm of Bridge Inspections, Grant is a Project Manager who leads teams as they inspect structures all across North America, and work to develop rehabilitation strategies.

For Bridge Design, Grant is a Design Manager for pedestrian and short span bridges.

For Marine Structures, Grant has inspected docks/boardwalks/esplanades, and developed both repair strategies as well as complete replacement of floating structures.

During Grant's earlier years at Parsons, he gained experience in computer modeling, software-based design calculations, and load-rating structures. He possessed practical skills of both hand drafting and computer aided drafting, as well as experience in surveying, materials testing, cost-estimating, quantity take-offs, quality control, shop drawing review, contract administration, scheduling, and proposal writing.

An overview of his experience follows.

### WORK EXPERIENCE

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#### Conceptual and Detailed Design of Bridges:

Grant is currently the Design Manager and Engineer-of-Record for structures along a 29 km long wilderness pathway on the west coast of Vancouver Island, called the "Pacific Traverse Trail." There are 6 bridge types to be designed, ranging in size from 5m to 40m. Grant was part of the initial team that used simply a GPS and a machete to lay out the original pathway through the forest. Now that the trail has progressed from concept to detailed design, Grant is leading the structural design team that will create plans for each water crossing. The client is *Public Works and Government Services of Canada*, in coordination with *Parks Canada*. The expected fees to Parsons for the entire project will be roughly \$3 million.

**Bridge Inspections:** Grant is Lead Inspector and Project Manager, responsible for coordinating and performing detailed inspections on superstructures, substructures, decks, and approaches for cracks, collision damage, corrosion, local failures, fatigue, delamination, general condition, etc. and also composing final inspection reports, on the following projects:

#### Long-Span Bridges:

- Public Works and Government Services Canada – Alexandra Bridge, 2016;
- Public Works and Government Services Canada – Lower Liard Suspension Bridge, 2011, 2013, 2015;
- Parsons – Thousand Islands Bridge Inspection, 2012.

### YEARS OF EXPERIENCE

7

### EDUCATION

- B.A.Sc. Civil Engineering, University of British Columbia, 2010.
- Advanced Diploma in Civil Engineering Technology, Camosun College, 2008

### COURSEWORK/TRAINING

- Canadian National Railway Contractor Safety Program, 2017
- Federal Aviation Administration – Small Unmanned Aircraft Systems, 2016
- Aerial and Scissor Lift Safety, 2016
- Pacific Ropes – Fall Protection, 2016
- Alberta Bridgeworks Bridge Inspection Truck Operation, 2016
- WHMIS Training, 2015
- Envirosafety - Fall Protection, 2013
- National Highway Institute Introduction to Safety Inspection of In-Service Bridges, 2012
- Envirosafety - Confined Space Awareness, 2012
- American Railroad Engineering and Maintenance-of-Way Association (AREMA) – Bridge Inspection Seminar Completion, 2010

### PROFESSIONAL AFFILIATIONS

- Professional Engineer (P.Eng.)
  - British Columbia
  - Alberta
  - Saskatchewan
  - Manitoba
  - Ontario
  - Nova Scotia
- Professional Engineer (P.E.) in:
  - Washington State
  - Illinois
  - Texas

### YEARS WITH OTHER FIRMS

- Stantec – Structural Designer, 2008 (Summer)
- Read Jones Christofferson – Site Inspector, 2007 (Summer)

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## **Medium-Span Bridges, Rural Roads:**

- Public Works and Government Services Canada – Alaska Highway Truss Bridge Focused Inspection on cracks in end-posts, 2017
- LEDCOR – Sierra Yoho Desan Resource Road Bridge Inspections, 2011, 2013, 2016; 2017
- Public Works and Government Services Canada – Alaska Highway Bridge Inspection, Fort St. John to Watson Lake, 2011, 2013, 2015;
- Parks Canada – Banff National Park Bridge Inspections, 2010.

- Scansa Construction – General Labourer on High-Rise Apartment Buildings, 2006 (Summer)
- Vickery and Sons – General Labourer on Residential Developments and Home Renovations, 2004 / 2005 (Summer)

## **Medium-Span Bridges, Urban Roads:**

- Teck Resources – Industrial Chemical Plant Bridge, 2017
- City of Chilliwack - Five-Year Program for City Bridge Inspections, 2012-2016;
- Port Metro Vancouver - Clark Drive / Main Street / Westshore / Commissioner / Fraser Wharves Bridge Inspections, 2011, 2015, 2017

## **Hiking Trail Bridges:**

- Sunshine Coast Regional District Hiking Trail Bridge Inspections, 2017
- BC Parks – Juan de Fuca Trail Bridge Inspections, 2017;
- Parks Canada – West Coast Trail Bridge Inspections, 2012, 2015;
- City of Chilliwack - Parks bridge trail inspections, 2014;
- City of Burnaby - Patterson Pedestrian Bridge Inspection, 2014;
- Public Works and Government Services of Canada - Tofino Trail Bridge Inspections, 2014;
- Parks Canada - Jasper, Yoho, Kootenay National Park Trail Bridge Inspections, 2012.

## **Moveable Bridges:**

- Parks Canada – Chambly Canal Moveable Bridge Inspections, 2011.

## **Railway Bridges:**

- Hudbay Minerals - Main Gate Trestle Inspection, 2016;
- OmniTrax - Hudson's Bay and Carlton Trail Railway Rail bridge inspections, 2014, 2016, 2017;
- OmniTrax - Kettle Falls International Rail bridge inspections, 2016, 2017;
- Keewatin Railroad Bridge Inspections, 2016, 2017;
- Trillium Railway - Rail bridge inspections, 2016, 2017;
- Sydney Coal Railway - Rail bridge inspections, 2016, 2017;
- Rail America / Genesee Wyoming - Cape Breton, Goderich Exeter, Ottawa Valley, and Southern Ontario Rail bridge inspections, 2016, 2017.

## **Culvert / Outfalls:**

- OmniTRAX – Railway Culvert Inspection Program, 2017;
- FortisBC – Alex Fraser Bridge Culvert, 2016;
- Metro Vancouver – Pump Station Inspection, 2016;
- District of West Vancouver – Outfall Inspections, 2013;

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- BC Ministry of Transportation & Infrastructure (BC MoT) – Highway Culvert Inspection, 2013;
- District of West Vancouver – Culvert Inspections, 2012.

## **Boardwalk / Esplanade:**

- Canadian Mortgage and Housing Corporation – Granville Island Marine Works Inspection, 2014;
- City of New Westminster – New Westminster Esplanade Inspections and Reconstruction Design, 2012, 2016, 2017.

## **Emergencies:**

- Genesee Wyoming – Rail Bridge in Guelph Ontario, vehicle impact damage inspection, 2016;
- City of Surrey – Nicomekl Sea Dam, overloaded vehicle on load-posted structure, damage inspection, 2014;
- Township of Langley – 16<sup>th</sup> Avenue at 204 Street, vehicle impact damage inspection, 2014;
- Township of Langley – Glover Road, vehicle impact damage inspection, 2013;
- TransLink – Post Earthquake Pattullo Bridge Inspection, 2012.

## **Load-Rating Inspections:**

Conducted inspections and coordinated the design team for load ratings on the following projects:

- Sunshine Coast Regional District Load Rating, 2016;
- City of Chilliwack – Park Bridge Load-Ratings, 2014;
- City of Chilliwack – Bailey Landfill Bridge Load-Rating, 2012;
- Parks Canada – Chambly Canal Moveable Bridge Load-Ratings, 2011.

## **Bridge / Culvert / Marine Reconstruction Projects:**

Developed prioritized repair recommendations, as well as cost estimates, detailed design drawings and specifications, Tender Documents, and helped to perform site-services for the following projects:

- Juan de Fuca Trail – Hiking Trail Bridge Repair Program, 2017;
- Sydney Coal Railway – Bridge Strengthening Project, 2017;
- Parks Canada – West Coast Trail Hiking Trail Bridges, 2016;
- City of Vancouver – Cambie Street Bridge Trolley Bus Poll Installs, 2016;
- Port Metro Vancouver – Main Street Overpass Reconstruction Works, 2016;
- Public Works and Government Services Canada – West Coast Trail Rehabilitation Design of Bridge Structures, 2016;
- Port Metro Vancouver – Westshore Reconstruction Works, 2015;
- City of Surrey – Nicomekl and Serpentine Reconstruction Works, 2014;
- Canadian Mortgage and Housing Corporation – Granville Island Marine Works Reconstruction, 2014, 2015, 2016, 2017;
- Goderich-Exeter Railway – Deck Framing Plans, 2014;
- Port Metro Vancouver – Clark Drive Joint and Deck Reconstruction Works, 2013;
- City of Chilliwack - Reconstruction Works Project, 2013;
- Public Works and Government Services Canada – Alaska Highway 113 Creek Bridge Abutment Rehabilitation, 2012;
- Public Works and Government Services Canada – Bridge and Culver Repairs, 2012.

## **New Bridge Construction Site Services:**

Assisted in Contract Administration and on-site inspection during the Construction phase of the following projects:

- Public Works and Government Services Canada - Tofino Bridge and Culvert upgrades, 2015/2016;
- Township of Langley - Nicomekl 56th Ave. and 211 St. Bridge Replacement, 2013, 2014;
- BC MoT - South Fraser Perimeter Road Bridges, 2010-2012

## **Independent Design Review:**

Created 3D computer models and performed detailed calculations using in-house software to produce Structural Certification for the following project:

- SNC-Lavalin - Southeast Stoney Trail, highway bridge Design Review, 2010, 2011.

## **Planning Studies:**

Reviewed documents, interpreted data, and produced sections of reports for:

- Metrolinx/GoTransit - 40-Year Budget Forecasting, Railway Bridge Infrastructure, 2016;
- Ministry of Transportation - Central Okanagan Planning Study, 2015.

## **Civil Projects:**

Responsible for Site Services during the construction phase of the following projects:

- Imperial Oil - Dock Assessment Report, 2016;
- Corporation of Delta - Goldenrod Crescent Retaining wall, 2016;
- District of North Cowichan - Flood wall design, 2015, 2016;
- City of Surrey - Surrey Dyke Floodwall Protection Project, 2011, 2015;
- BC MoT - Gateway Project, Underground Forcemain Thrustblock, 2011;
- City of Surrey - 24th Avenue Repaving, 2010;
- City of Surrey - 32nd Avenue Highway Replacement, 2010;
- City of Surrey - 64 Avenue, Surrey, BC, 2010.