

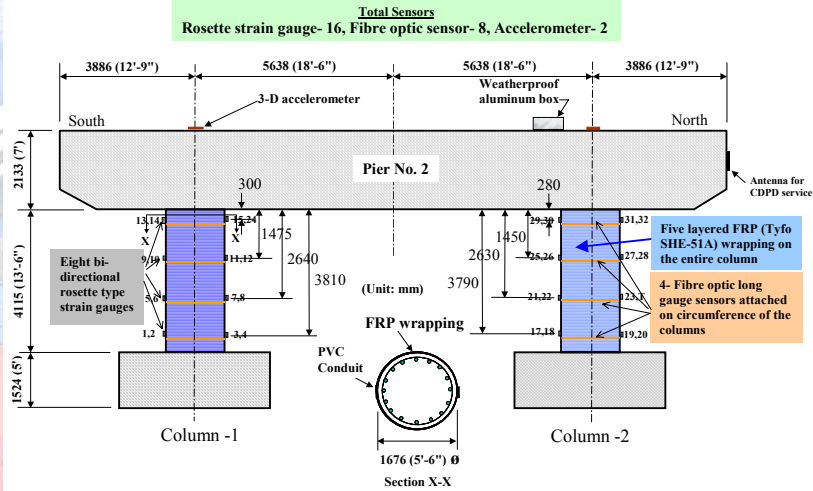
Portage Creek Bridge - Canada



Quick Facts about Portage Creek Bridge

- **Name and Location:** Portage Creek Bridge – Victoria, BC, Canada
- **Owner:** BC Ministry of Transportation & Highways (Bridge Eng. Branch)
- **Structure category:** Medium span steel bridge with a reinforced concrete deck
- **Spans:** 3 spans with total length of 410 ft / 163 ft / 100 ft
- **Structural system:** 3 steel girders with a reinforced concrete deck supported on two reinforced concrete piers and abutments on H piles
- **Start of SHM:** October, 1998
- **Number of sensors installed:** 26
- **Instrumentation design by:** ISIS Canada – University of Manitoba

Sensor Details



Elevation of Pier No. 2 with sensor locations

Sensor Details

Type	Number	Location
Long gauge fibre optic sensors	8	4 at each Column for pier No. 2
Bi-directional strain gauges	16	8 at each Column for pier No. 2
3-D accelerometers	2	Top of the pier cap (Pier No. 2)

Examples of Outcomes

- The data measurement frequency increased, especially when using accelerometers to record the dynamic data of seismic events.
- A video camera has been installed so that strain variations can be synchronized to traffic movements.
- Data communication has been recently established for the bridge.

Portage Creek Monitoring

Live Real Time Data - Updated Every 5 seconds
FFT of ACC1-2

Amplitude

0.000 0.200 0.400 0.600 0.800 1.000

0.0 5.0 10.0 15.0 20.0 25.0 30.0 35.0 Hz

Strain Gauges Column 1		
Strain Gauge 111	H - dir	V - dir
Strain Gauge 112	H - dir	V - dir
Strain Gauge 113	H - dir	V - dir
Strain Gauge 114	H - dir	V - dir
Strain Gauge 121	H - dir	V - dir
Strain Gauge 122	H - dir	V - dir
Strain Gauge 123	H - dir	V - dir
Strain Gauge 124	H - dir	V - dir

Sensor Tables

- [Strain Gauges Column 1](#)
- [Strain Gauges Column 2](#)
- [Accelerometers/Thermocouples](#)

Camera: [Camera]

Active Main Page | Sensor Lists | C1 Sensors | Accelerometers | Pictures | C2 Sensors | Data Base

Applet started | Internet