



Spiral Tunnels Centennial

The Spiral Tunnels are turning 100! Join the festivities in honour of this engineering marvel that is an important part of tourism in Yoho National Park and a vital link for the Canadian Pacific Railway.



Calendar of Events

Ongoing

Banner Year

Designed by Banff-based artist Max Elliot, these street banners decorating the town of Field celebrate both the Spiral Tunnels and Burgess Shale Centennials.

Centennial Hike Challenge

We challenge you to hike 100km in Yoho National Park in 2009! Booklets are available at the Friends of Yoho store at the Visitor Centre in Field. Bring back your completed booklet and get a free prize.

Trainspotting

This driving tour is a guide for everyone from the serious rail fan to anyone who wants to learn more about history. Free copies available at the Visitor Centre in Field.

May to September

Kids Contest

Complete an activity page and place in the box at the Information Centre in Field for a chance to win one of three great prizes from Parks Canada, Friends of Yoho and Canadian Pacific.

Throughout July and August

Interpretive Roving

Watch for national park interpreters with a portable display, ready to share stories and answer questions about the Spiral Tunnels at major points of interest throughout the park.

Interpretive Theatre Show

Catch the fun, free, family-oriented, weekly show about the Spiral Tunnels at the Kicking Horse Campground outdoor theatre. Open to the public, not only campground guests.

Historical Walking Tours in Field

Step back in time and discover the railway history and characters that helped shape the park and the town of Field. Offered three times per week by Friends of Yoho.

July 11 & August 15

Next Stop: Yoho

This evening with local songwriter Charlie Wake and Parks Canada's award-winning theatre troupe Mountain WHIT (World Heritage Interpretive Theatre) will be a ton of fun!

July 18 & August 22

Interpretive Theatre Show

Park interpreters usually only present theatre shows at the campground, but this year we're making special appearances at the Field Community Centre for the Spiral Tunnels Centennial.

July 18-19 & August 15 - 16

History of the Canadian Pacific Railway

A weekend course about the history of the railway between Lake Louise and Field. Slides, discussions and field trips are all part of the fun! Offered by Friends of Yoho.

August 14

Maze in the Mountains

Join author Graeme Pole for an evening presentation and launch of a new edition of his book The Spiral Tunnels and the Big Hill. Offered by Friends of Yoho.

September 5

Canadian Pacific, Parks Canada and Friends of Yoho are planning an exciting centennial event. Ask for more information at the Visitor Centre in Field.

For more details and information about events, contact the Visitor Centre in Field (250) 343- 6783 or visit the Friends of Yoho website: www.friendsofyoho.ca





Whyte Museum of the Canadian Rockies NA71-5409

Spiral Tunnels Centennial

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Join us in celebrating this engineering marvel that is important to tourism in Yoho National Park and is a vital link for the Canadian Pacific Railway.

Background

When British Columbia joined Confederation in 1871, it was on the condition that Prime Minister John A. Macdonald would build a railway to link the province to the rest of the country. Building a railway across such a large continent was a major undertaking and one of the most serious obstacles was the Rocky Mountains. Several passes were considered for the route and despite its rugged terrain, Kicking Horse Pass was chosen because of its proximity to the US border and its shorter distance to the Pacific Coast. This choice was so significant to the history of Canada that Kicking Horse Pass was designated as a National Historic Site in 1971.

The Big Hill

The steep grade in Kicking Horse Pass posed a serious challenge. Under government pressure to complete the railway, and given the engineering challenges that came along with the geography, Canadian Pacific was not in a position to carve a gradual descent. A solution was reached, which temporarily allowed a grade of 4.5%. The first train to attempt the hill in 1884 derailed, tragically killing three workers. In an effort to improve safety, three spur lines were created to divert such runaway trains on what became known as the “Big Hill”. Switches were left set for the spurs and were not reset to the main line until switchmen knew the oncoming train was in control. Descending the Big Hill was challenging, but uphill trains had their problems too. Extra locomotives were needed to push the trains up the hill, causing delays and requiring extra workers. Although the mountains were a complication for CP, they were an inspiration to the many tourists who started to arrive by train. In an effort to preserve the landscape and encourage tourism, CP prompted the creation of Mount Stephen Dominion Reserve in 1886. The park was renamed Yoho in 1901.



Main track with spur line to the right. Parks Canada

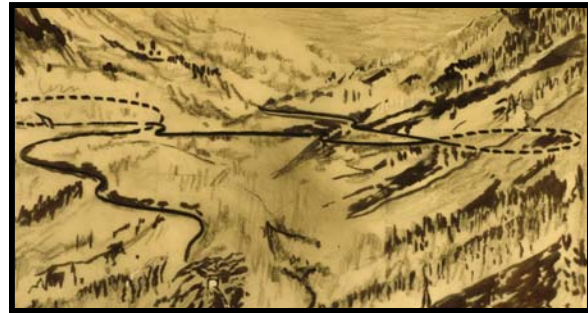
Schwitzer's Solution

The solution for a more gradual grade came from J.E.Schwitzer, one of the railway's Assistant Chief Engineers. He modeled the Spiral Tunnels after a system used in Switzerland. In 1909 the Spiral Tunnels were completed and after 25 years of use, the Big Hill grade was abandoned. With a gentler grade, descents became safer and slower, spur lines and rear pushers were no

longer necessary, and scheduling delays and operating costs were reduced. Although the Spiral Tunnels were a great improvement for the grade, rockfall, mudslides and avalanches are some of the challenges we still face today in this area where nature reigns supreme.

How the Spiral Tunnels Work

An eastbound train leaving Field climbs a moderate hill, goes through two short, straight tunnels on Mt. Stephen, under the Trans-Canada Highway, across the Kicking Horse River and into the Lower Spiral Tunnel in Mt. Ogden. It spirals to the left up inside the mountain for 891-m and emerges 15-m higher. The train then crosses back over the Kicking Horse River, under the highway a second time and into the 991-m tunnel in Cathedral Mountain. The train spirals to the right, emerging 17-m higher and continues to the top of Kicking Horse Pass.



Dotted lines are the Spiral Tunnels. Parks Canada

See Them for Yourself

There are two viewpoints where you can safely watch trains and learn more about the Spiral Tunnels and Kicking Horse Pass National Historic Site of Canada. On average, 25 to 30 trains pass through the Spiral Tunnels daily, though not on a regular schedule.

- From the viewpoint 7.4-km east of Field on the Trans-Canada Highway, you can see the Lower Spiral Tunnel in Mt. Ogden.
- The Upper Spiral Tunnel in Cathedral Mountain can be seen from the pull-off 2.3-km up the Yoho Valley Road.

Experience the Past

- Pick up an interpretive pamphlet at the trailhead in Kicking Horse Campground and hike the 1.2-km Walk in The Past Trail. It leads to an old spur line and an abandoned locomotive used during the Spiral Tunnels' construction. On the way to the trailhead, don't miss the old bake oven used by CPR construction crews.
- As you drive on the Trans-Canada Highway, you're following the path once known as the Big Hill. Imagine what it would be like over a hundred years ago, to be an Engineer facing this hill in a steam train with heavy freight behind you.

Special Events

- Parks Canada Interpreters will be presenting a weekly show about the Spiral Tunnels at the Kicking Horse Campground theatre. Also watch for Interpreters with a portable display, ready to share stories and answer questions at major points of interest throughout the park. Contact the Visitor Centre in Field for information about other Parks Canada events. 1-800-759-2429 or (250) 343-6783
- Friends of Yoho is hosting several events including courses about the history of Canadian Pacific, book signings, historical walking tours, and evening presentations. See the Friends of Yoho website for event details. www.friendsofyoho.ca
- Canadian Pacific, Friends of Yoho and Parks Canada are planning an exciting centennial event for September 5, 2009. Ask for more information at the Visitor Centre in Field.

For more information about the Spiral Tunnels contact Dave Cairns, Cultural Resources Manager. Dave.Cairns@pc.gc.ca (250) 343-6110.