



**19th RAILROAD
ENVIRONMENTAL
CONFERENCE**

*CN Initiative Protects Rare Plants and
Provides Nature Trail to Community*

**Seble Afework - CN
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October 2017



Site Location: Petit-Rocher, New Brunswick, Canada



Project Background

- The Petit-Rocher Nature Trail is one component of the overall CN Bathurst project work
- CN Bathurst project started in 2008 with the re-acquisition by CN of the QRC / NBEC Railway
- Phase I ESA in 2008 identified lead-zinc ore concentrate on the rail lines at the Bathurst Yard
- Additional study was completed in 2010 (44 miles [70km] of rail line Studied) between the mine and smelter
- Over 4000 samples collected on rail corridor lands in 2012



Project Background

- Plan to close mine in 2013; no further rail transport of ore concentrate
- Assessment of >355 of 1025 adjacent properties in 2014/15
- Risk assessment completed in 2014 developed risk based corrective action levels based on land uses
- CN partnered with mine in remedial action plan (RAP) for reuse of the excavated materials by CN as part of the mine reclamation
- Detailed project communication strategy (2012 to 2014)



Remedial Action Plan (RAP)

RAP work (following CN's environmental strategy) focused on:

- Safety
- Emissions Reduction
- Waste Management
- Environmental Stewardship

Environmental Strategy



Remedial Action Plan (RAP)

RAP had 6 tasks:

- Task 1: Visible Ore Concentrate Removal (2014)
- Task 2: Third Party Notification (2014-2015)
- Task 3: Remediation of Residential Properties (2015)



Remedial Action Plan (RAP)

RAP had 6 tasks:

- **Task 4:** Remediation / Risk Management of Third Party Properties (2015-2016)
- **Task 5:** Watercourse Remediation (2015-2016)
- **Task 6:** Remediation of “Hot Spots” on CN Land (2015-2017)



As Part of RAP Task 2

- Communications made to **355** property owners
- Of the 355 properties, **105** required additional work by CN
- The Village of Petit-Rocher (Site) was number **42** of 105
- Communications with the Village started in the fall of 2014 to understand the use of their property along the CN rail corridor
- This presentation describes the project success for the Village property and the nature trail construction

Unique Considerations for the Trail

- The property is mapped as a Provincially Significant Wetland and it contains the “Petit-Rocher Fen”
- Surface soil excavation of the impacted area (as a remedial approach) would have destroyed the plant habitat in the Fen
- The Village was unaware of the sensitive nature of their property



The Petit-Rocher Fen

- It is one of the richest botanical sites in NB
- Fens resemble bogs in their accumulation of water-logged peat however, their dominant plants are different (reflecting the influence of slowly moving groundwater rich in calcium)
- This fen is a habitat for 18 rare species - many of the plants occurring here are rarely found elsewhere in NB
- The Autumn Willow (*Salix serissima*) is found nowhere else in the province
- Fens such as this are very delicate and will not withstand many people walking through them
- Motorized traffic is almost always devastating to the ecosystem

Autumn Willow (*Salix serissima*)



Some of the Other Rare Plants in the Fen



Showy Lady Slipper



Swamp Valerian



Grass-of-parnassus



Yellow Lady Slipper

Why Was the Nature Trail Important to CN?

The two trails previously constructed by the Village provided a pathway for ATV to access the rail corridor

CN agreement allowed a portion of the land adjacent to the rail corridor to be transferred to CN and soil sample results re-screened to commercial land use without a need for further corrective action

Developed a better trail that protects the rare plants and now blocks ATV access to the rail corridor

This plan also prevented habitat disruption which would have resulted from any other corrective action



Nature Trail Timeline

October 2014

Initial communication regarding soil sample results with Village via registered mail

January 2015 to May 2015

Initial meeting with the Village (discussed the available corrective actions along with possible recreational park enhancement)

January to February 2016

Developed conceptual trail plan and obtained approval from NBDELG (since it's a protected wetland)

March to April 2016

Final plans presented and Village approval obtained by Mayor and Council

June to July 2016

Completed rare plant survey of trail path and obtained NBDELG WAWA permit

August 2016

Completed nature trail signage artwork and press release

September 2016

Started and completed construction work (within WAWA permit timeline)

October to November 2016

CN and Village planned and held grand opening for the new Nature Trail

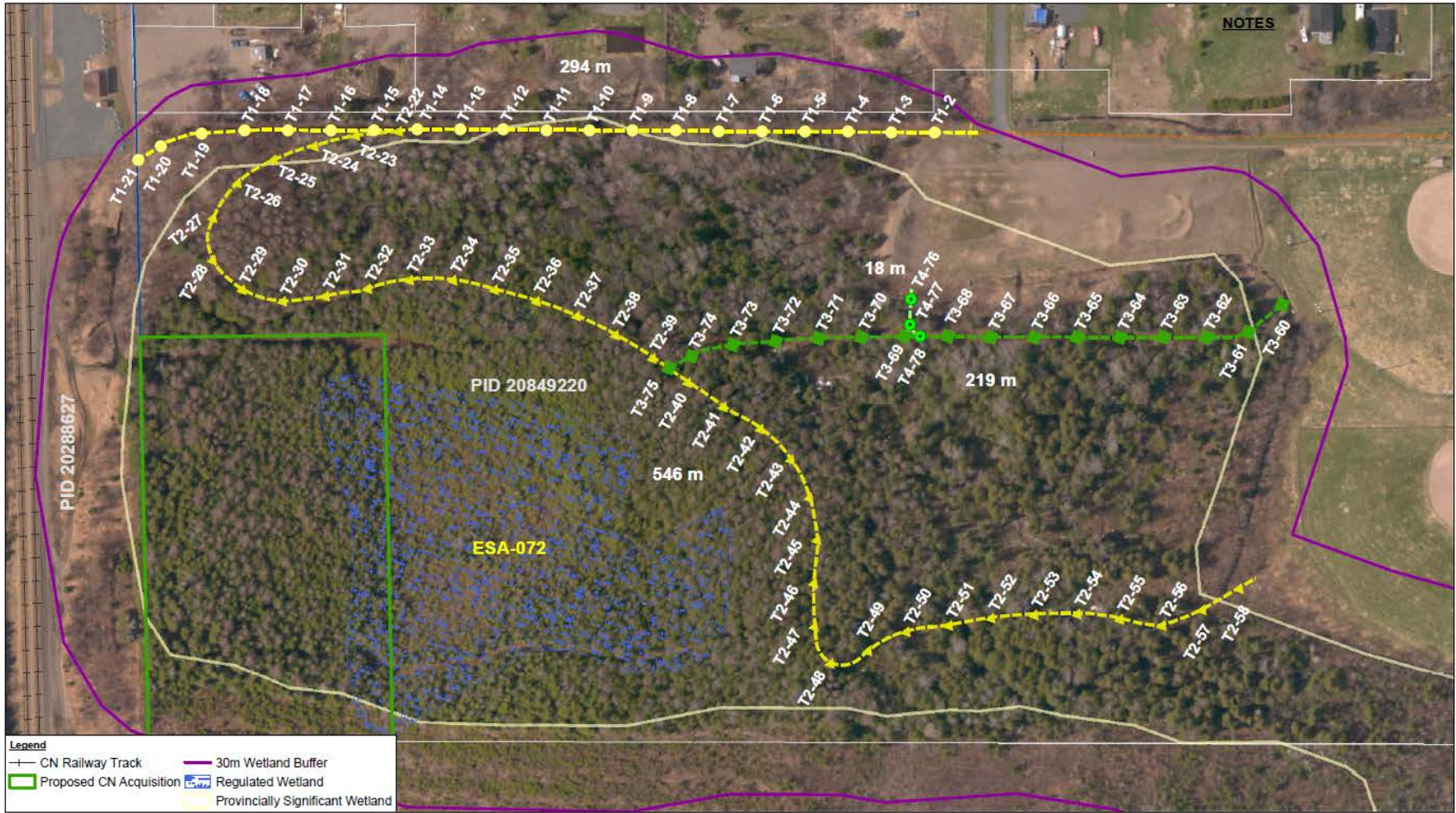


Nature Trail Plan Included

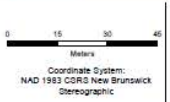
- Build 1.2km trail in exchange for land adjacent to the rail corridor
- Trail to be used for summer and winter recreational activities
- Trail path directed traffic around the “Fen” rare plant habitat
- Restricted ATV access to rail corridor
- Trail bed would not utilize imported fill
- Recycling of dead/fallen trees to make wood chips for trail bed
- Construction time frame had to be completed within the permit timeline (June to September)



Rare Plant Survey



Source: Inert source Wet track



- 1 — Trail 1
- 2 — Trail 2
- 3 — Trail 3
- 4 — Trail 4

DRAFT



CANADIAN NATIONAL RAILWAY CO. - CN BATHURST
GLOUCESTER CO, NEW BRUNSWICK
VILLAGE OF PETIT-ROCHER - PID 20849220
PROPOSED COMPLEX SPORTIF NATURE TRAIL
SURVEY POINTS

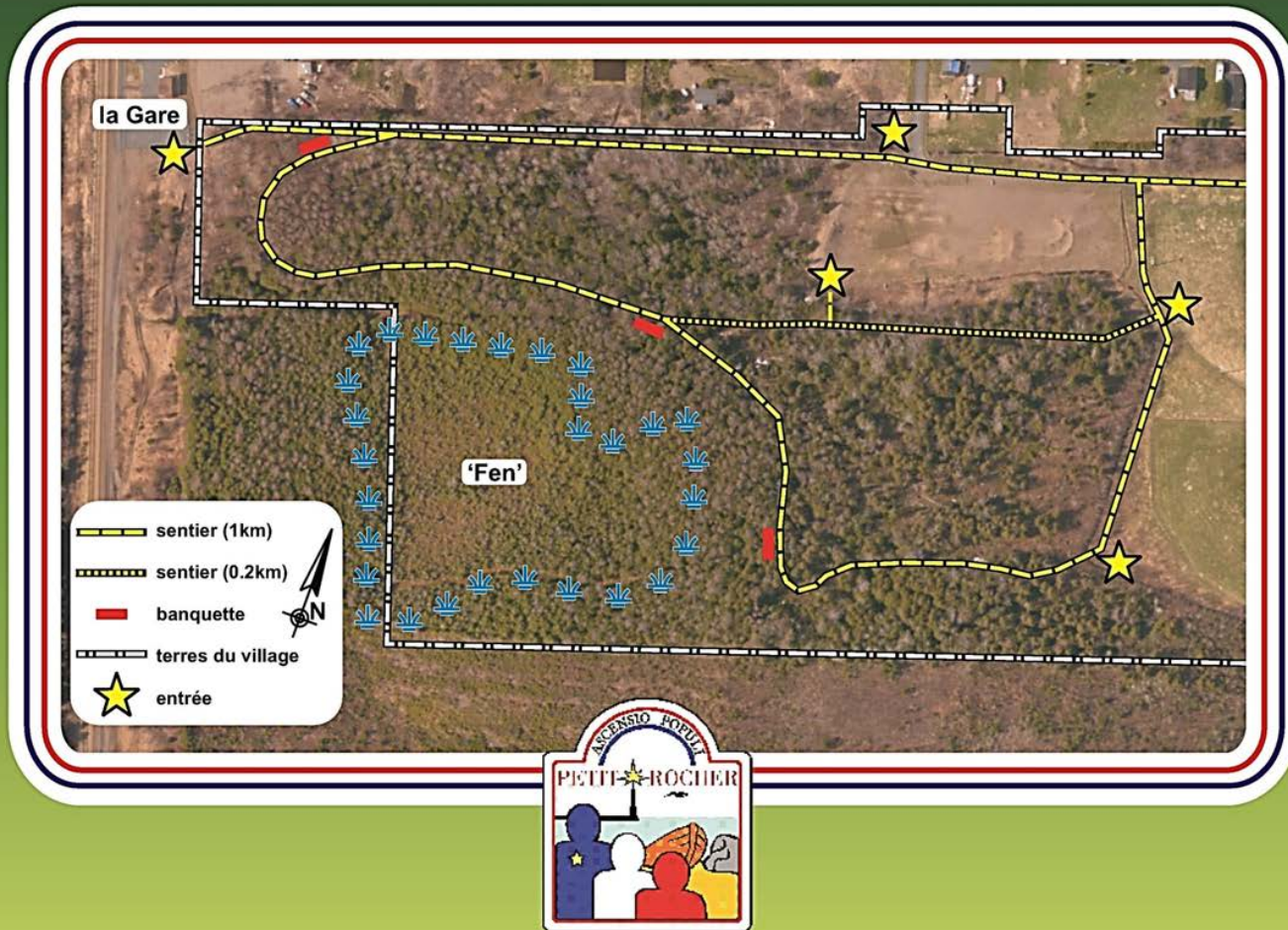
070818
May 12, 2016

FIGURE 2

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Final Trail Map Plan

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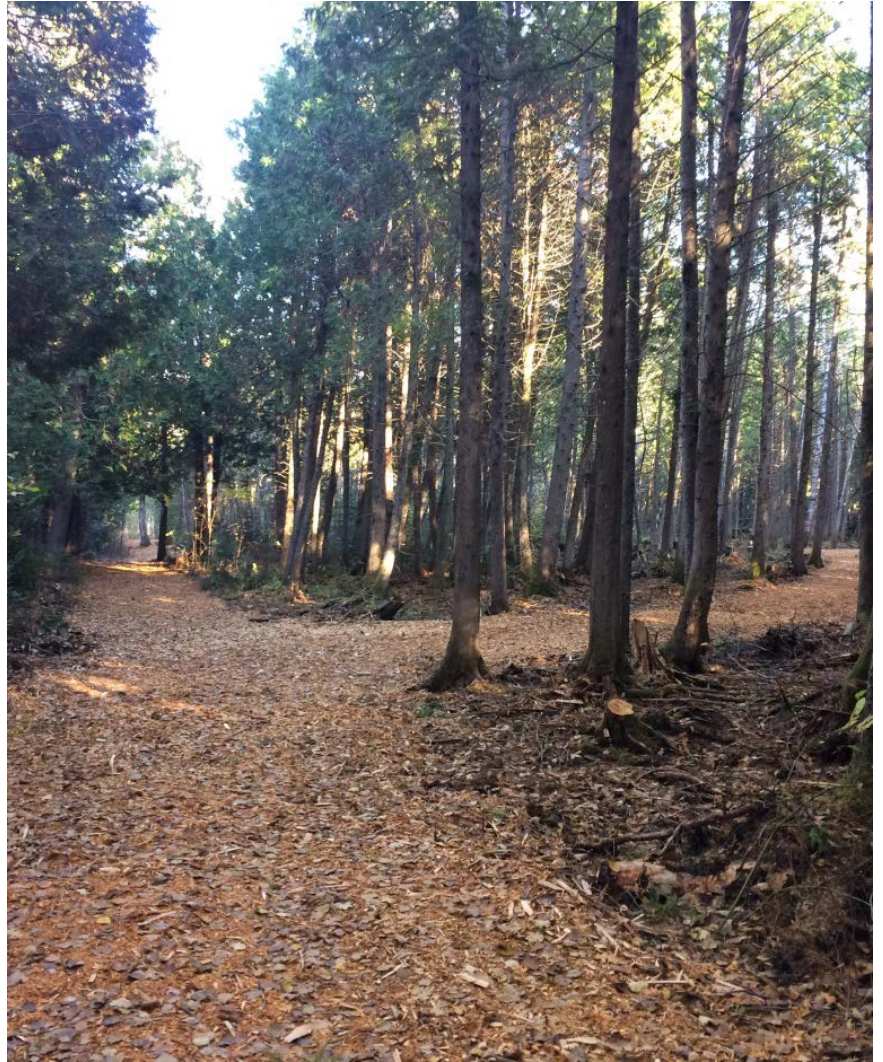
Construction - September 2016



Construction – September 2016



Finished Product – September 2016



Finished Product – September 2016



Four Season Trail – Hiking, Skiing, Snowshoeing



External Recognition

“The new nature trail will enhance the recreational use of the property while protecting the wetland and limiting ATV access to the rail line... They’re going to brush cut the trail and use the wood chips as the base for the trail... It’s really going to be the recycling and reusing of every element that’s in the trail.”

Mike Roy, Municipal Administrator for the Village of Petit-Rocher

LOCAL NEWS

Petit-Rocher, CN team up for a new trail

8/30/2016

The municipality of Petit-Rocher has announced a partnership with CN to build a new trail in the wooded area between the sports complex and the railway.

After months of planning, the municipality says in a release that they've decided to transfer a plot of land to CN in return for the trail's construction.

The one kilometre trail will bypass a section of land that has been declared an environmentally significant area containing several rare plant species which is found nowhere else in the province.

Once completed, the trail will be equipped with benches as well as signs informing people of the flora around them.

Petit-Rocher to receive trail built by CN in exchange for land

JENNIFER BISHOP
THE NORTHERN LIGHT

People in the village of Petit-Rocher will have a new nature trail to enjoy thanks to a partnership between the municipality and CN Rail.

Mike Roy, municipal administrator for the village of Petit-Rocher, said discussions with CN about the piece of land began around December 2015 when CN enquired about purchasing a small piece of land next to the railroad tracks. CN had been purchasing pieces of land along the railway leading to Belledune.

When they asked for land in Petit-Rocher, it happened to be a plot joined with the wetland section.

“When they noticed it was a wetland and it was an environmentally significant area,” he said.

Instead of selling the land, CN offered to develop a trail through the wetlands for the municipality in exchange for the piece of land.

The trail will be located behind the village’s baseball field, through what Roy described as a “vacant lot” that stretches to the railroad track.

“Because it’s a wetland we can’t develop it, we can’t do anything with it,” he said.

Roy said a study had to be conducted on the piece of wetland to see what they could do with it. The studies revealed



protective of human health and the environment.”

The municipality and CN held a meeting to discuss the potential sale of the piece of land to the company.

“We discussed the dangers of the ATV access to the rail corridor and the presence of the wetland on the municipality property,” he said. “The new nature trail will enhance the recreational use of the

entally significant area,” Roy said no foreign aggregate can be used to create the trail. But they’ve come up with another, more environmentally friendly solution.

“They’re going to brush cut the trail and use the wood chips as the base for the trail,” he said. “It’s really going to be the recycling and reusing of every ele-

Shown is a piece of land in Petit-Rocher behind the baseball field around where a walking trail will be built by CN Rail in exchange for a parcel of land along the railroad tracks. PHOTO: MARIO MERCIER/L'ETOILE CHALEUR

“The municipality of Petit-Rocher is proud to announce a partnership with CN....”



Grand Opening – November 2016



CN,
Village,
Media,
Public, and
>200 school students

“We are thrilled that CN Employees had the idea to build a nature trail on a piece of land that would otherwise sit unused. This is a win-win partnership that will have a positive impact on our community.”

Luc Desjardins, Mayor, Petit-Rocher



Grand Opening – November 2016



“The trail is awesome!! We will definitely take advantage of it to explore nature up close especially the rare species of plants in our science classes... The amount of work and the quality of that work that CN put in to making the trail a reality for the community is impressive and appreciated.”

Kristie Roy, School Principal



In Summary the Nature Trail was a CN Success

Multi-Stakeholder Engagement

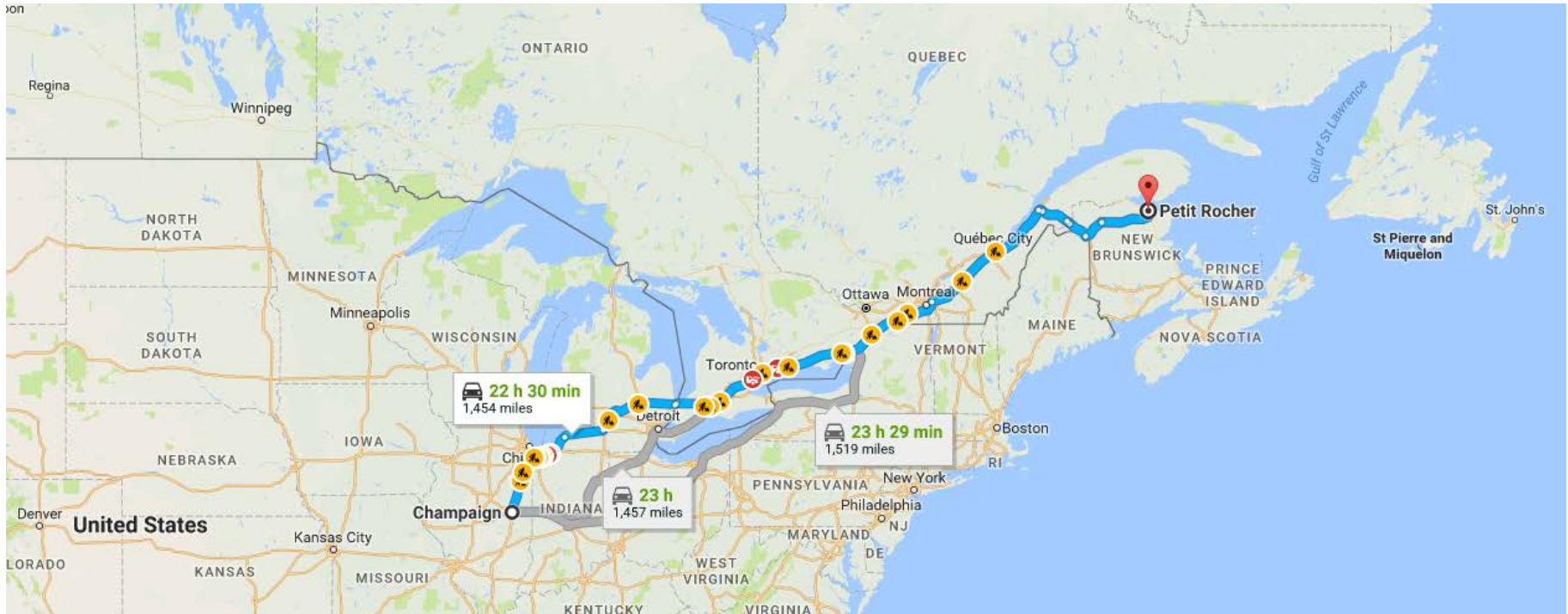


Detailed Planning & Implementation

Sustainable & Cost Effective Solution



Champaign, Illinois to Petit-Rocher, New Brunswick



*1500 miles / 24 hour drive
or
Amtrak & Via Rail*



QUESTIONS



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