



Concession Rd. 4 Golf Course Rd. to 1.7km Easterly



Calculating Schedule C Benefits

Project #1 Road Resurfacing - mill & overlay

Definitions

	input field
	calculated field (no data entry required)

AADT = Average Annual Daily Traffic

RCR = Ride Comfort Rating

MJ = mega joules

Assumptions

- milling of existing asphalt surface full width of pavement to a depth of 90mm
- surfacing with 2 lifts of hot mix asphalt to a depth of 90mm
- base lift of hot mix asphalt contains RAP

Project Description

project length	1650	m
width of pavement	6.5	m
intersections (and areas not included in above)	735	m ²
Total Project Area	11460	m ²
current traffic volume (actual or estimated)	580	AADT
% light trucks (pickup)	0	%
% trucks (heavy truck)	2	%
% trucks (tractor/trailer)	0	%
% trucks (B trains)	0	%
pavement smoothness	2.4	RCR

Current CO₂ Emissions

Total Current Emissions	199.8	kg/day
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NOTE: Based on Natural Resources Canada - 2.36kg/L CO₂ Gasoline, 2.73kg/L CO₂ Diesel and Transport Canada - Company Average Fuel Consumption 2004



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Energy Used For Construction

milling of existing asphalt surface	11460	m ²
trucking of milled asphalt (distance to dump site and return)	0	km
base lift of Hot Mix Asphalt with RAP	0	mm
% RAP	0	%
Surface lift of Hot Mix Asphalt	20	mm
Total MJ of energy required for project	383,831.4	MJ

NOTE: Natural Resources Canada - Road Rehabilitation Energy Reduction Guide for Canadian Road Builders 2005, IVL Swedish Environmental Research Institute - Lifecycle Assessment of Road, March 2001

Benefits

Maintaining this road with a smooth surface condition reduces emissions

pavement smoothness (on the above project length)	9	RCR
Total Emissions (on the above project length if pavement maintained with a smooth riding surface)	189.1	kg/day
Reduction in CO ₂	10.8	kg/day
	3931.8	kg/year

Resurfacing at appropriate lifecycle to maintain the road with a smooth surface can reduce the total energy required as the pavement will require less work to rehabilitate. For example: instead of double lift of hot mix asphalt a single lift may be all that is required to maintain a smooth surface

milling of existing asphalt surface	11460	m ²
trucking of milled asphalt (distance to dump site and return)	0	km
Surface lift of Hot Mix Asphalt	20	mm
Total MJ of energy required for single lift resurfacing	383,831.4	MJ
Reduced Energy requirements	0.0	MJ