Calculating Schedule C Benefits

19th. Avenue (West) Bridge (B20)

Definitions

input field
calculated field (no data entry required)

AADT = Average Annual Daily Traffic
RCR = Ride Comfort Rating
MJ = mega joules

Assumptions

- that a road closure will occur for the duration of the project

- that new technologies will be used to reduce the number of days a road closure is required

Details

length of road closed to traffic	2	km
length of detour route for bridge closure	5.5	km
estimated # of days road closed to traffic (conventional construction)	190	days
current traffic volume (actual or estimated)	776	AADT
% light trucks (pickup)	28	%
% trucks (heavy truck)	1	%
% trucks (tractor/trailer)	0	%
% trucks (B trains)	0	%
pavement smoothness (of road section to be closed)	8	RCR

Current CO_2 Emissions (before road closed to traffic)

Total Current Emissions	329.1

NOTE: Based on Natural Resources Canada - 2.36Kg/L CO_2 Gasoline, 2.73kg/L CO_2 Diesel and Transport Canada - Company Average Fuel Consumption 2004

CO_2 Emissions (as a result of the road closure)

pavement smoothness (of detour route)	8	RCR
Total Emissions	904.9	
Increased CO_2 (as a result of road closure)	575.9	kg/day
	109,413.9	increased kg while detour in effect

Benefits of Using New Technologies

using technologies that reduces the number of days a road closure is required reduces emissions

estimated # of days road closed to traffic (new technologies used for construction)	140	days
Increased CO_2 (as a result of road closure)	80,620.8	increased kg while detour in effect
Reduced CO_2 (a result of using of technologies that reduce the number of days a road closure is required)	28,793.1	total kg