Odometer Check:

Start of Rally: Northern most exit from SuperBurger, turning right onto Prince of Wales. There is a small stake in the ground on the right side of the exit. Zero your odometer to this point.

Take 18 minutes 5 seconds to reach the end of section at 14.55 km.

km (accumulative)

- 0.00 Turn right onto Prince of Wales.
- 0.08 Turn left at the lights onto Hwy 89
- 5.41 Turn left onto 3rd Line E
- 5.50 Forced Left onto Mono Mulmur Town Line. Caution: 1 lane bridge ahead.
- 5.94 Stop. Bear Right onto Hwy 89
- 8.06 Right onto 1st line East.
- 11.45 Straight ahead at 5th Side Road.

ODO CHECK: Your odometer should read 11.45 to the hydro pole on the right side of the junction (this intersection). If you need to stop for calculations, read your odometer at the pole, then pull ahead so others may take an accurate reading.

- 12.70 Straight ahead at 8th Side Road.
- 14.55 Stop. Turn Left onto 10th Side Road. END OF SECTION.

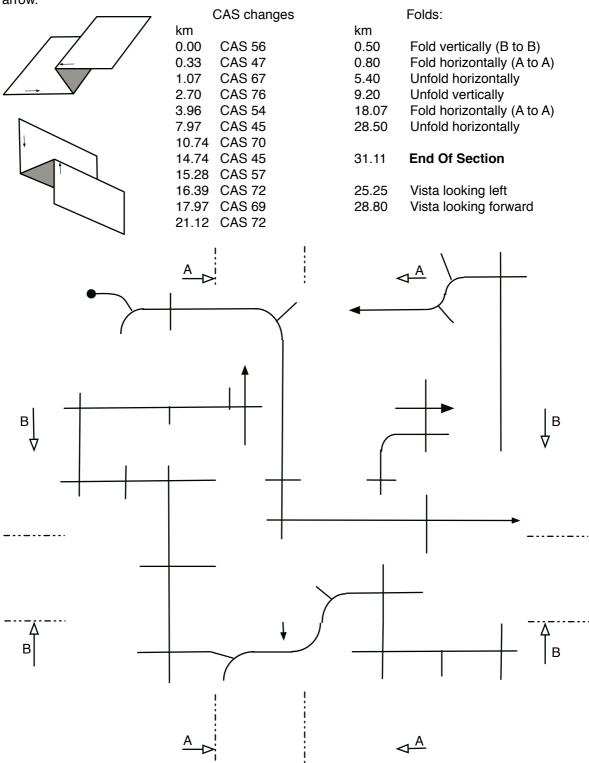
Welcome to the First Frost Rally.

Now that I have you out on the road, I'd like you to turn left onto 10th Sideroad and proceed at and average speed of 76 kph while I tell you all about the 2009 First Frost Rally, the first Navigational Rally to be hosted by SPDA. This is a tale of many route recon outings, getting lost, getting stuck, but generally having a great time on Ontario roads. Take the right turn onto Centre Road for example. We found out it has no winter maintenance, so you'll want to drive past it and turn right on Prince of Wales instead. At 3.88 km, slow to 56 kph and take caution on the upcoming downhill if it's slippery out. During the creation of this rally, we had our cars stuck in the snow or ditches a total of 5 times, so if we happen to note a caution, you'll probably want to be carefull. Stop and turn right at the Tee intersection! Whew, that was close. Better slow down a smidgeon to 47 kph at 5.13 km. Anyways, the route was put together using Google maps "terrain" feature, which gave us a pretty clear view of all the hilly, twisty, and otherwise entertaining roads. When drivers put together rally routes, you get awesome roads, but not much consideration for the Nav's. Sorry. After all, I don't have to sit in the right seat. I sit in the left seat. Speaking of left, we took at trip up 15th Side Road. This is an enjoyable road when you go up it, and when you come back down a few minutes later after it dead ends. Instead, continue to the other end of Centre Road, coming up on your right. I highly recommend going down this road, (really up this road from this end) but leave it for another day. it's the other end of the no winter maintenance road. Besides, River Road is nice in it's own way, plus at 6.88 km you can speed up again to 57 kph. That'll take you past the other, OTHER end of Centre Road. Don't ask me. Maybe they like the name "Centre Road" here or something. Maybe I do too, because you're coming up on a fun road you can finally go up, which is (you guessed it) Centre Road on your left. It's a single lane, so lets slow down to 37 kph right when you turn left at 9.09 km. Sorry, I shouldn't say right when you're turning left, as it might be confusing, right? Right! We started working on this route back in February so that we'd know first hand what the possible driving conditions would be like. Our first recon trip was a few days after some rain came down, so there was ice under the snow. Pretty much the worst conditions possible. On our very first trip out, even driving slow, we slid into a ditch before we'd gone 2.63 km, then spent the next 1.6 hours digging out and waiting for a tow before continuing on our way. Don't worry, we're not using that road, because it was another no maintenance road (or NWM's as they came to be known).

Centre Road was fun wasn't it? Stop and take a right at the intersection (beware of oncoming rally traffic), and increase speed to 54 kph when you turn. Take another right at the Tee intersection and increase your speed to 56 kph. Take a right at the junction where the road turns left and decrease speed to 37 kph when you do so. When you stop at the intersection at the top, take a look to the left. There's another awesome road in there. Awesome except for when I slid 45 feet dead sideways down an icy 1 lane road with trees a couple feet to either side. Great Fun, but lets not go down that road yet. Continue straight ahead up Centre Road increasing your speed to 63 kph. One of the things I struggled with was setting the right difficulty of instructions. Sitting in the drivers seat, I only really look at the route book while sitting at ease with a drink at the end of the rally, and even then I only really look at the novice instructions. Expert instructions are some mythical horror story to me, filled with tax return mathematics, instructions printed on t-shirts, dimly printed fortran punch cards and sometihing involving calculating the surface area of an octahemioctahedron, so please be sure to tell me what you think of these instructions. Take a right onto 25th Side Road. At 32.73 km into the rally, set your speed to 2 times a smidgen, plus the number of feet I slid sideways, minus the number of times Centre Road appears in this text (including this instance), plus the number of syllables in octahemioctahedron, plus the number of times we had cars stuck. The route you're on will take you far, over exciting roads and into beautiful scenery. I'd like the navigators to enjoy some of the scenery, so where it won't spoil the section instructions, I've marked some locations as VISTA with a direction relative to the car. Vistas will be noted separately so as not to confuse them with the navigational instructions. You can ignore the vistas if you'd like, There will be no tricks at the vistas, nor anything else that you need for the rally. Think of them as key places to look up and take in the spectacular views, assuming you're on route which isn't going to be the case if you don't turn right onto 1st Line East and slow your speed by 3 kph at the turn. I'd like to thank you all for coming out to SPDA's inaugural "First Frost Rally" and caution you about the very steep and twisty downhill sections ahead. The section ends at the end of the road, pausing 48 seconds for mental sanity, then turning left at 20th side road just after you've increased speed to 70 kph at 23.45 km.

Folding Space

Fold the page along the dot/dash line vertically so that point A meets point A and horizontally so point B meets point B. In this variant of a Giant Tulip, you will be given CAS instructions at accumulative distances. You will also be given instructions to fold or unfold the page at accumulative distances. What, me worry? It's not as hard as it looks. Enter on the dot, exit on the arrow.



There are 10 kinds of people

(those who understand binary, and those who don't)

Counting in binary is similar to counting in any other number system. Beginning with a single digit, counting proceeds through each symbol, in increasing order. Decimal counting uses the symbols 0 through 9, while binary only uses the symbols 0 and 1. When the symbols for the first digit are exhausted, the next-higher digit (to the left) is incremented, and counting starts over at 0.

Since binary is a base-2 system, each digit represents an increasing power of 2, with the rightmost digit representing 2 to the power of 0 (2^0), the next representing 2^1, then 2^2, and so on.

Binary	10000000	1000000	100000	10000	1000	100	10	1
=	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
Decimal	128	64	32	16	8	4	2	1

Hence the binary number 10101 = 21 $1x(2^4) + 0x(2^3) + 1x(2^2) + 0x(2^1) + 1x(2^0)$

The three columns on the next page are your instructions for this section. Each row consists of three binary numbers. The first is the instruction distance in whole km, the second column is the partial km (right of the decimal place).

The third column is an instruction set made of binary flags. Their meaning is as follows:

Binary	1000000	100000	10000	1000	100	10	1
Meaning	Stop	Left	Straight Ahead	Right	Bear	Acute	Forced

Example Translation:

00110110 . 00010101 1100010 = 54.21 km Stop Acute Left

00001001 . 01100011 0001001 = 9.99 km Forced Right

xx.00 KM	00.xx KM	Instruction	CAS Table
00000000	00000000	01100000	0.00 km CAS 72
00000011	00110110	01001100	3.22 km CAS 46
00000011	01011101	00010000	4.08 km CAS 76
00000100	00001000	00100000	6.29 km CAS 29
00000101	01011000	00010000	6.55 km CAS 76
00000110	00011101	00001000	7.93 km CAS 72
00000110	00100111	01100000	15.07 km BQZ
00000110	00110111	01001100	
00000111	01010010	00010000	Vista:
00000111	01011101	00100000	2.17 km
00001001	00010110	00010000	
00001010	00111000	00010000	
00001011	01011101	01001000	
00001101	01010001	00010000	
00001111	00000010	00010000	
00001111	00001100	00100001	
00001111	01010001	01100000	
00001111	01010101	00001001	
00010000	00100110	00010000	
00010000	00111100	01010000	

EOS, End of Leg A:

At 15.07 km take 7 minutes 50 seconds to reach the end of section at 16.60 km.

Park in the Mylar & Loretta's parking lot. The CP crew is inside. Turn in your score card and request your time in (any time that hasn't passed).

The CP crew will tell you when to start Leg B, and when you can pick up the Leg B instructions.

You'll have a break of about 15 minutes at Mylar and Loretta's restaurant. If you are running very late, we may shorten your break to keep you within the CP open window. Leg B ends back here with a longer break.

If you're planning on extended, off-route excursions, fuel is available at an Ultramar south of the rest stop (right, looking away from Mylar & Loretta's).

Leg B starts on Osprey Clearview Town Line, facing North at HWY 124, turning right. (The stop sign just north of Mylar & Loretta's).

First Frost 2009 Leg A - End of Section Details

Leg: A Start of Section: 1

Approximate Car 0 time: 11:00 am

Start of Rally is from the most Northern exit of SuperBurger, turning right onto Price of Wales,

then immediately left at the traffic lights on HWY 89.

Leg: A End of Section: 1

Approximate Car 0 time: 11:18 am

Section 1 ends facing North on 1st Line East, turning left (west) onto 10th Sideroad.

N: 44° 09.112 W: 80° 07.183

Leg: A End of Section: 2

Approximate Car 0 time: 11:45 am

Section 2 ends facing South East on 1st Line E, turning left (NE) onto 20th Sideroad (River

Road).

N: 44°12.443 w: 80° 07.526

Leg: A End of Section: 3

Approximate Car 0 time: 12:24 pm

Section 3 ends facing East on Mulmur / Nottawasaga Town Line, turning left (North) onto

Centre Road / Lavender Hill Road. N: 44° 16.034 W: 80° 09.813

Leg: A End of Section: 4

Approximate Car 0 time: 12:45 pm

Section 4 ends in the town of Singhampton, in the parking lot of Mylar & Loretta's restaurant. This is the end of Leg A. Turn in your timing card to the checkpoint crew inside the restaurant,

and receive your Leg B start time and instructions.

Everyone Loves Road Counting.

Vistas:

6.67 Ahead Right 12.35 Look Right

Start Leg B facing north on Osprey Clearview Town line, turning right onto Hwy 124 (at the stop sign just north of Mylar and Loretta's). Zero your odometer at this point. You will pass a few roads in Singhampton on Hwy 124 before finding the intersection at 2.76km.

In this road counting section, count roads in the counter clockiwise direction. You enter on road #0 with the first road to your right (counter clockwise) being road #1. Keep counting in a counter clockwise direction. Your exit road is the number at the distance below.

Non - Accum Route Dist		Accumulative CAS Table
0.00 km 2.76 km 3.71 km 1.24 km 2.44 km 2.79 km 2.77 km 1.41 km 0.04 km 2.68 km 1.87 km	2 6 16 23 11	0.00 km CAS 46 kph 0.73 km CAS 76 kph EQZ 6.47 km CAS 72 kph 15.71 km CAS 74 kph 17.12 km CAS 38 kph 17.16 km CAS 54 kph 19.84 km CAS 76 kph 23.31 km CAS 45 kph

First Frost 2009 Leg B - Section 2 - Expert

aixelsyD eramthgiN

(aka: gniyllaR htiw ybuR)

Vistas (not backwards) 6.35 look right 11.20 look ahead 13.80 look right 21.50 look left

eW detnaw ot od a tib fo na tnemirepxe ereh ot ees fi ew nac reggirt emos cixelsyd snoitcaer tsgnoma enoyreve. secnatsiD era evitalumucca. yojnE ruoy yad!

00.00 potS. tfeL otno ediS daoR 6. SAC 27

00.32 SAC 05.15

00.42 **NOITUAC.** sworran retfa llihnwod dneb.

01.72 SAC 27

02.92 SAC 26

03.41 potS. tfeL SAC 27

08.62 SAC 05

08.70 SAC 67

09.21 tfeL.

09.41 decroF thgiR

12.70 tzzb!

13.01 potS etucA thgir.

13.61 potS. tfeL.

13.70 TZZZB!

14.70 potS. thgiartS deaha.

19.50 dneB thgir

23.03 potS. esuaP s41. SOE raeB thgiR.

25.42 SAC 07

30.01 dneB tfel.

36.21 SAC 44. noituaC, egdirB ta 48.21

33.31 NOITUAC elgniS enal egdirb

36.40 potS. tfeL. SAC 47

62.70 tzzzb!

62.81 potS. tfeL.

63.81 thgiR

64.01 thgiartS deaha. SAC 17

64.82 thgiartS deaha

71.70 tzB!

72.22 **NOITUAC**. elgniS enal egdirb

73.21 thgiartS deaha.

77.20 potS. thgiR.

80.60 dneB tfel

86.22 thgiartS deaha.

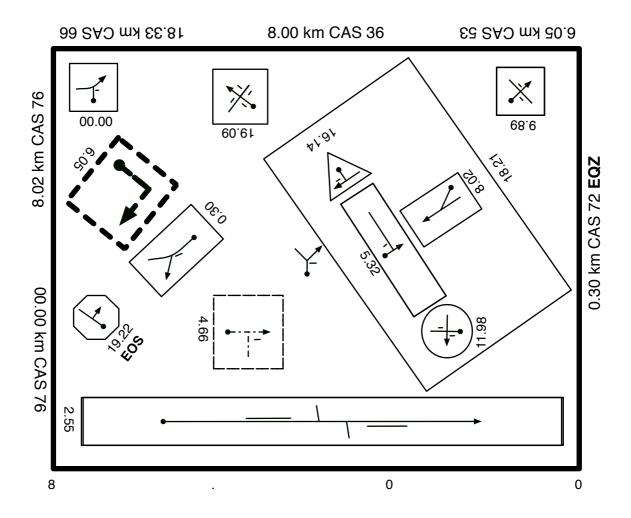
89.62 decroF tfel.

AHHH! Make it Stop!

Twisted Tulips

All the instructions for this rally were created on a great Mac program called OmniGraffle. It's great for diagrams, charts, and as it turns out tulips. After all the text in Leg B, I'm a little bored. Time for some fun. Distances are accumulative, printed by each tulip. Average speeds are printed around the edges.

From 18.33 km take 4 minutes 51 seconds to reach the end of section.



EOS / EOL Instructions: Again, Park in Mylar & Loretta's and hand in your score card, with your requested time in, to the CP crew there.

You will be given your time out for start of Leg C, and the time that you can pick up Leg C route instructions. There will be a long break at this CP (about 40 minutes). As with before, this may be shorter if you're late.

Leg C starts on Osprey Clearview Town Line, facing North at HWY 124, turning right. (The stop sign just north of Mylar & Loretta's, exactly where Leg B started).

First Frost 2009 Leg B - End of Section Details

Leg: B Start of Section: 1

Approximate Car 0 time: 1:02 pm

Leg B starts facing North on Osprey Clearview Town Line (Hwy 124), turning right (East) onto Hwy 124. This is the stop sign just north of Mylar & Loretta's, visible to the left as you exit the restaurant. Zero your odometer at the stop sign.

Leg: B End of Section: 1

Approximate Car 0 time: 1:23 pm

Section 1 ends facing North on 4th line, turning left (West) onto Side Road 6.

N: 44° 26.059 W: 80° 20.391

Leg: B End of Section: 2

Approximate Car 0 time: 2:00 pm

Section 2 ends facing North East on Osprey / Blue Mountains Town Line, Bearing right onto Grey Rd 2. Osprey / Blue Mountains Town Line has two ends on the west side of the road. The southern end is correct.

N: 44° 23.265 W: 80° 23.716

Leg: B End of Section: 3

Approximate Car 0 time: 2:20 pm

Section 3 ends in the town of Singhampton, in the parking lot of Mylar & Loretta's restaurant. This is the end of Leg A. Turn in your timing card to the checkpoint crew inside the restaurant, and receive your Leg B start time and instructions.

Colossal Tulip

Start this section facing north on Osprey Clearview town line, turning right onto Hwy 124. Zero your odometer at the stop sign. In Singhampton, on Hwy 124, Go straight ahead at Church Street, then turn right at Milltown Road, then left onto Ewing Road.

Open the Colossal Tulip map. We wanted to use large type for your tired eyes, but after we scaled the map, for some reason wouldn't fit on the remainder of this page. In fact, it wouldn't fit on any single page, so we had to break it out into several pages (adult assembly required).

Proceed through the 4 points indicated (#1 to #4) using the shortest distance possible for the entire route. No U-turns are allowed. You may not use the same road twice, though you may cross a road you've been on previously.

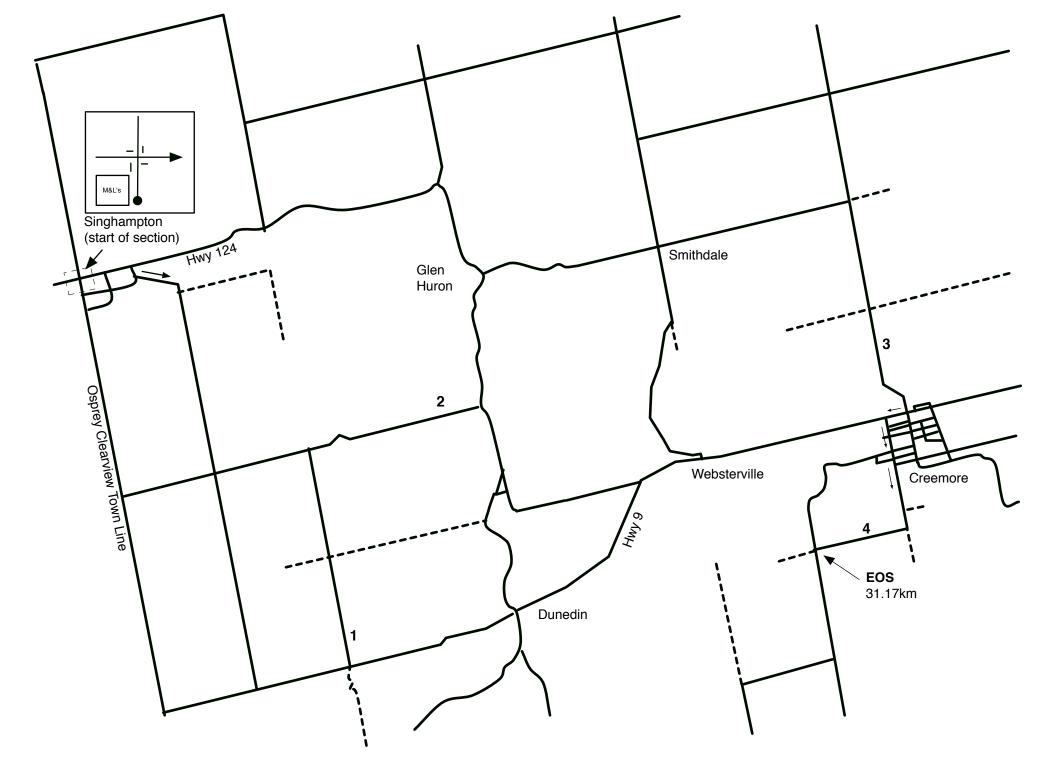
Use the average speeds posted on this page. Be sure to check there aren't additional instructions on the back of the map.

Creemore: If you enter Creemore, use only Hwy 9 (Louisa St) and Collingwood St.

Pangnirtung: If you enter Pangnirtung, you're on Baffin Island, and really REALLY off route. Be careful you aren't a of Cab.

CAS table:	Vistas:
0.00 km CAS 47.2 kph	8.80 km look ahead
1.69 km CAS 72 kph	22.50 km look ahead
16.25 km CAS 76 kph	25.47 km everywhere
18.38 km CAS 57.5 kph	
21.08 km CAS 72 kph	
23.87 km CAS 76 kph	
27.38 km CAS 45 kph	
29.79 km CAS 71 kph	

28.70 km Pause 1.7 minutes



English, French, and WHAT?

For some time, I've been considering going up to Baffin Island to climb Mount Thor. As a rock climber of many years, I'm drawn to Mount Thor's difficult northern face, which is almost completely vertical and about 4,200 ft. tall. I say almost vertical, because the top third of the mountain actually has a 15 degree overhang. So if you fell to your death from the top, not only would you not hit anything on the way down, but you'd actually make a crater over 200 ft away from the base of the climb. Neat huh? Of course this has nothing to do with this section. I just thought it was interesting.

Many Inuit peoples live on Baffin Island, and since they have such a great abundance of roads up there (just over 23 km at last I checked), i figured it would be great to describe this part of the route using one of their native written lanuages, Inuktitut. A small translation guide is on the next page. Apologies in advance to anyone who actually speaks or reads Inuktitut, for my complete butchering of the language.

 Vistas: 7.80 Look Ahead 19.40 Look Left

 $3.75 \ \mathsf{DPC^4D^4}$. $\ \mathsf{APA^4>^4} \ \mathsf{DA^4}$

4.10 Caution! Single Lane Bridge.

5.13 DPC 50 D50

8.22 Δ ⁶, L+2 \cap . $\wedge \cap \triangle$ ⁶>⁶ $\rightarrow \Delta$ ⁷ $\dot{\rightarrow}$ ⁷ $\rightarrow \triangle$ ⁷ $\dot{\rightarrow}$ ⁷ $\rightarrow \triangle$ ⁷ $\dot{\rightarrow}$ ⁸ $\rightarrow \triangle$ ⁷ $\dot{\rightarrow}$ ⁸ $\rightarrow \triangle$ ⁷ $\dot{\rightarrow}$ ⁸ \rightarrow

9.86 JPC 46 Je

10.08 ⊃P⊂⁵⁶⊃⁵⁶

11.07 $\D^{\text{L}} = \D^{\text{L}} = \D^{\text{L}}$

14 15 7Pc 56756

15.30 ∆⁵b. H⊲'S

15.43 ⊃P⊂⁵⁶⊃⁵⁶

15.90 $\Lambda \Gamma \triangleleft ^{\varsigma_0} > ^{\varsigma_0} \quad D \Delta^{\flat \dot{\flat}} {}^{\varsigma} \sigma^{\varsigma_0} U C {}^{\varsigma_0} D A^{\varsigma_0} U A 1$

16.05 Λ ቦ \triangleleft ናь \triangleright ናь $\triangleright \Delta$ ν $\dot{\nu}$ ና σ °LC \vdash 0 \triangleright 2 \vdash 0 \vdash 0 72

16.82 L\rd

 $20.45 \wedge \Box$

Leg C - Section 2 - Expert (the less interesting back side)

English to Inuktitut phrase translations

Stop! - △^{Sb}

Left - Ld2U

Not Left - くしょこしんこら (because there's no translation for "Right")

Begin - ∧∩⊲^{5b}>^{5b}

Turn Left! - H⊲'S (you can see the similarities, right?)

Go Straight - DPC 56 256

One - 4CD756

Acute - 人るしてくつい

Eaten by Bear - a_o^{cb}C^{cb} (I thought it interesting that when doing a search on "bear", I got four pages of results, and this was the first phrase it showed)

Act with Caution - $\Delta \cap ^{c} \supset ^{c} > ^{c}$

Bridge - PJN Jac GANYLK

Speed - ▷Δ^ϧϧʹσ^ͺ, UC ^៶b▷¬\D∩ ^{\bar\boldow} (really, this means tachometer, which is interesting given I found no translation for "speed".)

Folding Time

The real value of Steve's rally car "Ol' Smokey" isn't that it gets great gas mileage, or that it has excessive horsepower. It doesn't have a great paint job, It doesn't always work, and if you plan on driving it you'd better love the smell of burning oil. The frame creaks as you turn corners, and the rear brakes make this mysterious knocking noise when they get hot. What Ol' Smokey does have though, is a fully working Flux Capacitor and the required 1.21 gigawatts of power required to use it (really it's the Flux Capacitor and not the poorly wired headlights that set off all of Roger's Ham Radio equipment).

In this section, we recount one of our scouting trips through the last section of this rally. Of course, the odometer wasn't working that day, so rather than distances to instructions, we've given you the time we took to get to each new instruction. The problem is, we left the Flux Capacitor enabled, so every time we accelerated past **65** kph, we jumped forward in time by 1.315 minutes. This makes some of the times shown longer than they should be.

The Flux Capacitor is only triggered during acceleration, not deceleration. Jumps in time happen immediately after the CAS change, so the instruction time following the CAS change is affected by the jump in time.

Do not calculate a jump in time for the speed increase at 0.00 km (from the slower, previous section). Also assume we were always traveling at the average speed, and did not slow for traffic, turns or stop signs. We've only recorded the time to changes of speed or direction, so you may go straight ahead through some intersections. Times listed are non-accumulative, and printed in order.

End of Rally Instructions:

Note your time at 27.27 km into the section. Add to this time, 5 minutes, 45 seconds, plus three additional minutes for every time the rally takes you through an intersection with traffic lights over the entire route (Legs A, B and C). **This is your ideal time in**

Write your ideal time in on your score card and hand it in to the CP crew at the end of the rally, at SuperBurger.

Please park at the north end of the parking lot.

Folding Time Route Instructions

0.00 S L onto 25th Sideroad. CAS 76

0.165 minutes R CAS 60

1.240 CAS 72

1.758 S R

1.050 CAS 70

2.713 CAS 54

0.289 L CAS 47

1.072 CAS 60

2.180 CAS 72

2.282 R

1.141 BL. Then S BL

1.367 CAS 54

0.511 CAS 72

2.165 S L CAS 76

0.371 CAS 47

1.787 CAS 76

3.170 R. CAS 54. Caution Single Lane Bridge 460m in.

0.511 CAS 72

3.490 R

3.834 S R. Elapsed Time to End of Rally is from this point.

0.267 R CAS 45, then a forced left

0.706 S BR CAS 76

5.166 S R

0.071 L into SuperBurger Northern entrance. EOS, EOR.

Vistas: 33.42 Look Right if you have time:)

First Frost 2009 Leg C - End of Section Details

Leg: C Start of Section: 1

Approximate Car 0 time: 3:15 pm

Leg C starts facing North on Osprey Clearview Town Line (Hwy 124), turning right (East) onto Hwy 124. This is the stop sign just north of Mylar & Loretta's, visible to the left as you exit the restaurant. Zero your odometer at the stop sign.

Leg: C End of Section: 1

Approximate Car 0 time: 3:55 pm

Section 1 ends facing West on 6/7 Sideroad Nottawasaga,, turning left (south) on Concession 5

Nottawasaga S.

N: 44° 18.614 W: 80° 07.380

Leg: C End of Section: 2

Approximate Car 0 time: 4:10 pm

Section 2 ends facing south on 4th Line, turning left (East) onto 25th Sideroad.

N: 44° 14.682 W: 80° 5.219

Leg: C End of Section: 3

Approximate Car 0 time: 4:51 pm

Section 3 Ends at SuperBurger on Hwy 89 at Hwy 10 / Prince of Wales. Please park in the northern area of the parking lot. Turn in your timing sheet to the checkpoint crew at SuperBurger.