

CROSSWALK SAFETY & AWARENESS FORUM

Changing Behaviour – Saving Lives



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INTRODUCTION

The Surface Transportation Sub-Committee of the Halifax Chamber of Commerce's Transportation Committee hosted a Crosswalk Safety and Awareness Forum on January 18, 2007, at Mount Saint Vincent University. The impetus for this day-long session was the growing concern for pedestrian safety and interest on the part of the committee to host an event that could effect change by bringing together professionals to discuss crosswalk safety and awareness.

PURPOSE AND STRUCTURE OF THE FORUM

The purpose of the workshop was threefold:

1. Provide professionals with an environment within which they could share current practices regarding crosswalk safety and design;
2. Identify and discuss current best practices regarding crosswalk safety and design; and
3. Allow for the opportunity to brainstorm on how crosswalk safety can be enhanced in Nova Scotia.

Overall, the purpose of the Forum was achieved as the objective to draw together professionals engaged in roadway safety from across the province to discuss crosswalk safety was realized.

It was determined early in the planning process for the day-long Forum that it should be divided into two distinct, yet connected, components. The morning session was a plenary in which five presentations were made. To set the stage, Ralph Hessian, Director of Highway Engineering Services with Nova Scotia Transportation and Public Works, provided an overview of the provincial perspective. The next presentation outlined what was happening in HRM and was presented by Ken Reashor, HRM Traffic Authority.

With a general understanding regarding crosswalks throughout the province, the next sessions were more specific. The third presentation, provided by Dr. Fred French of Mount Saint Vincent University, centred on human behaviour and the implications on crosswalk safety. The last two presentations focused on enforcement and were presented by Sgt. Mike Spearns of the Halifax Regional Police force and Bill Bryden of the RCMP.

The presentations set the stage for the afternoon breakout sessions. Three concurrent workshops were held, with the discussion presented to the entire group at the end of the day. The workshops were entitled:

1. Improving the ABC's of Crosswalk Safety
2. Changing Behaviour
3. Best Practices

The success of the workshop depended upon the attendees. The objective of bringing together a number of professionals involved in road safety was achieved. With 40 people present, there was broad-ranging representation from three provincial departments - Nova Scotia Department of Transportation & Public Works (NSTPW), Department of Education, and Office of Health Promotion and Protection); two HRM departments (Transportation and Public Works Services and Community Development); two police forces (RCMP and Halifax Regional Police); five municipalities outside of HRM; two universities (MSVU and Dalhousie); IWK Safety Link; Halifax-Dartmouth Bridge Commission; Nova Scotia Safety Council and the Halifax Chamber of Commerce.

HIGHLIGHTS OF PRESENTATIONS

The Provincial Perspective

*Mr. Ralph Hessian, Director of Highway Engineering Services
Department of Transportation and Public Works*

- É success is dependent on a shared responsibility
- É we have seen a steady improvement since the 1960's - 10 fatalities at crosswalks since 2000
- É we are involved in several forums: Canadian Council of Motor Transport Administrators (CCMTA) - Road Safety, Research and Policy Standing Committee; Transportation Association of Canada (TAC) - Traffic Operations and Management Standing Committee; Road Safety Advisory Committee (RSAC) - Sub-Committee for vulnerable road users; Strategic Highway Research Program - research into human behaviour
- É numerous crosswalk types, for example, RA-3 (School), RA-4 (Pedestrian), RA-5 (Overhead)
- É legislatively governed by the Motor Vehicle Act and Official Traffic Sign Regulations
- É installations on provincial roads determined by technical investigation
- É we have adopted national guidelines (e.g. amber flashing beacons)
- É a fully signalized intersection costs in the range of \$200,000
- É Transportation & Public Works has a technical primer available for distribution and has allocated \$100,000 for investment in research, focus groups etc., in an effort to eliminate pedestrian crashes

The Halifax Regional Municipality (HRM) Perspective

Mr. Ken Reashor, HRM Traffic Authority

- É two basic types of crosswalks - marked and unmarked (at every intersection)
- É currently about 500 uncontrolled marked crosswalks exist - thousands of unmarked crosswalks

- É pedestrian collisions per 100,000 population have stayed relatively constant
- É use the Transportation Association of Canada (TAC) standard (e.g. no marked crosswalk within 200m of another crosswalk)
- É many design changes are possible, but few seem to make any real difference
- É numerous examples of media advertising re: crosswalk safety (e.g. Global Public Service Announcements, Metro Transit, Breakfast Television)

Human Behaviour - Implications for Crosswalk Safety

Dr. Fred French

- É behaviours are the result of a complex interaction of many factors
- É two theoretical positions on behaviour and learning - behavioural and cognitive
- É presentation focused on the cognitive - e.g. as a person matures, there is a shift from external to internal control
- É learning is an adaptive process in which the tendency to perform a particular behaviour is changed by experience
- É at about age 6, children have capacity to act less impulsively and more reflectively
- É depending on the task, the plan and the child, effective planning tends to emerge in the seven to eight year-old range
- É we need more than engineering and enforcement
- É thinking, decision-making and change can be impacted through education
- É need to impact personal decision-making through an integrated holistic program

Enforcement - Halifax Regional Police

Sgt. Mike Spearns

- É the traffic unit was out of service from 1997 until Oct/05 - 18,000 convictions since that time
- É key thrust - Education through Enforcement

- É biggest problem for drivers - information overload (e.g. signs, passengers, electronic devices)
- É brochure available entitled *Traffic Safety*
- É different traffic theme each month - Seat belts/booster seats this month (January)
- É Goals: proper dress (visibility/reflective material); education through the school system (e.g. raise hand to cross); use crosswalks

Enforcement - RCMP

Mr. Bill Brydon

- É the key is to change behaviour
- É the three E's - Engineering, Education, Enforcement - a long-term solution but it does work
- É engineering has done its job
- É the RCMP is part of the HRM integrated policing system
- É partnerships - *Citizens on Patrol* is a very useful program in rural areas
- É the focus is now on prevention
- É What about a national program on crosswalk safety, similar to seatbelts?

HIGHLIGHTS OF WORKSHOPS

Improving the ABC's of Crosswalk Safety

Challenges

- É lack of driver/pedestrian education
- É under the Motor Vehicle Act, vehicles must yield, but not stop for pedestrians
- É teachers decide how to implement the curriculum requirement respecting crosswalk safety
- É to convince people of the importance of "eye-to-eye" contact

Opportunities

- É design a mandatory accredited course so that drivers and pedestrians learn alike
- É corporate sponsorship of reflective gear
- É The Bedford “Safety Village” - a learning experience for school children
- É use the internet to reach youth
- É peer education/mentoring in high school
- É camera surveillance for problem crosswalks
- É raise the issue to the national level

Changing Behaviour

Challenges

- É lack of understanding of rules of the road - both drivers and pedestrians
- É enforcement needs to be a political priority
- É need a champion to move the issue forward
- É no or improper evaluation of current programs
- É lack of standardized training for teachers
- É lack of data - develop a baseline of “near-misses” vs collisions

Opportunities

- É ingrain in pedestrians to put out hand when crossing the street
- É wear reflective clothing for visibility
- É implement a standardized teaching method for schools
- É educate drivers and pedestrians together
- É develop a social marketing campaign
- É implement a provincial strategy (short term) and a national strategy (long term)

Best Practices

Challenges

- É we can engineer crosswalks all we want but, without evaluation, it's hard to know if there has been any improvement
- É we teach youth to use crosswalks, not how to cross them
- É crosswalks make pedestrians feel safer than they really are
- É some pedestrians just press the crosswalk button and proceed without looking
- É drivers are going too fast
- É it all comes down to behaviour: What do you respond to - the lines or the pedestrians?

Opportunities

- É Manual of Uniform Traffic Control Devices for Canada - things need to be consistent across the country
- É better communication with pedestrians
- É install extra lights, especially LED lights, on busy streets
- É implement traffic calming, with enforcement
- É install reflective tape at crosswalks

RECOMMENDATIONS

- **Education**

It is recommended that the province fully evaluate current mandatory educational programs conducted within Nova Scotia for both driver training and within the school system for pedestrians. The main purpose would be to determine if the current educational lessons, tools and programs are the best that they can be.

The **proper and frequent education** of our pedestrians and drivers must become a priority of the safety education programs within the province. From grade primary through to grade twelve we must continually focus on the self-protection of the pedestrian. In turn, an increased focus on driver responsibility has to survive the initial education and licensing process.

The development and application of “best lessons to teach,” as identified during the evaluation phase for both drivers and pedestrians, is a primary key in the improvement of pedestrian safety. There is a lack of understanding of the rules of the road on both the pedestrians and drivers. Pedestrians have priority.

Proper and frequent education was identified throughout the Forum as being the single biggest key to improving pedestrian safety.

- **Enforcement**

It is recommended that throughout Nova Scotia speed enforcement and pedestrian responsibility become a priority.

Vehicles are driven much faster today than they were 30 years ago. Vehicles are much better built with many more safety features; however, there are many more distractions in the form of on-board devices and cell phones. We need to engineer people to slow down. Enforcement needs to be a political priority.

These combined factors create an unsafe driving environment.

- **Engineering**

It is recommended that Nova Scotia take a pro-active approach to the review and improvement of crosswalk design, in conjunction with the Transportation Association of Canada and in accordance with national standards. There needs to be consistency in overlapping departments.

CONCLUSION

The province needs to focus on evaluating our current education, enforcement and engineering of crosswalk safety to prevent injuries and save lives.

A concerted effort needs to be implemented with regard to education, enforcement and engineering. The proper and frequent education of our pedestrians and drivers must become a priority of the safety education programs within the province. Education has to be specific and consistent. The education needs to be targeted and reinforced. We need a standardized teaching method for schools. There needs to be stronger consequences for both motorists and pedestrians. Crosswalks need to be more visible, through better design, lighting and more frequent general maintenance, e.g. painting of lines, particularly solid bar preceding the crosswalk.

A coordinated (city, provincial, insurance industry), consistent marketing/media campaign should be created. The province could dedicate a full year to crosswalk education, e.g.

1. "People Are Dying to Cross the Street"
2. "The Year of The Pedestrian"
3. "Crosswalks - Changing Behaviour, Saving Lives"

Unless there is a heightened awareness within the general population, crosswalk safety will continue to be an issue.

Appendices

Notes from Crosswalk Safety & Awareness Forum Workshops:

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Improving the ABC's of Crosswalk Safety

What are some of our challenges and opportunities?

Challenges:

- DRIVER EDUCATION...Lack of education
- How do we tell people that there is a caution in passing when there is low visibility and there is a crosswalk in the area
- What do we teach our pedestrians now? ----stop, look and listen? ...what about waiting for the car to actually STOP?
- Crosswalks that obstruct views for pedestrians?: poles...sight lines...large objects that make it hard to see and be seen
- The restrictions on height for 18 wheelers are a problem for the flashing lights (crosswalk signs)...they are high enough that it's out of your view plane if you're driving
- Everyone is entitled
- It has to be easy
- Natural walking patterns...people going other routes rather than crosswalks
- Politics: the political pressure from the community...getting them online with the rules and regulations laid out by government (HRM) and province
- Must be a mutual respect and appreciation for the driver and the pedestrian
- Teaching defensive driving in Driver's Education. And teach them the respect/and awareness of drivers and pedestrian
- As a parent...what do I teach my children?
- Vehicles must YIELD to pedestrians ...NOT STOP.....you don't legally have to stop
- Teachers: there is a curriculum requirement...but it's up to teachers how it's carried out
- Should a certain municipal department take the lead in crosswalk safety as something to control...but that may not be possible...may have to be everyone's agenda in order for it to be considered an issue of importance
- Better metro-transit service... more current changes and improvements...people running into traffic to catch buses
- Carrying the importance of this idea across jurisdictions
- Parents dropping their children off in traffic
- EYE-TO-EYE CONTACT between driver and pedestrian
- Increase the fine or penalty to those who create a danger
- Standard street lights at every intersection

Opportunities:

- Reflective gear...corporate sponsor who could issue something “Unique and seen”/ “cool”-----Make it “stylish” so that young people will wear and use it...something that can be kept on because if you have to keep putting it on and taking it off...having to repeat the behaviour could make it easily forgettable ----add it to backpacks for children’s bike helmets....etc.
- To put educational messages where they will be seen...for youth: the internet?
- MANDATORY ACCREDITED COURSE so that drivers and pedestrians learn alike
- “The Safety Village”: community that would be built in controlled environment. And different hazards would be there and children would learn how to respond to these hazards
- Take out a page ad that could be very creative...with some DID YOU KNOWs about crosswalks. Use positive things as well as negative. This should come out when children are just coming back to school and re-entering the social realm on their own
- Education must be on-going...people may have to do follow-up driver’s education - after X number of years
- The province could dedicate a full year to educating people “This Year People Are Dying to Cross the Street” “ The Year of The Pedestrian”
- Could even bring this campaign to a national level...create a law that conforms across Canada
- In high schools: students who take on certain issues...could we engage those groups and provide them with a challenge to fix the problem within their area : **PEER EDUCATION/ MENTORING**
- Let kids create a calendar which will display their own work that is focused on this problem
- To use the internet to reach youth
- Get testimonials from people who may have lost a loved one due to a traffic accident...get them to speak to those who need to be educated
- Camera surveillance for problematic crosswalks...CHALLENGE: Privacy laws?
- **Must** educate about the benefits of having these cameras...

Changing Behaviour

Gaps and Barriers for Crosswalk Safety

- It's not ingrained in our children - simple as putting out your hand when crossing the street
- Should be taught in the education program - it has to be specific and consistent; the education needs to be targeted and reinforced
- Our culture allows you to cross wherever and whenever we want - leads to so many more distractions for motorists
- There is an attitude that because we are pedestrians that we have the right of way - respect and obligation of both parties
- Lack of understanding of the rules of the road - on pedestrian and driver's part
- Stigma with following proper crosswalk safety rules and regulations
- There have been changes in regulations and laws that people may not be aware of
- Gap between driver training and mandatory refresher
- "Out of sight out of mind" - children perform risky behaviour when they are with friends; seem to not engage in proper behaviour; someone needs to be called on it
- It was said that we need practice on the "right" way in these situations
- People jaywalk - not wanting to walk down to the crosswalk; we need reinforcement
- It was brought forward that the "big picture" is in culture (Halifax behaviour) - our city does not take crosswalk safety as seriously as other cities (Montreal, New York)
- Over reliance on pedestrians on driver courtesy - sometimes you can be too courteous and cause danger that way
- It was brought forward that the language (car accident) may have something to do with the problem. Should be called collision
- Enforcement - needs to be political priority (seat belts and speeding vs. bike helmets and crosswalk safety)
- There is no national strategy to deal with crosswalk safety - needs to be consistent in the application of their standards from one end of the province to the other (same rules need to apply)
- The programs that are out there for the public are not evaluated correctly or not evaluated at all
- It was brought forward that people need to start wearing reflective clothing
- Pedestrians assume that drivers can see them
- We need a standardized teaching method for schools
- How do the teachers get proper training for making their students aware of crosswalk safety? Teachers do not have standardized training in this topic area

- Risk of teaching some children the “arm out” technique because they sometimes think you can stop traffic in all situations by using this technique

Are There Other Ways to Reinforce Positive Behaviour?

- It was said that an observational study or some measure of “near-misses” at a certain crosswalk may catch peoples attention on the matter and change behaviour
- Interview pedestrians
- Identify areas with a collision history
- Driver training lacks enough crosswalk safety/pedestrian safety to reinforce this issue

Changing Bad Behaviour

- More education
- Practice techniques that have been learned - smile, wave, make eye contact, reinforce good behaviour (could cause some problems with children who are taught not to practice this behaviour with strangers)
- Stronger consequences for both pedestrians and motorists - It was brought forward that it is difficult to determine who is at fault
- It was said that the perception of the frequency of being caught could decrease bad behaviour
- A social marketing campaign could be created. Who could we target? Do we target children, young adults, adults, etc? What are the behaviours you want to change?
- It was brought forward that it is important to educate pedestrians and motorists together - synthesize instead of separate the two groups
- It was said that emotional appeal could be used in marketing efforts, such as kids art/pictures of car crashes sent to traffic violators)

Opportunities

- Safe Kids Canada safety program for kids and Crossing Guard Recognition- this could bring awareness forward
- National strategy - unless political masters say “that’s a problem, something has to be done,” we will not get the recognition needed in regards to this issue (if this strategy was too long-term, a provincial strategy may work better and at a faster pace)
- Lessons through school (like recycling) could be reinforced/developed
- A leader to research and evaluate current safety programs. This could help develop or make changes to current programs to better educate the public about crosswalk safety
- Baseline of “near-misses” versus collisions

Best Practices

Discussion

- National standards have been made by the Government of Canada
- Uniform Traffic Control Manual (contains all of the national standards)
- However, most crosswalk issues are dealt with provincially
- NB adopted the National Manual by law; therefore, they must follow the manual across the board
- Not all provinces use the same practices when creating crosswalks
- If standards were uniform across the country, then drivers would see consistency

Problems

- In the spring, the paint fades and motorists can no longer clearly see the marked crosswalk
- All comes back to behaviour: what do you respond to: the lines, or pedestrians?
- Line testing didn't show compliance. Will it impact pedestrian safety?
- Why aren't they getting in accidents not in crosswalks?
 - The lines aren't protecting them?
 - Are people more cautious not on crosswalks?
- There is pressure to paint more crosswalks, though it's not really reducing accidents
- People are going too fast

Zebra Crossings

- The paint buildup can be a hazard to pedestrians
- Drivers' perspective - looks like a solid line from away; causes problems
 - Solution: perpendicular lines?
- Truro: zebra striping; clear paint; signs
- Only so much you can do without education and enforcement

Education

- Poor job in communicating to pedestrians; needs to improve for their safety
- Lots of signage for motorists
- We don't teach proper safety to children when crossing crosswalks
- There is a gap in education; they are taught a little when they are young and then it isn't mentioned until youth go to get their licences
- We teach youth to use crosswalks, not how to cross them
- Need to be taught to make eye contact with drivers so they know drivers see them

Crosswalk Dependence

- People request crosswalks to feel safe, even in lower traffic areas
- The only way to get to other side is to get a crosswalk
- The Mindset is that the only way to cross is on a marked crosswalk
- People are never satisfied. First they want the crosswalk, and then they want flashing lights, then half-lights. But none of it seems to make a difference
- Peoples' calls always focus on marked crossings; never on unmarked ones. People just want additional marked crosswalks

The Mindset

In Zurich, there are no lights - the mindset is that pedestrians have priority...that's just how it is.

In HRM:

- Consultants from Great Britain thought that compliances were very good here. People are good with seeing and stopping. It is those who are from away who seem to be a problem. Because they're not from HRM, they don't realize the way things work here.

Crosswalks at "T" Intersections

- Placed on the left hand side where making turns
 - 3 lanes of traffic and pedestrians for motorists to watch for
- Crosswalks should be on the right side
 - so they're only concerned for pedestrians; they have a clear view

Debates

- Some places have no sidewalks
- There are other conditions that determine the placement for crosswalks
- There needs to be consistency with overlapping departments
- Some crosswalks were put there for political reasons (they are now historic though not well-placed). No one would want them to take them away

Lights

- Can distract or blind drivers
- They can't always see the above lights; maybe they would work better if they were lower
- On busy streets, extra lights may help (especially LED lights)
- lighting stage area (on the sidewalk) and crosswalk so that drivers can see them before they step out onto the crosswalk

- The lights would shine lower; focused over where the individual would be standing; light on subject with no distractions or glare
- Control the height of lights by looking at heights of vehicles using the road
- Look at the types of fixtures used. Match them to height and the lamppost
- Flashing lights (2 per lane?) RA-5s

Speed

- We need to engineer people to slow down
- Methods for Traffic Calming:
 - Zig Zag (as done in London)
 - Makes the driver feel encroached on
 - Creating a tunnel effect
 - Narrowing the spacing on the lines
 - Makes drivers feel as though they are going faster
 - Curb extensions
 - Makes drivers feel funneled

Laning

- Lanes used to be 9 ft., but they are now 12 ft.
- More lanes = more volume
- Increased the speed of drivers
- There won't be any speed reductions without enforcement

Advanced Striping

- Triangles
- Had some additional compliance
- People stopped further before crosswalks; they are more visible

Signage

- Reflective Tape- not destroyed by the plow
- Painted Stop Mark (Bars)
 - Seems to help, though not mandatory
 - Want them to stop in proper position so they can see
 - We wouldn't put them at marked crosswalks
 - We should be looking at putting them everywhere (all intersections and crosswalks)
 - Allows the drivers know where to stop

Timing

- Many pedestrians don't want to wait for the cycle to go through, they'll simply cross anyway
- They feel that they should be able to walk on the light that is already green
- Waiting for the light can frustrate pedestrians. A balance needs to be found to deal with the impatience of drivers and pedestrians

Off-Set Crosswalks

- The lines are not directly under the lights (sometimes they use existing poles for lights rather than putting in new ones)
- The light does not reflect down onto the actual crosswalk
- They cannot challenge the issue because the law does not require that crosswalks be lit

Flashing Lights

- Increases the confidence in pedestrians to just cross
- Some pedestrians don't push the button to activate the lights, and the drivers are paying attention just to the lights, and not looking to make sure there are still no pedestrians on the road
- Some pedestrians don't wait to check and make sure that the cars stop for the flashing lights. They simply push the button and then walk

Crosswalks

- They continue to add to crosswalks and become more confident, yet pedestrians also seem to be becoming more careless
- Are pedestrians receiving false security by adding more features to crosswalks, especially if they aren't warranted
- Have we gone too far in addressing all the crosswalk issues?
- We can engineer crosswalks all we want, but without education, it's hard to know if it does anything?
- There is a lack of clarity that exists around the issue of crosswalks

Main Points

- We can engineer crosswalks all we want, but without education, it's hard to know if it does anything?
- We teach youth to use crosswalks, not how to cross them
- People are going too fast
- All comes back to behaviour: what do you respond to: the lines, or pedestrians?