TRANSMITTAL & DIARY DATE REQUEST — **FORMULAIRE D'ENVOI ET DEMANDE DE LA DATE D'AGENDA**

	Outside PD - Autres S.P.	Commr. / Comm.	C / Cdt. div.	OC - Cdt. s.-div.	IC Det. - Resp. du dét.	Copies to - Copies au
TO / AU	EAST ST PAUL					CST. KEN GRAHAM
FROM / DU				TRAFFIC SERVICES		Date: 2005-08-18
	HQ File - Dossier de la DG		DIV. File - Dossier de la div.		S/DIV. File - Dossier de la s.-div.	DET. File - Dossier du dét.
			2005-08CIB			2005-00568

ATTACHMENTS - PIÈCES JOINTES — Dated - Daté du

☐ Correspondence / Correspondance ☐ Warrant / Mandat ☐ Summons(es) / Assignation(s) ☑ FTCR CASE

FOR YOUR - POUR

☐ Information / Votre gouverne ☐ Action / Donner suite ☐ Execution / Exécution ☐

REMARKS (if reply-arrow to return address) - REMARQUES (dans le cas d'une réponse, indiquer par une flèche l'adresse de retour)

Ken,

Please find attached a copy of my collision analyst report. In this particular case, although I looked at speed, I was unable to go any further than a quick review of the collision evidence in order to determine speed. There were too many variables which precluded any chance of determining the speed of the offender.

Since I will be moving to Banff within the next couple of months, could you please review my report to ensure it makes sense and there are no glaring errors. I have included a disk of the digital photos, as well as, a copy of print photos for the M.E. The photo index cards are for the defence. I have spoke to the senior Crown Attorney, Zane Tessler on the issue of disclosure of photos to defence and he advised that photo index cards are sufficient.

If you have any questions or concerns, please feel free to give me a call at 9831557 or 4791264. I am sorry for the delay but if it justifies my slow submission, I devoted more than 90 hours to this file.

☐ SERVED - Original & Affidavit returned - SIGNIFIÉ - original et affidavit retournés

☐ NOT SERVED for reasons indicated - NON SIGNIFIÉ pour les raisons indiquée

Date fine & costs paid / Amende et frais payés le

DIARY DATE EXTENTION / PROLONGATION DE LA DATE D'AGENDA

☐ Disposition of exhibits / Disposition des pièces à conviction
☐ Further enquiries negative / Autres recherches nulles
☐ Awaiting instructions / Dans l'attente de directives
☐ Awaiting payment of fine & costs / Dans l'attente du paiement de l'amende et de frais
☐ Report overdue / Rapport en retard
☐ Unable to execute Warrant (Summons) / Impossibilité d'exécuter le mandat (assignations)
☐ Trial date not set / Date du procès non fixée

Adjourned to / Renvoyée au ▶

EXTEND TO - PROLONGÉE JUSQU'À

RCMP GRC A-151-1 (1994-08) ICS

RCMP-GRC

ROYAL CANADIAN MOUNTED POLICE / GENDARMERIE ROYALE DU CANADA

FORENSIC COLLISION ANALYST/ RECONSTRUCTION REPORT

FATAL MOTOR VEHICLE COLLISION

R.M. of EAST ST. PAUL, MANITOBA

2005-02-25 / 0700 Hours

FORENSIC TRAFFIC COLLISION RECONSTRUCTIONIST FILE: 2005-08CIB
EAST ST. PAUL POLICE DEPARTMENT FILE: 2005-00568

CST. CHRISTOPHER BLANDFORD
FORENSIC TRAFFIC COLLISION RECONSTRUCTIONIST
'D' DIVISION TRAFFIC SERVICES
PHONE: 983-1557 - CELL: [redacted]
e-mail: chris.blandford@rcmp-grc.gc.ca

TRAFFIC ANALYST INVESTIGATION REPORT

RAPPORT D'ENQUÊTE DE L'ANALYSTE DES ACCIDENTS DE LA ROUTE

☑ Fatal / Mortel ☐ P.I. / Blésse ☐ P.D. / Domm.

Analyst file no.-N° de doss. de l'analyste: 2005-08CIB

Detachment - Détachement: East St. Paul Police Department

Occ. no. - N° d'inc.: 2005-00568

COLLISION

Occurred - Survenu	On highway - Sur la route	At or near - À ou près de	Prov.
on le 2005-02-25 at à 7:00	P.T.H. #59	R.M. of East St. Paul	Manitoba

Investigated-Enquêté	Analyst - Analyste	Unit - Groupe
on le 2005-02-25 at à 9:03	Cst. C.I. BLANDFORD	'D' Division Traffic Services

Accompanied by - Accompagné de	Unit - Groupe
Cst. K. GRAHAM/Chief H. BAKEMA	East St. Paul Police Dept.

VEHICLE ONE - VÉHICULE N° 1

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)	
1991	Chevrolet	Sprint Convertable	YEL	YEL

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.
JG1MR3166MK613447	DZC 235	MAN

Location when examined - Endroit au moment de l'examen: Collision scene/MPI Salvage

VEHICLE TWO - VÉHICULE N° 2

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)	
2000	Hyundai	Accent 2DR	GRN	GRN

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.
KMHCG35G5YU042065	BYG 898	MAN

Location when examined - Endroit au moment de l'examen: Collision scene/MPI Salvage

COLLISION SCENE - LIEUX DE LA COLLISION

Type of highway / Genre de route: Intersection

No.of lanes / Nbre de voies: 6

☐ Urban / Urbaine ☑ Rural / Rurale

☑ Industrial / Sect. industriel ☐ Business / Sect. commercial ☐ School / Zone scolaire ☐ Residential / Sect. résidentiel ☐ Farm / Ferme ☐ Playground / Terrain de jeux ☐ Other / Autre — Specify - Préciser

☑ Asphalt / Asphalte ☐ Concrete / Béton ☐ Gravel / Gravier ☐ Other / Autre — Other (specify) - Autre (préciser)

Describe for drag factor - Décrire la chaussée pour le facteur de trainée: At 0903 hours - Light frost covered and traveled. The highway surface was tested the following day when the surface of the road was dry and

Factor / Facteur: 0.52

☑ Levelled / Plat ☐ Sloped / En pente ☐ Hill top / Haute d'une colline ☐ Hill bottom / Bas d'une colline — Grade - Inclinaison: %

☑ Straight / Droit ☐ Curved / En courbe ☐ Other / Autre — Specify - Préciser

Superelevation / Dévers: %

Speed limit / Vit. max. autorisée: 80 km/hr / km/h

CIRCUMSTANCES / ACTION TAKEN - CIRCONSTANCES / MESURES PRISES

SYNOPSIS:

The preliminary investigation determined that V1 and V2 were stopped at a red light at the north intersection of P.T.H. #101 and P.T.H. #59 when V3 collided into the rear of V1. V1 subsequently collided into the rear of V2.

The driver of V1 died of injuires sustained in this event. The driver's of V2 and V3 were taken to hospital with non-life threatening injuries.

I attended and obtained a sketch, several measurements and photographs of the collision scene.

This is a / Il s'agit d'un: ☑ preliminary report / rapport préliminaire ☐ follow-up report / rapport de suivi

Further report to follow: / Un autre rapport doit suivre: ☑ No / Non ☐ Yes, by: / Oui, au plus tard le:

Date of this report / Date du rapport: 2005-08-17

Signature: CST. CHRISTOPHER BLANDFORD

Date sent to detachment / Date d'envoi au détachement: 2005-08-07

DISTRIBUTION: 1) Analyst - Analyste 2) Detachment - Détachement 3) Senior Division Analyst - Analyste divisionnaire supérieur

TRAFFIC ANALYST INVESTIGATION REPORT

RAPPORT D'ENQUÊTE DE L'ANALYSTE DES ACCIDENTS DE LA ROUTE

☑ Fatal / Mortel ☐ P.I. / Blésse ☐ P.D. / Domm.

Analyst file no.-N° de doss. de l'analyste: 2005-08CIB

Detachment - Détachement: East St. Paul Police Department

Occ. no. - N° d'inc.: 2005-00568

COLLISION

Occurred - Survenu on/le at/à	On highway - Sur la route	At or near - À ou près de	Prov.

Investigated-Enquêté on/le at/à	Analyst - Analyste	Unit - Groupe

Accompanied by - Accompagné de	Unit - Groupe

VEHICLE THREE

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)	
1995	Dodge	Dakota Pickup	DBLU	DBLU

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.
1B7GL23X7SS362425	DAX 165	Manitoba

Location when examined - Endroit au moment de l'examen: Collision Scene/Dr. Hook Towing, Lowson Compound

VEHICLE TWO - VÉHICULE N° 2

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.

Location when examined - Endroit au moment de l'examen:

COLLISION SCENE - LIEUX DE LA COLLISION

Type of highway / Genre de route — No. of lanes / Nbre de voies

☐ Urban / Urbaine ☐ Rural / Rurale

☐ Industrial / Sect. industriel ☐ Business / Sect. commercial ☐ School / Zone scolaire ☐ Residential / Sect. résidentiel ☐ Farm / Ferme ☐ Playground / Terrain de jeux ☐ Other / Autre — Specify - Préciser

☐ Asphalt / Asphalte ☐ Concrete / Béton ☐ Gravel / Gravier ☐ Other / Autre — Other (specify) - Autre (préciser)

Describe for drag factor - Décrire la chaussée pour le facteur de traînée

Factor / Facteur

☐ Levelled / Plat ☐ Sloped / En pente ☐ Hill top / Haute d'une colline ☐ Hill bottom / Bas d'une colline — Grade - Inclinaison %

☐ Straight / Droit ☐ Curved / En courbe ☐ Other / Autre — Specify - Préciser

Superelevation / Dévers %

Speed limit / Vit. max. autorisée km/hr km/h

CIRCUMSTANCES / ACTION TAKEN - CIRCONSTANCES / MESURES PRISES

This is a / Il s'agit d'un ☐ preliminary report / rapport préliminaire ☐ follow-up report / rapport de suivi

Further report to follow: / Un autre rapport doit suivre: ☐ No / Non ☐ Yes, by: / Oui, au plus tard le:

Date of this report / Date du rapport: 2005-08-17

Signature: CST. CHRISTOPHER BLANDFORD

Date sent to detachment / Date d'envoi au détachement: 2005-08-17

DISTRIBUTION: 1) Analyst - Analyste 2) Detachment - Détachement 3) Senior Division Analyst - Analyste divisionnaire supérieur

SCENE OBSERVATIONS

WEATHER: The following weather information was obtained from the Pilot's Automatic Telephone Weather Answering System of Navigation Canada's, Winnipeg Flight Information Center. This information was posted at 1800Z (1200 hours local time) and obtained at 1208 hours. This weather information covers the control area of the Winnipeg International Airport which includes this collision scene:

- WINDS: 030° at 6 knots (11 Km/h)
- VISIBILITY: 15 statue miles
- CLOUD COVER: Overcast - 25,000 feet
- TEMPERATURE: -17° Celsius
- BAROMETER: 30.26 inHg

Upon my arrival at the scene (0903 hours), I made the following weather observations:

- WINDS: Light and out of the north
- VISIBILITY: Unrestricted
- CLOUD COVER: Overcast

LIGHTING: Daylight (0903 hours)

This collision occurred within the southbound lanes of the north intersection of Provincial Trunk Highway (P.T.H.) #59 and P.T.H. #101 in the R.M. of East St. Paul. P.T.H. #59 is a divided highway that runs straight north and south. On the south side of the intersection, the northbound lanes are designated as P.T.H. #101 - West and P.T.H. #59 - north. To continue west on P.T.H. #101, northbound traffic must turn left at the intersection. Two of the four northbound lanes are designated as left turn lanes for traffic continuing west on P.T.H. #101. On the west side of the intersection there are only two westbound lanes. The north and southbound lanes of P.T.H. #59 are separated by a shallow median ditch which at the time was filled with snow. At this particular location there are only two southbound lanes. On the north side of the intersection, the lanes are separated by a solid lane line. The lanes on the south side of the intersection are divided with a broken lane line. The shoulders on both sides of this highway were asphalt covered with approximately one centimeter of snow. When I arrived on the scene, I noted the surface of P.T.H. #59 was covered with a light layer of frost.

For the purposes of this report, the intersection where this incident occurred maybe

referred to as the "collision intersection." Furthermore, I will confine my observations to those traffic control devices erected for southbound traffic on P.T.H. #59. On the immediate north side of the intersection two signs, stating "Stop Line," were posted on east and west sides of the highway. Under these words, were arrows pointing toward the surface of the highway. These signs were properly and clearly posted. Nonetheless, the stop line itself was approximately 95% faded. Only very small portions near the center and fog line remained.

Approximately 249.46 metres north of the stop line were two traffic signs. One of the signs was erected in the median immediately next to the left lane. It was a diamond shaped, yellow advisory sign with the symbol of a traffic light on it. Two alternating, flashing amber lights were attached to the sign post and visible on the left and right sides of the sign. The lights were in proper working order. Directly across from this sign erected on the west side of the highway a large rectangular advisory sign attached to a cantilever style sign post was posted above the highway. At this particular location, there are three southbound lanes. The third lane is designated for traffic turning west to P.T.H. #101. This advisory was posted above this lane. A traffic light symbol and the words "Prepare to Stop"were on the face of this sign. Embedded in the sign on the left and right sides of the traffic light symbol were two flashing amber lights. Both lights were functioning properly. All of the warning lights are activated whenever there is a northbound vehicle stopped at the collision intersection in one of the two left turning lanes waiting to turn west onto P.T.H. #101. They remain on until the traffic lights turn to green. When the lights are activated, they will flash for approximately eleven seconds before the traffic lights at the intersection change from green to yellow.

The next group of signs, immediately south of the advance warning signs, were three destination signs attached to a sign bridge spanning the southbound lanes.

Approximately 112.25 meters north of the stop line was a regulatory speed sign. This sign clearly posted a speed of "80 Km/H." Between this sign and the intersection was a traffic control sign which only permitted traffic to travel straight through the intersection. Right turns at the intersection are prohibited. This sign is comprised of a straight, black arrow within a green circle.

The final traffic control devices were located within the collision intersection. There were two traffic lights facing southbound traffic. One set of lights was located in the median on the south side of the intersection. The other lights were situated in the southwest corner of the intersection. This was a cantilever style traffic light standard with the traffic light head suspended above the southbound lanes. Upon my arrival, I noted that both traffic lights were red. The green and yellow lights were functioning properly.

The timing of the traffic lights is as follows:

- Advance warning lights to yellow lights = 11 seconds.
- Yellow lights to red lights = 4 seconds.

When the lights change to red, it does not necessarily mean both directions on P.T.H. #59 stop. In part, these traffic lights are in place to allow motorists intending on continuing west on P.T.H. #101 to cross the southbound lanes of P.T.H. #59. Therefore, when the traffic lights for southbound traffic changed to red, the traffic lights for motorists continuing north stay green. Only the traffic light for south and westbound traffic completed their cycles. Further observations were made of these traffic lights which will be discuss later in this report.

Street lights lined both sides of P.T.H. #59. There was a street light in north and southwest corners of the intersection and two within the immediate vicinity of the intersection on the east side of the northbound lanes. All street lights within or close to the intersection were functioning properly.

Upon my arrival, I noted that the collision scene had been properly secured by members of the Headingley Traffic Services and the East St. Paul Police Department. Arrangements were being made to have the Department of Highways erect barricades across the southbound lanes of P.T.H. #59. All westbound traffic was redirected away from the intersection. Northbound traffic was permitted to continue through the intersection.

Proceeding through the collision scene from north to south, the following observations were made: the first collision scene evidence was two overlapping skid marks in the left lane of the southbound lanes on the north side of the collision intersection. These marks were made by a vehicle that was traveling from north to south. The vehicle that left these marks had a track width of approximately 1.575 metres. The marks were approximately 22.87 meters in length.

Immediately south of the end of these skid marks, were several small thin scratch, scrap and gouge metal scars. Each of the metal scars ran parallel to one another and with the edge of the highway. These metal scars were grouped in a line which was perpendicular to the east edge of the road (See Exhibit 1.1). Closer examination found that they were made by an object that was moving from north to south. Within the most easterly metal scars were small chips of yellow paint. These metal scars were followed by two more groups of metal scars that were located in the same lane on the north side of the intersection. As with the previous metal scars, these metal scars ran from north to south and parallel to the edges of the highway. The difference in this case was each group was separated by approximately 70 centimeters (cms) of asphalt and the combined groups ran parallel to the edge of the road (See Exhibit 1.2).

A single chip of green paint was located in the left lane immediately north of the most southerly set of metal scars.

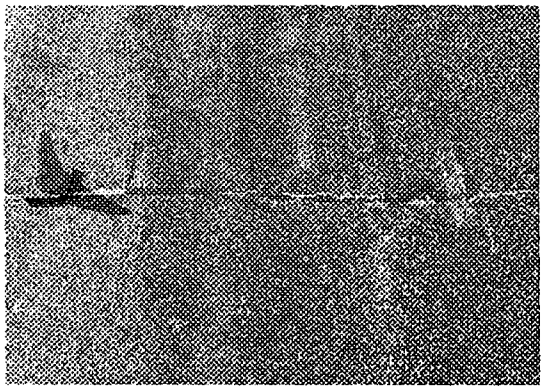


Exhibit 1.1

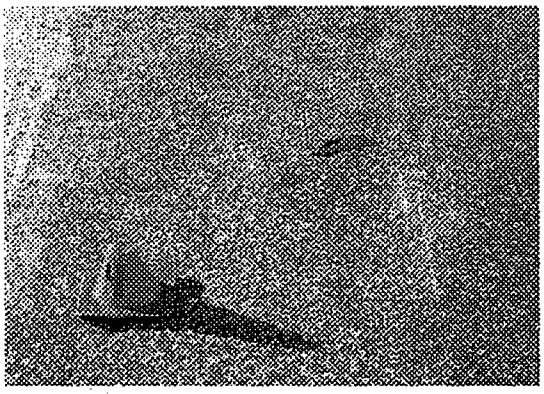


Exhibit 1.2

South of the metal scars and strewn throughout the intersection were various pieces of debris, consisting of broken vehicle parts. Among this debris were objects painted yellow as well as green.

Located within the centre of the intersection were two Manitoba license plates. Both were front plates. One of the plates displayed license number "DAX 165." This plate came from Vehicle #3 (V3). The other plate displayed number: "DZC 235", which came from Vehicle #1 (V1).

Approximately 2.5 meters to the south of the licence plates, a small piece of an orthodontic appliance was found on the road surface. Later that day, the remainder of this item was found in the rear storage area of V1. Directly east of this object were two tire marks. A thorough examination determined that these marks were made by a vehicle that was skidding toward the south. They extended from a point where the left, westbound lane of P.T.H. #101 and the left, southbound lane of P.T.H. #59 intersected. Each of the skid marks traversed an area of the road surface covered with approximately 1 centimeter of snow. Eventually they ran off the road and ascended the surface of snow piled in the median on the south side of the intersection (See Exhibit 2.1). This accumulation of snow was the result of snow clearing operations within the intersection. Over time the surface of the snow became hardened with a thick layer of ice. As they ran toward the south, these skid marks converged to form one tire mark. Once on the top of the snow, it could not be determined what state the wheels were in as the marks continued toward the south. To the right of this tire mark, the entire surface of the snow was disturbed and scraped toward the south. The tire

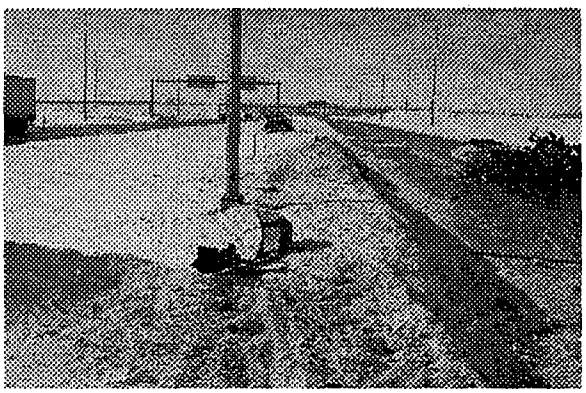


Exhibit 2.1

mark continued by the west side of the traffic light standard situated in the median ditch. The west side of the traffic light standard was freshly scraped and scratched. The object which created this minor contact damage was traveling from north to south (See Exhibit 3.1). Pieces of red taillight lens were found on the snow immediately south of the traffic light standard. Shortly after passing by the traffic light standard, the tire mark began to curve in a southwesterly direction. At approximately at the same location on the west side of the snow pile, a second tire mark appeared. As with the first, it could not be determined at this point what state the wheels were in when this mark was made. Nevertheless, it was determined the first set of tire marks was created by the driver's side wheels and the tire mark located on the east side of the snow pile was made by the passenger side wheels. All of the tire marks continued to the toward the southwest and eventually left the median.

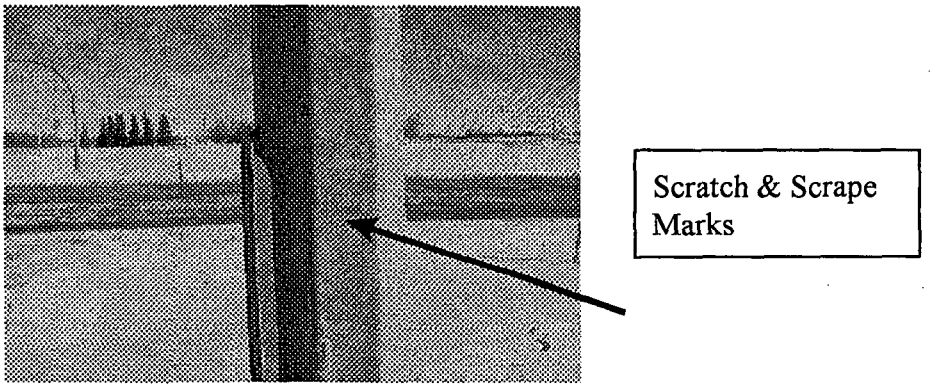


Exhibit 3.1

After leaving the median, the tire marks continued toward the southwest for a short distance and then abruptly turned back toward the median. Four tire marks were visible at the point. Two of the tire marks were imprints (rolling wheels) and the other two were side slip tire marks. The latter were tracking outside the tire imprint marks. All four tire marks ran onto the median in a southeasterly direction leaving ruts. Approximately three meters toward the southeast the tire marks changed direction and ran toward the south. As well, all four tire marks converged to form two marks which were tracked directly to the wheels of V3 (See Exhibit 4.1). It was determined that after V3 left the median, the driver was accelerating causing the rear wheels to spin subsequently leaving side slip tire marks. The imprints were made by the steering axle wheels.

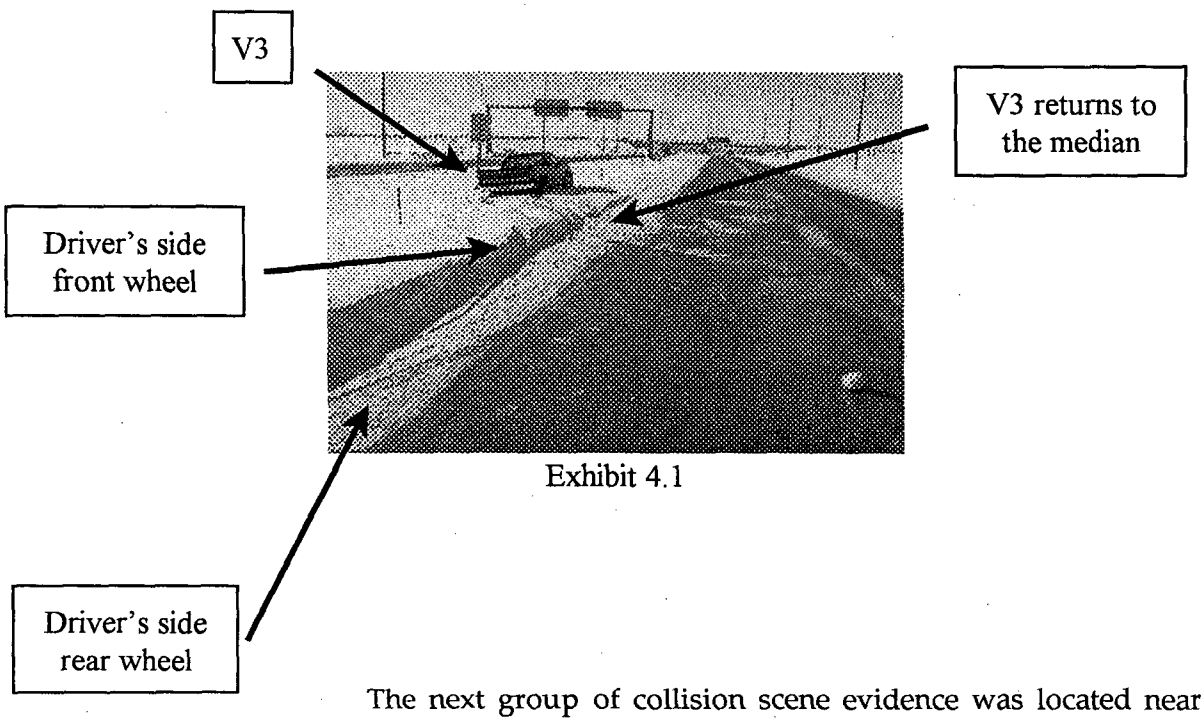


Exhibit 4.1

The next group of collision scene evidence was located near the southwest corner of the collision intersection. This evidence consisted of two tire marks which began at the middle of the southbound lanes and extended toward the southwest. After crossing the right lane, they ran onto the west shoulder which was covered with approximately one centimeter of snow. In addition to the first two marks, two more tire marks appeared on the shoulder. All four tire marks were side slip marks. Shortly after running onto the snow-covered shoulder, they crossed and changed direction to the south. All four time marks were tracked directly to the wheels on Vehicle #2 (V2) (See Exhibit 5.1).

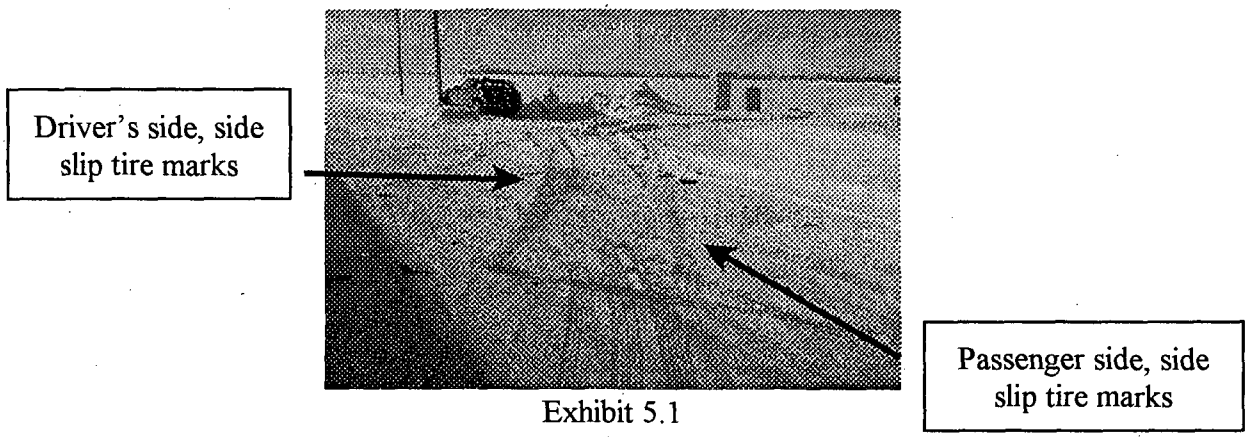


Exhibit 5.1

Vehicle #1 came to rest in the middle of the southbound lanes. This vehicle was located on its wheels, unoccupied and facing toward the east. It sustained severe contact damage and crush deformation to the front and rear ends. The damage to the rear end was much greater than experienced by the front (See Exhibit 6.1). V1 was a convertible. The roof was not on the car when it was examined. There was some moderate contact damage to the driver's side door and rear fender which were the results of extrication efforts by fire department personnel. The length of the car was approximately 2.35 meters on the driver's side and 2.41 meters on the passenger's side. This type of car is normally 3.71 meters in length. The principal direction of force (PDOF) at the rear of the car was directly from rear to front. The entire rear of V1 sustained severe contact damage. Approximately ⅓ of the rear end was collapsed and pushed forward. The rear axle was displaced forward, as well as upward, to such an extent that both wheels were no longer touching the road surface. As a result of the PDOF and crush damage sustained at this end of the car, the frame and floor pan buckled downward to such a degree that the bottom of the car was in contact with the road surface. This damage caused the top, leading edge of the front bumper to rise up to a height of approximately 50 centimeters. The engineered life space (occupant compartment) sustained moderate induced damage. Both front seats were bent forward. The storage area behind these seats was completely collapsed. A moderate amount of blood was noted in the driver's seat and on the steering wheel. Located behind and between the front seats, I found a broken piece of an orthodontic appliance.

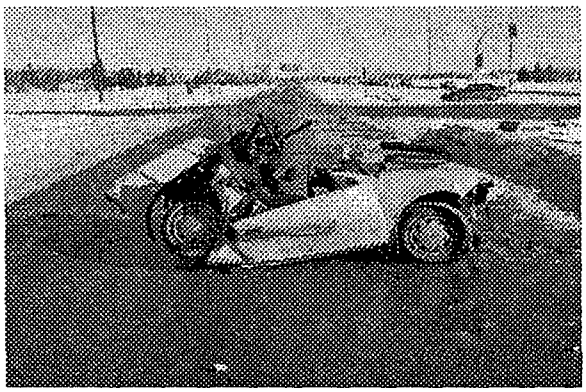


Exhibit 6.1

Although the rear end of V1 sustained severe collision damage, a number of the rear light bulbs remained. Some light bulbs were intact or missing while others were damage to some degree or destroyed. Four of the driver's side light bulbs were located, while only two of the light bulbs on the passenger's side were found. All of these light bulbs were seized for further examination.

V1 also sustained moderate to severe contact damage to the entire front end. The PDOF which caused this damage was from the front to the rear. Smears of green paint were noted on the passenger's side of the bumper cover.

Vehicle #2 came to rest off P.T.H. #59 in the southwest corner of the intersection (See Exhibit 7.1). This car was found unoccupied, on its wheels and facing toward the south. V2 sustained moderated to severe contact damage to the entire rear end between 50 and 100 cms

above the ground. The PDOF of the contact damage was from the rear to the front of the car. Parts of this car which sustained contact damage were the bumper, rear hatch and both rear fenders. The deepest intrusion into the passenger's compartment occurred between 72 and 80 cms above the ground. Smears and chips of yellow paint were noted on the top leading edge of the bumper. Light contact damage was sustained by the front third of the driver's side front fender. This damage appeared to have been caused by a minor sideswipe collision. The PDOF was approximately from the driver's side front corner to the center of the passenger's side. V2 came to rest immediately beside a street light standard (See Exhibit 7.1). On the west face of this standard, the metal was freshly scratched and scraped. Green paint was noted within this damage. On 2005-02-27, I attended the Manitoba Public Insurance salvage yard in Winnipeg and examined V2. During this examination, the light bulbs containing the brake lamp filaments were seized for further examination.

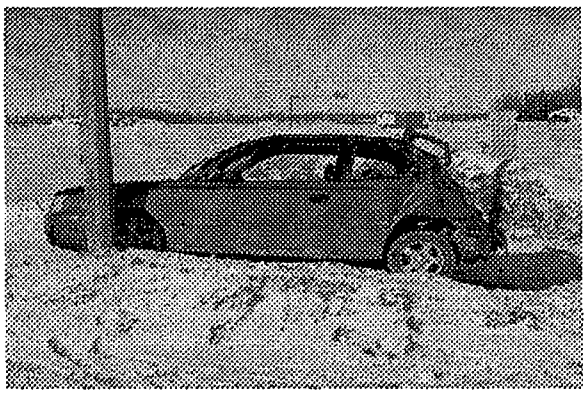


Exhibit 7.1

Vehicle #3 came to rest in the median ditch on the south side of the intersection. V3 was unoccupied, on its wheels and facing toward the south. Moderate to severe contact damage was sustained by the entire front end. The PDOF was from the front directly to the rear end. The lowest point of the contact damage was 48 centimeters. The height of this damage varied across the front of the vehicle: passenger's side - 117 cms, centre - 105 cms, driver's side - 111 cms. Along the leading edge of the hood within the contact damage, smears of yellow paint were noted. The driver's side taillight assembly and rear third of the fender sustained light, side swipe style contact damage. Pieces of the red taillight lens were missing and found next to the traffic light standard in the median on the south side of the collision intersection. The PDOF for this contact damage was from the front to the rear of the truck (See Exhibit 8.1).

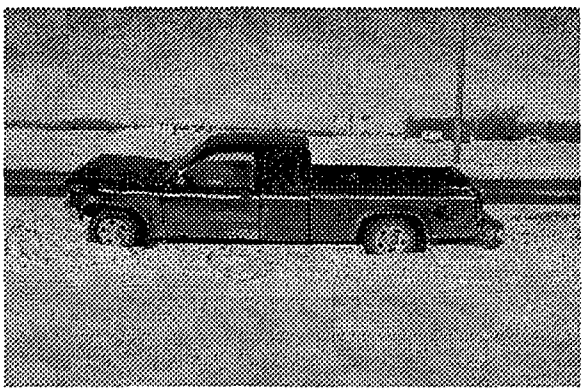


Exhibit 8.1

This vehicle was seized by the investigating unit for a mechanical inspection.

On 2005-03-04 the mechanical inspection of Vehicle #3 took place at the Lowson compound of Dr. Hook Towing in Winnipeg, MB. The inspection was conducted by two inspectors/mechanics of Manitoba Transportation and Government Services.

Other than defects created in the collision, the only noteworthy defects were located at the rear brakes and rear axle. Both brake cylinders were leaking brake fluid. As well, both rear axle seals were leaking. Only the brake cylinders had the potential of putting this vehicle out of service. Although the defects of the rear brakes could have placed the vehicle out of service, in this case the defects would have had little or no effect on the vehicle's ability to stop.

Coefficient of friction values of three surfaces were obtained with the use of a 40-pound drag sled and scale. The following chart lists the results of this testing:

SURFACE DESCRIPTION	μ VALUE
Bare, level, dry and traveled asphalt. (This measurement was taken in the left lane of P.T.H. #59 on the north side of the intersection.)	0.52
Level asphalt covered with approximately 1.5 cms of loose snow. (This measurement was taken along the path taken by Vehicle #2 post collision.)	0.43
Snow covered with a thick layer of rough ice. (This measurement was obtained in the median on the south side of the intersection along the path taken by V3 post collision.)	0.16

In the days that followed this event, I returned to the site and conducted two surveys and observed the timing of the traffic lights for southbound traffic on P.T.H. #59.

On 2005-03-18 while conducting a count of vehicles traveling through the collision intersection, the timing of the red light for southbound traffic on P.T.H. #59 was measured. The red light was activated whenever there were northbound vehicles in the left turn lanes of P.T.H. #101 waiting to turn west. It became apparent that the timing of the red light was dependant on the number of vehicles intending on turning west. Twenty-seven red lights were timed. The shortest length of time the red light was activated was approximately 17.3 seconds. The longest

was approximately 45.0 seconds with the average being 30.6 seconds.

Finally two surveys were conducted to determine how many vehicles traverse the southbound lanes of P.T.H. #59. Both surveys were conducted on a Friday between 6:30 A.M. and 7:30 A.M. These surveys were limited to those vehicles traveling south or west through the intersection.

VEHICLE COUNT SURVEY		
DATE	VEHICLE COUNT AT 0700 HOURS	FINAL VEHICLE COUNT
2005-03-04	501	1,165
2005-03-18	511	1,199

Vehicle count statistics at the same intersection were obtained from Manitoba Transportation and Government Services - Highway Engineering Department. They were conducted on 2004-06-24 and 2005-07-07 between 7:00 A.M. and 8:00 A.M. The vehicle counts were comparable to those conducted by the writer. On the 24th of June the number of vehicles passing through this southbound side of the intersection was 1,601. On the 7th of July it was slightly less at 1,555.

OBJECTIVES

Using accepted traffic collision reconstruction principles and techniques, I will attempt to:

I. DETERMINE THE MINIMUM SPEED OF VEHICLE #3.

II. DETERMINE WHICH REAR FACING LAMPS WERE ACTIVATED ON VEHICLE #1 AND #2.

III. DETERMINE THE SERIES OF EVENTS

My conclusions will be based upon my review, study and analysis of the collision scene evidence and automotive lamp examinations.

INVESTIGATIVE TECHNIQUES AND METHODOLOGIES

• SPEED

The speeds of the vehicles involved in this event were investigated through the principals and techniques of *slide to stop* and *linear momentum.*

It was reported to police, V1 and V2 were traveling south but stopped at a red light for southbound traffic at the collision intersection. V3 was also southbound when he collided into the rear of V1. All three vehicles were traveling in the left lane.

The investigation has determined that V3 collided into the rear of V1. While still in contact with V3, the front of V1 collided into the rear of V2. Upon disengagement with V1, V2 was redirected toward the southwest. This car eventually came to rest in the southwest corner of the intersection.

When disengagement between V1 and V3 occurred, V1 continued directly south and came to a stop in the middle of the southbound lanes of P.T.H. #59 south of the intersection. As this car slid to its final rest position, only the front tires and the undercarriage directly beneath the front seats were in contact with the road surface. V1 rotated counterclockwise about its vertical axis a minimum of 90°, before coming to rest.

V3 continued in a southeasterly direction toward the median ditch on the south side of the intersection. Prior to leaving the road the driver of this vehicle aggressively applied the brakes and skidded for a short distance before continuing into the median ditch. The median ditch was filled with a build up of snow which was the result of snow removal services within and around the collision intersection. Due to previous melting, the surface of the snow in the immediate vicinity of the intersection was covered with a thick layer of rough ice. After V3 left the road, it continued toward the south in the median. Due to the depth of the snow, the tire marks left by this vehicle could not be determined. The undercarriage was in contact with the ice covered surface. Although the driver's rear fender and taillight assembly sideswiped the traffic light standard in the median, this would have had little impact on the reduction of speed that this vehicle possessed after leaving the road. Eventually V3, either by design or on its own, turned toward the southwest and left the median. After it returned to the surface of P.T.H. #59, it was heading in a southwesterly direction. The tire marks were easily identified as tire imprints made by the steering axle wheels and acceleration, side slip scuff marks by the rear wheels. V3 was steered abruptly to the left after returning to the highway and proceeded back into the median. After driving into the median in an easterly direction, V3 was steered abruptly toward the south and came to a stop shortly thereafter. The steering axle wheels were found turned toward the right.

On the north side of the intersection two overlapping skid marks were observed in the left lane immediately north of the metal scars made by V1. Although the width of each skid mark (16 cms) was the same as the widths of the tires on V3, it must be understood that when a vehicle is braking hard, the weight of the vehicle moves forward and loads onto the front wheels. This causes the tire to over-deflect leaving a slightly wider than actual tire width. There is also the possibility that the rear wheels were tracking slightly outside the front wheels and therefore the width of the skid marks is not representative of the actual width of the tire. Furthermore, the track width of the vehicle which made the skid marks and those of V3 did not match. The vehicle which left the skid marks in the left lane had a track width of approximately 1.575 meters. The front track width of V3 was approximately 1.50 meters. The rear track width was approximately 1.52 meters (Published data indicates track widths of 1.49 meters - front; 1.51 meters - rear). Therefore it was concluded that these skid marks were not made by V3.

Since it has been determined that V1 and V2 were stopped at the intersection when the collision occurred and post collision speed that they possessed was acquired in the collision. Most of the elements to determine speed through in-line momentum were present in this case. However the collision and post collision movements of V3 precluded any opportunity to ascertain the speed of this and the other vehicles involved in this incident through in-line momentum.

Any post collision speeds for V1 and V2 would be at best estimates that would be subject to much discussion.

• REAR LAMP EXAMINATIONS OF V1 AND V2

VEHICLE #1

On the date of this event a number of the rear light bulbs were seized from this car. V1 sustained severe contact damage to the entire back end. The driver's and passenger's side taillight assemblies were within the contact damage area. The PDOF was from the rear of the car directly to the front. The following represents a schematic drawing of the taillight configurations for this car:

DRIVER'S SIDE					PASSENGER'S SIDE			
Clearance	Signal	Tail/Brake	Backup		Backup	Tail/Brake	Signal	Clearance

All four driver's side light bulbs were recovered from this car. The light bulb for the high mounted brake lamp was not in the vehicle and never located. Only the light bulb for the tail and brake lamps was seized from the passenger's side. The clearance light on this side was destroyed. Only the socket could be located. Only the socket, base and filament supports were found for the signal lamp. The backup lamp, although it was intact, it was trapped amongst the crumpled metal and could not be retrieved. Neither of these lamps were seized.

For details of the lamp examinations for this vehicle, please refer to "Appendix 'A' - Lamp Examinations - Vehicle #1."

VEHICLE #2

Vehicle #2 was examined at the scene and at the Manitoba Public Insurance salvage yard in Winnipeg, MB. In this case, the light bulbs for the driver's and passenger's side brake and tail lamps were located and seized for further examination.

For details of the lamp examinations for this vehicle, please refer to "Appendix 'B' - Lamp Examinations - Vehicle #2."

All light bulbs seized were photographed at the scene. Furthermore, under the direction of the writer, these lights were photographed by Cst. A. Chartier of the Winnipeg Forensic Identification Section.

• SERIES OF EVENTS

The post collision technical investigation has confirmed that all three vehicles involved in this event were southbound in the left lane of P.T.H. #59. Vehicle #1 and Vehicle #2 were stopped at a red traffic light at the intersection of P.T.H. #59, south and P.T.H. #101, west. V2 was stopped in front V1. At a minimum, the brake lamps were activated on both sides of V1. In addition, the driver's side clearance lamp and passenger's side tail lamp were on at the time of the collision. Both tail and at least one of the brake lamps were activated on V2. V1 was stopped directly behind V2. The published width of a Chevrolet Sprint is 1.58 meters. The published width of a Hyundai Accent is 1.67 meters. Whether any of the rear facing lamps on V2 could be seen by another southbound vehicle, could not be established. The passenger's side brake lamp may have been on when the collision occurred. While these vehicles were waiting for the red traffic light to change, V3 collided into the rear of V1. There was no evidence to show that the driver of V3 attempted to avoid the collision by steering or braking. The force of this collision crushed the rear third of V1 eliminating approximately 1.36 to 1.42 meters of its length. The force of the collision also caused the frame and floor pan to buckle downward and make contact with the road. This was the source of the first group of metal scars located north of the intersection. As well, this contact and induced damaged caused the front end to rise up. When V1 collided into the rear of V2, V3 was still connected and loading onto the rear of V1. Upon reaching maximum engagement, V2 was facing in a southwesterly direction. V1 and V3 were facing the south.

Upon disengagement with V2 and V3, V1 continued directly south while rotating counterclockwise about its vertical axis. It rotated a minimum of 90° to its final rest position. When V3 collided into the rear of this car, the driver's body would have quickly moved rearward. At the same time, the entire rear end of this car was moving forward into the passenger's compartment. Approximately less than a second later, V1 was pushed into the rear of V2. Subsequently the driver's body would have then moved quickly forward. All of this movement of the driver's body would have been quick and violent. The victim's dentures were probably broken when her face collided with some part on the dash or steering wheel.

The entire front end of V1 collided into the rear of V2. Upon maximum engagement, the rear end of V2 was pushed toward the left. Correspondingly the front end of V1 would have been facing in a southerly direction. After these vehicles separated, V1 continued passed the rear of V2 to its final rest position. The collision abruptly redirected V2 toward the southwest. The rear end of V2 was in a side slip as the vehicle was rotating clockwise about its vertical axis. As this car continued toward the southwest, either by design or on its own, V2 changed direction and began to side slip in a counterclockwise rotation. At this point V2 was on the west shoulder of P.T.H. #59. V2 continued to turn left until it reached a street light standard in the southwest corner of the intersection. At a relatively slow speed the driver's side front fender side swiped

a traffic light standard. The vehicle came to rest within one meter of striking the light standard.

V3 changed direction slightly proceeding in a southeasterly direction. When V3 was approximately in the middle of the intersection, the driver aggressively applied the brakes. It skidded across the intersection and onto the snow, built up in the median ditch on the south side of the intersection. Once on top of the snow, it continued toward the south. At the same time its back end was sliding out toward the left and upward. The driver's side rear corner side swiped the traffic light standard in the median causing minor contact damage to the fender and taillight assembly. After this relatively minor collision, V1 began to travel in a south-southwesterly direction. Eventually it left the median and returned to the highway. Once back on the southbound lanes of P.T.H. #59, the driver accelerated causing the rear wheels to spin on the snow covered east shoulder. This caused the rear end of the truck to swing out toward the right. As a result, V1 abruptly changed direction and began heading back toward the median. V3 was driven back onto the median in a southeasterly direction. Approximately two meters to the east V3 was steered sharply toward the south and came to rest in the median ditch facing south.

All metal scars found within the scene were made by V1 as it was the only vehicle where the undercarriage was or had come into contact with the road surface. The first set of metal scars south of the scene was made when V3 collided into and loaded on the rear end of V1 forcing the undercarriage into the surface of the highway. The second set of metal scars was created in the collision between V1 and V2. By this point in the series of events, the frame and floor pan of V1 had buckled behind the front seats and was in contact or extremely close to the road. The buckling of the car also caused its front end to raise up. When V1 collided into the back of V2, its front bumper over rode the rear bumper on V2 enabling the front end of V1 to penetrate deeply into the rear of V2. V3 was also still connected and loading onto the rear of V1. These collision configurations caused the metal frame and floor pan of V1 to leave more metal scars in the surface of P.T.H. #59.

All traffic lights were functioning properly. Based on the collision scene evidence and information provided by the investigators, it has been established that V1 and V2 were stopped at the red traffic lights for southbound traffic. Immediately prior to the collisions, the traffic lights changed from red to green. The driver of V3 was southbound when the on-scene series of events began to unfold. It is known that the advance lights are activated eleven seconds prior to the commencement of the yellow light cycle for southbound motorists. The yellow to red light stage is four seconds in duration. Therefore, a southbound motorist has a minimum of fifteen seconds warning before the lights change to red. If a vehicle is traveling the speed limit of 80 km/h, at the beginning of this fifteen-second period a vehicle would be approximately 333.60 north of the intersection. This would obviously place that vehicle well north of the advance warning lights which were just less than 250 meters north of the intersection. Based on the survey conducted of the shortest, longest and average length of time the red light is on at the intersection for

southbound traffic, motorists could conceivably be approximately of 384.75, 680.54 or 1000.80 meters north of the intersection when the traffic lights for southbound traffic changed to red. In addition, these distances do not take into consideration the timing of the advance warning lights and the yellow light cycle of 15 seconds. In this case the motorist would have been further away from the intersection. This distance could be longer because information gathered by the investigators determined the driver of V2 saw the yellow light come on, she slowed down and stopped for the red light. The red light went through an indeterminate amount of time and then changed to green. She was about to move when the collision occurred. If this information is accurate, then the driver of V3 was presented with the activated advance warning lights and the cycling of the traffic lights from green to yellow to red and finally back to green prior to the collisions. If this part of the investigation is based on the shortest time the red light could have been on, V3 was a minimum of 135.29 meters north of the advance warning lights when the red lights activated. At the speed limit, it would have taken V3 6.03 seconds to cover this distance. If the time of the advance warning lights and yellow to red light stage is factored into this particular situation, V3 would have been a minimum of 467.70 meters north of the advance warning light when they activated (21.03 seconds x 22.24 m/s).

V1 was stopped in traffic directly behind V2 waiting for the traffic lights to change. The driver of V1 could not have prevented running into the rear of V2 for a number of reasons. Firstly, in this type of crash, any object within the passenger's compartment will move toward the principal direction of force. This includes any occupant. Therefore, the driver of V1 would have moved very quickly toward the rear of the car pulling her feet and possibly, her hands away from the controls of the car. She therefore, would have been incapable of steering, braking or accelerating to avoid the collision. Other factors, such as the collapsing of the floor pan, the intrusion of the rear of this car into the passenger's compartment and the collision between V1 and V2, would have aggravated an already difficult situation. Secondly, when V1 collided into the rear of V2, V3 was still in contact with V1. Momentum and control of any movement of V1 at this particular point were the direct results of V3 colliding into and maintaining contact with this car. Lastly, if disengagement between V1 and V3 had occurred before the second collision, based on estimated speeds of V3 and the speed limit, V1 would have needed to be stopped a minimum of 81.81 meters (22 car lengths) from the rear of V2 in order to come to a complete stop before colliding with it. These distances rely on the driver's ability to maintain control of the vehicle and react within a perception/reaction time of 1.5 seconds before colliding with V2. Based on the metal scars left in the road surface and the sequence of events, V1 was stopped approximately 8.0 meters behind V2.

Vehicle equipment defect or failure was not a contributory factor.

The driver of V3 is solely responsible for both collisions. There was no evidence found to support any attempt to avoid the collision by the driver of V3 attempted to avoid the collision. Surveys

conducted of the traffic moving through this intersection suggest that a significant amount of traffic use this intersection 30 minutes leading up to and after the approximate time of the collision.

CONCLUSIONS

I. SPEED OF V3

THE SPEED OF V3 COULD NOT BE DETERMINED.

II. REAR LAMPS ON V1 AND V2

VEHICLE #1

DRIVER'S SIDE BACK UP LAMP - "A"	OFF
DRIVER'S SIDE BRAKE LAMP - "B"	ON
DRIVER'S SIDE TAIL LAMP - "B"	INDETERMINATE
DRIVER'S SIDE REAR CLEARANCE LAMP - "C"	ON
DRIVER'S SIDE REAR SIGNAL LAMP - "D"	INDETERMINATE
HIGH MOUNTED BRAKE LAMP	INDETERMINATE
PASSENGER'S SIDE BRAKE LAMP - "E"	ON
PASSENGER'S SIDE TAIL LAMP - "E"	ON
PASSENGER'S SIDE SIGNAL LAMP	INDETERMINATE

VEHICLE #2

DRIVER'S SIDE BRAKE LAMP - "BV2"	ON
DRIVER'S SIDE TAIL LAMP - "BV2"	ON
PASSENGER'S SIDE BRAKE LAMP - "AV2"	PROBABLY ON
PASSENGER'S SIDE TAIL LAMP - "AV2"	ON

III. SERIES OF EVENTS

SEE INVESTIGATIVE TOPIC "SERIES OF EVENTS."

Cst. C.I. BLANDFORD
Forensic Traffic Collision Reconstructionist

PHOTO LOG

PHOTO #1	A view taken from the north, showing the configuration of the southbound lanes of P.T.H. #59, as well as, the advance warning signs and lights north of the collision intersection.
PHOTO #2	A close up view of the large advance warning sign and lights.
PHOTO #3	A view taken from the north, showing the configuration of the southbound lanes north of the collision intersection, as well as, the regulatory speed control sign of "Maximum 80" (Km/h).
PHOTO #4	A view taken from the north, showing the configuration of the southbound lanes north of the collision intersection, as well as, the regulatory speed control symbol sign permitting only pull-through traffic.
PHOTO #5	A view, taken from the north, showing the configuration of the collision intersection and the yellow traffic lights for southbound traffic on P.T.H. #59.
PHOTO #6	A view, taken from the north, showing the configuration of the collision intersection, the final rest positions of all three vehicles involved in this event and the red traffic lights for southbound traffic on P.T.H. #59.
PHOTO #7	A view, taken from the north, showing the configuration of the collision intersection and the red traffic lights for southbound traffic on P.T.H. #59.
PHOTO #8	Photo index card completed by Cst. Chartier of the Winnipeg Forensic Identification Service (FIS).*
PHOTO #9	An ariel photograph taken north of the collision intersection showing the configuration of P.T.H. #59, #101 and the collision intersection.*
PHOTO #10	An ariel photograph taken south of the collision intersection showing the configuration of P.T.H. #59, #101 and the collision intersection.*
PHOTO #11	An ariel photograph taken west of the collision intersection showing the configuration of P.T.H. #59, #101 and the collision intersection.*
PHOTO #12	An ariel photograph taken east of the collision intersection showing the

configuration of P.T.H. #59, #101 and the collision intersection.*

PHOTO #13 An ariel view, taken from the north, showing advance warning signs and lights depicted in Photo's #1 and #2.*

PHOTO #14 A close up ariel view, taken from the south, showing the configuration of the collision intersection.*

PHOTO #15 A close up ariel view, taken from the southeast, showing the configuration of the collision intersection.*

PHOTO #16 A close up ariel view, taken from the north, showing the configuration of the collision intersection.*

PHOTO #17 A view taken from the north of the collision intersection showing the configuration of the left lane of P.T.H. #59 and two orange evidence markers. Both markers indicate the presents of two skid marks.

PHOTO #18 Evidence marker #3: Metal scars - Vehicle #1.

PHOTO #19 A close up view of the metal scars depicted in Vehicle #1.

PHOTO #20 A close up view of two small pieces of yellow paint found with the metal scars depicted in Photo #18 and #19.

PHOTO #21 Photo #20 with a scale applied.

PHOTO #22 Evidence Markers #4 and #5: Metal scars - Vehicle #1.

PHOTO #23 A close up view of the metal scars indicated by Evidence Marker #4.

PHOTO #24 A close up view of the metal scars indicated by Evidence Marker #5.

PHOTO #25 A close up view of more metal scars immediately west of the metal scars indicated by Evidence Marker #4.

PHOTO #26 A close up view of a chip of green paint found immediately south of the metal scars indicated by Evidence markers #4 and #5.

PHOTO #27 Photo #26 with a scale applied.

PHOTO #28	The front licence plates of V1 and V3.
PHOTO #29	A close up view of a piece of an orthodontic appliance.
PHOTO #30	Photo #29 with a scale applied.
PHOTO #31	The front of Vehicle #1.
PHOTO #32	The rear of Vehicle #1.
PHOTO #33	The driver's side of V1.
PHOTO #34	The passenger's side of V1.
PHOTO #35	A view of the contact damage sustained by the driver's side rear corner of V1.
PHOTO #36	A view of the contact damage sustained by the passenger's side rear corner of V1.
PHOTO #37	A view of the contact damage sustained by the driver's side front corner of V1.
PHOTO #38	A view of the contact damage sustained by the passenger's side front corner of V1.
PHOTO #39	A close up view of the front bumper cover on V1 showing smears of green paint.
PHOTO #40	A close up view of the driver's area in V1.
PHOTO #41	The remains of the driver's side back up light bulb inV1.
PHOTO #42	A close up view of the light bulb shown in Photo #41.*
PHOTO #43	The remains of the driver's side light bulb in V1 containing the brake and tail light filaments.
PHOTO #44	A close up view of the light bulb shown in Photo #43.*

PHOTO #45	A close up view of the light bulb shown in Photo #43.*
PHOTO #46	A close up view of the light bulb shown in Photo #43.*
PHOTO #47	A close up view of the driver's side clearance lamp from V1.*
PHOTO #48	A close up view of the light bulb depicted in Photo #47*
PHOTO #49	A close up view of the light bulb shown in Photo #47.*
PHOTO #50	The remains of the driver's side, rear signal light in V1.
PHOTO #51	A close of view of the light bulb shown in Photo #50.*
PHOTO #52	The remains of the high mounted brake light in V1.
PHOTO #53	The passenger's side tail light assembly in V1.
PHOTO #54	The remains of the passenger's side, rear clearance light in V1.
PHOTO #55	The passenger's side light bulb for the brake and tail lamps of V1.
PHOTO #56	A close up view of the light bulb shown in Photo #55.*
PHOTO #57	A close up view of the light bulb shown in Photo #55.*
PHOTO #58	A close up view of the light bulb shown in Photo #55.*
PHOTO #59	A view of the collision intersection, taken from the north and the area of impact between V1 and V2.
PHOTO #60	Evidence Marker #6: The beginning of the side slip tire marks made by the passenger's side tires on V2.
PHOTO #61	A view of the side slip tire marks of V2 as they traverse the snow covered west shoulder of P.T.H. #59.
PHOTO #62	The continuation of the side slip tire marks as they run directly to the wheels on V2.

PHOTO #63	The front of V2.
PHOTO #64	The rear of V2.
PHOTO #65	The driver's side of V2.
PHOTO #66	The passenger's side of V2.
PHOTO #67	A view of the passenger's side, rear corner of V2.
PHOTO #68	A view of the driver's side, rear corner of V2.
PHOTO #69	A close up view pieces of yellow paint and plastic attached to the rear bumper on V2.
PHOTO #70	A close up view of the driver's side light bulb containing the brake and tail lamp filaments.*
PHOTO #71	A close up view of the remains of the driver's side light bulb containing the brake and tail lamp filaments.*
PHOTO #72	A close up view of the passenger's side light bulb containing the brake and tail lamp filaments.*
PHOTO #73	A close up view of the passenger's side light bulb containing the brake and tail lamp filaments.*
PHOTO #74	A close up view of the passenger's side light bulb containing the brake and tail lamp filaments.*
PHOTO #75	Photo index card of Cst. Chartier.
PHOTO #76	Photo index card of Cst. Chartier.
PHOTO #77	Evidence Marker #7 - Beginning of the Driver's side, post collision skid marks of V3.
PHOTO #78	A view taken from the south showing the point where V3 initially drove on the median and the traffic light standard in the median.

PHOTO #79	Marks on the west side of the of the traffic light standard depicted in Photo #78.
PHOTO #80	A view of the tire marks of V3 where they left the median and ran back onto the left lane of P.T.H. #59.
PHOTO #81	A view of the tire marks of V3 where they turned back toward and ran onto the median and the final rest position of V3.
PHOTO #82	The front of V3.
PHOTO #83	The rear of V3.
PHOTO #84	The driver's side of V3.
PHOTO #85	The passenger's side of V3.
PHOTO #86	A view, taken from the driver's side front corner of V3, showing the contact damage.
PHOTO #87	A view, taken from the passenger's side front corner of V3, showing the contact damage.
PHOTO #88	A view, taken from the driver's side rear fender of V3, showing the contact damage.
PHOTO #89	A close up view of the passenger's side front corner of V3 and smears of yellow within the contact damage.
PHOTO #90	The driver's side rear brake assembly.
PHOTO #91	The passenger's side rear brake assembly.
PHOTO #92	A close up view of the driver's side rear brake assembly and brake fluid which had leaked from the brake cylinder.
PHOTO #93	A close up view of the passenger's side rear brake assembly and brake fluid which had leaked from the brake cylinder.

* Photograph taken by the Cst. A. Chartier of the Winnipeg FIS under the direction of the author of this report.

DIGITAL PHOTO LOG

PHOTO #1	A view taken from the north, showing the configuration of the southbound lanes of P.T.H. #59, as well as, the advance warning signs and lights north of the collision intersection.
PHOTO #2	A close up view of the large advance warning sign and lights.
PHOTO #3	A view taken from the north, showing the configuration of the southbound lanes north of the collision intersection, as well as, the regulatory speed control sign of "Maximum 80" (Km/h).
PHOTO #4	A view taken from the north, showing the configuration of the southbound lanes north of the collision intersection, as well as, the regulatory speed control symbol sign permitting only pull-through traffic.
PHOTO #5	A view, taken from the north, showing the configuration of the collision intersection, the final rest positions of all three vehicle involved in this event and the red traffic lights for southbound traffic on P.T.H. #59.
PHOTO #6	A view taken from the north of the collision intersection showing the configuration of the left lane of P.T.H. #59 and two orange evidence markers. Both markers indicate the presents of two skid marks.
PHOTO #7	Evidence marker #3: Metal scars - Vehicle #1.
PHOTO #8	A close up view of the metal scars depicted in Vehicle #1.
PHOTO #9	A close up view of two small pieces of yellow paint found with the metal scars depicted in Photo #18 and #19.
PHOTO #10	Photo #20 with a scale applied.
PHOTO #11	Evidence Markers #4 and #5: Metal scars - Vehicle #1.
PHOTO #12	A close up view of the metal scars indicated by Evidence Marker #4.
PHOTO #13	A close up view of the metal scars indicated by Evidence Marker #5.
PHOTO #14	A close up view of more metal scars immediately west of the metal scars

indicated by Evidence Marker #4.

PHOTO #15	A close up view of a chip of green paint found immediately south of the metal scars indicated by Evidence markers #4 and #5.
PHOTO #16	Photo #26 with a scale applied.
PHOTO #17	The front licence plates of V1 and V3.
PHOTO #18	A close up view of a piece of an orthodontic appliance.
PHOTO #19	Photo #29 with a scale applied.
PHOTO #20	The front of Vehicle #1.
PHOTO #21	The rear of Vehicle #1.
PHOTO #22	The driver's side of V1.
PHOTO #23	The passenger's side of V1.
PHOTO #24	A view of the contact damage sustained by the driver's side rear corner of V1.
PHOTO #25	A view of the contact damage sustained by the passenger's side rear corner of V1.
PHOTO #26	A view of the contact damage sustained by the driver's side front corner of V1.
PHOTO #27	A view of the contact damage sustained by the passenger's side front corner of V1.
PHOTO #28	A close up view of the front bumper cover on V1 showing smears of green paint.
PHOTO #29	A close up view of the driver's area in V1.
PHOTO #30	The remains of the driver's side back up light bulb inV1.

PHOTO #31	The remains of the driver's side light bulb in V1 containing the brake and tail light filaments.
PHOTO #32	The remains of the driver's side, rear signal light in V1.
PHOTO #33	The passenger's side tail light assembly in V1.
PHOTO #34	The passenger's side light bulb for the brake and tail lamps of V1.
PHOTO #35	The remains of the passenger's side, rear clearance light in V1.
PHOTO #36	The remains of the high mounted brake light in V1.
PHOTO #37	A view of the collision intersection, taken from the north and the area of impact between V1 and V2.
PHOTO #38	Evidence Marker #6: The beginning of the side slip tire marks made by the passenger's side tires on V2.
PHOTO #39	A view of the side slip tire marks of V2 as they traverse the snow covered west shoulder of P.T.H. #59.
PHOTO #40	The continuation of the side slip tire marks as they run directly to the wheels on V2.
PHOTO #41	The final rest position of V2.
PHOTO #42	The front of V2.
PHOTO #43	The rear of V2.
PHOTO #44	The driver's side of V2.
PHOTO #45	The passenger's side of V2.
PHOTO #46	A view of the driver's side, rear corner of V2.
PHOTO #47	A view of the passenger's side, rear corner of V2.

PHOTO #48	A close up view pieces of yellow paint and plastic attached to the rear bumper on V2.
PHOTO #49	The rear of V2.
PHOTO #50	The driver's side rear corner and remains of the taillight assembly.
PHOTO #51	A close up view of the remains of the driver's side rear light bulb and the brake and taillight lamp filaments.
PHOTO #52	A close up view of the remains of the driver's side rear light bulb and the brake and taillight lamp filaments.
PHOTO #53	The passenger's side rear corner and remains of the taillight assembly.
PHOTO #54	A close up view of the passenger's side rear light bulb and the brake and taillight lamp filaments.
PHOTO #55	Evidence Marker #7 - Beginning of the Driver's side, post collision skid marks of V3.
PHOTO #56	A view taken from the south showing the point where V3 initially drove on the median and the traffic light standard.
PHOTO #57	Marks on the west side of the of the traffic light standard depicted in Photo #78.
PHOTO #58	A view of the tire marks of V3 where they left the median and ran back onto the left lane of P.T.H. #59.
PHOTO #59	A view of the tire marks of V3 where they turned back toward and ran onto the median and the final rest position of V3.
PHOTO #60	The front of V3.
PHOTO #61	The rear of V3.
PHOTO #62	The driver's side of V3.
PHOTO #63	The passenger's side of V3.

PHOTO #64	A view, taken from the driver's side front corner of V3, showing the contact damage.
PHOTO #65	A view, taken from the passenger's side front corner of V3, showing the contact damage.
PHOTO #66	A view, taken from the driver's side rear fender of V3, showing the contact damage.
PHOTO #67	A close up view of the passenger's side front corner of V3 and smears of yellow within the contact damage.
PHOTO #68	The driver's side rear brake assembly.
PHOTO #69	A close up view of the driver's side rear brake assembly and brake fluid which had leaked from the brake cylinder.
PHOTO #70	The passenger's side rear brake assembly.
PHOTO #71	A close up view of the passenger's side rear brake assembly and brake fluid which had leaked from the brake cylinder.

APPENDIX 'A'

REAR LAMP EXAMINATION REPORTS FOR

VEHICLE #1 AND VEHICLE #2

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le	Seized from vehicle / Saisi sur le véhicule	Received from: / Reçu de:
2005-02-25	☑	☐

Lamp examined - Phare examiné le	By - par
2005-07-20	Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer) Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
CHEVROLET SPRINT	1991	DZC 235, MANITOBA

Show location of: -Indiquer l'emplacement:
the lamp - du phare: Left - rear

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
'A'	1156	KOITO

Base - Culot: SINGLE CONTACT BAYONNET
Bulb - Ampoule: U/K
Filaments: ONE
Volts: 12

the contact damage area / de la zone de dommage par contact

the direction of thrust / de la direction de poussée

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Plié	☐	☐	☐	☐	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
GLASS - VERRE	% Missing / % manquant	100				
	Loose in base / Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
BASE / CULOT	Damaged / Endommagé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion / Saleté ou corrosion	☐	☐	☐	☐	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☑	☐	☐	☐	☐
% Missing or detached / % manquant ou détaché	99				
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☑	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☐	☐	☐	☐	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated / Un peu allongé	☐	☐	☐	☐	☐
Stretched out, uncoiled / Déroulé	☐	☐	☐	☐	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☐	☐	☐	☐	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☑	☐	☐	☐	☐

INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent					
	Hot - Chaud					
	Cold - Froid	X				
	Aged - Vieux					
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X				

Opinion not definite but only probable: X
Opinion non assurée mais seulement probable: X

For definite opinion: XX
Pour une opinion assurée: XX

If you cannot determine if one of the two filaments was ON , put one mark X in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un X dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

OPINION		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
OPINION	Off - Éteint	XX				
	On - Allumé					
	Indeterminate / Impossible à					

REMARKS - REMARQUES

DRIVER'S SIDE BACK UP LAMP. THE ONLY PARTS OF THE FILAMENTS THAT REMAINED WERE THE TAILS. V1, ALTHOUGH STOPPED AT A RED LIGHT, THE LIKELIHOOD OF THIS LAMP BEING ACTIVATED WAS EXTREMELY REMOTE.

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☐ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS

100% of the glass was missing. Usually this model of light bulb has a straight sided, clear glass bulb.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☑ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☐ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS

The base was seized with the socket for this light bulb. The base was in good condition.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☐ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS

This type of lamp usually has one, C6, coiled wire filament. Only the filament tails remained. The end of the remaining wire were fracture.

REMARKS - REMARQUES

Signature

OST C.I. BLANDFORD

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le	
2005-02-25	☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:
Lamp examined - Phare examiné le: 2005-07-20	By - par
☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer)	Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
CHEVROLET SPRINT	1991	DZC 235, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Left - rear

the contact damage area / de la zone de dommage par contact:

the direction of thrust / de la direction de poussée:

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"B"	1157	KOITO

Base - Culot	Bulb - Ampoule
DOUBLE CONTACT BAYONET	U/K

Filaments	Volts
TWO (ONE MISSING) C6 - COILED WIRE	12

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

	ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Plié	☑	☐	☐	☑	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☑	☐	☐	☑	☐
GLASS - VERRE	% Missing / % manquant	100				
	Loose in base / Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
BASE / CULOT	Damaged / Endommagé	☑	☐	☐	☑	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion / Saleté ou corrosion	☑	☐	☐	☑	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☑	☐	☐	☐	☐
% Missing or detached / % manquant ou détaché	99				
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☐	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☐	☐	☐	☑	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated / Un peu allongé	☐	☐	☐	☐	☐
Stretched out, uncoiled / Déroulé	☐	☐	☐	☑	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☐	☐	☐	☑	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☑	☐	☐	☑	☐

	INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent				/	
	Hot - Chaud				X	
	Cold - Froid					
	Aged - Vieux				/	
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X			X	

Opinion not definite but only probable: **X**
Opinion non assurée mais seulement probable: **X**

For definite opinion: **XX**
Pour une opinion assurée: **XX**

If you cannot determine if one of the two filaments was ON, put one mark **X** in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un **X** dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

OPINION	Off - Éteint						
	On - Allumé					XX	
	Indeterminate / Impossible à	XX					

REMARKS - REMARQUES

DRIVER'S SIDE BRAKE AND TAIL LAMPS

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☐ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS

100% of the glass bulb was missing. Usually this type of lamp is straight sided, clear glass.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☐ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☑ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS

The base and the socket were seized. The top edge of the base was bent slightly and a very light dusting of dirt was noted on the exposed sides of the base. The damage to the base probably occurred sometime during the collision. The dirt and sand deposited on the base occurred post collision.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS

All four filament support wires were bent over and clumped together in one direct. The filament support stem was covered with a light layer of dirt and sand. Approximately 99% of the taillight filament wire was missing. One of the clamps for this wire was bent open. Only one of the tails remained. The brake lamp filament wire was stretched out. Coil spacing was irregular. Beginning at the filament wire supports this wire had oxidization on it which was dark blue, blue, purple and

REMARKS - REMARQUES

green in colour. The centre of the filament wire was gold. A small porition of the wire was touching one of the filament supports. There was a black burn marks between the filament wire and support . The wire was also pitted.

Signature

~~Cst. C.I.~~ BLANDFORD, FTCR

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le	☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:
2005-02-25	

Lamp examined - Phare examiné le	By - par
2005-07-21	Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer) Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
CHEVROLET SPRINT	1991	DZC 235, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Left - rear

the contact damage area / de la zone de dommage par contact:

the direction of thrust / de la direction de poussée:

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"C"	1M	KOITO

Base - Culot	Bulb - Ampoule
WEDGE	TUBULAR

Filaments	Volts
ONE C2F COILED WIRE	12

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

	ABNORMALITIES OF SUPPORTS, GLASS AND BASE ANOMALIES - SUPPORTS, VERRE ET CULOT	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Pilé	☐	☐	☐	☐	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit Saleté ou autre encrassement	☐	☐	☐	☐	☐
GLASS - VERRE	% Missing % manquant					
	Loose in base Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☑	☐	☐	☐	☐
	White Deposit Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit Saleté ou autre encrassement	☑	☐	☐	☐	☐
BASE - CULOT	Damaged Endommagé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion Saleté ou corrosion	☐	☐	☐	☐	☐

ABNORMALITIES OF FILAMENTS ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☐	☐	☐	☐	☐
% Missing or detached % manquant ou détaché					
Loose in bulb Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured Extrémité brisée	☐	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored Teinté ou de couleur pâle	☐	☐	☐	☐	☐
White Deposit Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated Un peu allongé	☐	☐	☐	☐	☐
Stretched out, uncoiled Déroulé	☑	☐	☐	☐	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☐	☐	☐	☐	☐
Other, show in Remarks below Autre, indiquer dans les remarques ci-dessous	☐	☐	☐	☐	☐

	INDICATIONS AND OPINIONS INDICATIONS ET OPINIONS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent	X				
	Hot - Chaud					
	Cold - Froid					
	Aged - Vieux	X				
	Burned out - Grillé					
	Impact Shock Choc de l'impact	X				

Opinion not definite but only probable: **X**
Opinion non assurée mais seulement probable: **X**

For definite opinion: **XX**
Pour une opinion assurée: **XX**

If you cannot determine if one of the two filaments was ON , put one mark **X** in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un **X** dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
OPINION	Off - Éteint					
	On - Allumé	XX				
	Indeterminate Impossible à					

REMARKS - REMARQUES

DRIVER'S SIDE REAR CLEARANCE LIGHT

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☐ **S** Straight Sided / À flanc droit
- ☑ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS
Clear glass intact. Light deposits of dirt on glass. Entire interior of glass blacked slightly. This is a characteristic of aging.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☑ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☐ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☐ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS
The base of this light bulb was intact. The socket was removed with the light bulb.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS
The filament was significantly stretched out and uncoiled. Coil spacing was extremely irregular.

REMARKS - REMARQUES

Signature

C.I. BLANDFORD, FTCR

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le		
2005-02-25	☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:	

Lamp examined - Phare examiné le	By - par
2005-07-21	Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer) Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
CHEVROLET SPRINT	1991	DZC 235, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Left - rear

the contact damage area / de la zone de dommage par contact

the direction of thrust / de la direction de poussée

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"D"	1156	KOITO

Base - Culot	Bulb - Ampoule
SINGLE CONTACT BAYONNET	U/K

Filaments	Volts
ONE	12

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

	ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☑	☐	☐	☐	☐
	Bent - Plié	☑	☐	☐	☐	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☑	☐	☐	☐	☐
GLASS - VERRE	% Missing / % manquant	100				
	Loose in base / Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
BASE / CULOT	Damaged / Endommagé	☑	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion / Saleté ou corrosion	☐	☐	☐	☐	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☐	☐	☐	☑	☐
% Missing or detached / % manquant ou détaché	99				
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☐	☐	☐	☑	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☐	☐	☐	☐	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☑
Moderately elongated / Un peu allongé	☐	☐	☐	☐	☐
Stretched out, uncoiled / Déroulé	☐	☐	☐	☐	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☐	☐	☐	☐	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☐	☐	☐	☐	☐

	INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent					
	Hot - Chaud					
	Cold - Froid					
	Aged - Vieux					
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X				

Opinion not definite but only probable: **X**
Opinion non assurée mais seulement probable: **X**

For definite opinion: **XX**
Pour une opinion assurée: **XX**

If you cannot determine if one of the two filaments was ON , put one mark **X** in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un **X** dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

OPINION	Off - Éteint					
	On - Allumé					
	Indeterminate / Impossible à	XX				

REMARKS - REMARQUES

DRIVER'S SIDE REAR SIGNAL LIGHT

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☑ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS

100% of the glass bulb was missing. A small amount of glass remained in the base and therefore it could be determined that it was clear glass. This type of light bulb is usually straight-sided.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☑ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☐ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS

The rim of one side of the base was bent inwards. It was also bent in the same direction as the filament support wires. Directly opposite of this damage, the rim of the base was bent outwards. The base was seized in its socket.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS

Both filament support wires were bent outwards in the same direction. One of these wires was broken directly above the rim. The rim at this position sustained damaged which bent it outwards. The other filament support was bent over to a point that it was at a 45 degree angle to the base. 99% of the filament wire was missing. Only the tail and a small portion filament wire remained connected to the filament support wire which was only bent over. The end of the wire was fractured.

REMARKS - REMARQUES

This lamp sustained far too much damage to determine its state at the time of the collision.

Signature

C.J. BLANDFORD, FTCR

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le		
2005-02-25	☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:	

Lamp examined - Phare examiné le	By - par
2005-07-21	Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer) Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
CHEVROLET SPRINT	1991	DZC 235, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Right - rear

the contact damage area / de la zone de dommage par contact

the direction of thrust / de la direction de poussée

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"E"	1157	KOITO

Base - Culot	Bulb - Ampoule
DOUBLE CONTACT BAYONNET	STRAIGHT SIDED

Filaments	Volts
TWO C6 COILED WIRES	12

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Plié	☐	☐	☐	☐	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
GLASS - VERRE	% Missing / % manquant					
	Loose in base / Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☑	☐	☐	☑	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☑	☐	☐	☑	☐
BASE / CULOT	Damaged / Endommagé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion / Saleté ou corrosion	☐	☐	☐	☐	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☐	☐	☐	☐	☐
% Missing or detached / % manquant ou détaché					
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☐	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☐	☐	☐	☐	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated / Un peu allongé	☐	☐	☐	☑	☐
Stretched out, uncoiled / Déroulé	☑	☐	☐	☑	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☑	☐	☐	☑	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☐	☐	☐	☐	☐

INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent	X			X	
	Hot - Chaud					
	Cold - Froid					
	Aged - Vieux	X			X	
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X			X	

Opinion not definite but only probable: **X**
Opinion non assurée mais seulement probable: **X**

For definite opinion: **XX**
Pour une opinion assurée: **XX**

If you cannot determine if one of the two filaments was ON , put one mark **X** in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un **X** dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

OPINION	Off - Éteint					
	On - Allumé	XX			XX	
	Indeterminate / Impossible à					

REMARKS - REMARQUES

PASSENGER'S SIDE REAR BRAKE AND TAIL LAMPS

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☑ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS

When initially examined, the glass was covered with a light layer of dust, dirt and sand. When this debris was cleared off, a few tiny black scuff marks were noted on the outside of bulb. The glass sustained a few minor scratches. The inside, top of the glass was darkened. This is a characteristic of aging.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☑ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☐ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS

Unremarkable

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS

Both filament wires were stretched out inthe same direction. The tail lamp filament was stretched out to such an extent that the wire was bunch up next to one of the filament supports. The brake lamp filament was bunch up on the same side but not to the extent as the tail lamp filament. This was probably due to the thickness of each wire. The tail lamp filament is much thinner than the brake lamp filament.

REMARKS - REMARQUES

Signature

C.I. BLANDFORD, FTCR

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le: 2005-02-28

☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:

Lamp examined - Phare examiné le: 2005-07-21

By - par: Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer)

Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
HYUNDAI ACCENT	2000	BYG 898, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Right - rear

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"AV2"		

the contact damage area / de la zone de dommage par contact

Base - Culot	Bulb - Ampoule
DOUBLE CONTACT BAYONNET	STRAIGHT SIDED

Filaments	Volts
TWO C6 COILED WIRES	12

the direction of thrust / de la direction de poussée

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Plié	☐	☐	☐	☐	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
GLASS - VERRE	% Missing / % manquant					
	Loose in base / Libre dans le culot	☑	☐	☐	☑	☐
	Darkened - Noirci	☑	☐	☐	☑	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☑	☐	☐	☑	☐
BASE / CULOT	Damaged / Endommagé	☐	☐	☐	☐	☐
	Pitted - Piqué	☑	☐	☐	☑	☐
	Dirt or corrosion / Saleté ou corrosion	☑	☐	☐	☑	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☐	☐	☐	☐	☐
% Missing or detached / % manquant ou détaché					
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou effilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☐	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☐	☐	☐	☐	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated / Un peu allongé	☑	☐	☐	☑	☐
Stretched out, uncoiled / Déroulé	☑	☐	☐	☐	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☑	☐	☐	☑	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☐	☐	☐	☐	☐

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS		Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent	X			/	
	Hot - Chaud				X	
	Cold - Froid					
	Aged - Vieux	X			X	
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X			X	

Opinion not definite but only probable: X
Opinion non assurée mais seulement probable: X

For definite opinion: XX
Pour une opinion assurée: XX

If you cannot determine if one of the two filaments was ON , put one mark X in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un X dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

OPINION						
	Off - Éteint					
	On - Allumé	XX			X	
	Indeterminate / Impossible à					

REMARKS - REMARQUES

PASSENGER'S SIDE REAR BRAKE AND TAIL LAMPS. THE TRADE NUMBER AND MAKE OF THE LIGHT BULB COULD HAVE BEEN DETERMINED BUT DUE TO THE FRAGILE STATE OF THE BULB, I DECIDED NOT TO REMOVE THE IT FROM ITS SOCKET.

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☑ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS

When initially examined, the glass was covered with a light layer of dust, dirt and sand. It was removed before the light bulb was photographed. When this debris was cleared off, a few tiny black scuff marks were noted on the outside of bulb. The top of the glass sustained a small scratch. The inside, top of the glass was darkened. This is a characteristic of aging. This will also indicate the orientation of the light bulb. The darkened area is always up. The bulb was loose and pushed up toward the darkened area.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☐ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☑ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS

The outer surface of the base was pitted and somewhat corroded. These are signs of aging. The base was seized in the socket along with a piece of the parabolic reflector.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS

The filament wires were either stretched out or elongated in the opposite direction of the force that pushed the bulb upwards.

REMARKS - REMARQUES

Signature

S.I. BLANDFORD, FTCR

MOTOR VEHICLE LAMP EXAMINATION

FICHE D'EXAMEN DE PHARE D'UN VÉHICULE AUTOMOBILE

Analyst File No. - N° de doss. de l'analyste
2005-08CIB

Accident Date - Date de l'accident	Investigating Detachment - Détachement enquêteur	Accident Analyst - Analyste des accidents
2005-02-25	East St. Paul Police Department	Cst. C.I. BLANDFORD

Lamp received - Phare reçu le	☑ Seized from vehicle / Saisi sur le véhicule ☐ Received from: / Reçu de:
2005-02-28	

Lamp examined - Phare examiné le	By - par
2005-07-21	Cst. C.I. BLANDFORD

☑ Lamp held as exhibit / Phare conservé à titre de pièce à conviction ☐ Disposed (explain) / Détruit (expliquer) Date

Vehicle Make - Marque du véhicule	Year - Année	Lic. No. - N° d'immatr.
HYUNDAI ACCENT	2000	BYG 898, MANITOBA

Show location of: -Indiquer l'emplacement:

the lamp - du phare: Left - rear

LAMP DESCRIPTION (See Page 2 for designations)
DESCRIPTION DU PHARE (Voir les désignations à la page 2

Exh. No. - N° de la p. à c.	Trade No. - N° de m.	Manufacturer - Fabricant
"BV2"	2357	KD

Base - Culot	Bulb - Ampoule
DOUBLE CONTACT BAYONNET	STRAIGHT SIDED

Filaments	Volts
TWO C6 COILED WIRES	12

the contact damage area / de la zone de dommage par contact

the direction of thrust / de la direction de poussée

LAMP EXAMINATION - EXAMEN DU PHARE

For each abnormality observed, check the appropriate column opposite the applicable description. Record estimated percentage where required. Notes may be added below.

Pour chaque anomalie, cocher la colonne appropriée, à côté de la description pertinente. Indiquer les pourcentages approximatifs, s'il y a lieu. On peut faire des remarques supplémentaires plus bas.

Mark indications, if any, for each filament thus: X for definite, / for possible.

Si nécessaire, pour chaque filament, marquer de la façon suivante: X pour manifeste, / pour possible.

	ABNORMALITIES OF SUPPORTS, GLASS AND BASE / ANOMALIES - SUPPORTS, VERRE ET CULOT	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
FILAMENT SUPPORT / SUPPORT DE FILAMENT	Broken - Brisé	☐	☐	☐	☐	☐
	Bent - Plié	☑	☐	☐	☑	☐
	Rusted - Rouillé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☑	☐	☐	☑	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
GLASS - VERRE	% Missing / % manquant	100				
	Loose in base / Libre dans le culot	☐	☐	☐	☐	☐
	Darkened - Noirci	☐	☐	☐	☐	☐
	White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
	Dirt or other deposit / Saleté ou autre encrassement	☐	☐	☐	☐	☐
BASE - CULOT	Damaged / Endommagé	☐	☐	☐	☐	☐
	Pitted - Piqué	☐	☐	☐	☐	☐
	Dirt or corrosion / Saleté ou corrosion	☑	☐	☐	☑	☐

ABNORMALITIES OF FILAMENTS / ANOMALIES - FILAMENTS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
Broken - Brisé	☐	☐	☐	☐	☐
% Missing or detached / % manquant ou détaché					
Loose in bulb / Libre dans l'ampoule	☐	☐	☐	☐	☐
End melted or tapered / Extrémité fondue ou éffilée	☐	☐	☐	☐	☐
End fractured / Extrémité brisée	☐	☐	☐	☐	☐
Blackened - Noirci	☐	☐	☐	☐	☐
Tinted or light colored / Teinté ou de couleur pâle	☑	☐	☐	☑	☐
White Deposit / Dépôt blanc	☐	☐	☐	☐	☐
Moderately elongated / Un peu allongé	☐	☐	☐	☐	☐
Stretched out, uncoiled / Déroulé	☑	☐	☐	☑	☐
Fused Glass - Verre fondu	☐	☐	☐	☐	☐
Pitted - Piqué	☑	☐	☐	☑	☐
Other, show in Remarks below / Autre, indiquer dans les remarques ci-dessous	☐	☐	☐	☐	☐

	INDICATIONS AND OPINIONS / INDICATIONS ET OPINIONS	Single Phare combiné	Park Feu - stationnement	Low Beam Phare - croisement	Brake / Turn Feu d'arrêt / de virage	High Beam Phare de route
INDICATIONS	Incandescent	X			X	
	Hot - Chaud					
	Cold - Froid					
	Aged - Vieux	X			X	
	Burned out - Grillé					
	Impact Shock / Choc de l'impact	X			X	
OPINION	Off - Éteint					
	On - Allumé	XX			XX	
	Indeterminate / Impossible à					

Opinion not definite but only probable: **X**
Opinion non assurée mais seulement probable: **X**

For definite opinion: **XX**
Pour une opinion assurée: **XX**

If you cannot determine if one of the two filaments was ON , put one mark **X** in both the ON and the INDETERMINATE lines for each pair of filaments.

Si on n'est pas sûr que l'un des deux filaments était allumé, faire un **X** dans la case ALLUMÉ ainsi que dans la case IMPOSSIBLE À DÉTERMINER pour chacune des paires de filaments.

REMARKS - REMARQUES

DRIVER'S SIDE REAR BRAKE AND TAIL LAMPS.

LAMP IDENTIFICATION - IDENTIFICATION DU PHARE

BULK TYPE - GENRE D'AMPOULE
Bulb shape is indicated by one of the following letters:
La forme de l'ampoule est indiquée par l'une des lettres suivantes:

- ☐ **B** Blister / Cloque
- ☐ **FE** Flat end / À bout plat
- ☐ **G** Globular / Globulaire
- ☐ **PAR** Parabolic Aluminized Reflector (sealed beam) / Réflecteur parabolique aluminisé (phare scellé)
- ☐ **R** Rectangular / Rectangulaire
- ☐ **REC** Rectangular Sealed Beam / Phare scellé rectangulaire
- ☐ **RP** Reflector Parabolic / Réflecteur parabolique
- ☑ **S** Straight Sided / À flanc droit
- ☐ **T** Tubular / Tubulaire
- ☐ **TL** Tubular with lense end / Tubulaire avec lentille à l'extrémité

COMMENTS - OBSERVATIONS
100% of the bulb was missing. Glass within the base indicated that the it was a clear bulb.

BASE TYPE - GENRE DE CULOT
Base types are categorized as follows:
Les genres de culot sont classés de la façon suivante:

- ☐ Midget Flanged Base / Culot minuscule évasé
- ☐ Midget Grooved Base / Culot minuscule rainuré
- ☐ Midget Bi-Pin Base / Culot minuscule à deux broches
- ☐ Screw Base / Culot vissé
- ☐ Single Contact Midget Flanged Base / Culot minuscule évasé à un plot
- ☐ Single Contact Miniature Flanged Base / Culot miniature évasé à un plot
- ☐ Wedge Base / Culot poussoir
- ☐ Miniature Bayonet Base / Culot miniature à baionnette
- ☐ Single Contact Bayonet Base / Culot à baionnette à un plot
- ☑ Double Contact Bayonet Base / Culot à baionnette à deux plot
- ☐ Double Contact Index Base / Culot polarisé à deux plots
- ☐ Single or Double Contact Focus Base / Culot de focalisation à un plot ou à deux plots

COMMENTS - OBSERVATIONS
Other than some dust and dirt on its outer surface, the base was unremarkable.

FILAMENT CONFIGURATIONS - CONFIGURATION DES FILAMENTS
Filaments are identified by the following codes:
Les filaments sont identifiés par les codes suivants:

- ☐ **S** Straight Wire / Filament droit
- ☑ **C** Coiled Wire / Filament en spirale
- ☐ **CC** Coiled Coil Wire / Filament bispiralé

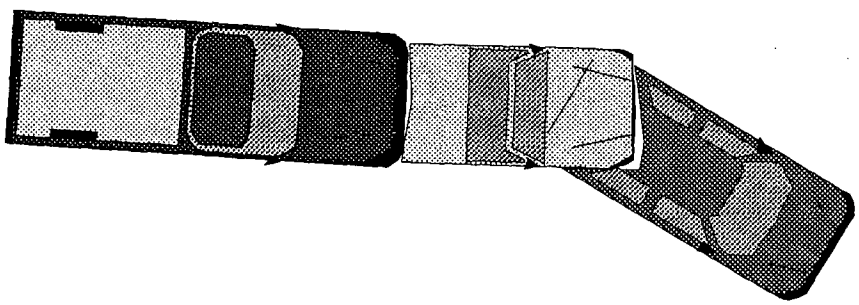
There will also be a suffix number to indicate the number of filament support posts.
Le code sera suivi d'un chiffre pour indiquer le nombre des montants de support des filaments.

COMMENTS - OBSERVATIONS
The stem and filament support were significantly bent over to one side of the build. Both filament wires stretched out. One end of the brake lamp filament had detached itself from the filament support.

REMARKS - REMARQUES

Signature C.I. BLANDFORD, FTCR

MAXIMUM ENGAGEMENT



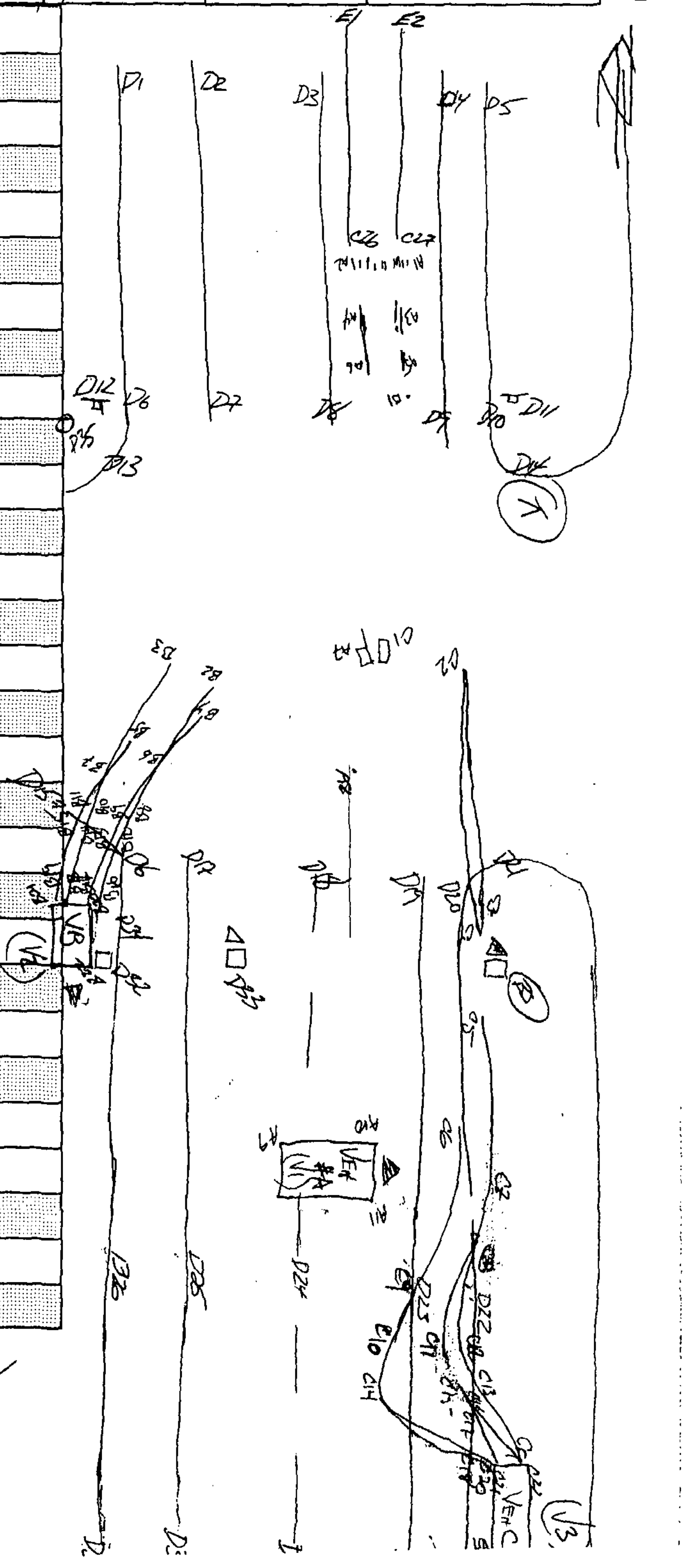
	File Number: 2005-00568	Date of Occurrence: 2005-02-25
	Fatal Motor Vehicle Collision P.T.H. #59 R.M. of East St. Paul, MB.	
	0 1 2 meters	
	Investigating Detachment: East St. Paul Police Dept.	
	File Investigator: Cst. K. Graham	
	Collision Reconstructionist: Cst. C.I. Blandford	Reconstructionist File No: 2005-08CIB
	Drawn By: Cst. C.I. Blandford	Date of Sketch: 2005-08-16

TRAFFIC COLLISION FIELD SKETCH AND NOTES

RP:	**VEHICLE DESCRIPTIONS**
BASELINE:	#1
DATE: 2005-02-25	#2
LOCATION: Hwy #59 + 101 a/b [illegible]	#3
TIME: 1130HRS.	#4
WEATHER: CLR.	ROAD CONDITION: ASPHALT WET [illegible] FROST
ASSISTED BY: Cst. [illegible] / Chief [illegible]	WIDTH: CENTRE LINE: SHLDRS: TRAVELLED

ANALYST: CST. CHRIS BLANDFORD

N	S	E	W		DESCRIPTION



SKETCH BY: [signature] DATE: 2005-02-25

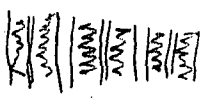
- SL.O. / Talk. = 22 87/100 M

- 80 KM/H SIGN TO STOP LINE
  112 25/100 M

- ADVANCE WARNING LIGHTS TO
  STOP LINE.
  249 46/100 M

(ALL MEASURED W.T.A
MEASURING WHEEL)

LOCATION: PM 59+ PM 101 N | DATE: 2005-02-25

N	S	E	W	CODE	DESCRIPTION	NOTES
						GPS COORDINATES N 49 57 09 W 097 01 41
						ADVANCE WARNING OF TRAFFIC LIGHTS
						EL-TIRED MARK: 160 FT
						6 RIDGES
						T/W of RSID MARS: 1 575
						F/ T/W of V-C 1 50 R-T/W 1 52
						DR's Across TIRE 6 SMALL RIDGES 3 LARGE  160 FT WIDE.
						115 46 00 -24 00

CIB 2004-08-03 MVAFS2

(1)

ON SITE MEASUREMENT RECORD

COMPLAINT NUMBER: 2005 085

LOCATION: NORTH INTERSECTION OF FM 359 & IH 10 W/B R/W OF E 5TH PASADENA

TEMPERATURE	BAROMETRIC PRESURE	ENVIRONMENTAL CONDITIONS (CLOUD COVER, PRECIPITATION, WIND ETC.)
-17°C	30.20 in Hg	1700Z 030@6 15SM -2500 OVC (1208AGL)

RECORDER NAME: BRANDON C.	REG #: 4/04/05	DATE (YYYY MM DD): 2005 04 25
MEASURER NAME (TRANSIT) (LIVE END): BRANDON C.	REG #: 4/04/05	START TIME (24hours): 12:37
ASSISTANT (RODMAN / REEL END): JEN GRAHAM + CHIEF HARRY BAKEYA (EST)	REG #:	FINISH TIME (24hours): 14:04

TYPE OF MEASUREMENT: ☒ TOTAL STATION 15057 (SERIAL NO.) ☐ COORDINATE ☐ TRIANGULATION

REFERENCE POINT(S) LOCATED/BASE LINE INFORMATION

BS = TRAFFIC LIGHT STANDARD IN MEDIAN ON S/SIDE OF INTERSECTION.

LN = 1665 RN = 1665

OBJECT / ITEM DESCRIPTION	CODE	NORTH HORIZONTAL ANGLE	SOUTH HORIZONTAL DISTANCE	EAST ELEVATION	WEST
	BS	0 00 00	32 937	+0.53 → E	
METAL SCARS V1	A1	165 27 00	25 033		
" " V1	A2	162 26 20	21 537		
" " V1	A3	160 26 20	17 737		
" " V1	A4	153 09 00	17 743		
" " V1	A5	157 46 00	15 059		
" " V1	A6	153 20 40	13 528		
MB PLATE DZC235	A7	41 56 40	9 58		
PIECE OF DEBRIS	A8	35 43 40	14 991		
DVR'S R CORNER V1	A9	9 01 00	40 [illegible]		
DVR'S F CORNER V1	A10	5 08 00	[illegible]		
PAS'S F CORNER V1	A11	4 37 00	41 [illegible]		
FLAKE OF GREEN PAS	B1	149 53 20	11 [illegible]		
DVR'S RR WHEEL - V2	B2	43 16 20	12 [illegible]		
PAS RR WHEEL - V2	B3	48 23 40	14 [illegible]		
DVR'S REAR WHEEL - V2	B4	40 18 40	16 [illegible]		
PAS REAR WHEEL - V2	B5	44 27 40	16 [illegible]		
DF + DR X V2	B6	39 40 00	17 [illegible]		
PF + PR X V2	B7	43 21 20	12 [illegible]		
DF WHEEL V2 SIDE	B8	36 12 20	20 [illegible]		
DR WHEEL V2 SIDE	B9	37 08 20	21 [illegible]		
PF WHEEL V2	B10	29 22 40	20 [illegible]		
PR WHEEL V2	B11	40 11 00	21 [illegible]		

OBJECT / ITEM DESCRIPTION	CODE	NORTH HORIZONTAL ANGLE	SOUTH HORIZONTAL DISTANCE	EAST ELEVATION	WEST
DF WHEEL V2 SIDE SLIP	B12	30 24 40	29 435		
DR WHEEL V2 ✓	B13	31 27 00	29 952		
PF WHEEL V2 ✓	B14	33 34 40	30 [illegible]		
PR WHEEL V2 ✓	B15	33 37 20	30 653		
DF WHEEL V2 ✓	B16	26 15 00	34 [illegible]		
DR WHEEL V2 ✓	B17	26 16 00	34 781		
PF WHEEL V2 ✓	B18	26 30 20	35 [illegible]		
PR WHEEL V2 ✓	B19	27 59 00	35 231		
DR CORNER V2	B20	26 29 20	34 812		
PR CORNER V2	B21	28 [illegible]	35 [illegible]		
DF CORNER V2	B22	24 40 00	34 [illegible]		
MBL PLATE DAX165	C1	38 34 40	[illegible]		
DVR FWD SLD V3	C2	9 49 20	15 [illegible]		
DVR REAR SLD V3	C3	1 09 20	27 660		
DVR FRONT SLD V3	C4	1 03 40	27 602		
DVR SIDE RUT - V3	C5	0 13 40	33 [illegible]		
PASS SIDE RUT - V3	C6	1 21 20	43 [illegible]		
DVR SIDE RUT - V3	C7	359 33 40	50 970		
DVR FRONT + REAR RUT - V3	C8	1 29 20	51 [illegible]		
PAS REAR SIDE SLIP - V3	C9	359 54 00	58 [illegible]		
" " " - V3	C10	1 01 20	61 403		
DR SIDE SLIP - V3	C11	0 42 00	61 263		
DF SIDE SLIP - V3	C12	0 07 40	61 180		
DF SIDE SLIP - V3	C13	359 37 20	64 [illegible]		
PR SIDE SLIP - V3	C14	1 49 00	61 [illegible]		
PF - DR X - V3	C15	0 19 40	66 345		
DR SIDE SLIP - V3	C16	359 05 00	68 750		
PF SIDE SLIP - V3	C17	359 03 00	69 492		
PR SIDE SLIP - V3	C18	359 01 00	71 541		
DF - DR CONVERG - V3	C19	355 51 20	75 317		
PF - DR CONVERG - V3	C20	356 59 00	75 377		
DR CORNER - V3	C22	355 31 20	75 [illegible]	PR CORNER - V3	
DF CORNER - V3	C23	355 44 00	80 [illegible]	C21 - 35 [illegible]	
W EDGE of 59	D1	163 06 20	56 [illegible]		
W FOG LINE	D2	[illegible]	[illegible]		
CENTER LINE	D3	173 40 20	55 [illegible]		
E FOG LINE	D4	173 [illegible]	[illegible]		
E EDGE of HWY	D5	[illegible] 32 40	57 [illegible]		
W EDGE of HWY	D6	[illegible] 24 40	18 [illegible]		
W FOG LINE	D7	[illegible]	[illegible]		

(3)

OBJECT / ITEM DESCRIPTION	CODE	NORTH HORIZONTAL ANGLEE	SOUTH HORIZONTAL DISTANCE	EAST ELEVATION	WEST
CENTRE LINE.	D8	1431200	13 808		
E FOG LINE	D9	1573100	12 036		
E EDGE OF HWY	D10	1631440	11 838		
STOP LINE SIGN.	D11	1715700	11 [illegible]		
STOP LINE SIGN	D12	1273300	17 822		
W EDGE OF HWY	D13	1070740	[illegible]		
E EDGE OF HWY.	D14	1714400	5 442		
W EDGE OF HWY	D15	670640	[illegible]		
W EDGE OF HWY	D16	593820	18 [illegible]		
W FOG LINE.	D17	162000	34 672		
CENTRE LINE	D18	103120	33 [illegible]		
E FOG LINE.	D19	42120	[illegible]		
E EDGE OF HWY	D20	30240	33 133		
E EDGE OF HWY	D21	30240	[illegible]		
E EDGE OF HWY	D22	0 09 00	55 [illegible]		
E FOG LINE	D23	[illegible] 08 20	[illegible]		
CENTRE LINE	D24	45040	56 [illegible]		
W FOG LINE	D25	111440	58 [illegible]		
W. EDGE OF HWY	D26	1220000	58 949		
E EDGE OF HWY	D27	3582920	81 532		
E FOG LINE	D28	3591800	87 482		
CENTRE LINE	D29	14000	87 538		
W FOG LINE	D30	55300	88 801		
W EDGE OF HWY	D31	61220	86 [illegible]		
TRAFFIC LIGHT BASE	D32	225[illegible]	[illegible]		
TRAFFIC LIGHT HEAD	D33	154120	[illegible]		
W EDGE OF HWY	D34	211940	36 305		
STREET LIGHT	D35	1154600	24 820		
SKID MARK - U/K	E1	1695140	49 237		
SKID MARK - U/K.	E2	1712240	47 852		

TRAFFIC ANALYST INVESTIGATION REPORT

RAPPORT D'ENQUÊTE DE L'ANALYSTE DES ACCIDENTS DE LA ROUTE

☒ Fatal / Mortel ☐ P.I. / Blésse ☐ P.D. / Domm.

Analyst file no.-N° de doss. de l'analyste: 2005-08CS

Detachment - Détachement: EAST ST PAUL ☒ VI

Occ. no. - N° d'inc.: 2005-00568

COLLISION

Occurred - Survenu on le	at à	On highway - Sur la route	At or near - À ou près de	Prov.
05-02-25	0700	TCH #59	TCH #101 - 1 KM of E. ST PAUL	MB

Investigated-Enquêté on le	at à	Analyst - Analyste	Unit - Groupe
05-02-25	0903	CS [illegible]	D DIVISION TRAFFIC SERVICE

Accompanied by - Accompagné de	Unit - Groupe
CS KEN GLANTZ / CHIEF HARRY BALETA	EAST ST PAUL POLICE

VEHICLE ONE - VÉHICULE N° 1

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.

Location when examined - Endroit au moment de l'examen:

VEHICLE TWO - VÉHICULE N° 2

Y - A	Make - Marque	Model - Modèle	Colour(s) - Couleur(s)

VIN - N.I.V.	Lic. no.- N° d'imm.	Prov.

Location when examined - Endroit au moment de l'examen:

COLLISION SCENE - LIEUX DE LA COLLISION

Type of highway / Genre de route: ☐ Urban / Urbaine ☐ Rural / Rurale

No.of lanes / Nbre de voies:

☐ Industrial / Sect. industriel ☐ Business / Sect. commercial ☐ School / Zone scolaire ☐ Residential / Sect. résidentiel ☐ Farm / Ferme ☐ Playground / Terrain de jeux ☐ Other / Autre — Specify - Préciser

☐ Asphalt / Asphalte ☐ Concrete / Béton ☐ Gravel / Gravier ☐ Other / Autre — Other (specify) - Autre (préciser)

Describe for drag factor - Décrire la chaussée pour le facteur de trainée:

Factor / Facteur: ☐ Levelled / Plat ☐ Sloped / En pente

Grade - Inclinaison: ☐ Hill top / Haute d'une colline ☐ Hill bottom / Bas d'une colline — %

☐ Straight / Droit ☐ Curved / En courbe ☐ Other / Autre — Specify - Préciser

Superelevation / Dévers: %

Speed limit / Vit. max. autorisée: km/hr / km/h

CIRCUMSTANCES / ACTION TAKEN - CIRCONSTANCES / MESURES PRISES

Reason for investigation:

___ Satisfy policy, no action required.
✓ Assistance Required

Objective: (__)Speed (__)Seatbelts (__)Vehicle Collision Positioning (__)Pre Collision Vehicle Actions (__)Other

The following actions have been initiated:

✓ Scene examination
✓ Photos Taken
✓ Measurements/Survey
✓ Vehicle Examination
___ Other:_____

IN order to complete the collision analysis report the following information is required from the unit investigator:

✓ Statements of Driver(s) and Witnesses
___ Scene photos prior to analyst arrival
___ I.A.R.
✓ Occupant weights
___ Vehicle weights
✓ Other (1) MEMBER NOTES RE: ROAD CONDITIONS UPON INITIAL ARRIVAL.
(2) DATE + LOCATION OF MECHANICAL.
___ NONE

This is a / Il s'agit d'un: ✓ preliminary report / rapport préliminaire ☐ follow-up report / rapport de suivi

Further report to follow: / Un autre rapport doit suivre: ☐ No / Non ✓ Yes, by: / Oui, au plus tard le: 05-04-25

Date of this report / Date du rapport: 05-02-28

Signature: [signature]

Date sent to detachment / Date d'envoi au détachement: 05-02-28

DISTRIBUTION: 1) Analyst - Analyste 2) Detachment - Détachement 3) Senior Division Analyst - Analyste divisionnaire supérieur

RCMP GRC 3011 (1996-11) (FLO)

DRAG SLED TESTING

DATE: 2005 03 04
TIME: 1121 HRS
LOCATION: NORTH INTERSECTION 59-101 KM ESB
SURFACE: BARE, DRY + TRAVELLED ASPHALT

1.	21 lbs	6.	20 lbs
2.	21 –	7.	20 ✓
3.	22 –	8.	21 ✓
4.	22 ✓	9.	22 ✓
5.	21 ✓	10.	20 ✓

WEIGHT: 40 lbs
STEEL ON ASPHALT

21
21
22
22
21
20
20
21
22
20
210

f = F/W

$F = \frac{210}{10}$

$F = 21.0$

$f = F/W$

$f = \frac{21}{40}$

$f = 0.525$

$f = 0.52$

2005-03-04

DATE:
TIME:
LOCATION:
SURFACE:

1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

WEIGHT:

MANITOBA DEPT OF HWYS & TRANSPORTATION — Page: 1
FHWA Vehicle Classifications — Date: 3/01/200[illegible]

****

Location: PTH 59 & PTH 101 NORTH INTERSECTION — Starts : 06/24/[illegible] at 07:00:0[illegible]
Notes : PTH 59 N-S FHWA -- 2004 — Ends : 06/24/[illegible] at 21:00:0[illegible]
Study ID: MERG 00975 - 2004 — Interval : 60 min — Intervals: 14
Operator: CLEO — S/N : 4335 — Type: FHWA Class
Weather : — Correction: 1.00

****

Class -->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Time/Lane	Cycle	Autos	2A-4T	Buses	2A-6T	3A-SI	>3A-S	<5A-T	5A-ST	>5A-T	<6A-M	6A-MT	>6A-M	OTHER	Undef	Total
Thu 6/24/1999																
7:00 on Thu																
From North Rt/Red	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	4	630	249	1	6	7	0	0	4	5	0	1	2	0	0	909
Right	2	448	149	0	5	5	0	0	24	5	0	0	4	0	0	642
From South Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	4	429	154	0	27	21	1	0	30	15	2	0	9	0	0	692
Thru	0	238	87	0	15	6	0	1	14	8	0	0	1	0	0	370
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From East Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From West Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	2	132	31	0	3	8	0	0	14	1	0	1	0	0	0	192
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interval Total	12	1878	670	1	56	47	1	1	86	34	2	2	16	0	0	2806
Hour	12	1878	670	1	56	47	1	1	86	34	2	2	16	0	0	2806
8:00 on Thu																
From North Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	2	455	143	2	7	5	0	3	7	8	0	0	1	0	0	633
Right	3	334	82	1	9	5	0	0	17	9	0	1	2	0	0	463
From South Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	3	269	101	1	24	19	0	0	41	14	0	0	12	0	0	484
Thru	0	258	70	0	19	5	0	1	6	6	0	1	1	0	0	367
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From East Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From West Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	151	36	0	6	4	0	0	15	4	0	1	0	0	0	217
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MANITOBA DEPT OF HWYS & TRANSPORTATION — Page: 1
FHWA Vehicle Classifications — Date: 3/01/200

Location: PTH 101 & PTH 59 NTH JCT — Starts : 07/07/[illegible] at 07:00:0
Notes : PTH 59 N-S FHWA -- 2004 — Ends : 07/07/[illegible] at 21:00:0
Study ID: MERG 01043 - 2004 — Interval : 60 min — Intervals: 14
Operator: JULIE — S/N : 4335 — Type: FHWA Class
Weather : — Correction: 1.00

Class -->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Time/Lane	Cycle	Autos	2A-4T	Buses	2A-6T	3A-SI	>3A-S	<5A-T	5A-ST	>5A-T	<6A-M	6A-MT	>6A-M	OTHER	Undef	Total
Wed 7/07/1999																
7:00 on Wed																
From North Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	4	619	229	0	8	3	0	0	4	7	1	0	0	0	0	875
Right	7	445	152	0	9	10	0	0	20	6	0	0	4	0	0	653
From South Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	2	405	159	0	26	15	0	0	53	14	0	0	6	0	0	680
Thru	0	211	79	0	4	6	0	0	11	4	0	0	2	0	0	317
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From East Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From West Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	1	119	31	0	4	4	0	0	15	3	0	1	2	0	0	180
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interval Total	14	1799	650	0	51	38	0	0	103	34	1	1	14	0	0	2705
Hour	14	1799	650	0	51	38	0	0	103	34	1	1	14	0	0	2705
8:00 on Wed																
From North Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	7	499	155	0	3	2	0	0	6	5	1	0	1	0	0	679
Right	1	320	114	0	9	6	0	0	21	7	0	0	2	0	0	480
From South Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	4	321	103	0	22	15	0	0	32	13	0	0	6	0	0	516
Thru	1	228	62	0	8	4	0	0	10	6	1	0	0	0	0	320
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From East Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
From West Rt/Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left	0	140	65	0	3	2	0	0	19	8	2	0	3	0	0	242
Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Knowles

2005.05.18

Red light timing.

Red light for S/B traffic on 59. Lights observed with longest time was traffic turning left from N.B. 59 to F.M. 101 W/B.

The length of the light ~~was~~ appeared to be depends on the number of vehicles turning left. All in seconds.

(1)	30.8	(17)	25.0
(2)	22.0	(18)	43.2
(3)	32.8	(19)	33.2
(4)	35.3	(20)	21.9
(5)	27.5	(21)	33.4
(6)	26.0	(22)	44.5
(7)	28.3	(23)	30.9
(8)	25.5	(24)	33.6
(9)	28.0	(25)	30.1
(10)	29.7	(26)	35.4
(11)	45.0	(27)	38.9
(12)	24.5		
(13)	30.8		
(14)	17.3		
(15)	18.5		
(16)	34.3		

Avg t = 30.6 sec.

DRAG SLED TESTING

f = F/W

DATE: 2005-03-04
TIME: 1121 HRS
LOCATION: NORTH INTERSECTION of 59+101 R/H of ESP.
SURFACE: ASPHALT 1.5cm of SNOW (-10°C)

1.	19 lbs	6.	16 lbs
2.	18 ✓	7.	18 ✓
3.	19 ✓	8.	18 ✓
4.	17 ✓	9.	17 ✓
5.	15 ✓	10.	17 ✓

WEIGHT: 40 lbs

19
18
17
17
15
16
18
18
17
17
174

$F = \frac{174}{10}$

$F = 17.4$

$f = F/W$

$f = 17.4/40$

$f = 0.435$

$f = 0.43$

DATE: 2005-03-04
TIME: 1121 HOURS
LOCATION: NORTH INTERSECTION of 59+101 R/H of ESP
SURFACE: SNOW WITH AN ICE COVERED SURFACE

1.	6 lbs	6.	7 lbs
2.	6 ✓	7.	6 ✓
3.	10 ✓	8.	10 ✓
4.	6 ✓	9.	5 ✓
5.	4 ✓	10.	5 ✓

WEIGHT: 40 lbs
"STEEL ON ICE"

6
6
10
6
4
7
6
10
5
5
65

$F = \frac{65}{10}$

$F = 6.5$

$f = F/W$

$f = \frac{6.5}{40}$

$f = 0.1625$

$f = 0.16$

05-03-04

1991 CHEVROLET CARS SPRINT CONVERTIBLE

Database	North American
Year	1991
Make	CHEVROLET CARS
Model	SPRINT CONVERTIBLE
Object	Convertible
Overall Length	3.71 Meters
Overall Width	1.58 Meters
Overall Height	1.33 Meters
Wheel Base	2.27 Meters
Curb Weight	797 KG
Longitudinal distance between the center of the front bumper and the center of the base of the windshield	1.02 Meters
Passenger Car - Longitudinal distance between the center of the rear bumper and the cetner of the base of the backlight Station Wagon and Vans - Longitudinal distance between the backlight top moulding and the front door latch pillar Pick-ups - Longitudinal distance between the rearmost projection and the front door latch pillar	0.64 Meters
Vertical distance between the base of the side glass and the lower edge of the rocker panel	0.38 Meters
The maximum vertical height of the side glass	0.67 Meters
Distance between side rails or maximum width of top	1.12 Meters
The front overhang	0.74 Meters
The rear overhang	0.66 Meters
Front Track Width	N/A
Rear Track Width	N/A
Front/Rear Weight Distribution	N/A

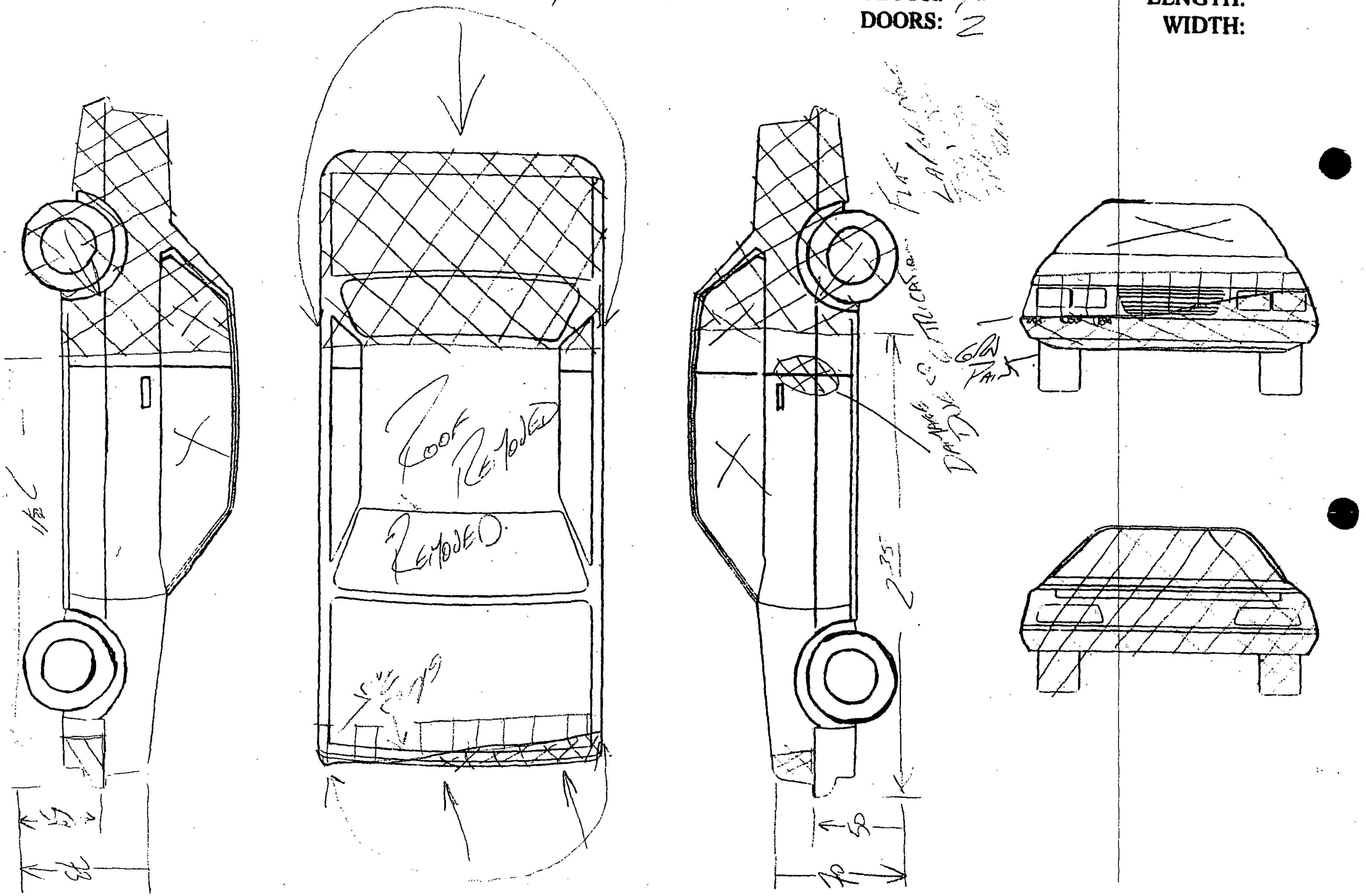
VEHICLE DAMAGE SHEET

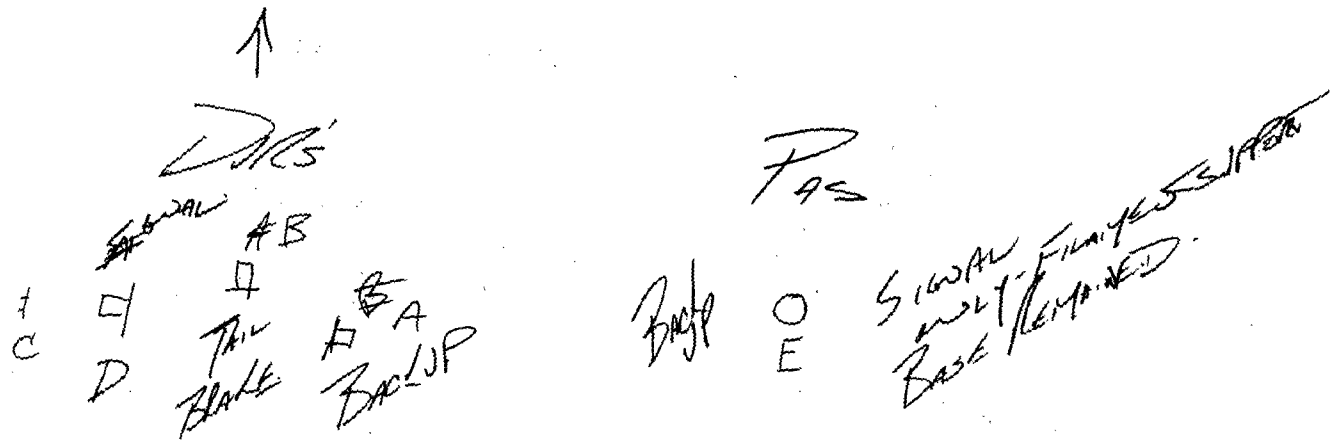
OFFICER: [illegible]
UNIT: R.C.M.Police
LOCATION: Pth#59+101 W/B
DATE & TIME: 2005 05 [illegible] @1431

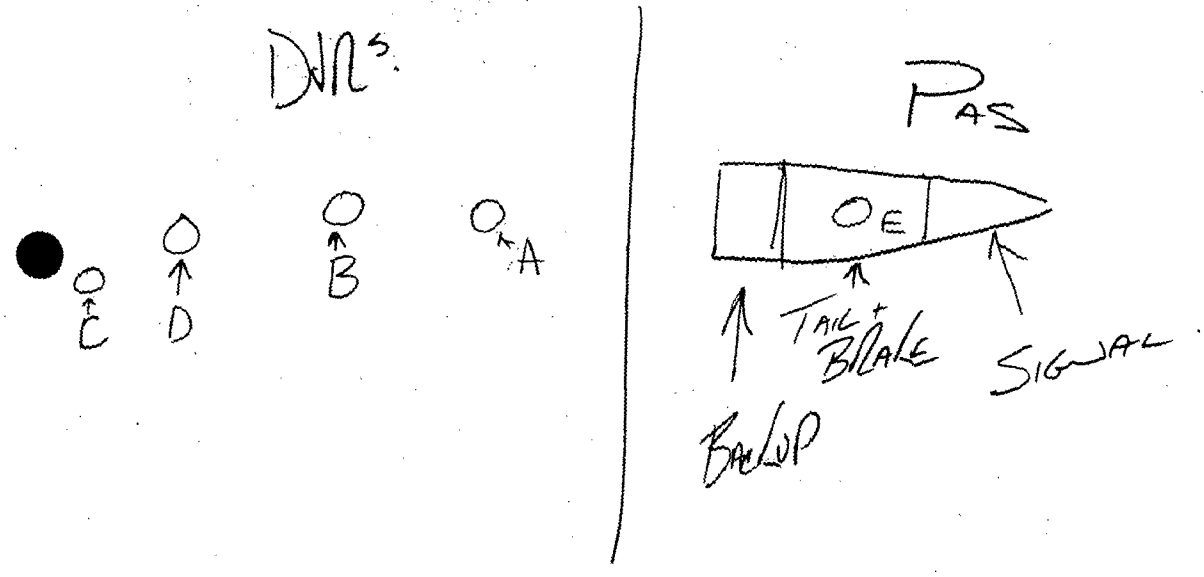
VI
[illegible]
128571

LICENCE: [illegible]
YEAR: [illegible]
MAKE: [illegible]
MODEL: [illegible]
COLOUR: [illegible]
DOORS: 2

TRANSMISSION: [illegible]
GEAR: [illegible]
WHEEL BASE:
WHEEL TRACK:
LENGTH:
WIDTH:

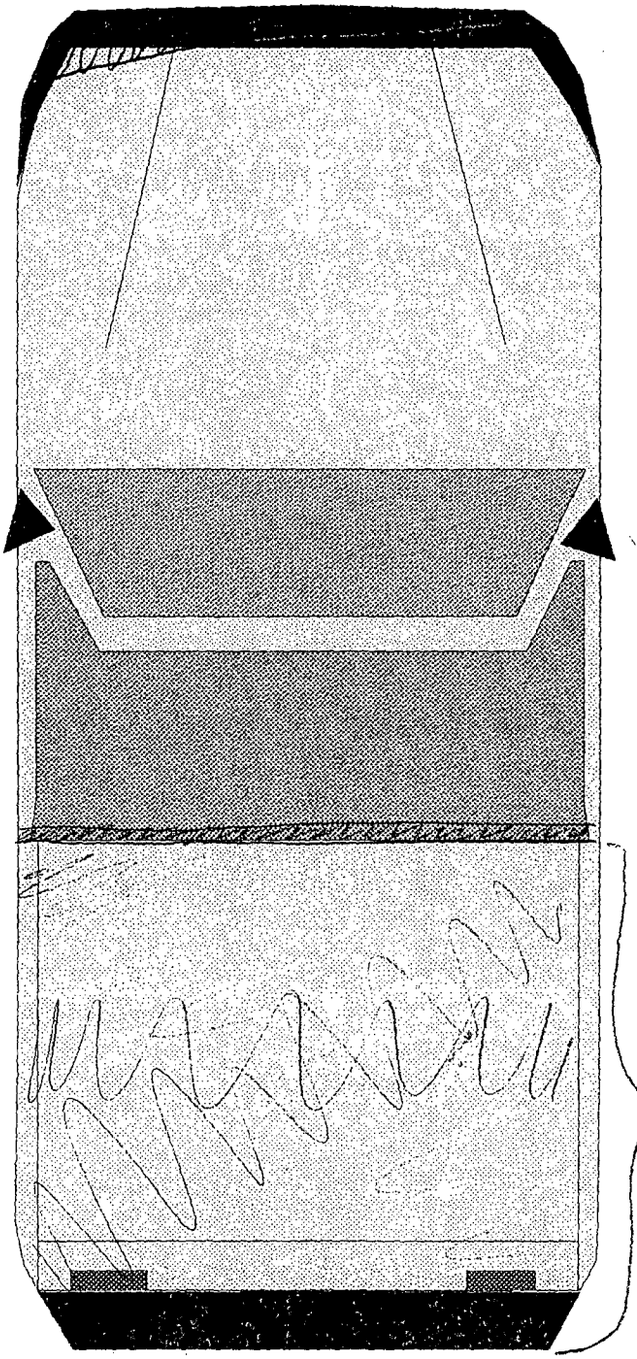



DRCS
SIGNAL
#B
B
A
TAIL
BLADE
BACKUP
C
D
PAS
BACKUP
O
E
SIGNAL
ONLY - FILM YES SUPPORT
BASE REMAINED.


DRCS.
B
A
C
D
PAS
E
TAIL
BLADE
SIGNAL
BACKUP

VEHICLE #1

LTBL DEC 235



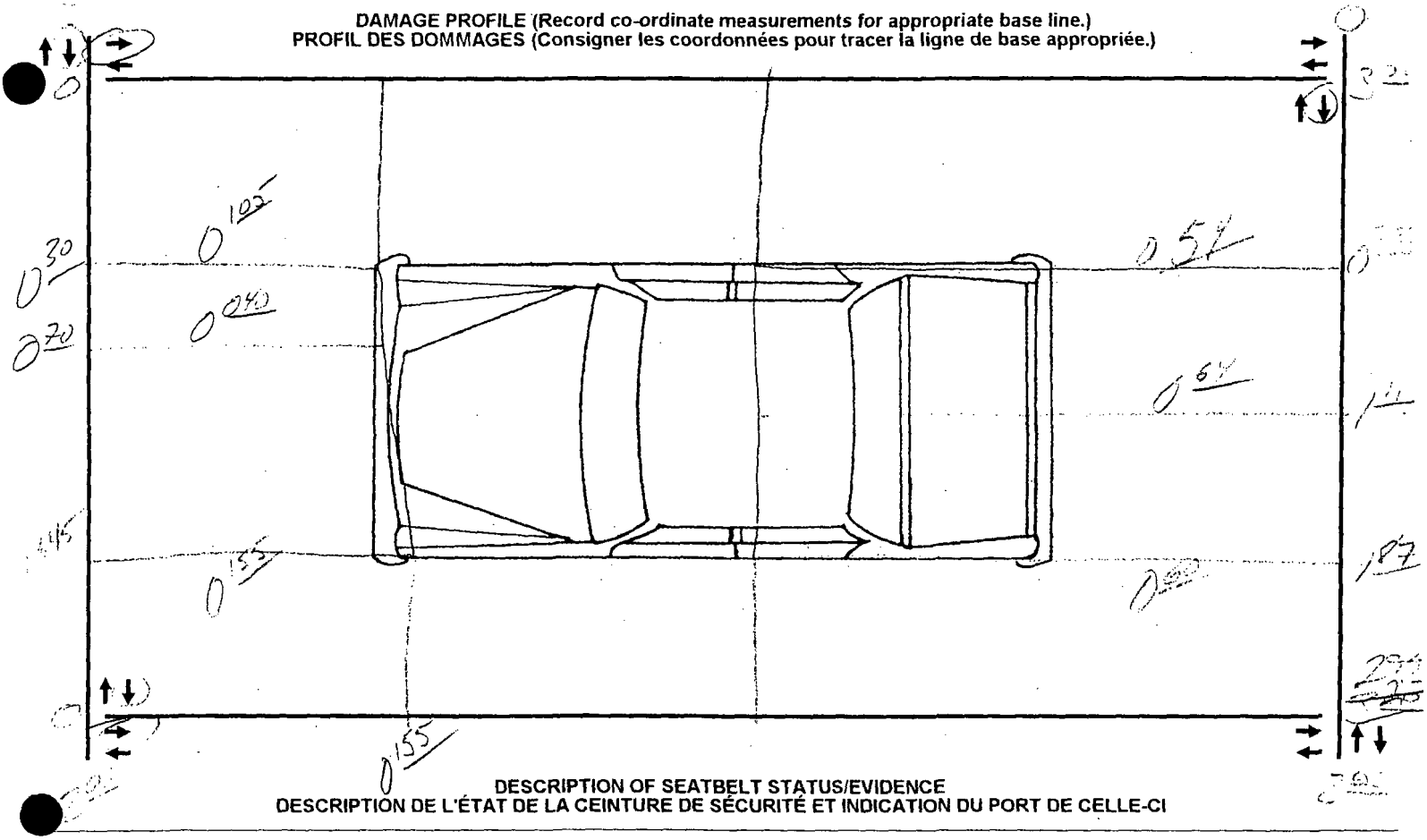
DISPLACED AND CRUSHED FWD.

VEHICLE DAMAGE RECORD

FICHE DES DOMMAGES SUBIS PAR UN VÉHICULE

Analyst File No. - N° de doss. de l'analyste

DAMAGE PROFILE (Record co-ordinate measurements for appropriate base line.)
PROFIL DES DOMMAGES (Consigner les coordonnées pour tracer la ligne de base appropriée.)



DESCRIPTION OF SEATBELT STATUS/EVIDENCE
DESCRIPTION DE L'ÉTAT DE LA CEINTURE DE SÉCURITÉ ET INDICATION DU PORT DE CELLE-CI

VI

2005.02.

ADDITIONAL REMARKS - REMARQUES SUPPLÉMENTAIRES

Signature

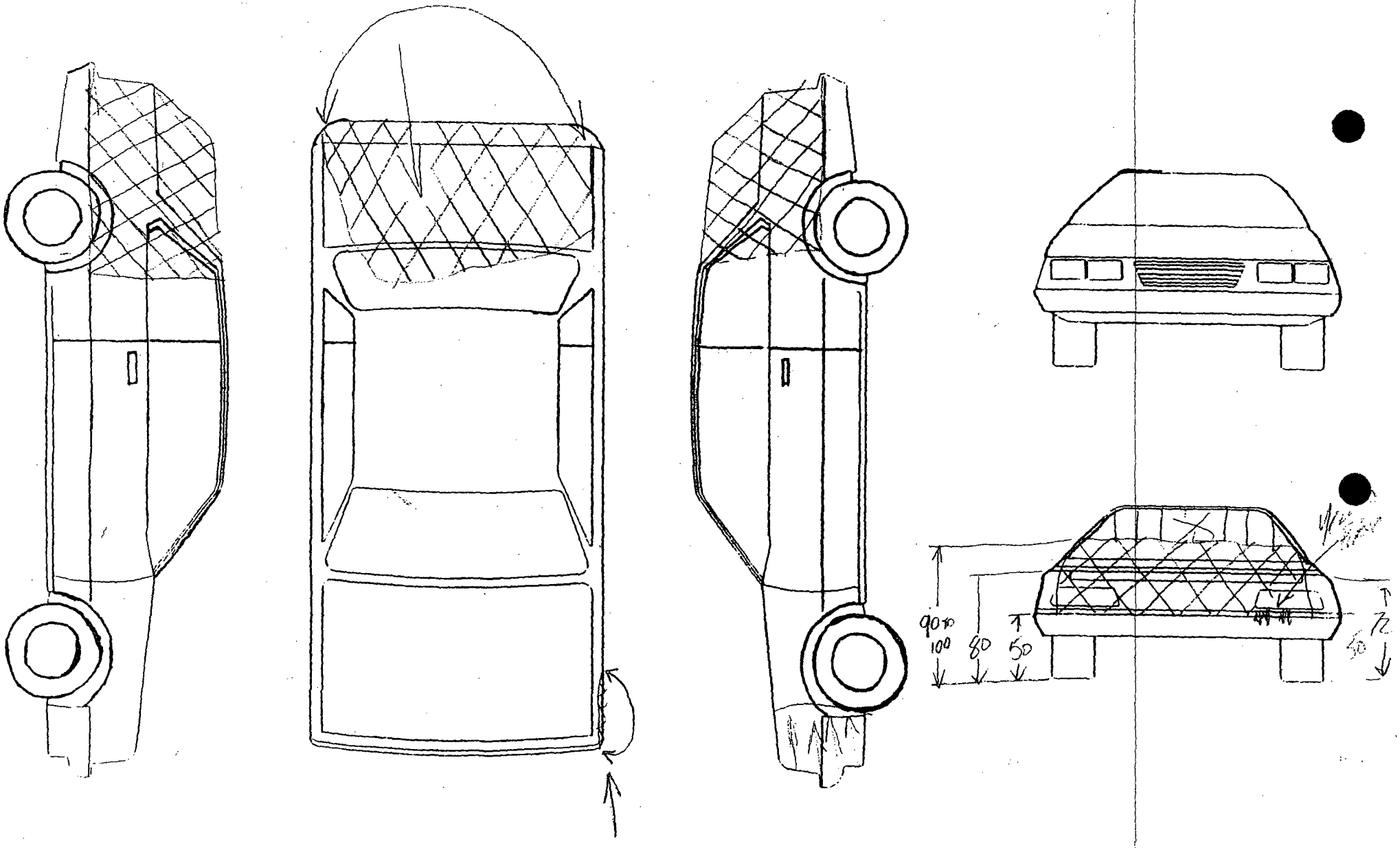
2000 HYUNDAI ACCENT 2DR HATCHBACK GS/GSi

Database	North American
Year	2000
Make	HYUNDAI
Model	ACCENT 2DR HATCHBACK GS/GSi
Object	HatchBack
Overall Length	4.2 Meters
Overall Width	1.67 Meters
Overall Height	1.4 Meters
Wheel Base	2.44 Meters
Curb Weight	953 KG
Longitudinal distance between the center of the front bumper and the center of the base of the windshield	1.12 Meters
Passenger Car - Longitudinal distance between the center of the rear bumper and the cetner of the base of the backlight Station Wagon and Vans - Longitudinal distance between the backlight top moulding and the front door latch pillar Pick-ups - Longitudinal distance between the rearmost projection and the front door latch pillar	1.06 Meters
Vertical distance between the base of the side glass and the lower edge of the rocker panel	0.38 Meters
The maximum vertical height of the side glass	0.73 Meters
Distance between side rails or maximum width of top	1.11 Meters
The front overhang	0.84 Meters
The rear overhang	0.93 Meters
Front Track Width	1.44 Meters
Rear Track Width	1.43 Meters
Front/Rear Weight Distribution	N/A

UNIT: R.C.M.Police
LOCATION: Hwy #59 + 101 W/B.
DATE & TIME: 2005-02-25
15:13 HRS.

LICENCE: BYGE77
YEAR: 2000
MAKE: Hyundai
MODEL: Accent
COLOUR: Gold
DOORS: 5

TRANSMISSION: Auto
GEAR:
WHEEL BASE:
WHEEL TRACK:
LENGTH:
WIDTH:



DR'S SEAT (SE)

- LAP + SHOULDER HARNESS
- FOUND 1 PARTIAL DEPLOYED
- NO LOADING MARKS.
- DR'S SEAT FULLY RECLINED.

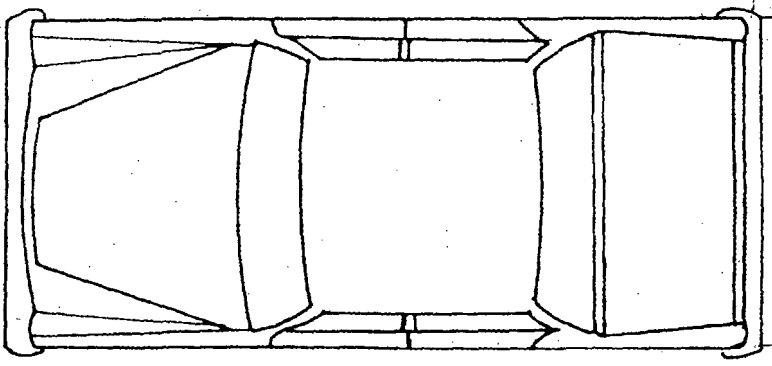
1/2

VEHICLE DAMAGE RECORD / **FICHE DES DOMMAGES SUBIS PAR UN VÉHICULE**

Analyst File No. - N° de doss. de l'analyste

DAMAGE PROFILE (Record co-ordinate measurements for appropriate base line.)
PROFILE DES DOMMAGES (Consigner les coordonnées pour tracer la ligne de base appropriée.)

MB: BY6991
2005-02-25



MEASURED TO BUMPER.

DESCRIPTION OF SEATBELT STATUS/EVIDENCE
DESCRIPTION DE L'ÉTAT DE LA CEINTURE DE SÉCURITÉ ET INDICATION DU PORT DE CELLE-CI

ADDITIONAL REMARKS - REMARQUES SUPPLÉMENTAIRES

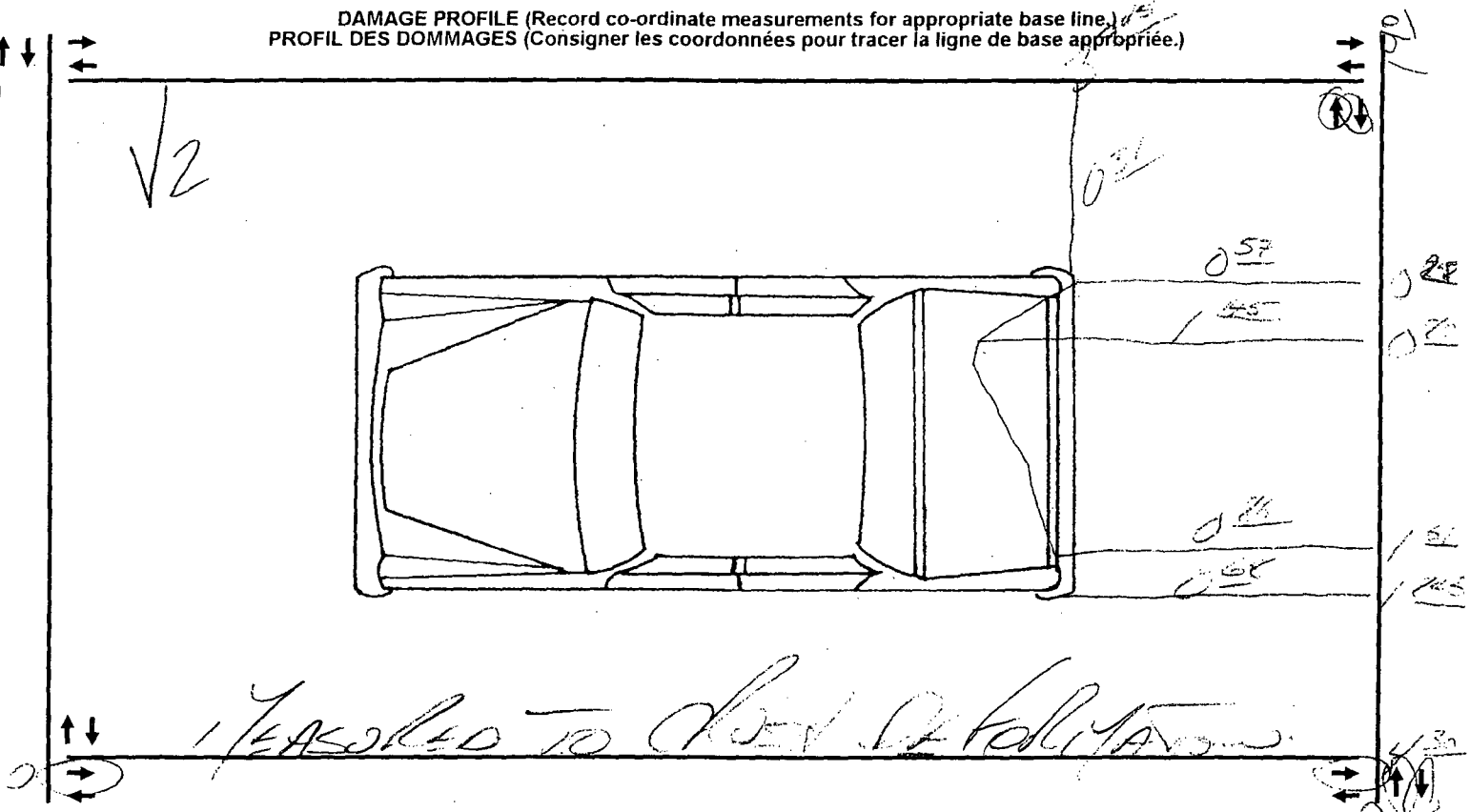
SEIZED BY TPC/ERIC LAPLANTE
1216HC 2005-03-28

Signature

VEHICLE DAMAGE RECORD / **FICHE DES DOMMAGES SUBIS PAR UN VÉHICULE**

Analyst File No. - N° de doss. de l'analyste

DAMAGE PROFILE (Record co-ordinate measurements for appropriate base line.)
PROFIL DES DOMMAGES (Consigner les coordonnées pour tracer la ligne de base appropriée.)



DESCRIPTION OF SEATBELT STATUS/EVIDENCE
DESCRIPTION DE L'ÉTAT DE LA CEINTURE DE SÉCURITÉ ET INDICATION DU PORT DE CELLE-CI

VEHICLE #2

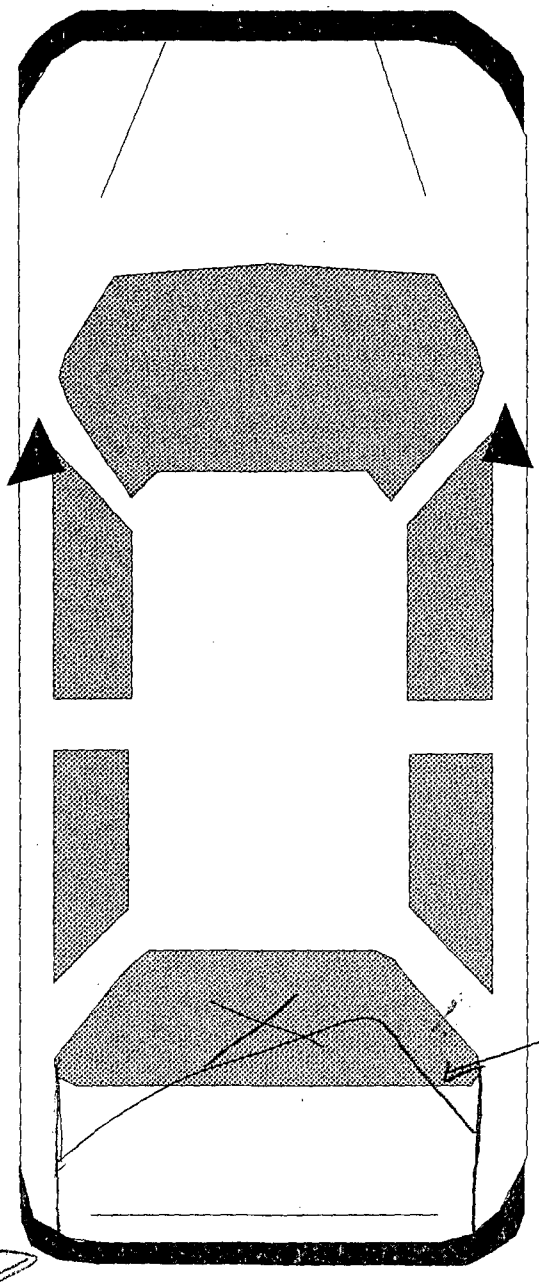
RE: B16096

ADDITIONAL REMARKS - REMARQUES SUPPLÉMENTAIRES

Signature

VEHICLE #2

MB
BYG898



HATCH DOOR DISPLACED + CRUSHED FORWARD.

BUMPER COVER REMOVED. BUMPER ONLY SUSTAINED MINOR DAMAGE

1995 DODGE TRUCKS DAKOTA P/U CLUB CAB S/BOX

Database	North American
Year	1995
Make	DODGE TRUCKS
Model	DAKOTA P/U CLUB CAB S/BOX
Object	Pickup
Overall Length	5.29 Meters
Overall Width	1.77 Meters
Overall Height	1.67 Meters
Wheel Base	3.33 Meters
Curb Weight	1578 KG
Longitudinal distance between the center of the front bumper and the center of the base of the windshield	1.32 Meters
Passenger Car - Longitudinal distance between the center of the rear bumper and the cetner of the base of the backlight Station Wagon and Vans - Longitudinal distance between the backlight top moulding and the front door latch pillar Pick-ups - Longitudinal distance between the rearmost projection and the front door latch pillar	2.11 Meters
Vertical distance between the base of the side glass and the lower edge of the rocker panel	0.42 Meters
The maximum vertical height of the side glass	0.78 Meters
Distance between side rails or maximum width of top	1.21 Meters
The front overhang	0.85 Meters
The rear overhang	1.09 Meters
Front Track Width	1.49 Meters
Rear Track Width	1.51 Meters
Front/Rear Weight Distribution	N/A

VEHICLE DAMAGE SHEET

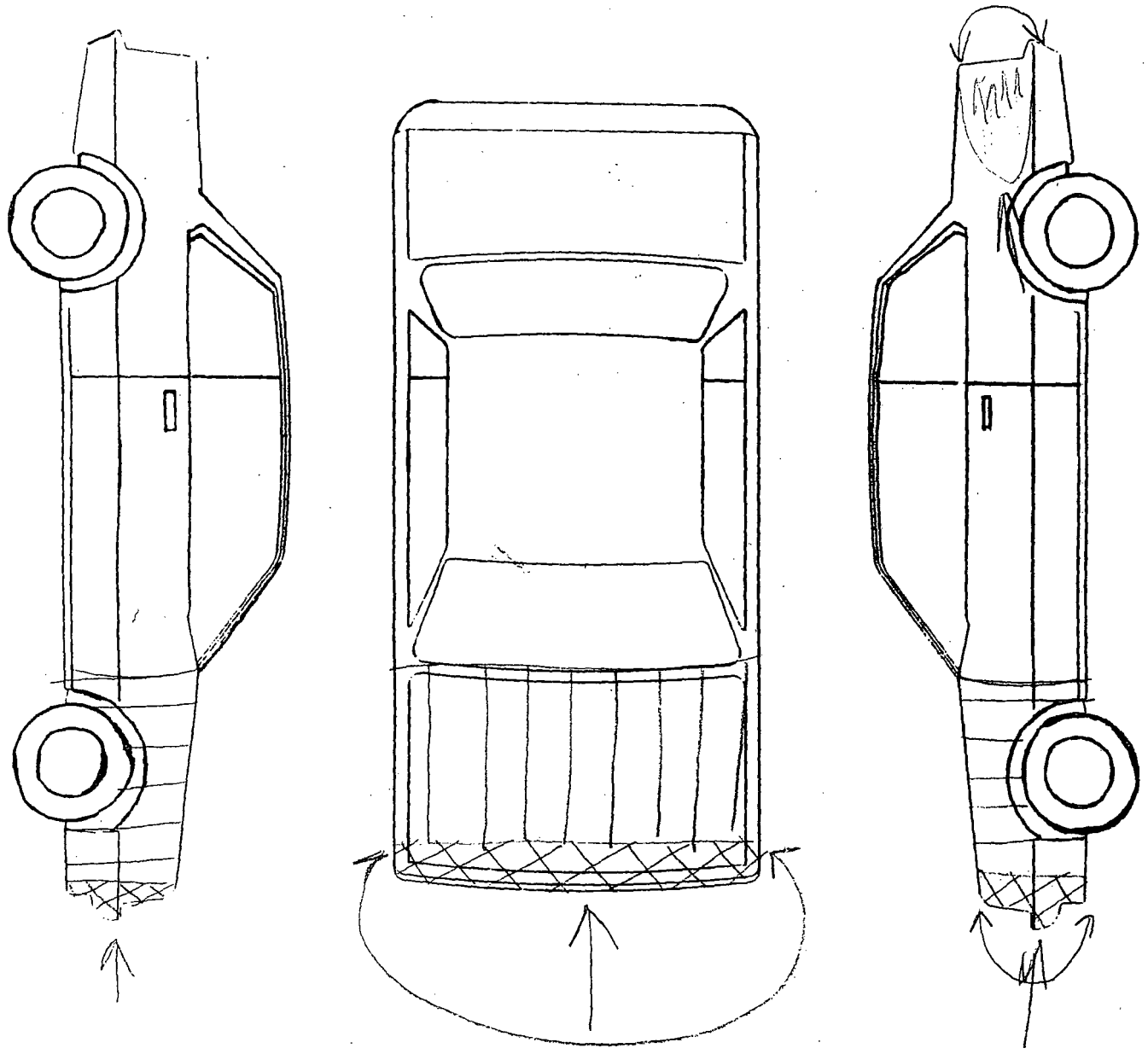
UNIT: R.C.M.Police
LOCATION: PH 59-101 W/B
DATE & TIME: 2005-02-25 1531 HRS

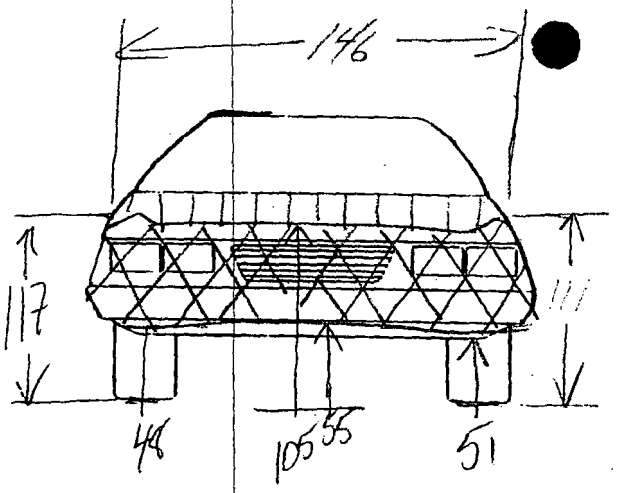
13

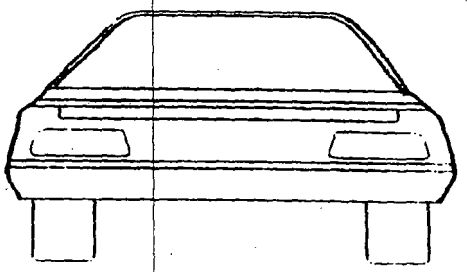
1B76L02X755364125
15954

LICENCE: DAV 165
YEAR: 1995
MAKE:
MODEL: DAKOTA
COLOUR:
DOORS:

TRANSMISSION:
GEAR:
WHEEL BASE:
WHEEL TRACK:
LENGTH:
WIDTH:

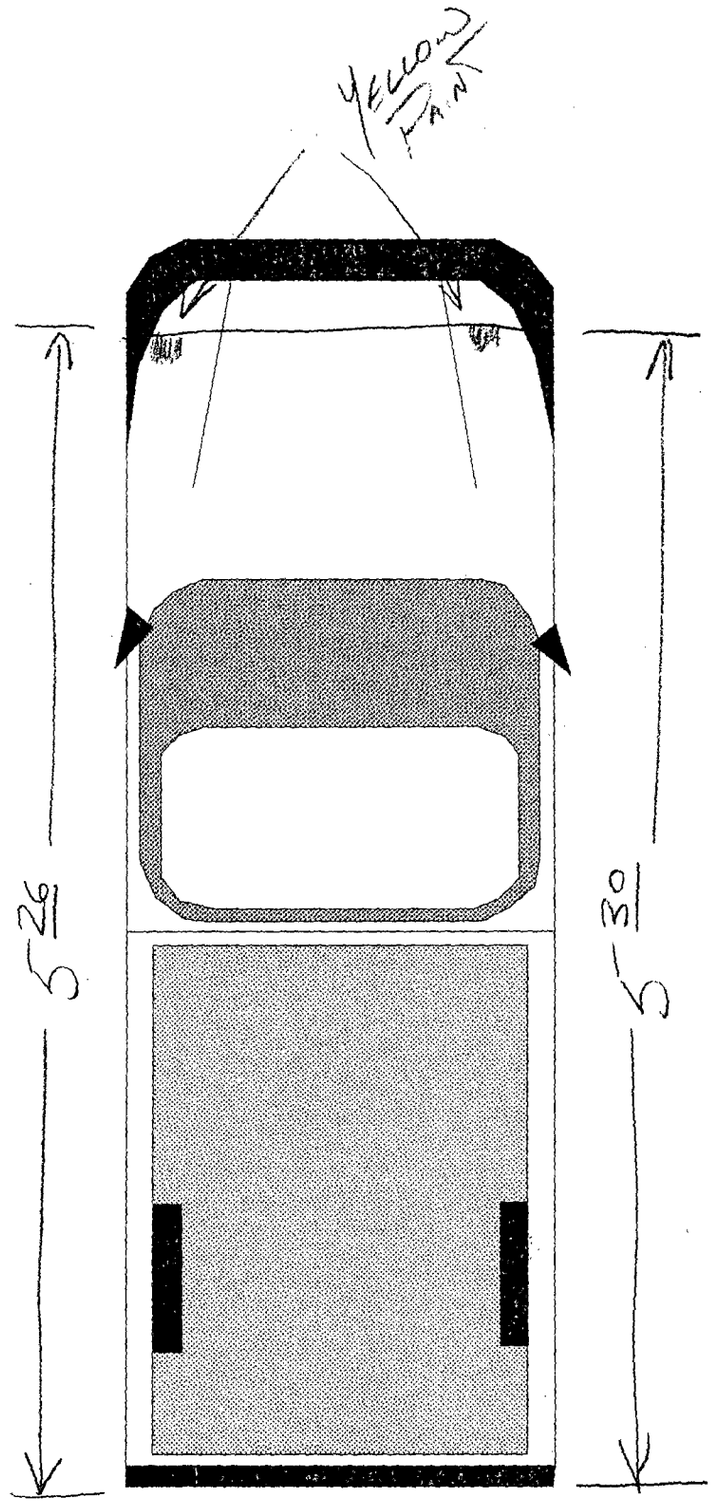






DVR'S S/B

- LAP-SHOULDER HARNESS S/B ASSEMBLY & RETRACTOR - LOCKING TONGUE
- LOADING MARKS ON D RING.
- WEBBING HANGING IN A DEPLOYED POS.
- LOADING MARKS ON WEBBING.
- STITCHING @ ANCHOR STRETCHED



VEHICLE #3

1/BL: DAX165

Royal Canadian Mounted Police / Gendarmerie royale du Canada

C.I. (Chris) Blandford

Constable
Forensic Traffic Collision Reconstructionist
RSV 2010 Coordinator
Division Traffic Services

Constable
Analyste de collision

Canada

FOR NOTEBOOK #3

2005.02.25

0807 Rcvd a Call Re 201 Accident

THAT THE EAST ST PAUL POLICE REQUIRE A COLLISION ANALYST AT THE SCENE OF A 3 VEH, SERIOUS INJURY, POSSIBLY FATAL COLLISION ON PTH #59 NR THE WEIGH SCALES. APPARENTLY ON VEHICLE WAS TOWED IN HALF.

0[illegible] I ADVISED DOT THAT I WOULD ATTEND. I WAS GIVEN THE PHONE # TO THE ESP POLICE. I CALLED AND THE SAME INFORMATION WAS PASSED ON. I WAS CONFIRMED THAT THIS WAS A FATAL COLLISION. I ADVISED THAT I WOULD BE ATTENDING. ETA - 45 MIN.

0854 AFTER GETTING CHANGE + GATHERING EQUIPMENT, I DEPARTED H.Q. FOR THE SCENE.

0903 ARRIVED @ THE SCENE. THIS COLLISION OCCURRED WITHIN THE INTERSECTION (NORTH) OF PTH #59 - PTH #101 IN THE R.M. OF ESP.

THE SCENE WAS SECURED BY MEMBERS OF HEADINGLEY TRAFFIC SERVICES + THE ESP POLICE.

ink

ALL OF THE COLLISION EVIDENCE
WAS CONFINED TO THE S/B
LANES. THE ONLY EXCEPTION
WAS THAT THE PICKUP
INVOLVED IN THIS EVENT CAME
TO REST IN THE MEDIAN

INITIALLY I SPOKE TO CST
KEN GALLAHAY OF THE ESP
POLICE. HE EXPLAINED
THAT THEIR ~~A~~ PRELIMINARY
FINDINGS HAVE DETERMINED
THAT THE GREEN HYUNDAI +
THE YELLOW CHEVY SPRINT
WERE STOPPED @ A RED
LIGHT. THE YELLOW SPRINT
WAS DIRECTLY BEHIND THE
HYUNDAI. WITNESSES INDICATED
THAT THE PICKUP RAN INTO
THE REAR OF THE SPRINT +
DROVE IT INTO THE HYUNDAI.
WITNESSES ADDED THAT THE
PICKUP APPEARED TO BE
TRAVELLING THE SPEED
LIMIT (80 KPH). IT DID NOT
SLOW DOWN BEFORE COLLIDING
WITH SPRINT.

I THEN EXPLAINED TO
CST GALLAHAY HOW I WOULD
CONDUCT THE SCENE
INVESTIGATION.

BEGAN MY INITIAL ASSESS-

PART OF THE SCENE. I CONDUCTED THE SURVEY OF THE EVIDENCE BY WALKING INTO THE SCENE FROM SOUTH TO NORTH.

- 2 TRAFFIC LIGHTS. 1 SITUATED ON THE MEDIAN FACING NORTH. THE OTHER WAS A CANTALEVER STYLE HANGING ABOVE THE S/B LANES. ALL LIGHTS WERE FUNCTIONING PROPERLY.

- 2 CLEARLY POST. "STOP LINE" SIGNS WERE SITUATED ON THE NORTH SIDE OF THE INTERSECTION THERE WAS ONE SITUATED ON THE WEST - EAST SIDES OF THE ROADS.

THE COLLISION EVIDENCE BEGAN WITH A LENGTH OF SCRAPE - SCRATCH METAL SCARS ON THE LEFT LANE OF THE S/B LANES ON THE NORTH SIDE OF THE INTERSECTION I NOTED, EMBEDDED WITH A TAR SEAM A TOOLING, THE METAL SCARS WERE CMS OF YELLOW PAINT. THE OTHER THAT MADE THE METAL SCARS WAS, TOOLING APPROX 10

NORTH → SOUTH. IMMEDIATELY FURTHER SOUTH OF THESE METAL SCRAPS WERE 2 MORE GROUPS OF SIMILAR METAL SCRAPS. W.W.D. 2 METERS OF THE LAST GROUP OF METAL SCRAPS, WERE CITRS OF GREEN P.S.T.

ALL OTHER VEHICLES INVOLVED IN THE CRASH CAME TO REST ON THE SOUTH SIDE OF THE INTERSECTION. BEGINNING ON THE NORTH SIDE OF THE INTERSECTION AND SCATTERED THROUGHOUT THE INTERSECTION WERE SEVERAL PIECES OF DEBRIS CONSISTING MOSTLY OF GREEN VEHICLE PARTS. AMONG THE VARIOUS PIECES OF DEBRIS, CST GRAHAM FOUND ON A PIECE OF A DOOR.

VEHICLE 1 - GREY ST. CAME TO REST IN THE MIDDLE OF THE SB LANES FACING EAST. THIS CAR SUSTAINED EXTREMELY ~~SEVERE~~ SEVERE CONTACT DAMAGE TO THE ENTIRE BACK END. LIGHT TO MODERATE CONTACT DAMAGE WAS SUSTAINED BY THE FRONT END. WITHIN THE CONTACT DAMAGE AT THE

FRONT END I NOTED 5 MARKS OF GREEN PAINT

V1 WAS REPORTEDLY OCCUPIED BY ONLY THE DRIVER. THE PERSON DIED OF INJURIES SUSTAINED IN THE CRASH. THE DRIVER'S DOOR HAD BEEN OPENED BY EMERGENCY PERSONNEL. I ~~WAS REPORTED THAT THE V1 WAS OCCUPIED BY THE DRIVER. THIS PERSON~~ IT WAS REPORTED THAT THE ROOF OF THIS CONSIDERABLE [illegible] OF THE CAR IN THE CRASH.

VEHICLE #2 - GREEN HYUNDAI ACCENT.

AFTER THE COLLISION, THIS CAR WAS REDIRECTED TOWARD THE S/W. AS IT WAS PROCEEDING TOWARD THE WEST SIDE OF THE ROAD IT WAS ROTATING COUNTER-CLOCKWISE. PRIOR TO LEAVING THE HIGHWAY, IT LEFT 4 SIDE SLIP SCUFF MARKS ON THE SNOW COVERED SHOULDER. V2 CAME TO REST WITH ITS DRIVER'S FRONT FENDER IMMEDIATELY NEXT TO THE STANDARD OF THE CANTILEVER STYLE TRAFFIC LIGHT [illegible]

SECONDARY ENGAGEMENT
CONTACT DAMAGE TO THE
DRIS FRONT FENDER.

THE MOST SIGNIFICANT CONTACT
DAMAGE WAS SUSTAINED BY
THE REAR HATCH DOOR ON
THE TOP EDGE OF THE REAR
BUMPER I NOTED SMALL
PIECE OF YELLOW PLASTIC.
THE DRIS SEAT WAS IN A
FULLY RECLINED POSITION.
THIS CAR CAME TO REST FACING
SOUTH.

VEHICLE #3 - DODGE DAKOTA
PICKUP.

AFTER THE COLLISION, THIS
VEHICLE CONTINUED TOWARD
THE SOUTH BUT ALSO TOWARD
THE MEDIAN.

THE MEDIAN HAD APPROXIMATELY
TOOMS OF SNOW PILED ON
IT. THIS SNOW HAD A THICK
LAYER OF ICE ON IT.

PRIOR TO COMING INTO THE
MEDIAN, WE LEFT TWO
SKID MARKS ON THE SNOW
COVERED ROAD SURFACE. THE
MARKS WERE LEFT BY [illegible]
THE DRIS SIDE WHEELS.

AND TRAILS LEFT BY THE VAS S. OF WERE OBLITERATED BY CAST COLLISION / MOVEMENT OF VEHICLES THRU THE SCENE.

THE DIR'S S. OF THE TRAILS CONT. NE TOWARD THE SOFT on TOP OF THE SNOW FOR APPROX 375' BEFORE THEY BEG. TO ANGLE BACK TOWARD THE SOFT SHOULDERS. APPROX 10 METERS TOWARD THE SOFT THE TRAILS TURN BACK TOWARD THE ROAD BUT VERY ABRUPTLY THE RUN BACK TOWARD THE S/E AND BACK ONTO THE ROADWAY. THEY ALL TRACK DIRECTLY TO THE WHEELS of V3.

V3 SUSTAINED PROBABLY SEVERE CONTACT DAMAGE TO ITS ENTIRE FRONT END. YELLOW PAINT NOTED WITH DRAMAGE. NONE of THESE VEHICLES WERE OCCUPIED.

WHEN I FIRST ARRIVED on THE SCENE THE ROAD WAS DRY + CLEAR.

1026 BEGAN PHOTOGRAPHING THE SCENE WITH 35MM —

DIGITAL CAMERAS.
I PHOTOGRAPHED THE
SCENE FROM SOUTH TO 1401
~~EAST~~ NORTH.

AFTER PHOTOGRAPHING THE
SCENE, I THEN BEGAN
TO IDENTIFY + TAKE THE
COLLISION EVIDENCE THAT
WOULD BE GATHERED BY
TOTAL STATION SURVEY.

1130 COMPLETED A SKETCH OF
THE SCENE + TAKEN THE
COLLISION EVIDENCE TO
BE MEASURED 1445

1234 BEGAN SURVEY OF COLLISION
SCENE WITH TOTAL STN
EQUIPMENT. PRIOR TO
COMMENCING I INSTRUCTED
CST GLADYS OF HIS DUTIES
AS FOLLOW.
- TAKE SURE THE PRISM IS
FACING THE TOTAL STN
- ENSURE THE PRISM IS
LEVEL BY USING THE
ATTACHED VIAL LEVEL.
1501

1341 CST GLADYS SWITCHED ON
WITH CHIEF GALENA.
- CST GLADYS PASSED
FOLLOWS RESPONSIBILITIES.
OBSERVED CHIEF GALENA

PRACTICING LEVELING THE PRISM.

1404 COMPLETED THE SURVEY OF THE COLLISION SCENE.

I THEN MOVED TO THE EXAMINATION + RETRIEVAL OF TAILLIGHTS FROM V1.

THE GLASS BULBS OF THE SIGNAL / BRAKE-TAIL / BACKUP LAMPS ON THE DRIVER'S SIDE OF THE VEHICLE WERE SMASHED. PHOTOGRAPHED.

1445. SEIZED ALL THREE LIGHT BULBS FROM V1. THE MARKER/ CLEARANCE LIGHT WAS SEIZED AS WELL.

THE PASSENGER'S SIDE TAIL/ BRAKE LIGHT BULB WAS INTACT. THE SIGNAL LIGHT BULB WAS DESTROYED. ALL THAT REMAINED WAS THE SOCKET BASE + FILAMENT SUPPORTS. PHOTOGRAPHED.

1508 SEIZED THE BRAKE/TAIL LIGHT BULBS.

THE BACKUP LIGHT BULB ALTHOUGH INTACT WAS NOT SEIZED

1513 V2 EXAMINED. DAMAGE MEASUREMENTS WERE OBTAINED.
S/R WAS EXAMINED. V.V.S VEHICLE WAS REPORTEDLY OCCUPIED BY THE DR away. 183

1531 -V3- EXAMINED. DAMAGE MEASUREMENTS OBTAINED. S/R EXAMINED. OCCUPIED By away the DR. 1808

1607 DEPARTED SCENE.

1639 ATTENDED HQ.

1709 LOCK LIGHT EXAMINED, D + LOCK BOX, D/Y PERSONAL LOCKER.

COMPLETED NOTES.

1810 CIR OFF DUTY

2005.02.28

0830 BEGAN FILE WORK ON CASE 2005.08CR5. 1121

0842 DEPARTED HQ. 1135

0937 RETURNED TO COLLISION SITE OF & THE NORTH INTERSECTION OF RTE #59 - 101 - CASE 2005.08CR5

OBTAINED A VIDEO OF THE TRAFFIC LIGHT SEQUENCE FOR S/B TRAFFIC on PIN #59. THIS INCLUDED THE ADVANCE WARNING LIGHT.

LIGHT TIMINGS.

ADVANCE WARNING LIGHTS on → YELLOW LIGHT on: 11° SEC.

YELLOW LIGHTS on TO RED LIGHTS on: 4° SEC.

RED S/B PIN #59 + LEFT TURN FROM PIN #59 N TO PIN # 101 W: 2 SECS.

CONDUCTED DRAG SLED TESTING OF VARIOUS SURFACES RUBBER on SNOW COVERED ASPHALT.

METAL on ICE.

METAL on DRY, BARE ASPHALT.

1121 C.T.

1133 I/P SAVAGE TO OBTAIN MOST PROFILES OF V1 + V2.

BEGAN WITH V2.

2015

1216 SEIZED + PHOTOGRAPHED THE BRAKE LIGHTS Flow V2. 134

1250 CLR 1 P.

1330 D.C Hooks Lowsuit Co. Pond TO OSA.) / YEASUPERS Flow V3.

1421

CONTACT DAMAGE TO THE REAR OF THIS TRUCK WAS PINT - APPROXIMATELY THE SAME DISTANCE TO THE REAR BUMPER

1337 CLR

1447 HQ

0800

1623 LAMP EXHIBITS SEIZED Flow V2 PLACED IN A LOCK BOX W/ T.N.) / MY PERSONAL LOCKER.

1000

1634 CLR

2005.08.01

1347 I/E W.T.A HAILED LARSON OF DOT ENG. DEERING DEP. HE SUPPLIED ME W.T.A VEH MOVEMENT COUNTS FOR THE NORTH INTERSECTION OF INT #59-101. CASE 2005.0805.

1421 CLR.

2005.03.03/04

0450 HQ.

0535 DPT HQ FOR SITE OF 2005-
08C[illegible] 101

0608 AT INTERSECTION.

VEHICLE COUNT BETWEEN 131
0630 + 0730HRS.

0630 COMMENCED COUNT

0700 COUNT = 501

0730 FINAL COUNT : 1165

0732 CLR.

0836 DPT HQ FOR AIR SERVICE
WITH CST ANDRE CHARTIER OF
W.I.S.

0855 AIR SERVICES HANGER

→ PILOT.

FLEW TO SITE OF 2005-
08C[illegible].
I DIRECTED CST CHARTIER
TO THE PHOTO'S I REQUIRED.
1428
0938 RETURNED TO AIRPORT
30 MINS FLYING TIME.

AT 1DE 2,000'

0955 C.R Hancock

1018 Back @ HQ.

1300 CL CNG

1317 DITCH FOR EXAMINATION (MECHANICAL) OF MBL: DAX165 #13#

- CLIVE RAMSDEN
- MICHAEL WALKER
- RICHARD HYLAWAY

BOTH REAR BRAKE CYLINDERS LEAKING. PASSENGER BRAKE SHOES ALL DRY. ACCORDING TO HYLAWAY, THIS WOULD NOT HAVE AFFECTED THE BRAKING CAPABILITIES OF THE VEH.

L/R AXLE SEAL LEAKING.

FOOT BRAKE CABLE CLEVIS BROKEN & BENT.

1428 CWR.

1454 HQ.

07

07

07

14C

14-

16C

2005.03.18

0558 DPW, RES FOR SITE OF 2005-09CNS.-N INTERSECTION OF 59-101. 16C

0627 ARRIVE @ SITE.

0630 BEGIN SURVEY OF TRAFFIC PASSING THROUGH THE INTERSECTION (S/B ON 59 + W/B ON 101) AND 10-

1117.26 OF RED LIGHT LENGTH.

0700 511 VEHICLES.

0730 1199 VEHICLES

THE LENGTH OF THE RED LIGHT WAS DEPENDANT ON THE AMOUNT OF N/B TRAFFIC ON P.H #59 LINED UP TO TURN LEFT ONTO P.H #101 W/B.

0733 C.R.

Royal Canadian Mounted Police / Gendarmerie royale du Canada

:.I. (Chris) Blandford
onstable
orensic Traffic Collision aconstructionist
SV 2010 Coordinator
ivision Traffic Services

Constable
Analyste de collision

Canada

FCR
NOTEBOOK #4

1510 RETRIEVED A LIGHT EXHIBITS
FROM LOCKED BOX IN PERSONAL
LOCKER - FCR CASE 2005-0808

UNDER MY DIRECTION CST ANDLE
CHARTRAND TOOK SEVERAL PHOTOGRAPHS
OF THE LIGHT EXHIBITS.

END OF COMPLETION.

1618
1618 CLR
1621 ALL LIGHT EXHIBITS BACK IN
1621 THE LOCK BOX IN PERSONAL
LOCKER.

Ack.

of

ED

RE

2005.07.20

year

1039 / RETRIEVED LAPTOP EXHIBITS
FOR CASE 2005.0805 AT
LOCKER.

1316 RETURNED LAPTOP EXHIBITS