

Remote Not in Traffic Surveillance Back Over Investigation / Vehicle to Pedestrian  
Dynamic Science, Inc. / Case Number: DS06032  
1990 Chevrolet Silverado 4x4 Club Cab Pickup  
Washington  
March 2006

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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16. Abstract  This remote investigation focused on the circumstances surrounding a child fatally injured in a back over incident. This single vehicle incident involved a 1990 Chevrolet Silverado 4x4 club cab pickup striking a 23-month-old child. The 22-year-old female driver of the case vehicle had pulled into a driveway facing generally southwest. She parked the vehicle and dropped off the 23-month-old male child with a relative. The child was taken inside the house. The driver and relative were talking inside and did not notice that the child had left the house. The driver returned to her vehicle and began backing up. She felt something as she backed up. She stopped the vehicle and saw the child lying in the driveway. The child sustained a depressed skull fracture, a closed head injury, abrasions to his right eyelid and cheek, and a laceration to his forehead. The local fire department was the first responder to the scene. They began administering aid while in the house. The child was transported by ambulance to a local trauma center. He arrived at 1030 hours with a Glasgow Coma Scale (GCS) score of 3. He was pronounced dead at 1057 hours. There was no damage to the Chevrolet.				
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**Dynamic Science, Inc.**  
**Crash Investigation**  
**Case Number: DS06032**

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## BACKGROUND

This remote investigation focused on the circumstances surrounding a child fatally injured in a back over incident. This single vehicle incident involved a 1990 Chevrolet Silverado 4x4 club cab pickup striking a 23-month-old child. The 22-year-old female driver of the case vehicle had pulled into a driveway facing generally southwest. She parked the vehicle and dropped off the 23-month-old male child with a relative.

The child was taken inside the house. The driver and relative were talking inside and did not notice that the child had left the house. The driver returned to her vehicle and began backing up. She felt something as she backed up. She stopped the vehicle and saw the child lying in the driveway. The child sustained a depressed skull fracture, a closed head injury, abrasions to his right eyelid and cheek, and a laceration to his forehead. The local fire department was the first responder to the scene. They began administering aid while in the house. The child was transported by ambulance to a local trauma center. He arrived at 1030 hours with a Glasgow Coma Scale (GCS) score of 3. He was pronounced dead at 1057 hours. There was no damage to the Chevrolet.

According to the investigating police agency, this incident was reported as a fatality to the state.

This Not In Traffic Surveillance (NITS) investigation was initiated in response to an on-line news article reporting the death of a child in a back over incident. DSI located the article in December 2006. Shortly after, DSI received permission to obtain the police report and the on-scene photographs. DSI was assigned the case in December 2006. The following information was obtained from the police report, exemplar vehicles and on scene photographs.

## SUMMARY

### Incident Site

This single vehicle incident occurred on a private driveway in March 2006 at 0942 hours. The driveway is comprised of asphalt on the east side and of gravel on the west side. There is a small amount of negative grade. The south end (house side) is higher than the north end (street side). At the time of the crash, there were no adverse weather conditions and the driveway was dry. There was a parked Honda vehicle in the driveway, closer to the house. The front door of the house is to the left of the driveway. The driveway intersects a straight residential roadway. The asphalt roadway was level and had speed limit of 24 km/h (15 mph). There is a bicycle lane



**Figure 1.** 1990 Chevrolet Silverado pickup



**Figure 2.** Overview of crash scene (looking south)

on the southern edge of the residential roadway. The temperature at the time of the crash was 13 C (55 degrees F).

### Pre-Crash

The 1990 Chevrolet Silverado pickup was being driven by a 22-year-old female. There were three children in the vehicle, including the victim. The driver was dropping off the children at her mother's house for the day before going to work. The driver pulled the pickup into the driveway and parked behind the parked Honda vehicle. She exited the vehicle with the children and went inside the house. After speaking to her mother for a short period of time, she exited the house and got back into the Silverado pickup. The driver began backing out of the driveway while steering to the left.



**Figure 3.** Path from house to area of impact

The maximum distance that could have been traveled was 4.5 m (15.0 ft) with a minimum distance of approximately 3.0 m (10.0). Based on these distances and using an acceleration rate of 3.2 fps<sup>2</sup>, the case vehicle was traveling no faster than between 8.77 km/h (5.45 mph) and 10.73 km/h (6.67 mph) at impact. The speed was likely even lower given the situation.

The 23-month-old child left the house through the open front door and wandered outside.

### Crash

The driver backed up, likely struck the child with the rear bumper, and then backed over the child with a rear tire. Witnesses place the child on the left side of the vehicle when struck. There was no obvious damage to the vehicle. On the right hand side of the rear bumper, just to the right of the license plate, was a slight erasure of dirt/dust. This does not appear to be related to this incident.



**Figure 4.** Close up of blood pool/child final rest

### Post-Crash

The child was found on the driveway, just south of the white fog line. The driver exited her vehicle, picked up the child and carried him into the house. The driver and her mother began administering CPR. One of the witnesses called 911. The child sustained a depressed skull fracture, a closed head injury, abrasions to his right eyelid and cheek, and a laceration to his

forehead. The local fire department was the first responder to the scene. They began administering aid while in the house. The child was transported by ambulance to a local trauma center. He arrived at 1030 hours with a Glasgow Coma Scale (GCS) score of 3. He was pronounced dead at 1057 hours.

#### **VEHICLE DATA -1990 Chevrolet Silverado pickup**

The 1990 Chevrolet Silverado was identified by the Vehicle Identification Number (VIN): 2GCFK29K2L1XXXXXX. The vehicle's mileage was 244,325 km (151,817 miles). The Silverado was a 4x4 club cab pickup that was equipped with a 5.7 liter V8 engine and an automatic transmission. The Silverado was configured with Dean Mud Terrain 33 x 12.5 R17/LT tires. The vehicle manufacturer's recommended tire pressure is not known. The vehicle had a lift kit installed and custom wheels. The specific tire information is as follows:

<b>Position</b>	<b>Measured Pressure</b>	<b>Measured Tread Depth</b>	<b>Restricted</b>	<b>Damage</b>
LF	276 kPa (40 psi)	12 mm (15/32 in)	No	None
RF	262 kPa (38 psi)	12 mm (15/32 in)	No	None
LR	255 kPa (37 psi)	9 m (11/32 in)	No	None
RR	269 kPa (39 psi)	11 mm (14/32 in)	No	None

The reverse lights were not functioning at the time of the crash. According to the police, the mirrors were functioning correctly and there were no obstructions. There was a construction type cargo box in the bed and the vehicle was carrying several wooden ramps.

## Vehicle Dimensions

Ground to top of trunk/tailgate:	125.0 cm (49.2 in)
Ground to top of front bumper:	82.3 cm (32.4 in)
Ground to bottom of front bumper:	57.9 cm (22.8 in)
Ground to top of rear bumper:	76.2 cm (30.0 in)
Ground to bottom of rear bumper:	60.9 cm (24.0 in)
Driver's seated eye height <sup>1</sup> :	74.7 cm (29.4 in)
Ground to vehicle seat height:	78.0 cm (30.7 in)
Overall vehicle height:	193.0 cm (76.0 in)
Overall vehicle width:	195.0 cm (76.8 in)
Overall vehicle length:	616.0 cm (242.5 in)
Rear overhang:	132.0 cm (52.0 in)
Track width:	161.0 cm (63.4 in)
Longitudinal distance between rear most projection and front door latch pillar	260.0 cm (102.4 in)
Bed length:	210.0 cm (82.6 in)

The bumper measurements were obtained from the case vehicle by the investigating police officers. The remaining measurements were obtained from either published vehicle specifications or an exemplar vehicle.

## Parking Aids/Sensors

The case vehicle was not equipped with any parking aids or backing sensor/video technology.

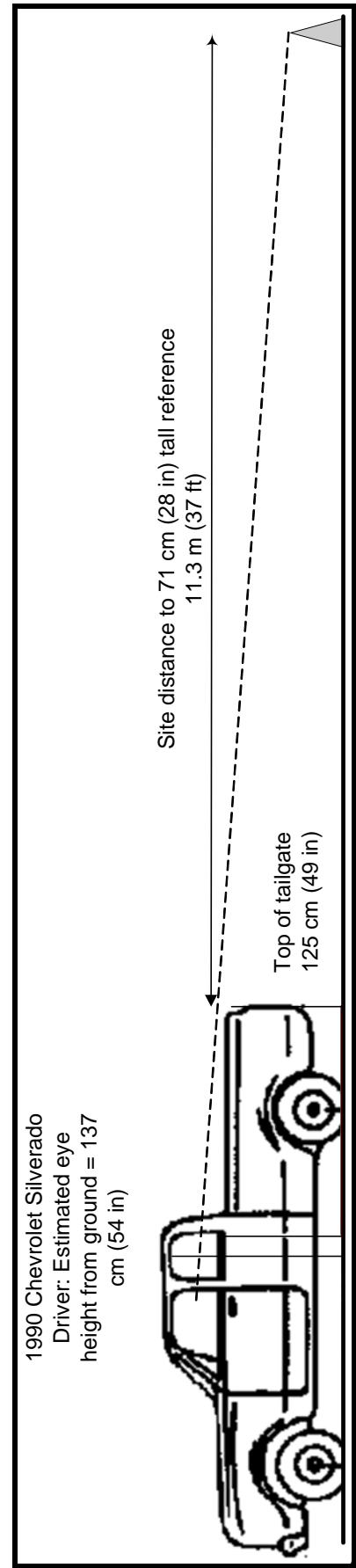
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<sup>1</sup>NIOSH 50<sup>th</sup> percentile woman



## Vehicle Sight Distances

Based on the driver's estimated eye height, it appears that the driver's rear sight distance (visual clearance of tailgate) was approximately 11.3 m (37.0 ft). The driver would not have been able to see the child by looking rearward given the sight distance and the length of the driveway. It appears that the driver was looking more towards the right than directly rearward.



**Figure 5.** Rear visibility diagram

## Vehicle Damage

### Exterior Damage - 1990 Chevrolet Silverado

There was no damage to the Chevrolet Silverado. The only indication of a possible contact was a scuff/erasure of dust on the right hand side of the rear bumper, just to the right of the license plate. This does not appear to be related to this incident.



**Figure 6.** Rear bumper, 1990 Chevrolet pickup



**Figure 7.** Close up of scuff/dust erasure to right side of rear bumper



**Figure 8.** Left rear tire and undercarriage



**Figure 9.** Right rear tire and undercarriage

### Interior Damage - 1990 Chevrolet Silverado

There was no interior damage.

**OCCUPANT DEMOGRAPHICS - 1990 Chevrolet Silverado pickup**

	Driver
Age/Sex:	22/Female
Seated Position:	Front left
Seat Type:	Bucket
Height:	157 cm (62 in)
Weight:	54 kg (120 lbs)
Occupation:	Waitress
Pre-existing Medical Condition:	None noted
Alcohol/Drug Involvement:	None
Driving Experience:	Unknown
Body Posture:	Unknown
Hand Position:	Unknown
Foot Position:	Right foot likely on accelerator, left on floor
Restraint Usage:	Lap and shoulder belt available, used

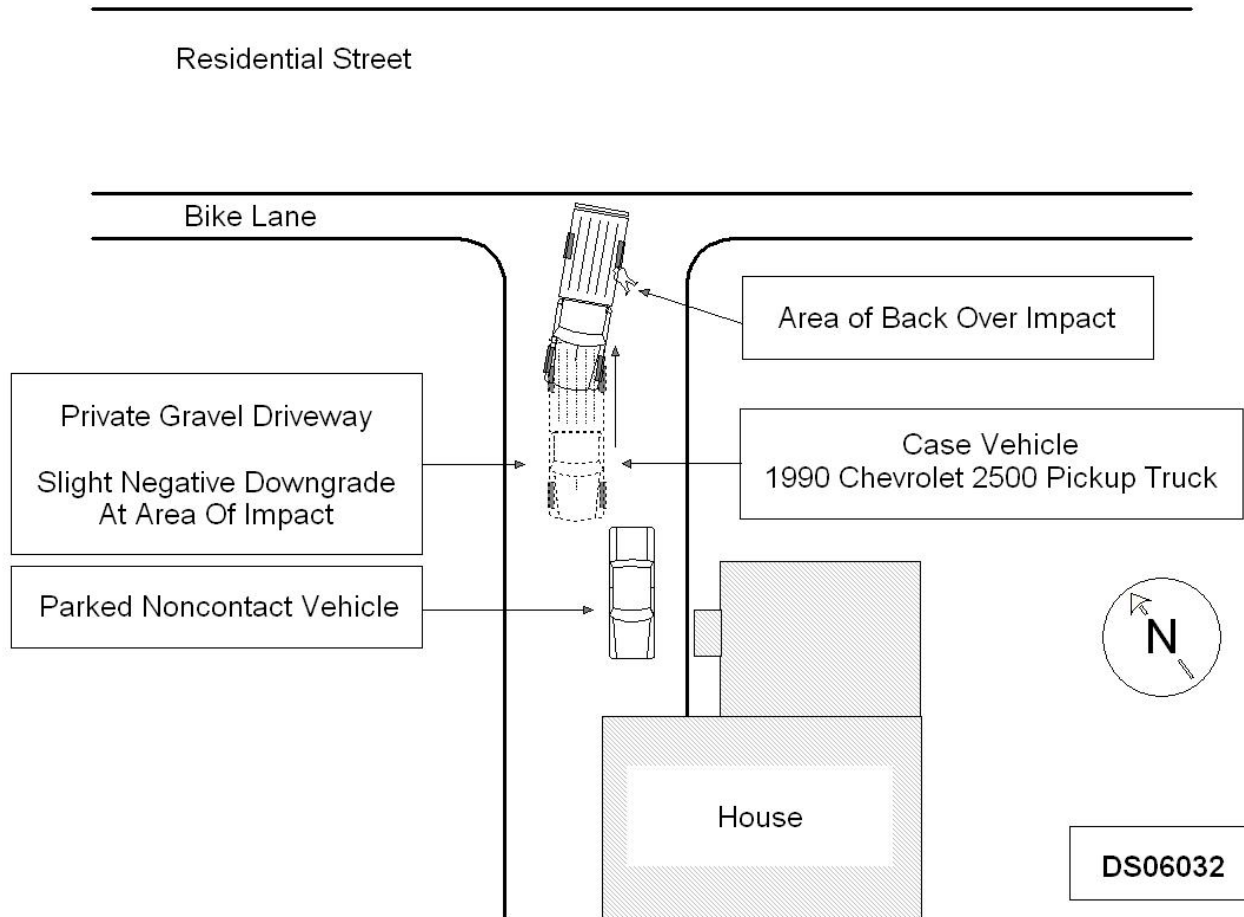
**PEDESTRIAN/NON MOTORIST DEMOGRAPHICS**

Age/Sex:	23-month-old/Male
Height:	Unknown
Weight:	15 kg (33 lbs)
Occupation:	NA

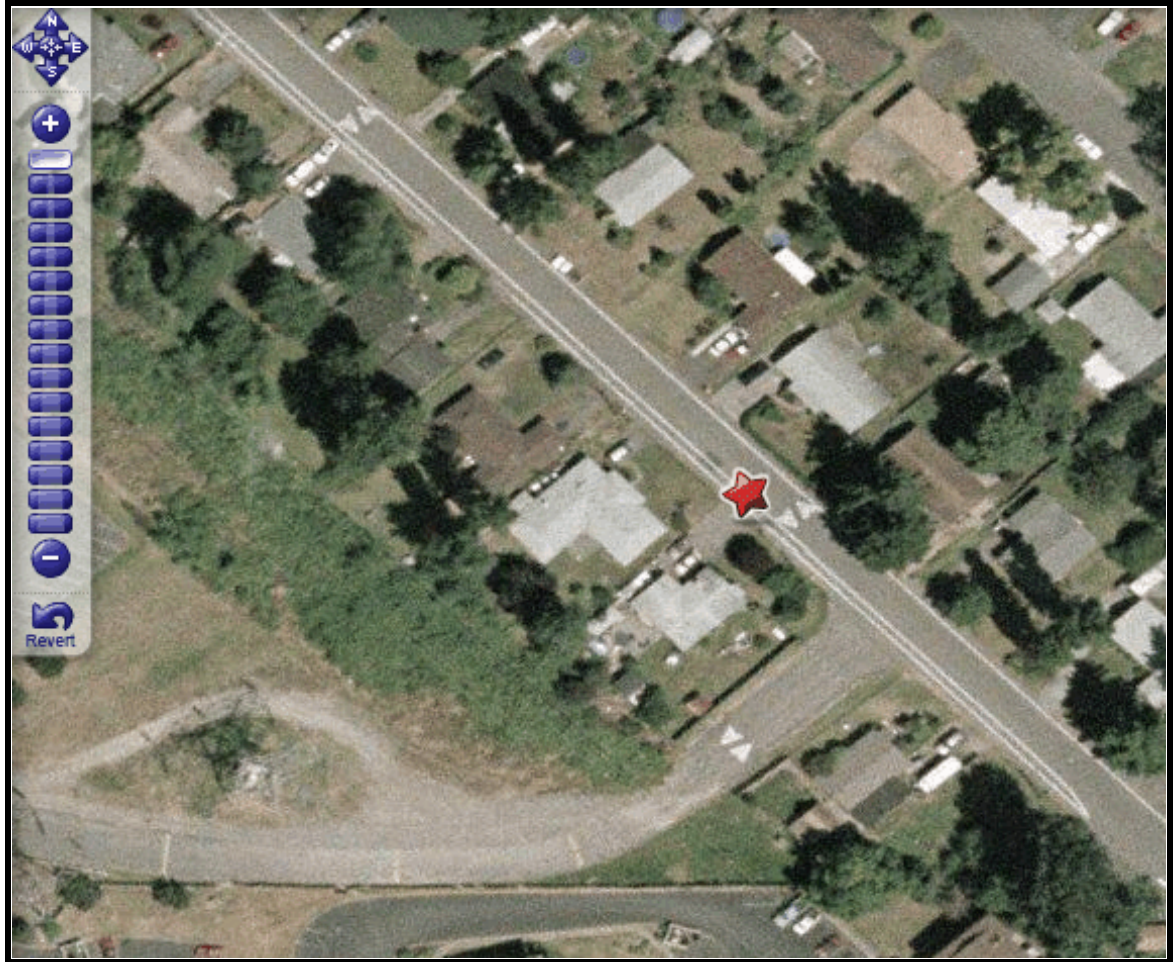
**OCCUPANT INJURIES -1990 Chevrolet Silverado pickup**Driver: Not injured**PEDESTRIAN/NON MOTORIST INJURIES**Pedestrian: Injuries obtained from ER Records, Operative Report, Post-ER Records.

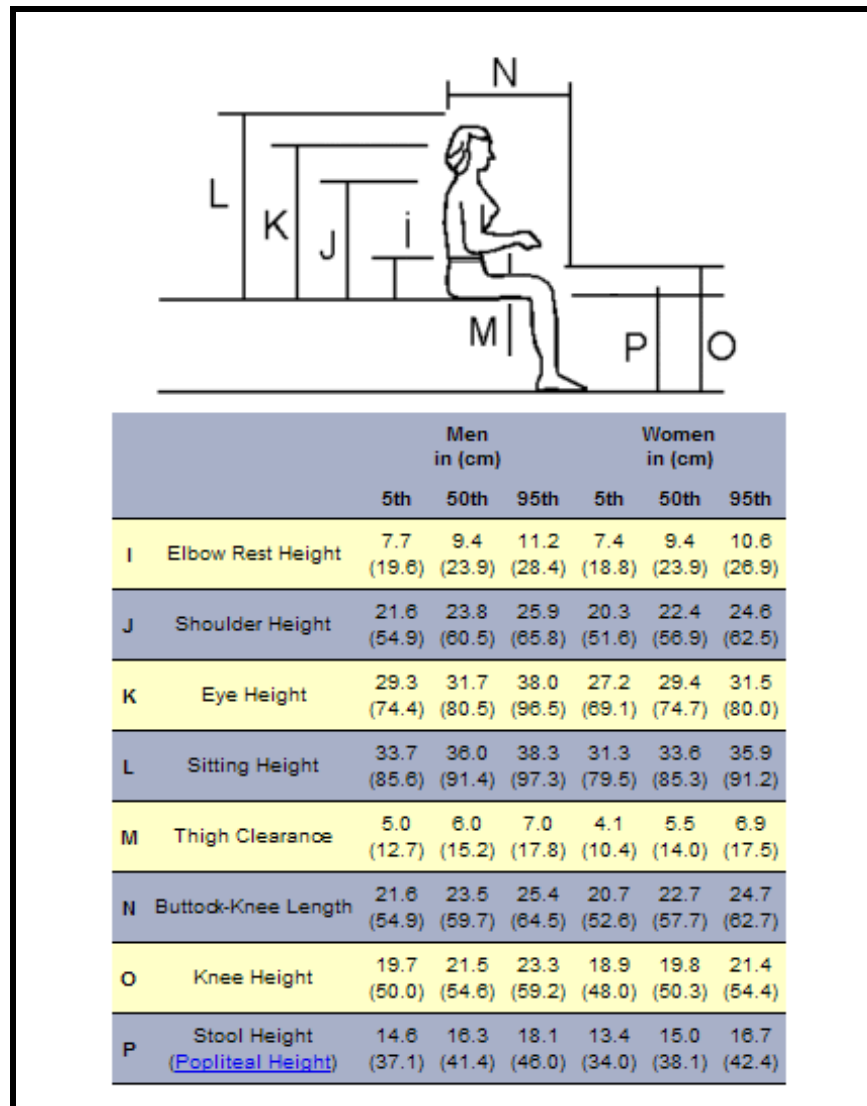
<u>Injury</u>	<u>OIC Code</u>	<u>Injury Mechanism</u>	<u>Confidence Level</u>
Fracture, depressed, skull NFS	150000.2,9	Tire/Ground	Probable
Closed head injury/blunt head trauma	115099.7,0	Tire/Ground	Probable
Laceration, forehead NFS	290600.1,7	Ground	Probable
Abrasion, right eyelid	297202.1,1	Ground	Probable
Abrasion, right cheek	290202.1,1	Ground	Probable

**Attachment 1. Scene Diagram**



Attachment 2. Aerial View of Crash Scene



Attachment 3. Average Driver's Eye Height<sup>2</sup>

<sup>2</sup>[http://www.cdc.gov/niosh/pot\\_anth.html](http://www.cdc.gov/niosh/pot_anth.html)

**Attachment 4. Data Forms**





1. Case Number

\_\_\_\_\_

### IDENTIFICATION

2. Date of Crash \_\_\_\_ / \_\_\_\_ / \_\_\_\_

3. Time of Crash \_\_\_\_\_

Code reported military time of crash.

NOTE: Midnight = 2400  
Unknown = 9999

### AMBIENT CONDITIONS

4. Light Conditions

- Daylight
- Dark
- Dark but lighted
- Dawn
- Dusk
- Unknown

5. Atmospheric Conditions  
(Select all that apply)

- Clear-No adverse conditions
- Cloudy
- Rain
- Snow
- Fog, Smog, Smoke
- Sleet, Hail (freezing rain or drizzle)
- Blowing Snow
- Severe Crosswinds
- Blowing Sand, Soil, Dirt
- Other (specify):
- Unknown

6. Temperature

- Below 0 degrees Celsius (Below 32 F)
- 1-10 degrees Celsius (33-50 F)
- >10-24 degrees Celsius (51-75 F)
- Over 24 degrees Celsius (Over 75 F)
- Unknown

### SCENE INFORMATION

7. Type of area in which crash occurred

(Select all that apply)

- Single family residential
- Row houses/townhouses
- Multi family housing
- Commercial
- Industrial
- Rural
- Unknown

8. Driver exterior sightline obstructions

(Select all that apply)

- None
- Other vehicles
- Building
- Trees
- Shrubby
- Other (specify) \_\_\_\_\_
- Utility poles
- Signs
- Glare
- Unknown
- No driver present

9. Crash location

- Driveway
- Parking Lot
- Sidewalk
- Alley
- Intersection of driveway and sidewalk
- Road / street
- Roadside / shoulder
- Other (specify) \_\_\_\_\_
- Unknown

10. Non motorist sightline obstructions

(Select all that apply)

- None
- Other vehicles
- Building
- Trees
- Shrubby
- Utility poles
- Signs
- Glare
- Other (specify) \_\_\_\_\_
- Unknown

11. Grade at parked position \_\_\_\_\_ +/- %

12. Estimated distance from parked position to impact

\_\_\_\_\_ m

13. Estimated speed at impact \_\_\_\_\_ +/- kmph

+/-

14. Grade at impact \_\_\_\_\_ +/- %

15. Estimated distance from impact to vehicle final rest

\_\_\_\_\_ m

Unknown = 999 Reference Items 11,12, 13, 14, 15



1. Case Number \_\_\_\_\_

## VEHICLE IDENTIFICATION

2. VIN \_\_\_\_\_

3. Model Year \_\_\_\_\_

4. Vehicle Make (specify): \_\_\_\_\_

5. Vehicle Model (specify): \_\_\_\_\_

## GLAZING

Location	Presence (check)	Status (select)	Clarity (select)	Tint (check)	Glazing Obstructions (specify if present)
Windshield		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
LF		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
RF		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
2 <sup>nd</sup> Left		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
2 <sup>nd</sup> Right		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
3 <sup>rd</sup> Left		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
3 <sup>rd</sup> Right		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
Backlight		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
Left Backlight		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
Right Backlight		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
Roof		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		
Other (specify)		Fixed / Closed / Open / Partially Open / Unknown	Clear / Hazy / Very Dirty / Unknown		

## TIRE DATA

6. Vehicle Manufacturer Recommended Tire Size \_\_\_\_\_

7. LF Tire Size \_\_\_\_\_

9. RF Tire Size \_\_\_\_\_

8. LR Tire Size \_\_\_\_\_

10. RR Tire Size \_\_\_\_\_

**Seats / Head Restraint Data**

Seat Position	Seat Type (Select from below )	Head Restraint (Check if available)	Head Restraint Adjustment (select)	NOTES:
Front Left			Full Down / Mid / Full Up	
Front Middle			Full Down / Mid / Full Up	
Front Right			Full Down / Mid / Full Up	
2 <sup>nd</sup> Left			Full Down / Mid / Full Up	
2 <sup>nd</sup> Middle			Full Down / Mid / Full Up	
2 <sup>nd</sup> Right			Full Down / Mid / Full Up	
3 <sup>rd</sup> Left			Full Down / Mid / Full Up	
3 <sup>rd</sup> Middle			Full Down / Mid / Full Up	
3 <sup>rd</sup> Right			Full Down / Mid / Full Up	

**Seat Type codes:**

- |   |                                      |
|---|--------------------------------------|
| 0 = No seat or seat folded down           | 8 = Pedestal (i.e. column supported) |
| 1 = Bucket                                | 9 = Box mounted (i.e. van type)      |
| 2 = Bucket w/ folding back                | 10= Other seat type (specify)        |
| 3 = Bench                                 | 99= Unknown seat type                |
| 4 = Bench with folding back cushions      |                                      |
| 5 = Bench w/ folding back                 |                                      |
| 6 = Split bench w/ separate back cushions |                                      |
| 7 = Split bench w/ separate folding back  |                                      |

**VEHICLE MEASUREMENTS**

Clearance Heights	Measurements (all from ground, and in centimeters)	NOTES
Beltline		
Top of trunk/tailgate		
Bottom of bumper		
Trailer hitch (if applicable)		
Undercarriage		
Sway bar		
Axle		
Differential		
Other (specify):		
Sensor Height (if equipped)		
Camera Height (if equipped)		



1. Case Number

\_\_\_\_\_

### PARKING AID PRESENCE

2. Type of backing/parking aid present

- OEM camera
- OEM ultrasonic/radar sensor
- OEM combination camera-ultrasonic/radar sensor
- OEM Fresnel lens
- OEM interior mirrors
- Aftermarket camera
- Aftermarket ultrasonic/radar sensor
- Aftermarket combination camera-ultrasonic radar sensor
- Aftermarket Fresnel lens
- Aftermarket interior mirrors
- Other (specify): \_\_\_\_\_

### CAMERA INFORMATION

*Specify field of view measurements on diagram*

3. System make/model

\_\_\_\_\_

4. Video monitor type

- None present
- LCD (color)
- CRT (black & white)
- Unknown

5. Video display size \_\_\_\_\_ cm  
(Diagonal)

6. Camera location

- None present
- Bumper
- License plate
- Tailgate/Hatch/Trunk
- Other (specify): \_\_\_\_\_

7. Video image quality under scene lighting conditions

- None present
- Good
- Average
- Poor (specify): \_\_\_\_\_
- Unknown

8. Was the camera functioning properly

- None present
- Yes
- No, poor image quality due to glare
- No, poor image quality due to atmospheric conditions
- No, camera turned off
- No, camera inoperable
- Unknown

### ULTRASONIC/RADAR SENSOR

*Specify object detection range on diagram*

9. System make/model

\_\_\_\_\_

10. Auditory warning illumination

- No sensor present
- Yes
- No
- Unknown

11. Number of sensors \_\_\_\_\_

12. Sensor locations  
(Select all that apply)

- No sensor present
- Left bumper
- Center bumper
- Right bumper
- License plate area
- Tailgate/Hatch/Trunk

13. Was warning system functioning properly

- No sensor present
- Yes, system alerted driver
- No, system did not alert driver
- No, system turned off
- No, system inoperable
- Unknown

14. Did driver react to warning

- No sensor present
- Yes
- No
- Unknown

15. Did driver report common false warnings

- No sensor present
- Yes
- No
- Unknown



# DRIVER FORM

1. Case Number  
\_\_\_\_\_

## DRIVER PROFILE

2. Driver's Age \_\_\_\_\_  
99 = Unknown

3. Driver's Sex  Male  
 Female  
 Unknown

4. Driver's Height \_\_\_\_\_ cm  
999 = Unknown

5. Driver's Weight \_\_\_\_\_ kg  
999 = Unknown

6. Driver eyewear worn  
(Select all that apply)  
 None  
 Eyeglasses  
 Sunglasses  
 Contacts  
 Unknown

7. Driver vision deficiency condition  
(Select all that apply)  
 None  
 Near sighted  
 Far sighted  
 Astigmatism  
 Other (specify): \_\_\_\_\_  
 Unknown

8. Non motorist's relationship to driver  
 No relationship  
 Child  
 Grandchild  
 Sibling  
 Neighbor  
 Friend  
 Other (specify): \_\_\_\_\_  
 Unknown

## DRIVER ACTIONS

9. Driver approach to vehicle for entry  
From left front  
 From left  
 From left rear  
 From right rear  
 From right front  
 Circled vehicle  
 Return trip (backing into driveway/lot)  
 Other (specify): \_\_\_\_\_  
 N/A  
 Unknown

10. Driver entry interruption  
(Select all that apply)  
 Direct trip from building to vehicle  
 Loaded items into vehicle  
 Spoke with family  
 Spoke with neighbors  
 Spoke with contacted nonmotorist  
 Return trip (backing into driveway/lot)  
 Other (specify): \_\_\_\_\_  
 N/A  
Unknown

11. Purpose of backing  
 Leaving parking space in parking lot  
 Backing onto roadway from driveway  
 Entering parking space in parking lot  
 Backing into driveway from roadway  
 Other (specify): \_\_\_\_\_  
 N/A  
Unknown

12. Where was driver going  
Description:  
\_\_\_\_\_  
\_\_\_\_\_

13. Driver in a hurry  
 Yes N/A  
 No Unknown  
 Unknown

14. How did driver check behind (rear area of vehicle)  
after vehicle entry  
(Select all that apply)  
 Did not look  
 Checked mirrors  
 Turned right and looked back  
 Turned left and looked back  
Viewed Camera  
Listened for auditory/visual warning from  
system  
 Other (specify): \_\_\_\_\_  
N/A Unknown

15. Estimated time between vehicle entry and start  
of backing  
 0-10 Seconds  Over 60 Seconds  
 11-30 Seconds  N/A  
 31-60 Seconds  Unknown

16. What direction was the driver looking during backing maneuver  
(Select all that apply)
- Straight ahead
  - Right
  - Left
  - Rearward
  - At object inside the car
  - At mirrors
  - Other (specify): \_\_\_\_\_
  - N/A
  - Unknown
17. Was the driver distracted during back up maneuver  
(Select all that apply)
- No non-driving activities
  - External**
  - Looking at other vehicles
  - Looking at other non motorist
  - Looking at intended turn destination
  - External focus, not specified
  - Other external focus (specify): \_\_\_\_\_
  - Internal**
  - Looking at other occupant
  - Talking to passenger
  - Dialing phone
  - Talking on phone
  - Listening to radio/cd/portable playback device
  - Adjusting radio/cd player
  - Adjusting climate controls
  - Using a device/controls integral to vehicle (specify): \_\_\_\_\_
  - Reading/adjusting navigation system
  - Eating or drinking
  - Smoking related
  - Retrieving fallen object (specify): \_\_\_\_\_
  - Internal focus, not specified
  - Focused on other internal object (specify): \_\_\_\_\_
  - N/A
  - Unknown
18. Driver avoidance actions prior to impact  
(Select all that apply)
- None
  - Braking
  - Steering left
  - Steering right
  - Accelerating
  - Other (specify): \_\_\_\_\_
  - N/A
  - Unknown
19. Did driver see struck non motorist prior to impact  
(Select all that apply)
- No, never saw non motorist
  - Saw non motorist prior to entering vehicle
  - Saw non motorist after entering vehicle
  - Other (specify): \_\_\_\_\_
  - N/A
  - Unknown
20. Est time between start of backing and impact
- <2 or = 1 second
  - 2-5 seconds
  - 6-10 seconds
  - > 10 seconds
  - N/A
  - Unknown
21. Driver interior sightline obstructions  
(Select all that apply)
- Pillar
  - Headrest
  - Cargo
  - Other occupant
  - Other (specify) \_\_\_\_\_
  - Unknown
  - None
22. Recent experience driving this vehicle
- More than 10 times the last three months
  - 6-10 times the last three months
  - 2-5 times the last three months
  - Less than 2 times the last three months
  - First time driving this vehicle
  - N/A
  - Unknown
23. Frequency of driving in this parking lot/driveway
- Daily
  - Weekly
  - Several times a month
  - Monthly
  - Rarely
  - First time in lot/driveway
  - N/A
  - Unknown
24. Driver Impairment  
(Select all that apply)
- No drugs or alcohol present
  - Alcohol present (specify BAC): \_\_\_\_\_
  - Drugs present (specify): \_\_\_\_\_
  - Unknown
25. Source of alcohol/drug results
- Police reported
  - Medical record
  - Other (specify) \_\_\_\_\_
  - Not Tested
  - Unknown if tested



# Non Motorist Form

1. Case Number \_\_\_\_\_

## NON-MOTORIST PROFILE

2. Non-motorist's Age \_\_\_\_\_ Months  
\_\_\_\_\_ Years  
99 = Unknown

3. Non-motorist's Sex  
 Male  
 Female  
 Unknown

4. Non-motorist's Height \_\_\_\_\_ cm  
999 = Unknown

5. Non-motorist's Weight \_\_\_\_\_ kg  
999 = Unknown

6. Medical outcome  
 Not injured  
 ER only  
 Hospitalized 1-4 days  
 Hospitalized 5 days or more  
 Treatment later  
 Fatal  
 Unknown

7. Source of most severe injury  
 Bumper  
 Tire  
 Undercarriage  
 Other Specify: \_\_\_\_\_  
 Ground  
 N/A  
 Unknown

8. Non-motorist impairment  
*(Select all that apply)*  
 No drugs or alcohol present  
 Positive for alcohol (specify BAC): \_\_\_\_\_  
 Positive for drugs (specify): \_\_\_\_\_  
 Unknown

9. Source of alcohol/drug results  
 Police reported  
 Medical Report  
 Other (specify) \_\_\_\_\_  
 Not Tested  
 Unknown if tested

## NON-MOTORIST ACTIONS

10. Non-motorist attitude  
 Standing  
 Bending at waist  
 Sitting  
 Crouching  
 Kneeling  
 On skates/skateboard  
 On bike/scooter  
 Other (specify) \_\_\_\_\_  
 Unknown

11. Non-motorist motion  
 Not moving  
 Walking slowly  
 Walking rapidly  
 Running or jogging  
 Skipping/Hopping/Jumping  
 Falling/Stumbling/Rising  
 On skates/skateboard  
 On bike/scooter  
 Other (specify): \_\_\_\_\_  
 Unknown

12. Non-motorist approach relative to rear of vehicle  
 Stationary  
 From left  
 From right  
 From behind  
 Other (specify): \_\_\_\_\_  
 Unknown

13. Non-motorist first avoidance action  
 No avoidance actions  
 Stopped  
 Accelerated pace  
 Ran away (along vehicle path)  
 Jumped  
 Turned away from vehicle  
 Turned toward vehicle and braced  
 Dove or fell away from vehicle  
 Other (specify): \_\_\_\_\_  
 Unknown

14. Non-motorist primary focus of attention  
 Striking vehicle  
 Play object  
 Person  
 Surrounding traffic  
 Animal  
 Handheld electronic (phone, MP3 player, etc.)  
 Other Object (specify) \_\_\_\_\_  
 Unknown

15. Were any other Non-motorists present?  
*(Select all that apply)*  
 Alone  
 One adult present  
 One other child present  
 Multiple adults present  
 Multiple children present  
 Unknown



**NON MOTORIST CLOTHING**

**NOTES:**

- Specify Color, Fabric and Texture/Weight for outermost layer only
- Indicate "NONE" if applicable
- Available codes:

	<u><b>Colors</b></u>		<u><b>Fabrics</b></u>		<u><b>Textures</b></u>		<u><b>Weights</b></u>
Black	Charcoal gray		Natural		Soft		Heavy
Lt gray/silver	Brown		Synthetic		Slick		Medium
Gold/tan	Purple		Blend		Coarse		Light
Dark blue	Light blue						
Dark green	Light green						
Maroon	Red						
Orange	Yellow						
White	Other (specify)						

	<b>Clothing</b>	<b>Color</b>	<b>Fabric</b>	<b>Texture</b>	<b>Weight</b>
<b>H E A D W E A R</b>	Hat				
	Helmet				
	Hood				
	Other (specify): _____				
<b>U P P E R  B O D Y</b>	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
<b>L O W E R  B O D Y</b>	Shorts				
	Pants				
	Shoes				
	Other (specify): _____				