On-Site Not-In-Traffic Front Over Investigation
Dynamic Science, Inc. (DSI), Case Number DS09034
2001 Acura MDX
California
October 2009

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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.

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient Catalog No.
DS09034		

4. Title and Subtitle	5. Report Date
On-Site Not-In-Traffic Surveillance Front Over Investigation	May 21, 2010
	6. Performing Organization Report No.

7. Author(s)	8. Performing Organization Report No.
Dynamic Science, Inc.	

9. Performing Organization name and Address	10. Work Unit No. (TRAIS)
Dynamic Science, Inc. 299 West Cerritos Avenue Anaheim, California 92805	11. Contract or Grant no. DTNH22-01-C-27002

12. Sponsoring Agency Name and Address	13. Type of report and period Covered [Report Month, Year]
U.S. Dept. of Transportation (NVS-411) National Highway Traffic Safety Administration 1200 New Jersey Ave, SE Washington, DC 20590	14. Sponsoring Agency Code

15. Supplemental Notes

16. Abstract

This on-site investigation focused on the circumstances surrounding the fatal injuries sustained by a 5-year-old male child during a front over incident in the parking lot of a private school/day care center. The child was struck and subsequently run over by a 2001 Acura MDX driven by a 28-year-old female teacher at the school. The driver had picked up four male children (ages 5-8) at a local elementary school and had driven them to the school for an after-school program. After entering the parking lot, the vehicle stopped and three of the children exited the vehicle. One of the children exited through the second row left door and the other two exited through the second row right door. The 5-year-old who was fatally injured was one of the two children who exited the second row right door. The school was located to the left of the Acura. The two children who had exited the right rear door walked forward and crossed in front of the Acura. One of the children continued walking to the front door of the school. The Acura began moving forward and the child was knocked down by the front of the vehicle and run over by the left rear tire. The Acura continued moving forward until a passenger spoke to the driver and the driver brought the vehicle to a stop. The child was located on the ground south of the drop-off point and succumbed to his injuries one hour after the incident.

17. Key Words	18. Distribution Statement
Not in Traffic Surveillance (NiTS), fatality, front over	

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No of pages	22. Price

Dynamic Science, Inc.
Crash Investigation
Case Number: DS09034
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Background

This on-site investigation focused on the circumstances surrounding the fatal injuries sustained by a 5-year-old male child during a front over incident in the parking lot of a private school/day care center. The child was struck and subsequently run over by a 2001 Acura MDX (**Figure 1**) driven by a 28-year-old female. The driver had picked up four male children (ages 5-8) at a local elementary school and had driven them to the school for an after-school program. After entering the parking lot, the vehicle stopped and three of the children exited the vehicle. One of the children exited through the second row left door and the other two exited through the second row right door. The 5-year-old who was fatally injured was one of the two children who exited the second row right door. The school was located to the left and aft of the Acura. The two children who had exited the right rear door walked forward and crossed in front of the Acura. One of the children continued walking toward the front door of the school. The Acura began moving forward and the child was knocked down by the front of the vehicle and run over by the left rear tire. The Acura continued moving forward until the remaining child passenger spoke to the driver and the driver brought the vehicle to a stop. The struck child was located on the ground south of the drop-off point and succumbed to his injuries one hour after the incident.

Figure 1. Subject vehicle, 2001 Acura MDX

This on-site Not in Traffic Surveillance (NiTS) front over investigation was identified by the National Highway Traffic Safety Administration (NHTSA) in an internet news article. The article reported that a 5-year-old child was fatally injured during a front over incident in the parking lot of a school. The article was forwarded to DSI on November 3, 2009 and the case was assigned on November 5, 2009. The field work consisted of an inspection and visibility measurements of the Acura MDX and an inspection of the incident site. The on-site inspection took place on November 10, 2009. The investigating officer and an evidence officer were present during the vehicle inspection.

The final police report was obtained on May 3, 2010. This incident occurred on private property but, according to the records department, was reported to the state fatality database.

Incident Site

The incident occurred in October 2009 at 1515 hours in a parking lot located on the west side of a single story office building. The parking lot was oriented north/south relative to the west side of the building (**Figure 2**). The lot had a negative 1% grade from west to east, was level from north to south, and was constructed of asphalt. Painted parking stalls were located on the east and west sides of the 18.6 m (61.0 ft) wide lot. The stalls were 3.0 m (10.0 ft) wide and 4.9 m (16.0 ft) long. The entrance to the school was located on the west side of the building 13.4 m (44.0 ft) south of the north side of the building. A satellite view of the parking lot and office building is included in this report as Attachment 2. At the time of the incident the weather conditions were clear and dry. The

temperature at the nearest reporting station was 76 degrees F (24 degrees C).

Pre-Crash

The driver of the Acura had picked up four male children at a local elementary school that was located approximately 1.6 km (1.0 mile) from the private school. The second row seat of the Acura was occupied by two 8-year-old males and the third row seat was occupied by two 5-year-old males. The driver was a teacher at the school and was being paid by the parents of the children to provide transportation. According to an interpreted driver statement[1], the driver had been picking up children every day and bringing them to an after school program for approximately two years. She had been picking up the four children in this incident for the past year. On this day, three of the children were being driven to the school to attend the after-school program. The fourth child was going to be taken home after the other children had been dropped off. Typically, the driver parks the vehicle in a designated stall in the school parking lot and then walks the children into the classroom. During the week of this incident, however, the school was short-handed and the driver needed to drop the children off and then pick up three additional children at a different school. On the date of the incident, the driver entered the parking from a north/south roadway, traveled west along the north side of the building, and then turned left and began traveling south. She brought the vehicle to a stop near the entrance to the school. The 8-year-old child in the second row right position climbed over the 8-year-old in the second row left position and exited the vehicle through the second row left door. The two 5-year-olds in the third row seat exited the vehicle through the second row right door. They then walked forward and crossed in front of the Acura. One of the children continued walking directly to the front door of the school. The other child was wearing a green shirt with white stripes and blue sleeves, long blue corduray pants, tan socks, and tennis shoes. He was pulling a rolling back pack. As he crossed in front of the vehicle it is not known if he was still walking or had stopped.

Figure 2. View of parking lot, facing south

Crash

The child was in the driver's blind zone. The driver of the Acura did not see the child and began driving forward. The child was knocked down by the front of the vehicle **(Figure 3)** and was dragged/tumbled for approximately 8.0 m (26.4 ft) before being run over by the left rear tire. According to the investigating officer, the tire

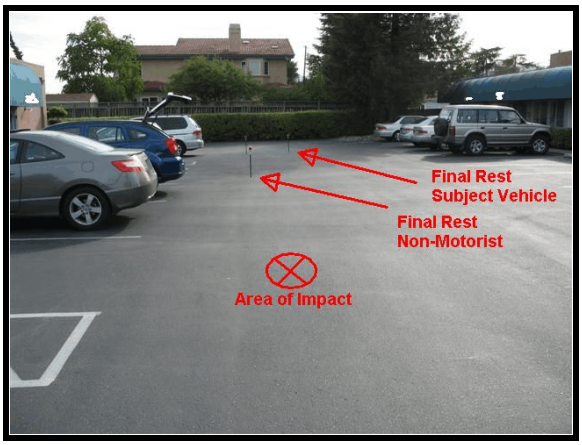


Figure 3. Overview of impact area and final rest

[1]The driver spoke Mandarin Chinese.

rolled over the child in a diagonal pattern across his anterior torso. The driver reported feeling a bump while driving forward. Investigators found a friction scuff approximately 58.4 cm (23.0 in) long located just before the final rest of the child. The friction mark had pieces of green cloth imbedded in it that probably came from the child's green and white shirt.

The Acura continued moving forward approximately 7.9 m (26.0 ft) until the child in the third row seat said something to the effect of "what happened" and then the driver brought the vehicle to a stop. There was no residual damage to the Acura that could be attributed to the incident. The vehicle had been in a crash at some point in the past and had been repaired.

Post-Crash

After stopping the vehicle, the driver looked in the driver's side mirror and saw the child on the ground. She exited her vehicle, went over to the child, and recognized the child as one of the children who had just exited her vehicle. She went back to her vehicle and attempted to call 911 from her cell phone. She did not recall if she actually made contact with a 911 operator. She remained in her vehicle until the first police officer arrived at 1524 hours. The police reported that she was in a semi-catatonic state after the incident. An ambulance arrived shortly after the police arrival and began transport at approximately 1530 hours.

The child was transported to a local hospital where he died approximately one hour after the incident. The medical examiner was contacted and an invasive autopsy was not conducted. The attending pathologist reported to the police that the cause of death was a collapsed right lung due to crushing injuries. A certificate of death was obtained and the immediate cause of death was listed as "tension pneumothorax". The time between the incident and death was listed as "minutes".

The Acura was towed from the incident site and was placed on a police hold.

The school was conducting an after-school program of an unknown nature and was also serving as a day care center. In the weeks following the incident it was determined that the school was unlicensed by the state. The school was cited for unlicensed operation and was voluntarily closed.

Vehicle Data - 2001 Acura MDX

The 2001 Acura MDX was identified by the Vehicle Identification Number (VIN): 2HNYD188X1Hxxxxxx. The Acura was manufactured in January 2001. The vehicle was equipped with a 3.5-liter, 6-cylinder engine, 5-speed automatic transmission, all wheel drive, and antilock brakes. The tires were General Altimax HP 235/65R17 and were the proper size recommended by the vehicle manufacturer. The window glazing consisted of an AS1 laminated windshield, AS2 front row glazing, and AS3 second row, third row, roof and backlight glazing. There were no visual obstructions and the glazing clarity was clear. The interior was configured with front buck seats with adjustable head restraints. The front head restraints were in the full up position. The second row was configured with a split bench seat with folding back and adjustable head restraints for the three seating positions. The head restraints were in the full up position. The third row was configured with a bench seat with a folding back with adjustable head restraints for the two seating positions. Both head restraints were missing at the time of the vehicle inspection.

The vertical clearance heights for various components measured from the ground are listed in the following table:

Component	Clearance Height
Height of the hood face	97.0 cm (38.5 in)
Top of front bumper	78.0 cm (30.7 in)
Bottom of front bumper	47.0 cm (18.5 in)
Lowest edge of front fascia	20.0 cm (7.9 in)
Oil pan	23.0 cm (9.0 in)
Cross member at front axle	23.0 cm (9.0 in)
Engine cradle	19.0 cm (7.4 in)
Muffler	23.0 cm (9.0 in)
Rear axle swing arm	18.0 cm (7.0 in)
Beltline - Row 1	114.0 cm (44.9 in)
Beltline - Row 2	122.0 cm (48.0 in)

Vehicle Damage

There was no residual damage to the Acura.

Driver Data

The driver of the Acura was a 28-year-old female with a reported height of 163.0 cm (64.0 in). The driver was transporting children from an elementary school to the private school.

Occupant Data

Prior to the incident there were four occupants in the vehicle in addition to the driver. The second row seat of the Acura was occupied by two 8-year-old males and the third row seat was occupied by two 5-year-old males. Three of the occupants exited the vehicle after it had stopped at the school. The remaining occupant was a 5-year-old male who was seated in the second row seat behind the driver.

Non-Motorist Data

The non-motorist was a 5-year-old male with a reported height of 109.0 cm (43.0 in). He was wearing long blue corduroy pants, a green with white stripes short-sleeve shirt, tan socks, and tennis shoes. He had been seated in the third row of the Acura. After the vehicle stopped, the two children in the third row seat unlatched the second row right seat and rotated it forward. Both children exited the second row right door and proceeded forward along the right side of the Acura and then crossed

in front of the vehicle.

Non-Motorist Injuries: Injury obtained from death certificate.

Injury	AIS Code	Injury Mechanism	Confidence Level
Thoracic cavity injury NFS with tension pneumothorax	442210.5,9	Tire	Certain

Front Visibility

The Acura was moved out of the evidence structure onto a parking lot and its front visibility was measured during the SCI inspection. This visibility assessment was measured on level ground using five 71.0 cm (28.0 in) tall targets to identify the location of the front blind zone around the vehicle. The targets were located outboard the left mirror, at the left front, forward centerline, at the right front and outboard the right mirror (**Figure 4**). The seated eye height of a female of the same height of the driver was measured and that height was located in the vehicle. The seated eye height was 142.0 cm (55.9 in) above the ground. The SCI investigator positioned himself at that height location and identified the targets. The target locations were then measured relative to the vehicle. **Figure 5** is a driver view through the windshield to the right front target. **Figure 6** on the following page is a scaled overhead visibility schematic depicting the blind zone forward of the driver based on the measured target locations.

Figure 4. Front view of blind zone targets

Figure 5. Driver view of forward right visibility target

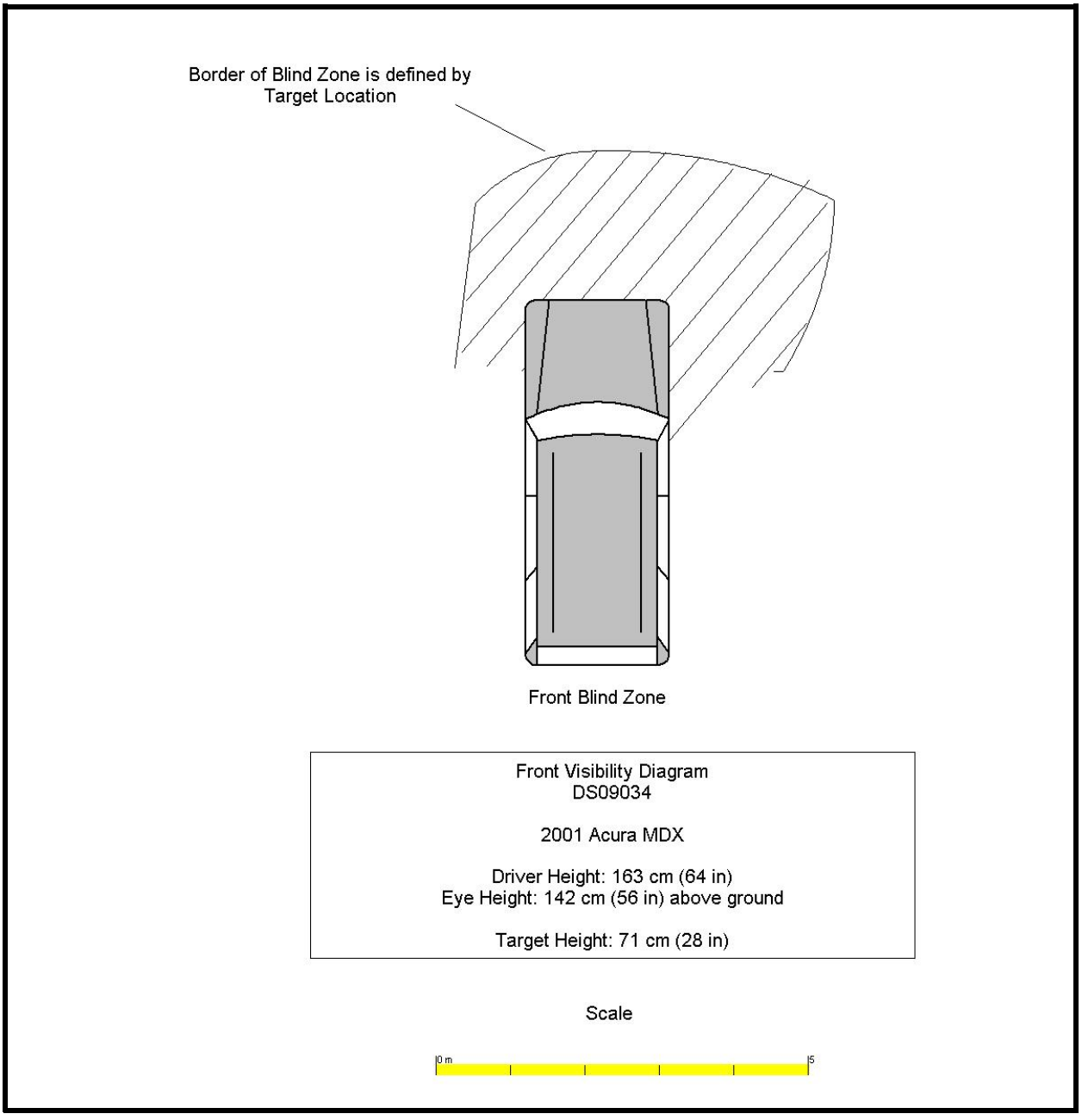
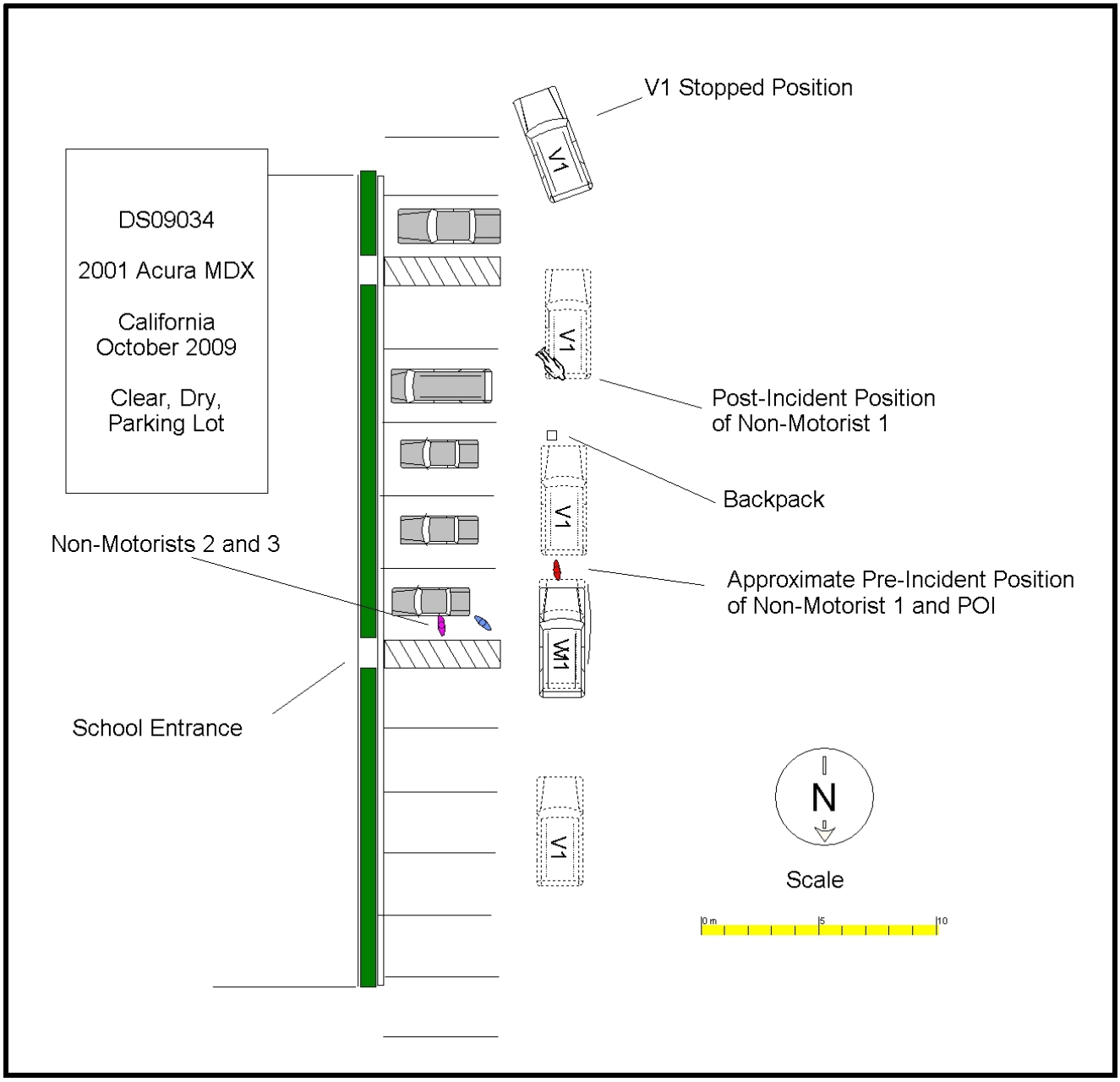
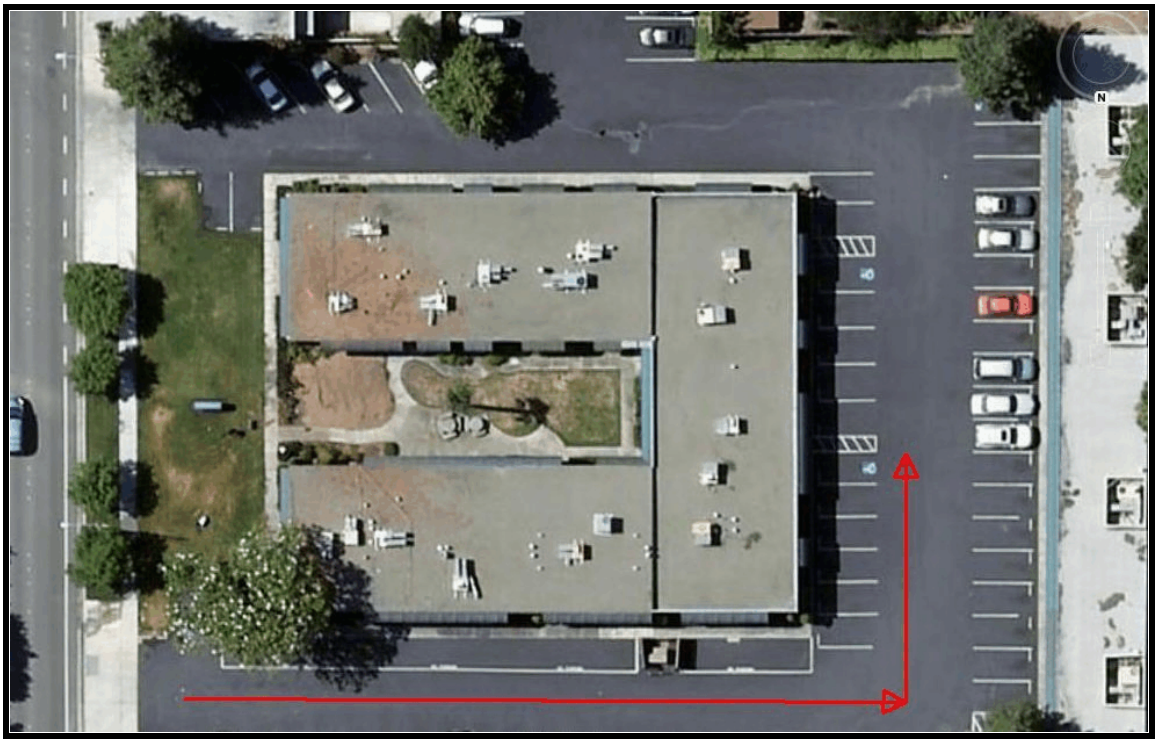


Figure 6. Front Visibility Diagram

Attachment 1. Scene Diagram



Attachment 2. Satellite View of Parking Lot and School



Attachment 3. Field Data Forms

Not Applicable ☐

Reset Values

Print Forms

U.S. Department of Transportation
National Highway Traffic Safety Administration

SCENE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 9 0 3 4

IDENTIFICATION

2. Date of Crash 1 0 / X X / 0 9

3. Time of Crash 1 5 1 5

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
- ☐ Shrubbery
- ☐ 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
- ☐ Shrubbery
- ☐ Utility poles
- ☐ Signs
- ☐ Glare
- ☐ Other (specify) _____
- ☐ Unknown

11. Grade at parked position + / - 0 0 0 %

12. Estimated distance from parked position to impact

0 0 0 . 3 m

13. Estimated speed at impact 0 0 2 kmph

14. Grade at impact +/ - 0 0 0 %

15. Estimated distance from impact to vehicle final rest

0 2 0 . 4 m

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

Not Applicable ☐

Reset Values

U.S. Department of Transportation
National Highway Traffic Safety Administration

VEHICLE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number D S 0 9 0 3 4

VEHICLE IDENTIFICATION

2. VIN 2 H N Y D 1 8 8 X 1 H X X X X X X

3. Model Year 2 0 0 1

4. Vehicle Make (specify): ACURA

5. Vehicle Model (specify): MDX

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	☐	
2nd Left	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☑	
2nd Right	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☑	
3rd Left	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☑	
3rd 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 P235/65R17

7. LF Tire Size 235/65R17

8. LR Tire Size 235/65R17

9. RF Tire Size 235/65R17

10. RR Tire Size 235/65R17

Seats / Head Restraint Data

Seat Position	Seat Type (Select from below)	Head Restraint (Check if available)	Head Restraint Adjustment (select)	NOTES:
Front Left	1	☑	☐ ☐ ☑ Full Down / Mid / Full Up	Head restraints missing for 3rd row seats
Front Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
Front Right	1	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Left	5	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Middle	5	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Right	5	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
3rd Left	5	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Right	5	☐	☐ ☐ ☐ Full Down / Mid / Full Up	

Seat Type codes:

0 = No seat or seat folded down
1 = Bucket
2 = Bucket w/ folding back
3 = Bench
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
8 = Pedestal (i.e. column supported)
9 = Box mounted (i.e. van type)
10= Other seat type (specify)
99= Unknown seat type

VEHICLE MEASUREMENTS

Clearance Heights		Measurements (all from ground, and in centimeters	NOTES
Beltline		114	
Top of trunk/tailgate		N/A	
Bottom of bumper		47	
Trailer hitch (if applicable)		N/A	
Undercarriage			
	Sway bar	18	
	Axle	19	
	Differential	N/A	
	Other (specify): Fascia	20	
Sensor Height (if equipped)		N/A	
Camera Height (if equipped)		N/A	

Not Applicable ✔

Undo Not Applicable

Reset Values

U.S. Department of Transportation
National Highway Traffic Safety Administration

Back Up / Parking Aid Form

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 9 0 3 4

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
- ☐ Sensor present, did not sound

15. Did driver report common false warnings

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown

Not Applicable

No Driver Present ☐

Reset Values

U.S. Department of Transportation
National Highway Traffic Safety Administration

DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 9 0 3 4

DRIVER PROFILE

2. Driver's Age 2 8
99 = Unknown

3. Driver's Sex
- ☐ Male
- ☉ Female
- ☐ Unknown

4. Driver's Height 1 6 3 cm
999 = Unknown

5. Driver's Weight 9 9 9 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): TEACHER
- ☐ 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:

TRANSPORTING CHILD TO RESIDENCE

13. Driver in a hurry
- ☉ Yes
- ☐ No
- ☐ N/A
- ☐ 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
- ☐ 11-30 Seconds
- ☐ 31-60 Seconds
- ☐ Over 60 Seconds
- ☉ N/A
- ☐ 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

Not Applicable ☐

U.S. Department of Transportation
National Highway Traffic Safety Administration

Non Motorist Form

Reset Values

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number
D S 0 9 0 3 4

NON-MOTORIST PROFILE

2. Non-motorist's Age
99 = Unknown
0 5 ☐ Months ☉ Years

3. Non-motorist's Sex
☉ Male
☐ Female
☐ Unknown

4. Non-motorist's Height
999 = Unknown
1 0 9 cm

5. Non-motorist's Weight
999 = Unknown
9 9 9 kg

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:

Colors		***Fabrics***	***Textures***	***Weights***
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)			
Pink				

	Clothing	Color	Fabric	Texture	Weight
HEADWEAR	Hat				
	Helmet				
	Hood				
	Other (specify): _____				
	Unknown				
UPPER BODY	Short Sleeve				
	Long Sleeve	green/white/blue	Unknown	Soft	Light
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
	Unknown				
LOWER BODY	Shorts				
	Pants	Light blue	Unknown	Soft	Medium
	Shoes	Unknown	Synthetic	Unknown	Medium
	Other (specify): _____				
	Unknown				