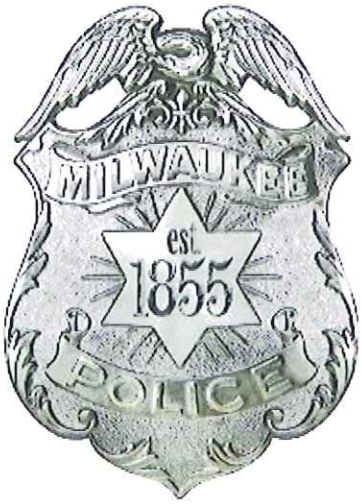
Collision Analysis
&
Reconstruction Report



Milwaukee Police Department Incident #: 12-309-0028
DOT Document #: 9H14322
Crash Date: Sunday, November 4, 2012, 2:09 A.M.

Location: 6324 W Fond Du Lac Ave
City of Milwaukee
Milwaukee County, Wisconsin

Prepared by:

P.O. William Hanney
P.O. Richard Schnier

Milwaukee Police Department
Neighborhood Task Force
Crash Reconstruction Unit

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SYNOPSIS

This crash occurred on Sunday, November 4, 2012 at approximately 2:09 a.m., in the City and County of Milwaukee, Wisconsin. The investigation revealed that a 2007 Lexus ES350, operated by Tiera M. Perry, was traveling northwest bound on West Fond du Lac Avenue. At the same time a pedestrian, Kendrick L. Finch, was crossing West Fond du Lac Avenue eastbound. The Lexus struck Kendrick L. Finch, stopped briefly at the scene, and then fled the location in a northwest direction on West Fond du Lac Avenue.

Kendrick L. Finch suffered severe injuries and died at the scene as a result of the collision.

OBJECTIVE OF ANALYSIS

The objective of this report is to analyze the evidence collected at the scene of the crash, which was used to create a scale diagram of the incident. Human factors, environmental factors, and vehicle factors will also be reviewed. Should additional information come forward after this report is completed, it would need to be reviewed to determine its effects on the findings.

INFORMATION REVIEWED FOR REPORT PREPARATION

Printed Material(s) and Police Reports

Numerous police reports and published references were consulted in preparing this analysis. The items of information that were reviewed include the following:

1. City of Milwaukee Police Department officer narratives and reports:
    a. Wisconsin Motor Vehicle Crash Report (MV4000e) completed by Police Officer William Hanney
    b. Narrative report written by Police Officer Richard Schnier
    c. Narrative report written by Police Officer Michael Lassanske
    d. Narrative report written by Police Officer Tara Ferguson
    e. Narrative report written by Police Marcell Daniels
    f. Narrative report written by Police Officer Nicholas Povolo
    g. Narrative report written by Police Officer David Laurilla
    h. Narrative report written by Police Officer Christopher Bruns
    i. Narrative report written by Police Officer William Hanney
    j. Narrative report written by Police Detective Jason Doravo
    k. Narrative report written by Police Detective Brian Stott
    l. Narrative report written by Police Detective Michael Koscielak
    m. Narrative report written by Police Detective Timothy Behning
    n. Narrative report written by Forensic Investigator Deona Williams
    o. Narrative report written by Forensic Investigator Douglas Brahm
    p. Narrative report written by Forensic Investigator Jeffery Muhammad
    q. Narrative report written by Forensic Investigator Jimmy Young
    r. Narrative report written by Latent Print Examiner Andrew Smith

2. Witness statements:
    a. Statement of Sasha T. Gulley
    b. Statement of Michael D. Harrison
    c. Statement of Roger D. Harston
    d. Statement of Henry Stenzel
    e. Statement of Jean Kies
    f. Statement of Larry Fortun
    g. Statement of Genevieve Riehl

3. State of Wisconsin Crime Laboratory Report:
    a. Trace evidence report of fracture analysis written by Ruth Hent
    b. DNA analysis report written by DNA analyst Lisa Treffinger

4. Sprint Corporate Security Report
    a. Subscriber information and tower log compiled by Michelle Luna

5. Shawano County Sheriff's Office officer narrative and report
    a. Wisconsin Motor Vehicle Crash Report (MV4000) completed by Deputy Alex Krause

Forensic Mapping Data

The following forensic mapping data was used to complete the reconstruction analysis:

1. Topcon Total Station Mapping Data of the crash scene by Police Officer William Hanney of the Milwaukee Police Department Crash Reconstruction Unit.

9-1-1 Call Recordings

The following 9-1-1 call recordings were used to complete the reconstruction analysis

1. Digital audio file containing 9-1-1 calls placed to the Milwaukee Police Department regarding this incident compiled by Police Officer William Hanney.

Photography

The following digital photographs were reviewed while completing the reconstruction analysis:

1. Seventy-five (75) digital photographs taken at the crash scene by Forensic Investigator Deona Williams.
2. Fifty-two (52) digital photographs taken at the site of vehicle recovery by Forensic Investigator Jeffery Muhammad.
3. Twenty-seven (27) digital photographs taken during processing of vehicle by Forensic Investigator Jimmy Young.

COMPUTER SOFTWARE/DATA USED

The following computer software programs or professional websites were utilized or consulted in preparing this collision analysis:

1. Computer Programs

   A. Crash Zone™ Version 8.5.4 – professional drawing program.
   B. Pocket Zone™ Version 1.0.17 / Total Station Data Acquisition Software.
   C. Microsoft Word 2000 –word processing software.
   D. Accident Reconstruction Professional, Version 7.50.33, (Maine Computer Group).
   E. Expert Autostats Version 5.0.1 – Vehicle Dimension and Specification Software.
   F. VIN Assist Version 1.38LE – Vehicle Identification Number Decoding Software.

2. Professional Websites/Resources

   A. U.S. Geological Survey – Aerial Photograph of the collision area (http://maps.google.com)
   B. Historical weather data for nearby Milwaukee, Wisconsin on November 4, 2012, as catalogued by the Weather Underground in Ann Arbor, Michigan (www.weatherunderground.com).
   C. Carfax Vehicle History Reports (www.carfax.com)
   D. National Highway Traffic Safety Administration (NHTSA) Office of Defects Investigation – Safety Recall Information. (www.nhtsa.dot.gov)
   E. *Manual of Uniform Traffic Control Devices* (MUTCD).
   F. American Association of State Highway and Transportation Officials
   G. Traffic Crash Reconstruction, Second Edition, Northwestern University Center for Public Safety

PRE-INCIDENT SCENE DESCRIPTION

The scene of the traffic crash was located in the westbound lanes of West Fond du Lac Avenue near the intersection of West Armitage Avenue. West Fond du Lac Avenue is a four-lane roadway, which runs primarily northwest and southeast at an angle to the typical grid street pattern in Milwaukee. A raised, grass filled, concrete curbed median separates the northwest bound and southeast bound lanes of traffic. There is a parking/bus lane on the outer half of lane two in both directions of travel. The posted speed limit on West Fond du Lac Avenue is 35 miles per hour.

West Armitage Avenue is a two-lane roadway, which runs primarily northeast and southwest. There is no separation between eastbound and westbound traffic on West Armitage Avenue. Traffic on West Armitage Avenue is controlled by a stop sign at West Fond du Lac Avenue. There is a non-posted speed limit of 25 miles per hour.

The individual roadways are straight through the collision area. There is a slight uphill grade on West Fond du Lac Avenue as you approach the collision area which then transitions to a slight down hill grade at approximately 6342 West

Fond du Lac Avenue. Elevation data collected with the total station indicated an uphill grade of approximately 0.8% - 1% and a downhill grade of approximately 1.0% - 1.3%. All signs, signals and markings in the area appear to be in compliance with federal standards, including the *Manual of Uniform Traffic Control Devices* (MUTCD). Figure 1 illustrates the approximate location of the crash upon the map.

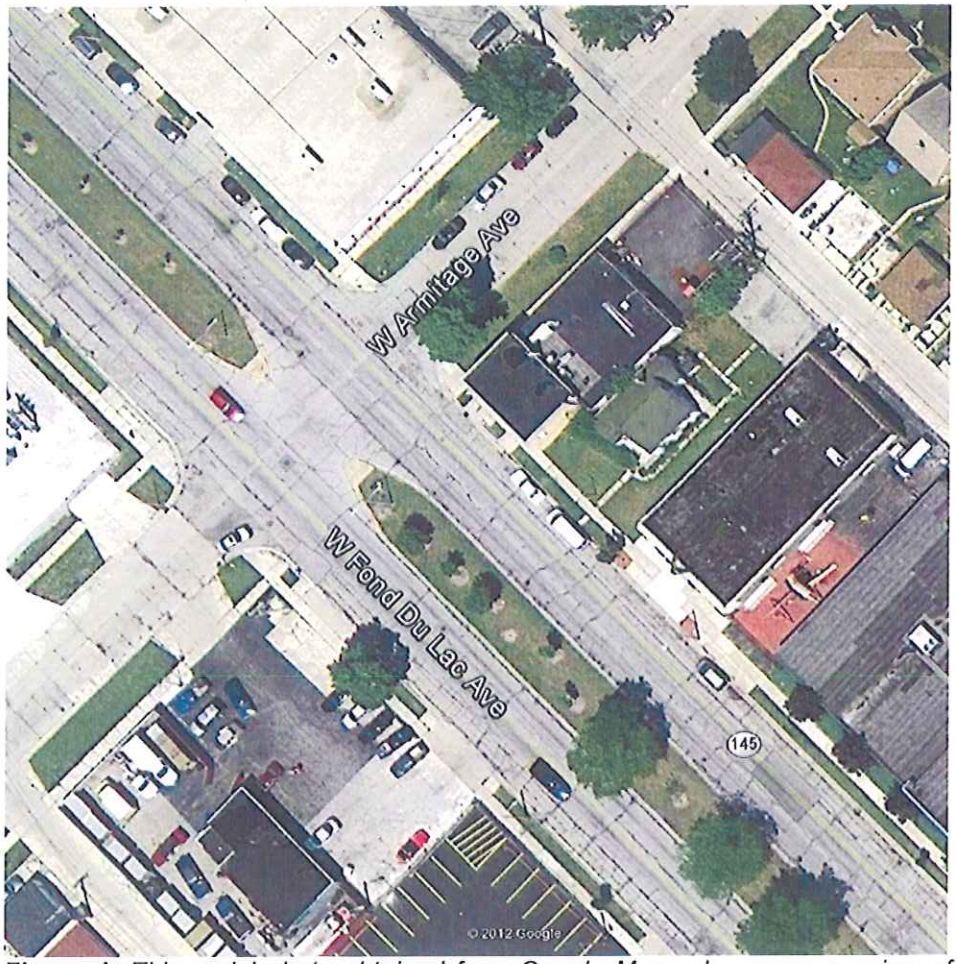

Figure 1. *This aerial photo obtained from Google Maps shows an overview of the intersection of W. Fond Du Lac Ave. and W. Armitage Ave. The photo illustrates the general design and setting of the roadway. The photograph was not taken on the day of the crash and is not intended to depict the conditions at that time.*

POST-INCIDENT SCENE DESCRIPTION

Following the collision, several citizens called 9-1-1 and notified authorities of the crash. A short time later, officers from the Milwaukee Police Department District Seven arrived on scene. Officers reported observing a deceased male, later identified as Kendrick L. Finch, with a severed leg lying in the westbound lanes of West Fond du Lac Avenue. Officers also reported observing a trail of vehicle debris, bloody stains, and clothing in the roadway.

A black knit hat was observed in the roadway directly in front Brighter Days Child Care at 6324 W. Fond du Lac Avenue. Small black paint flecks were observed on the roadway in the area of the black knit cap, being first observed approximately five feet south of the black hat. The black paint flecks continued north in lane two towards the intersection with W. Armitage Avenue. Two bloody tire marks were observed on the roadway surface starting at about 6342 W. Fond du Lac Avenue. The tire marks were located in the curbside half of lane two, commonly referred to as the parking lane. A pair of blue jeans was observed in the roadway in lane two, in front of 6342 W Fond du Lac Avenue. Directly north of the blue jeans was a pair of blood stained underwear, a black boot and the right foot of the victim. The left boot was located near the median break in the intersection.

Directly west of the body, Officers observed a large pool of what appeared to be vehicle fluids. This was the first location that the vehicle fluids were observed. The fluid pool started near the center of lane two and then transitioned to lane one as it traveled to the north.

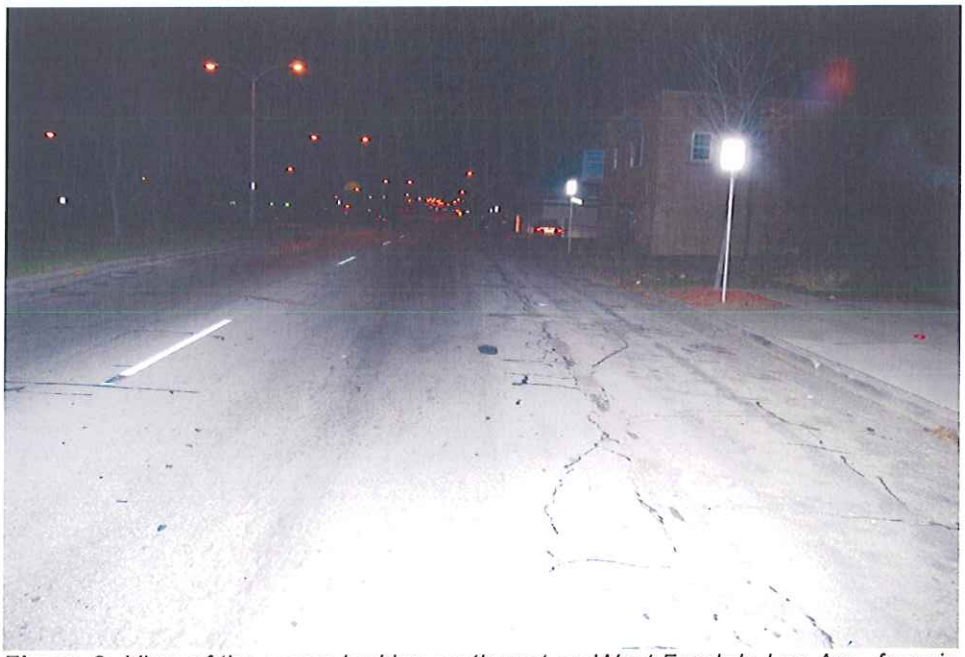

Figure 3. *View of the scene looking northwest on West Fond du Lac Ave. from in front of 6324 West Fond du Lac Ave.*

EVIDENCE COLLECTION AND SCENE DOCUMENTATION

On Sunday, November 4, 2012, Officers William Hanney and Michael Lassanske conducted the forensic mapping of the crash scene. The area was profiled and surveyed by using a Topcon GPT-3000 Total Station. This device is an electronic instrument that is composed of a theodolite (angle measuring system), an EDM (electronic distance measuring system), an external data collector and a prism. This is a two-person operation involving one individual operating the total station and a second person holding the prism over a particular evidentiary point. The theodolite and the EDM then record the angle and the distance to the prism. The

recorded data is stored electronically and later downloaded for transfer and creation of scaled drawings. A scaled drawing of the scene was created by using the Crash Zone professional software program and is included with this report.

To the northwest of the area of impact, Officer Hanney located and collected forty-two distinct pieces of vehicle debris, which were left at the scene by the striking auto. In examining these vehicle parts, Officer Hanney observed a Lexus insignia on one of the larger pieces of debris. The vehicle parts were collected, individually packaged, and later sent to the Wisconsin Regional Crime Laboratory for analysis.

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DIAGRAM

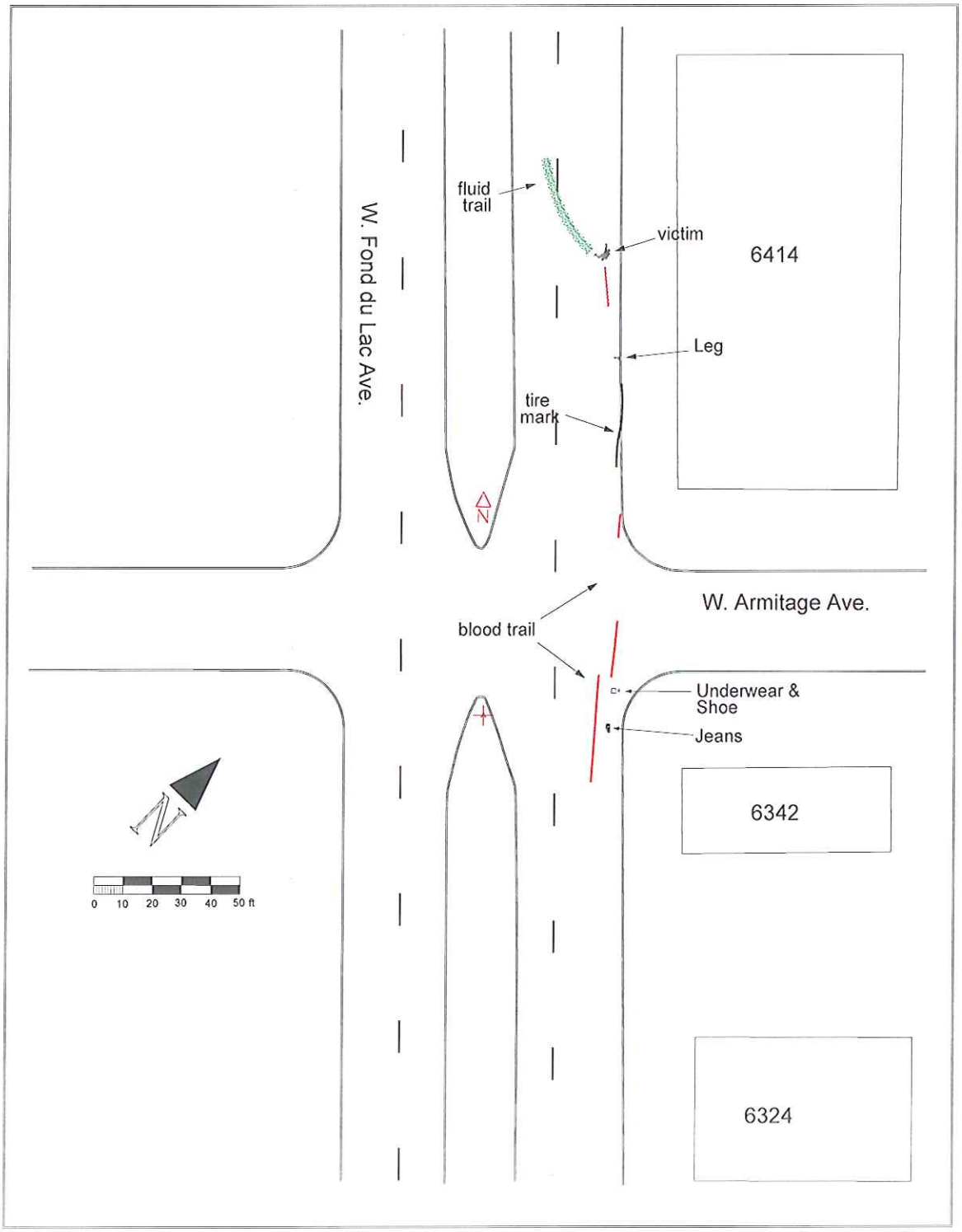

Figure 4. *Scaled scene diagram*

CITIZEN INTERVIEWS/STATEMENTS

Citizens provided oral statements to Officers from the Milwaukee Police Department. The following section summarizes the information obtained in these interviews and is not presented in any particular order.

- Sasha T. Gulley-Witness to the crash

Sasha T. Gulley (B/F 10/25/74 of 3157 N. 53rd St., Milwaukee, WI 53216) provided the following account of the crash: Gulley stated she was driving west on W. Fond du Lac Ave. and had slowed to approximately 20 MPH. While driving west on W. Fond du Lac Ave. Gulley heard a crunching noise as her vehicle drove over debris. Gulley looked to her right and observed a vehicle she could only describe as a black four-door parked on the right side of W. Fond du Lac Avenue. Gulley stated she observed a white or Hispanic female wearing a knee length dress standing outside the driver's door looking at the front of the vehicle. Gulley observed that the front of the vehicle was pushed in as if it had been involved in an accident. Gulley continued westbound and was stopped for the red traffic signal on W. Fond du Lac Ave. at W. Hampton Avenue. Gulley observed a vehicle approaching from behind at a high rate of speed. Gulley stated the vehicle appeared to be smoking, Gully stated the vehicle made a right turn onto W. Hampton Ave. and she observed what she believed to be a human leg embedded in the grill. Gulley attempted to locate this vehicle but was not successful. Gulley then returned to the scene of the crash.

- Michael D. Harrison-Witness to the crash

Michael D. Harrison (B/M 05/25/63 of 3163 N. 45th St., Milwaukee, WI 53212) provided the following account of the crash: Harrison stated he was walking westbound out of the parking lot of Gene's Lanes, 6315 W. Fond du Lac Ave., when he heard a loud noise to the west of him and across the median on W. Fond du Lac Avenue. Harrison stated he observed vehicle debris in the air and observed a vehicle traveling westbound on W. Fond du Lac Avenue. Harrison stated he looked for the vehicle involved in this incident and was surprised not to see it. Harrison stated he heard people yelling that there was a body in the roadway. Harrison stated he then walked back to the parking lot of Gene's Lanes. Harrison was unable to provide a description of the vehicle or the driver.

- Roger G. Harston-Cousin of Kendrick Finch

Roger G. Harston (B/M 07/15/67 of 3035 N. 24th St., Milwaukee, WI 53206) provided the following account of events prior to the crash: Harston stated he spoke with his cousin, Kendrick Finch, on the telephone on November 3, 2012, between 7:30 p.m. and 8:00 p.m. and had made plans to go out later that evening. Between 11:00 P.M ad 11:30 p.m. Hartson arrived at Finch's residence and shortly thereafter the two left in their respective vehicles and

drove to Gene's Lanes, 6318 W. Fond du Lac Avenue. While at Gene's Lanes, Harston and Finch interacted with each other and with others. At approximately 2:00 a.m. Harston left Gene's Lanes and went to his vehicle, which was parked on the north side of W. Armitage Ave. facing west. Harston stated he was waiting in his own vehicle for Finch when he noticed paramedics in the area. Harston stated he did not observe the incident.

- Henry Stenzel-Parts Manger, Jack Safro Lexus of Brookfield

Henry Stenzel (W/M 09/13/57 of 19455 Janacek Ct., Milwaukee, WI 53045) provided the following information: Officer Richard Schnier conveyed vehicle parts recovered from the scene to Jack Safro Lexus of Brookfield and requested Stenzel examine them to determine the year, make and model of the striking vehicle. After examining the parts and part numbers, Stenzel stated the parts belong on a 2006-2010 Lexus ES350, black in color. Stenzel stated the parts belong on the grill, bumper, and headlamp assembly of the vehicle. Stenzel identified one of the parts as coming from an aftermarket bumper cover as the part contained an identifying tag that is not used by Lexus. Stenzel suggested the vehicle might have had the front bumper cover replaced at a non-Lexus body shop.

- Jean Kies-Attorney for Tierra Perry

Jean Kies, attorney for Tierra Perry provides the following information: On November 7, 2012, Kies spoke with Officer Richard Schnier via telephone. Kies stated her client, who she identified as Tierra Perry, was presently at the Milwaukee County District Attorney's Office Homicide Unit and wished to turn herself in to the police for her involvement in a crash that occurred on November 4, 2012, on W. Fond Du Lac Ave. in which a person was killed. Atty. Kies advised Officer Schnier that Perry would not be making a statement to police. Officer Schnier requested Kies provide the location of the vehicle involved in the offense. Kies stated she would provide that information to Milwaukee County Assistant District Attorney Mark Williams. A short time later Kies provided Williams with that information.

- Genevieve Riehl-Sales and Leasing Consultant, Bergstrom Lexus

Genevieve Riehl (W/F 01/20/77 of 3060 Victory Lane, Appleton, WI 54913) provides the following information: Pursuant to a search warrant, Officer Richard Schnier located inside the vehicle involved in this offense a business card for Bergstrom Lexus bearing the name Genevieve Riehl. Officer Schnier was able to determine this vehicle was newly registered on October 4, 2012. Regarding the sale of the vehicle, Riehl stated several days prior to October 4, 2012 she received a telephone call from a male who identified himself as Larry Fortun. Fortun was inquiring about a 2007 Lexus ES350, black in color, that the dealership currently had for sale. Fortun indicated he was interested in purchasing the vehicle for his girlfriend. On October 4, 2012, Fortun and a

female, described as a black female with long black hair and in her twenties, came into the dealership. Riehl then positively identified photographs of Fortun and Perry as being the pair that came into the dealership. Riehl stated that during her interaction with Fortun and Perry it was clear to her that the vehicle was being purchased for her. Riehl stated the pair did not look at any other vehicles and Fortun subsequently purchased the vehicle.

- Larry Fortun-Owner of vehicle

Larry Fortun (W/M 09/19/49 of 107 Sunset Dr., Viroqua, WI 53665) provides the following information: Fortun stated that he was aware that the 2007 Lexus ES350 that he owns was involved in this incident and that Perry had been arrested in connection with the crash. Fortun described Perry as a friend and stated he has known her for five to six months. Fortun stated he owns the vehicle but allows Perry to drive it because she does not own her own vehicle. Fortun stated the last time he saw his vehicle three or four days prior to November 4, 2012, when he gave it to Perry. In the early morning hours of November 4, 2012, around 2:18 a.m., Fortun stated he received a phone call from Perry. Fortun described Perry as hysterical. Perry told Fortun that she thought something "dropped from the sky". Perry then stated she believed she had hit someone. Perry told Fortun the vehicle's airbags deployed and the vehicle was smoking. Fortun stated Perry told him she was still at the scene. Fortun stated Perry then "freaked out" and left the scene. Fortun told Perry not to leave the scene and to call the police. Fortun stated Perry was aware the person was injured but he did not know if she knew the person was deceased. Fortun told Perry several times that she needed to report what had happened. Fortun stated he spoke with Perry later in the day on November 4, 2012 and Perry told him she intended to hire an attorney and turn herself in on Monday, November 5, 2012.

VEHICLE EXAMINATION

On Friday, November 9, 2012, Officer Richard Schnier of the Crash Reconstruction Unit examined the 2007 Lexus ES350 at the City of Milwaukee Tow Lot, located at 3811 W. Lincoln Ave. This vehicle was towed from the recovery location as evidence tow #1558317 and was placed in a secure indoor storage facility. The vehicle was in substantially the same condition as when it was recovered on November 7, 2012.

The Lexus ES350 is a four-door sedan powered by a 3.5 Liter, V-6 engine. The engine's power is delivered to the road through an automatic transmission coupled with front-wheel drive. The vehicle is equipped with four-wheel anti-lock disk brakes. The Lexus ES350 received severe damage across front of the vehicle, as well as to the hood, windshield and roof. The damage across the front of the vehicle is focused slightly left of the center of the vehicle with large sections of the driver's side bumper cover and headlamp assembly missing. The outer edges of the hood bend upward, and the center of the hood is has several

creases. The hood itself is pushed rearward towards the windshield. A significant amount of paint is missing from the hood, exposing the bare metal. The missing paint is primarily in the center of the hood. The windshield is shattered, with a large portion of the center of the windshield missing. The roof is pushed rearward and downward where the roofline meets the windshield. The vehicle is equipped with a moon roof. The glass for the moon roof is shattered and is mostly displaced from the vehicle. To the rear of the moon roof, there is a large dent that extends from the rear of the moon roof to the top of the rear window. Blood splatter was observed from the right side of the hood back to the trunk. Inside the vehicle, the driver's steering wheel and knee bolster air bags deployed. The pretensioners for both the driver's side and passenger side seat belts fired and the seat belts were locked in place against the B pillar. Shattered glass was located throughout the interior of the vehicle.

Figure 5. *2007 Lexus ES 350 used in this offense*

COLLISION SEQUENCE

Based on the physical evidence collected at the scene, the vehicle examinations, and witness statements, the following collision sequence is offered.

The Lexus ES350, traveling northwest on West Fond du Lac Avenue approaching the intersection with West Armitage Avenue in the right travel lane (lane two), collided with a pedestrian, who was traveling eastbound across West Fond du Lac Avenue. The front of the Lexus ES350 collided with the pedestrian. Following the initial collision the Lexus ES350 began to decelerate and travel towards the outside curb. The Lexus ES350 came to rest at approximately 6414 West Fond du Lac Avenue at which time the driver briefly exited the auto before fleeing the scene. The pedestrian's blue jeans, underwear and right boot were located in lane two immediately east of West Armitage Avenue. The lower right

leg of the pedestrian was severed during the collision sequence and came to rest approximately 36 feet east of the victim's body.

STATE CRIME LABORATORY ANALYSIS OF EVIDENCE

Fifty-three (53) pieces of evidence, including the 2007 Lexus ES350 used in this offense, were submitted to the Wisconsin Department of Justice State Crime Laboratory – Milwaukee Trace Evidence Unit for analysis. The purpose of submitting these items to the State Crime Laboratory was to determine if any of the pieces of physical evidence recovered at the crash scene came from the 2007 Lexus ES350. In a report of laboratory findings prepared by Laboratory Analyst Ruth M. Henk, it was documented that nine (9) pieces of evidence recovered from the crash scene by Officer William Hanney physically matched to the 2007 Lexus ES350 to the exclusion of any other source.

Thirteen (13) pieces of evidence were submitted to the Wisconsin Department of Justice State Crime Laboratory – Milwaukee DNA Analysis Unit. Among the items submitted were DNA samples from Tiera M. Perry and Kendrick L. Finch, nine (9) swabs from the 2007 Lexus ES350, and two (2) airbags from the driver's side of the 2007 Lexus ES350. In a report of laboratory findings prepared by Laboratory Analyst Lisa M. Treffinger it was documented that Kendrick L. Finch was the source of DNA recovered from the blood on four (4) swabs from the exterior of the 2007 Lexus ES350. Tiera M. Perry was excluded as being the DNA source on these items.

Tiera M. Perry was the source of DNA recovered from the swabs of the gear shift and the source of DNA recovered from blood on the deployed driver's side airbags from the 2007 Lexus ES350. Kendrick L. Finch was excluded as being the source of the DNA on these items.

CDR ANALYSIS

A vehicle's safety restraint system is generally monitored and controlled by dedicated electronic module. In Lexus vehicles, this unit is referred to by as the Electronic Control Unit (ECU) This electronic instrument "senses" a crash and makes the "decision" as to whether or not the airbags should deploy. The module, which utilizes an internal accelerometer to analyze and interpret sudden speed changes, may also record data surrounding a collision event. In most Lexus vehicles, this data may include pre-crash data such as vehicle speed, throttle position, engine RPMs, brake switch activation, post-crash longitudinal velocity change information, as well as seat belt use and general airbag deployment command parameters. It is noted that this information is recorded by the ECU from several sources, including the Powertrain Control Module (PCM), the Anti-Lock Brake System (ABS) Module or other systems wired directly to the ECU. Following a collision event the ECU can store up to two events for each of the three types of triggers: Front/Rear, Side, Rollover. If the event commands the

airbag to deploy, the event is locked into the ECU and cannot be overwritten. If the event does not command the airbag to deploy, the event can be overwritten.

It is stated that the data obtained from vehicle Electronic Control Unit is not intended to stand alone, or in place of a complete reconstruction and causation analysis. Recovered information should be utilized in conjunction with professional analytical techniques and procedures. It is strongly recommended that all information downloaded from the vehicle on-board recording devices be analyzed and interpreted by properly trained personnel.

As part of this investigation, a search warrant was obtained to acquire the recorded data from the ECU of the 2007 Lexus ES350, VIN: JTHBJ46G872091095, registered to Larry Fortun, involved in this crash. The driver's steering wheel and knee bolster air bags deployed in this collision event. The vehicle was secured and towed as evidence tow #1558317 to the City of Milwaukee Tow Lot, 3811 W Lincoln Ave, and placed inside building Z.

On Tuesday, November 13, 2012, Wisconsin State Patrol Trooper William Ryan responded to the City of Milwaukee Tow Lot, 3811 W Lincoln Ave, to download the Event Data Recorder (EDR) contained within the ECU. Trooper Ryan connected the Crash Data Retrieval (CDR) system to the vehicles Diagnostic Link Connector. Trooper Ryan was able to successfully download the information contained in the EDR by following the manufacturer's procedure. Trooper Ryan saved the CDR report and turned it over to the Milwaukee Police Department for analysis.

The download from the ECU of the 2007 Lexus generated a 13-page CDR report. There were two Front/Rear Events. The events recorded are listed as Most Recent Event and 1st Prior Event. The trigger (TRG) count for the Most Recent Event is 2 and the TRG count for the 1st Prior Event is 1. The Pre-Crash & DTC Data Recording Status is listed as complete. The time between the Most Recent Event and the 1st Prior Event is listed as -16381 milliseconds or greater, which is the maximum amount of time recorded between events.

Event Record Summary at Retrieval

Events Recorded	TRG Count	Crash Type	Time (msec)	Pre-Crash & DTC Data Recording Status	Event & Crash Pulse Data Recording Status
Most Recent Event	2	Front/Rear Crash	0	Complete (Page 1)	Complete (Front/Rear Page 1)
1st Prior Event	1	Front/Rear Crash	-16381 or greater	Complete (Page 0)	Complete (Front/Rear Page 0)

The ECU recorded 4.4 seconds of pre-crash data for both the Most Recent Event and the 1st Prior Event.

Pre-Crash Data, -5 to 0 seconds (Most Recent Event, TRG 2)

Time (sec)	-4.4	-3.4	-2.4	-1.4	-0.4	0 (TRG)
Vehicle Speed (MPH [km/h])	75.8 [122]	75.8 [122]	75.8 [122]	75.8 [122]	75.8 [122]	75.8 [122]
Brake Switch	OFF	OFF	OFF	OFF	OFF	ON
Accelerator Rate (V)	1.68	1.56	1.56	1.52	1.41	0.78
Engine RPM (RPM)	2,400	2,400	2,400	2,400	2,400	2,400

Pre-Crash Data, -5 to 0 seconds (1st Prior Event, TRG 1)

Time (sec)	-4.4	-3.4	-2.4	-1.4	-0.4	0 (TRG)
Vehicle Speed (MPH [km/h])	42.3 [68]	41 [66]	37.3 [60]	26.1 [42]	8.7 [14]	1.2 [2]
Brake Switch	ON	ON	ON	ON	ON	ON
Accelerator Rate (V)	0.78	0.78	0.78	0.78	0.78	0.78
Engine RPM (RPM)	800	800	800	400	400	400

The System Status at Event was recorded for both the Most Recent Event and the 1st Prior Event. In reviewing the 1st Prior Event, the data shows that airbag deployment was not commanded. A review of records related to this particular vehicle revealed the vehicle was involved in a crash on February 24, 2012, (Shawano County Sheriff's Office, Report A331089) in which the Lexus was struck from behind by another vehicle. According to the narrative section of the crash report related to that crash, the Lexus was slowing for a stopped vehicle when it was struck from behind. The data recorded and listed as the 1st Prior Event is consistent with the dynamics of the February 24, 2012 crash and is not consistent with the November 3, 2012 crash incident.

System Status at Event (Most Recent Event, TRG 2)

Recording Status, Front/Rear Crash Info.	Complete
Crash Type	Front/Rear Crash
TRG Count (times)	2
Previous Crash Type	No Event
Time from Pre-Crash TRG (msec)	0
Linked Pre-Crash Page	1
Time to Deployment Command, Front Airbag, Driver (msec)	6
Time to Deployment Command, Front Airbag, Passenger (msec)	6
Event Severity Status, Driver	Level 3
Event Severity Status, Passenger	N/A
Time to Deployment Command, Pretensioner (msec)	2

System Status at Event (1st Prior Event, TRG 1)

Recording Status, Front/Rear Crash Info.	Complete
Crash Type	Front/Rear Crash
TRG Count (times)	1
Previous Crash Type	No Event
Time from Pre-Crash TRG (msec)	0
Linked Pre-Crash Page	0
Time to Deployment Command, Front Airbag, Driver (msec)	Not Commanded
Time to Deployment Command, Front Airbag, Passenger (msec)	Not Commanded
Event Severity Status, Driver	N/A
Event Severity Status, Passenger	N/A
Time to Deployment Command, Pretensioner (msec)	Not Commanded

An analysis of the pre-crash data for the Most Recent Event was conducted. The pre-crash data obtained for the Most Recent Event includes six distinct data points for the five seconds prior to trigger establishment. The time is recorded in one-second increments beginning with -4.4 and ended with 0. The Vehicle Speed recorded for the five seconds prior to trigger establishment is 75.8 mph. According to the data limitations, the upper limit for the recorded vehicle speed is 75.8 mph. The resolution is 1.2 mph and the value is rounded down and recorded. The Brake Switch is indicated as OFF for data points -4.4, -3.4, -2.4, -1.4, and -0.4. At data point 0 (TRG) the Brakes Switch is indicated as ON. This indicates that the break switch was activated between .39 seconds and 0 seconds prior to trigger establishment. The Accelerator Rate is recoded in volts. The voltage rate increases as the driver depresses the accelerator. Full pedal application equals 3.5 volts while 0.78 volts indicates no pedal application. The

Accelerator rate is recorded as 1.68 volts at data point -4.4. The rate steadily falls through the remaining data points until the rate is recorded as 0.78 volts at data point 0 (TRG). The Engine RPM is recorded as 2,400 for each of the six data points prior to trigger establishment. According to the data limitations, the recorded value has an upper limit of 5,200 RPM. The resolution is 400 RPM and the value is rounded down and recorded. With a recorded value of 2,400 RPM, the actual engine RPM is between 2,400 RPM and 2,799 RPM.

Pre-Crash Data, 1 Sample (Most Recent Event, TRG 2)

Recording Status, Pre-Crash/Occupant	Complete
Time from Pre-Crash to TRG (msec)	400
Buckle Switch, Driver	Unbuckled
Buckle Switch, Passenger	Unbuckled
Occupancy Status, Passenger	Not Occupied
Seat Position, Driver	Rearward
Shift Position	Drive

A pre-crash data sample was taken 400 milliseconds prior to the Most Recent Event. This data sample indicates that both the Buckle Switch for both the Driver and Passenger are recorded as Unbuckled. The Occupancy Status for the passenger seat is recorded as Not Occupied. The Seat Position, Driver is recorded as rearward. The recorded Shift Position is Drive.

In summary, in analyzing the Most Recent Event, the recorded vehicle speed for the six data points prior to trigger establishment is 75.8 MPH, the maximum recorded value. The brake switch is activated between 0 and -0.39 seconds prior to trigger establishment. The Buckle Switch, Driver is recorded as Unbuckled and the Occupancy Status, Passenger is Not Occupied.

SPEED ANALYSIS

After review of the police crash reports, examination of the vehicle involved, a direct site examination of the intersection at the time of the crash and based on our training and experience in Traffic Crash Reconstruction, our investigation revealed:

1. The speed of the Lexus ES350 at the time of impact was calculated to be in the range of **77-84 mph.**

This calculation was determined using several factors. Skid tests were preformed on the roadway in the area of impact. Using a Vericom VC2000 Performance Computer, it was determined the roadway in the area of impact has a friction value of 0.8g.

In addition to calculating the speed of the Lexus at the time of impact, a time-distance study was conducted to determine how far from the area of impact the Lexus was when Finch entered the roadway. The westbound lanes of West Fond du Lac Avenue are thirty-six (36) feet wide, curb to curb. This collision occurred in the center of the right lane of westbound traffic. Finch entered the roadway from the center median on the west side of West Fond du Lac Avenue. It is

approximately twenty-five (25) feet from the east edge of the center median to the center of the right lane for westbound traffic on West Fond du Lac Avenue. The Manual on Uniform Traffic Control Devices assumes a normal rate for pedestrians of 4 feet per second. The American Association of State Highway and Transportation Officials state that walking rates are faster at mid-block than at intersections and are faster for men then women. For the purposes of this study, calculations were made at both 4 feet per second and 6 feet per second.

Based on an assumed travel rate of 4 feet per second, it would have taken Finch 6.25 seconds to travel from the east edge of the median to the center of the right lane of westbound traffic. An assumed travel rate of 6 feet per second would have taken Finch 4.2 seconds to travel from the east edge of the median to the center of the right lane of westbound traffic. As previously stated, the westbound lanes of W. Fond du Lac Ave. are thirty-six (36) feet wide, curb to curb. At an assumed travel rate of 4 feet per second, it would have taken Finch 9 seconds to cross all lanes of traffic, while at an assumed travel rate of 6 feet per second it would have taken Finch 6 seconds to cross all lanes of traffic.

Using a pedestrian travel speed of 4 feet per second, along with the speeds calculated for the Lexus, the Lexus would have been between 710 feet and 778 feet from the area of impact when Finch entered the roadway. Using a pedestrian travel speed of 6 feet per second, along with the speeds calculated for the Lexus, the Lexus would have been between 477 feet and 523 feet from the area of impact.

The posted speed limit on West Fond du Lac Avenue at the location of this incident is 35 miles per hour. Using all the previously discussed scenarios as to the travel speed of Finch and the Lexus, as well as the distances from the area of impact, had the Lexus been traveling 35 miles per hour, Finch would have cleared the westbound lanes of traffic by the time the Lexus arrived at the area of impact.

VEHICLE FACTORS

In an effort to thoroughly examine any possible contributing factors to this collision, the National Highway Traffic Safety Administration's Office of Defects Investigation (ODI) database on vehicle recalls and campaigns was researched in regards to the 2007 Lexus ES350.

It was found that two recalls and/or campaigns existed that were related to the 2007 Lexus ES350 line of vehicles, none of which would have affected the vehicles ability to function at the time of the crash.

A subsequent search with CARFAX.com and a vehicle history report on the vehicle identification number (JTHBJ46G872091095) for the 2007 Lexus ES350 revealed the Lexus had one previous owner. Although NHTSA reported that there were four active recalls for the 2007 Toyota line of vehicles, there were no

issues reported relating to the Structure/Frame Damage check, Airbag Deployment check, Odometer Rollback check, Accident/Damage check, and the Manufacturer Recall check of this particular vehicle, prior to the crash being investigated.

HIGHWAY AND ENVIRONMENTAL FACTORS

- **Highway Factors**

According to reports and personal observations, the roadway appeared to be regularly maintained. There was no debris or defect present on the roadway. No highway factors have been identified that would have been a contributor to this crash.

- **Environmental Factors**

Historical weather data for Milwaukee compiled by the National Weather Service and archived by the website www.weatherunderground.com in Ann Arbor, MI, indicated that conditions at the time of the crash on Sunday, November 4, 2012, from the Timmerman Airport weather station were as follows: temperature 28.0°F, dew point 24.8°F, relative humidity 86%, winds were calm, barometric pressure 29.9 in. As of this report, no environmental factors have been identified that would have contributed to the collision.

INVESTIGATIVE SUMMARY

The following statements are the opinions of the authors and are based on all of the information included in this report. These opinions are based on our training and experience in the field of crash investigation/reconstruction. These statements are accurate to a reasonable degree of scientific certainty and are based on sound scientific principles.

- This crash occurred on Sunday, November 4, 2012 at approximately 2:09 a.m., a 2007 Lexus ES350 was traveling northwest bound on West Fond du Lac Avenue approaching the intersection with West Armitage Avenue. A pedestrian was crossing West Fond du Lac Avenue eastbound. The front of the Lexus ES350 collided with the pedestrian. The Lexus ES350 slowed to a stop near 6414 West Fond du Lac Avenue where the driver briefly exited the auto before fleeing the scene in a northwest direction on West Fond du Lac Avenue.

- The pedestrian was fatally injured as a result of this crash.

- No vehicle factors have been identified that would have contributed to the collision.

- No environmental or highway factors have been identified that would have contributed to the collision.

- No active recalls and/or campaigns existed that were related to the function of the vehicle.

- The speed of the Lexus ES350 at the time of impact was calculated to be in the range of **77-84 mph.**

Respectfully Submitted,

Police Officer William Hanney
Neighborhood Task Force
Crash Reconstruction Unit

Police Officer Richard Schnier
Neighborhood Task Force
Crash Reconstruction Unit