STATE FIRE MARSHAL'S OFFICE

Line of Duty Death Investigation

Investigation Number 03-194-01

Firefighter James Taylor
Bonham Fire Department
January 19, 2003

Texas Department of Insurance
Austin, Texas

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Summary

Firefighter/EMT-I James Edward Taylor, age 28, died from injuries sustained in a motor vehicle accident while responding to another serious traffic accident occurring on January 19, 2003. Taylor was an employee of the Bonham Fire Department.

Taylor was a passenger in the front seat of a Bonham Fire Department ambulance when another vehicle crossed the center line and struck the ambulance head on. Taylor was killed instantly and his body was trapped in the front passenger seat area. A post-crash fire consumed much of the cab of the ambulance.

The driver of the other vehicle was also killed instantly and her vehicle also caught fire after the crash. The cause of the crash has been attributed to the driver of the vehicle that struck the ambulance being distracted or not paying attention.

Firefighter/EMT-I James Edward Taylor served in the Bonham Fire Department for six months. He is survived by his spouse and two children.

Introduction

The Texas State Fire Marshal's Office was notified of the death of Bonham firefighter James Edward Taylor on January 20, 2003 by Sherman Fire Department Chief Jack Gott. State Fire Marshal's Office (SFMO) Arson Investigator Ed Cheever was assigned as the lead investigator. Cheever traveled to the Bonham Fire Department on January 20, 2003 to meet with Chief Mike Baker and conduct an investigation of the incident.

The SFMO commenced an LODD investigation under the authority of Texas Government Code Section 417.0075. The statute requires SFMO to investigate the circumstances surrounding the death of the firefighter, including the cause and origin of the fire, the condition of the structure, and the suppression operation, to determine the factors that may have contributed to the death of the firefighter. The State Fire Marshal is required to coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist in the investigation.

The National Fallen Firefighter's Foundation and the National Institute for Occupational Safety and Health (NIOSH) Fire Fighter Fatality Investigation and Prevention Program were notified.

Origin and Cause Investigation

Both vehicles involved in the accident caught fire after the collision. Witnesses reported that the fires did not start immediately but may have ignited up to several minutes after the collision.

Vehicle #1, a Wheeled Coach Type III ambulance body installed on a 1995 Ford E-350 cutaway chassis with a 7.3 liter Turbo-Diesel engine, sustained extensive fire damage to the interior of the chassis-cab with some extension to the right front of the ambulance body.

Vehicle #2, a 2001, Chrysler PT Cruiser, sustained fire damage to the engine area with some extension into the passenger compartment.

Both the passenger of Vehicle #1 and the driver of Vehicle #2 were entrapped in the vehicles and sustained post-mortem burns.

No investigation was conducted to determine the ignition sources of the two vehicle fires.

Building Structure and Systems

No buildings were a factor in the fatality.

Investigation of the Death of the Firefighter

On January 19, 2003 at approximately 6:08 a.m., the Bonham Police Department Dispatch received a report of a head-on, two vehicle traffic accident on Farm-to-Market Road 100 approximately five miles north of Honey Grove, Texas. Bonham Fire Department Medic 5 and the Honey Grove Volunteer Fire Department were dispatched to the scene. The first unit from the Honey Grove VFD arrived on the scene of the accident at 6:18 a.m. and requested a medical evacuation helicopter at 6:23 a.m. Medic 5 then requested a second ground ambulance to respond to the accident at 6:25 a.m. Bonham FD Medic 3 left the station for the accident scene at 6:26 a.m.

At 6:34 a.m. Bonham Police Dispatch received a radio call from the driver of Medic 3, Bonham firefighter/paramedic David Hale, who reported Medic 3 had been involved in a serious traffic accident. At the same time, a 911 call came in from Deborah Jones, a resident at 232 East State Highway 56 in Fannin County, who reported a traffic accident involving an ambulance.

When Jones first observed the accident, she said there was no vehicle fire visible. After she called 911, she looked outside and observed flames in both vehicles. Jones and her son, Andrew Betters, carried a fire extinguisher and a blanket to the accident scene. As they approached the scene Jones observed David Hale, the driver of Medic 3, moving back from the wrecked PT Cruiser toward the ambulance. Hale indicated with a hand motion to Jones that the driver of the car, Kathy De Leon, was deceased. Hale, Jones, and Betters attempted to extinguish the fire in Medic 3 and rescue the passenger, firefighter Taylor, who was trapped in the right front seat. They were

unsuccessful at freeing Taylor, and were driven back by the fire in the cab of the ambulance chassis.

At 6:34 a.m. Bonham Fire Department Engine 2, Medic 2, and Rescue 1 left the station for the scene of the ambulance accident. When these units arrived at the scene on State Highway 56 at 6:38 a.m., firefighters observed that both vehicles were on fire. Firefighters extinguished the flames and checked on the occupants of both vehicles. Firefighters observed that both occupants were obviously deceased.

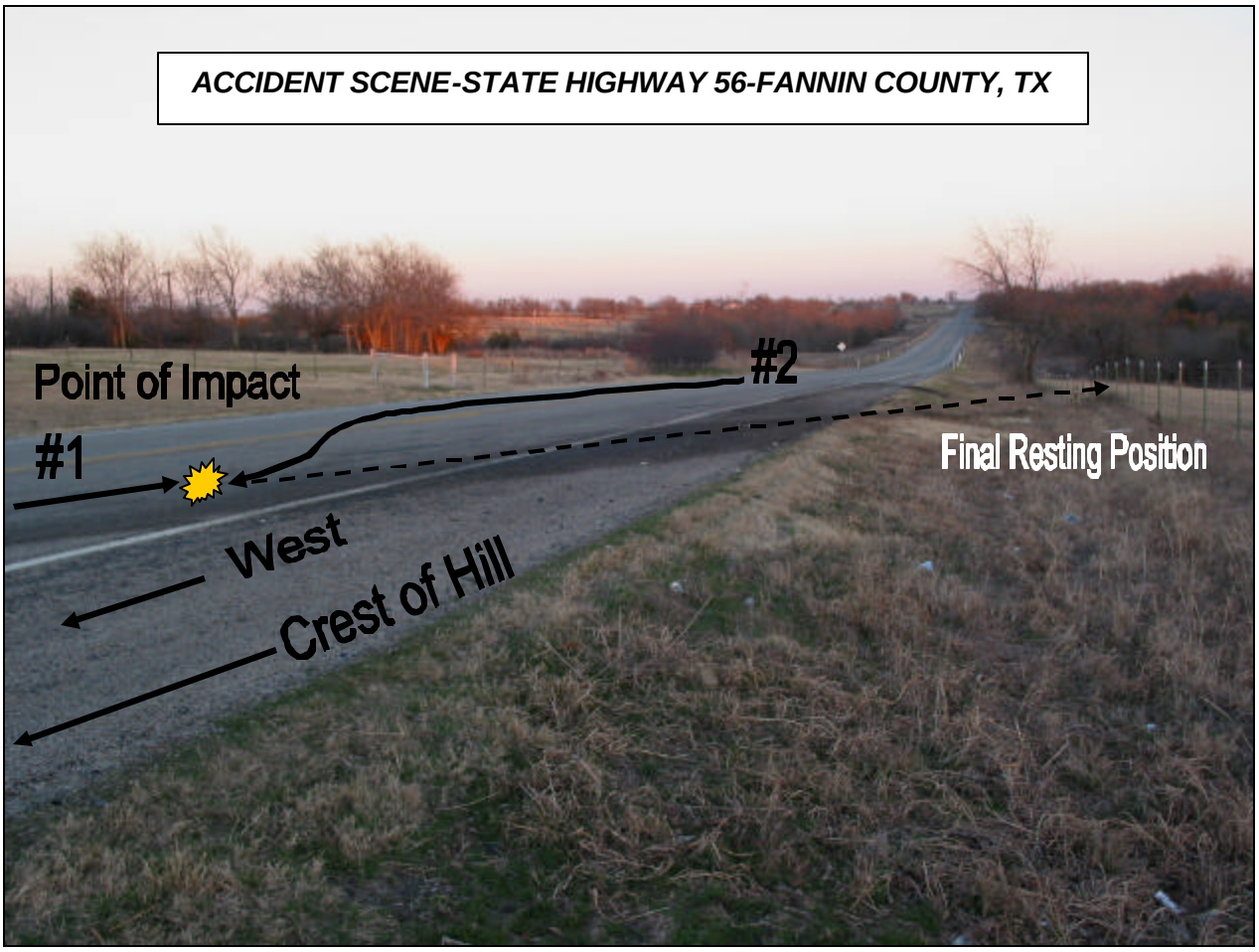
Fannin County Precinct 1 Justice of the Peace Joe C. Dale was summoned to the scene where he pronounced both Taylor and De Leon dead. Judge Dale ordered autopsies of both victims and their bodies were transported to the Dallas County Medical Examiner's Office.

Firefighter/Paramedic Hale was transported by Bonham Fire Department ambulance to Northeast Medical Center in Bonham with facial lacerations.

Texas Department of Public Safety (DPS) Trooper Kevin Verner and a DPS accident reconstruction team investigated the accident. Verner determined that Vehicle # 1, the Bonham Fire Department ambulance, was traveling eastbound on State Highway 56 (SH 56) with emergency warning equipment operating. Vehicle #2 was traveling westbound on SH 56. Vehicle #1 crested a hill and the driver observed Vehicle #2 swerve into the eastbound lane. The left front of Vehicle #2 struck the center front of Vehicle #1. There were no pre-crash skid marks from either of the vehicles. Vehicle #1 was traveling at approximately 60-65 MPH at the time of the accident with emergency warning lights and siren activated.

After the collision, both vehicles came to rest on the grassy shoulder on the south side of SH 56. Vehicle #1 had damaged a barbed wire fence and came to rest facing southwest. Vehicle #2 came to rest approximately 75 feet from the rear of Vehicle #1 facing northeast. Both vehicles caught fire a short time after the impact. The fires were primarily concentrated in the engine compartment and front passenger areas.

Trooper Verner interviewed relatives of the driver of Vehicle #2. They stated that on the morning of the accident, the driver, Kathy DeLeon, awakened at 6:10 a.m. and was scheduled to be at work in Bonham at 6:30 a.m. The accident report did not estimate the speed of DeLeon's vehicle at the time of the accident. (See following two pages for pictures of the accident scene and a diagram.)



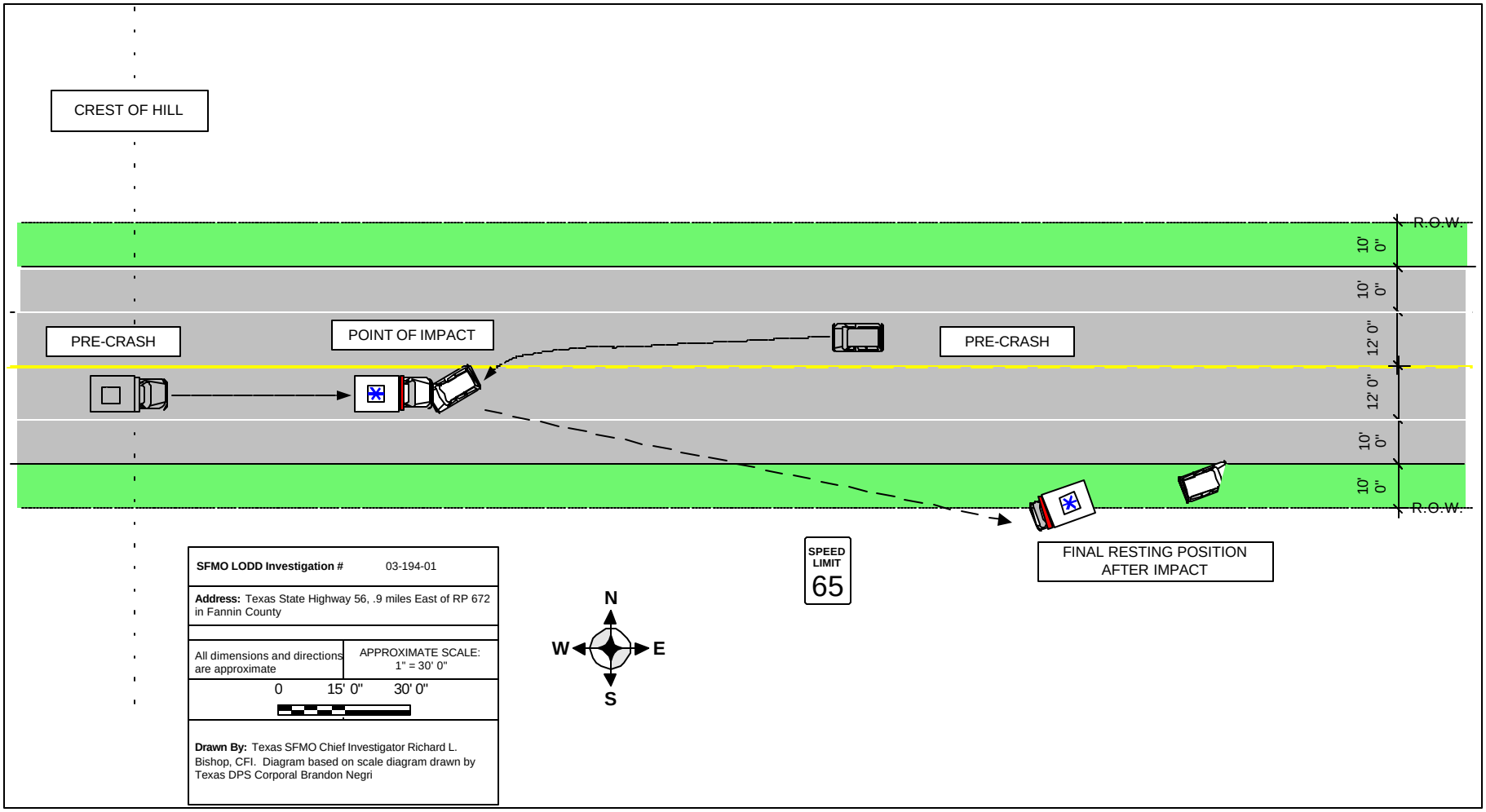
Weather and Road Conditions

It was dark at the time of the LODD incident at approximately 6:34 a.m. Sunrise on that date was 7:28 a.m. The two-lane asphalt roadway was dry with no loose foreign material. There was no construction in the area and there was no roadway lighting. The road has paved shoulders on each side of the traffic lanes. The weather was clear.

The incident occurred on a straight, moderately sloped section of SH 56. The roadway crests a hill just west of the accident scene. The posted speed limit in the area is 65 MPH.

Personal Protective Equipment Evaluation

Firefighter/EMT-I Taylor was not wearing any firefighter personal protective equipment at the time of the accident. He was restrained in the ambulance by a properly worn three-point lap and shoulder seatbelt assembly. He was wearing his fire department uniform of knit blue shirt, black pants, and leather boots.


CREST OF HILL
PRE-CRASH
POINT OF IMPACT
PRE-CRASH
R.O.W.
10' 0"
10' 0"
12' 0"
12' 0"
10' 0"
10' 0"
R.O.W.
SPEED LIMIT
65
FINAL RESTING POSITION AFTER IMPACT
N
W
E
S
SFMO LODD Investigation # 03-194-01
Address: Texas State Highway 56, .9 miles East of RP 672 in Fannin County
All dimensions and directions are approximate
APPROXIMATE SCALE: 1" = 30' 0"
0 15' 0" 30' 0"
Drawn By: Texas SFMO Chief Investigator Richard L. Bishop, CFI. Diagram based on scale diagram drawn by Texas DPS Corporal Brandon Negri

Examination of Fire Department Vehicle

Vehicle #1 was a 1995 Ford E-350 RV cutaway chassis with a Type III Wheeled Coach ambulance body mounted to the frame. The ambulance was acquired as a used vehicle by the Bonham Fire Department from East Texas Medical Center in July 2002.

The gross vehicle weight listed for the vehicle was 10,500 pounds. The Texas Department of Public Safety weighed the vehicle after the accident and found that it weighed 11,800 pounds without crew or patients. It was not possible to determine the total mileage on the vehicle because of fire damage, but fire department records show Medic 3 had 312,657 total miles shortly before the accident in January 2003.

The engine and transmission were replaced in July and August 2002, respectively. The vehicle underwent modifications based on Ford factory recall # 98S08 on August 12, 2002. The recall was because of fuel line chafing in similar vehicles which could cause a fuel leak or fire.

There was significant deformation of the vehicle and intrusion into the passenger space caused by the collision. The cab doors were removed with rescue tools when Taylor's body was removed from the vehicle. Other than fire damage, there was not significant damage to the ambulance box assembly.

Medical Examination of Victim

The Dallas County Medical Examiner's report stated that Firefighter/EMT-I Taylor died of blunt force injuries. These injuries included a hinge fracture of the skull, subdural and subarachnoid hemorrhages, fractures of the left fifth though seventh ribs, contusions and a hemothorax of the left lung, and a transected aorta.

Taylor sustained thermal burns to approximately 90% of his body, most of which were third-degree burns, and a thermally induced epidural hemorrhage. The autopsy indicates these burns occurred post-mortem as no soot was found in the lower airways and the blood carbon monoxide was less than 3%.

Findings

Finding 1: Overloading of the fire department ambulance by more than 1,300 pounds over Gross Vehicle Weight (GVW) combined with an estimated speed of 60-65 MPH created additional inertia which may have resulted in more vehicle damage than if the vehicle was at or below the correct GVW. Overloading may have affected vehicle handling, performance, and braking.

Finding 2: The ambulance's driver had not undergone department-prescribed driver training. It is not known whether such training would have enabled the driver to avoid the accident. Time for evasive action may have been limited. The limited line-of-sight may have reduced opportunities for driver response to the situation.

Recommendations

Recommendation: Fire departments should weigh all vehicles and compare weights to the Gross Vehicle Weight (GVW) listed on the federally required label. Equipment loads should be adjusted to bring weights to a level at or below GVW. Allowances should be made for the weight of the largest foreseeable number of crew and passengers aboard and a full fuel tank.

Recommendation: The State Fire Marshal's Office recommends that all fire departments use NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program,* as a guide for all fire protection operations.

> NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program,* Chapter 5.1.1 through 5.1.3 states: "The fire department shall establish and maintain a driver training and education program with the goal of preventing vehicular crashes, deaths, and injuries to members, employees, and the public."

“The fire department shall provide, to all fire department members, driver training and education that are commensurate with the duties and functions members are expected to perform, in order to ensure that they are able to perform their assigned duties in a manner that does not pose a hazard to themselves, other members, or the general public.”

“Members shall be provided with driver training and education appropriate for their duties and responsibilities before being permitted to operate fire department vehicles or apparatus."

NFPA 1500, Chapter 5.3.2 states: “All fire department members who drive fire service vehicles shall meet the objectives specified in Chapter 2 of NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications.*” This chapter applies to all fire department vehicles, including administrative vehicles and ambulances. Other chapters of NFPA 1002 follow with objectives for operators of specialized apparatus such as pumpers, aerial apparatus, etc.