



Accident-scene evidence

Securing and preserving evidence from the accident scene can make your case. Don't wait until it's too late

BY JOHN D. ROWELL

In every case I have handled – well, almost every case – I didn't find out about the accident until weeks or months after it happened. My experience is not unusual.

If you're fortunate enough to get to the scene within hours after the accident, photograph all the damage and the position of the vehicle(s) and measure distances from the vehicles to two stationary objects (telephone pole, stop sign, signal, etc). Remember to photograph all tire marks. When taking photographs of tire marks, make sure to take one set of pictures of each mark *facing in the direction the vehicle was traveling*. Tire marks appear much more distinct in photographs taken in the direction of travel.

If you are not so fortunate as to be present within hours of the accident, you must look to other sources of contemporaneous observation and information. Every lawyer knows enough to obtain a copy of the police report and police photos, so in this article I will identify other sources you can look at to obtain information and evidence concerning the scene and how the accident happened.

Red-light cameras

This is my favorite. For good or bad, the so-called "red-light camera" programs are proliferating. These cameras monitor both intersections and approaches to intersections. Red light cameras are money-makers for many jurisdictions and we can expect to see their numbers grow.

The systems are found throughout the Bay Area and Northern California, primarily located in areas of heavy traffic

at "dangerous" intersections. If you have an intersection-collision case, it is always a good idea to check with the particular jurisdiction to see whether or not the intersection happens to have been part of their red light program. (You can Google "red-light camera San Francisco" (or any other city) for sites that list locations of these cameras.)

From a practical standpoint, serving a subpoena on the jurisdiction to obtain copies of any photographs taken during a particular time period is likely to garner minimum results. It is generally better to call the police department of the particular jurisdiction, ask for the person in charge of photo-tickets and find out if the intersection in question was monitored. If so, you can usually get a callback with information as to whether or not any photo-tickets were issued during the pertinent time period. The next step would be a person-most-qualified deposition, coupled with a document request for photographs and tickets issued during a very discrete window of time.

Assuming you are able to obtain relevant information (including the fact that no red light photo was taken during the time of your accident), you may wish to investigate to determine which contractor has been employed to install and operate the system. A few minutes on the telephone will identify the contractor for you. You can also specify in your Person Most Qualified (PMQ) notice that the person to be produced by the City also be the person most qualified to talk about the contractor, the equipment, and operation of the equipment. As might be expected, such evidence is extremely persuasive, if not conclusive.



Photograph 1

Tire marks

Pre-impact tire friction marks are frequently observed on the roadway at the scene of a traffic accident. Pre-impact tire marks are those leading up to the point of impact. Common examples are locked-wheel skid marks that result from panic braking. Another example consists of marks that follow the curved path of a vehicle to the point where it trips and rolls over.

Even weeks and months after the accident, tire marks can often still be seen. Photograph and measure them. Again, make sure you take at least one set of photographs looking in the direction of travel. When deciding what marks are from your accident, it is usually useful to use the police photographs for comparison and identification. If there are no photographs, you obtain a description from the police report or eyewitnesses.

Tire friction marks are used to calculate pre-impact speeds. Their general



shape, linear or curved, will indicate the type of mark that is observed and will dictate the means used to calculate speeds and trajectories. Thus, it is very important to obtain accurate measurements and photos of all tire marks. The different types of marks and their significance are described below. These descriptions were taken from an article by accident reconstructionist Kurt Weiss (Advocate magazine, Sept. 2008. www.caala.org). His article goes on to explain precisely how speed can be calculated from the different marks.

Locked-wheel skid marks

When a tire is free-rolling straight, the velocity of the tire contact patch is zero relative to the road. A retarding force on the tire is generated by the road surface when the vehicle's brakes are applied. At the moment of braking, the velocity of the tire contact patch is no longer zero, but increasing. Once locked, the tire begins to slide. The tire compound is heated by friction and is transferred to the roadway surface leaving discernible marks. In the case of linear, locked-wheel skid marks, the length of the tire marks along with the coefficient of friction of the road surface can be used to determine the vehicle's pre-braking velocity. In a collision case, the amount of velocity reduction from braking *must be added* to the estimated impact speed based upon vehicle damage in order to obtain pre-braking velocity.

A passenger car traveling at a high rate of speed impacted the side of a large trash truck that entered the road and crossed its path. The driver of the car observed the hazard of the encroaching trash truck and braked hard, locking the wheels. The police investigator measured the tire friction marks and determined the left side was approximately 138 feet long while the right side was approximately 156 feet long. Photograph 1 is a photograph taken at the collision scene. Photograph 1 shows the tire marks when the passenger car started the locked-wheel skid.

A tire friction mark resulting from a locked wheel under hard braking is characterized by a dark, tire-width band.

Looking closely, photograph 1 clearly reveals longitudinal striations in the tire marks. Longitudinal striations are a result of the tire tread pattern under straight line skidding.

Critical speed scuff marks

For example, a vehicle in a high speed turn began to yaw, then drifted to the outside of the turn, while leaving critical speed tire friction marks. This sideways movement of a tire is often referred to as tire sideslip. Slipping of a tire can occur when steering. During cornering, tires may exceed the available friction limits of the road surface and slip. Once the tires begin to slip, the tires will leave friction marks. The marks left by a vehicle in a cornering maneuver can also be used to determine vehicle velocity.

Photograph 2 shows the critical speed scuff marks from a vehicle in yaw. The tire mark observed follows the path of the left front tire. It begins in the foreground of the photograph, to the right of the double-yellow centerline, adjacent to evidence marker #1. The friction mark follows a curved path, arcing to the right. The tire mark ends in the foreground of the photograph to the left of the centerline, adjacent to the second evidence marker #1.

The vehicle was traveling at approximately 55 mph when it entered the right-hand turn and began to slide into the oncoming lane. There are many frustrating instances where physical evidence, clearly observed in collision scene photographs, is not measured and documented in the traffic report. Your job is to get this information and get it accurately.

Yaw friction marks

Another example is as follows: A large SUV is traveling at high speed on a two-lane highway. The right rear tire suffers a complete tread separation, and then deflates. The SUV begins to yaw uncontrollably counter-clockwise. The SUV travels across the opposing traffic lane and rolls over on the shoulder.

The tire friction marks observed on the roadway in Photograph 3 are characteristic of yaw marks. The heaviest,

more pronounced and apparent marks are those from the leading side tires, because the weight shifts toward the tires on the leading side of the vehicle in yaw. In this case, the right front and rear tires leave heavy rubber transfer marks. Also visible in the photograph is the tire friction mark from the left rear tire. The left rear mark displays classic striations and intersects the track left by the right front tire mark.

Similar to critical speed tire marks, yaw friction marks reveal diagonally oriented striations representing the direction of the vehicle slide. These marks indicate the tires have exceeded the friction limits and have begun to sideslip. A tire that is sideslipping is partially rolling and partially sliding.

Intersection collisions

When dealing with an intersection collision, you will need to obtain more information about the physical surroundings at the accident site. If you have an intersection controlled by lights, you will want to get the following information:

- As-built plans
- Lane striping drawings (may be the same as as-builts)
- Signal timing chart
- Signal maintenance logs



Photograph 2



To obtain this information you will need to make information requests with the appropriate agency at either the city, county or state level (depending on who has control of the intersection in question). In some cities, you can simply call the traffic engineering department and request the information; it may be delivered by mail or email.

In intersection collision cases, witness testimony can be severely impeached by the mechanics of signal operation. Most witnesses have a very poor memory of time increments. However, you can probably rely on traffic pattern, i.e. light or heavy in certain directions. The location and movement of other vehicles and pedestrians will influence the operation of traffic signals.

(For more details see Landerville, Jon B., Advocate, November 2009, www.caala.org) "Disputed Red Light Accidents.")

First responder reports

We all know that police reports are prepared for significant traffic accidents. It would be a rare auto case indeed where any of us would feel comfortable without having a copy. Similarly, emergency room records are always obtained. But there is much more.

Paramedics

When fire department paramedics respond to an accident, the police report may or may not list the station numbers and/or unit number. As might be expected, paramedics create their own paperwork, and patient-care reports. These forms will include a description of the accident, usually taken from the patient or others in the vicinity. Their fire station will have a log with a brief description of the accident. The paramedics and/or the ambulance will be in contact with their base hospital by radio. Tapes are made of these contacts. The tapes are retained for a short period, often six months or less.

This material should give you accurate times. Usually, a brief description of the accident is included in the paramedic paperwork as well as the station log; this



Photograph 3

paperwork will normally include a statement that the patient was or was not using a seatbelt. The tapes of conversations between the paramedics, ambulance and base hospital can be quite dramatic in an understated way.

Air ambulance

If your client was taken by air ambulance to a hospital, there may be a transcript of messages (as well as tapes) with times and call signs. The on-board nurse will have filled out forms (usually completed when they arrive at the hospital). There will be some handwritten entries, but most will be electronic, entered on a portable computer. A print-out will give you entries for patient information, flight information, history, vitals, examination and treatment. The history will include a description of the accident, *often inaccurate*.

How inaccurate? In one case, an SUV was traveling at 70 mph east-bound in the fast lane on the Palmdale Freeway; it was side-swiped, crashed into the center barrier and then cut across all traffic lanes and went over an embankment. The entry describing the accident was: "MVA, rollover, ejected, initial speed 55, no protective devices used." In fact, the evidence showed the client had to be extracted from the front seat of the vehicle; his seatbelt was in use; there was no rollover; and the speed as mentioned, was 70

mph. No reference to the other vehicle appeared anywhere in the print-out.

Ground ambulance

The standard California Traffic Collision Report (TCR) form will identify, on page three, who transported an injured party and the location to which they were transported. The information is normally self-explanatory. The TCR will also include the entries identifying fire department para-

medics (by unit or badge number). Fire department responsibility is geographical. A few calls to the local police or fire department will identify the station that would respond based upon the site of the accident.

If the patient was transported in a city fire department vehicle, there will be a city record which includes a description of the accident. The emergency medical services billing unit will provide an invoice and an incident report. The final incident report is entered by keyboard and will include the engine numbers, employee numbers, times and location. It will also include a description of the accident under "Comments" and a section on vital signs, medical history, and treatment. The comments can be quite detailed.

Private ambulance records are more detailed than most city fire department incident information records. For example, the American Medical Response forms give the names and numbers of all personnel and much of the same information as the air ambulance forms. Unlike the air ambulance, the ground ambulance forms are filled out by hand. While the risk of default entries is thus eliminated, deciphering the handwriting and translating the entries can be an exercise in frustration. However, ambulance paramedics do not reach the levels of



illegibility demonstrated by doctors and lawyers.

Ambulance paramedics also tend to offer descriptions of accidents which are beyond what even a percipient witness could offer. In one multi-vehicle accident in which a pick-up rolled over, the AMR form describes the accident as, "full-size pickup rollover approximately 3 times." Of course, the ambulance driver had no idea how many times the pickup had rolled, and was repeating something someone said at the scene. The accident reconstruction by both plaintiff and defendant's experts concluded there had been only one roll.

Towing records

If you have a case where the vehicle was towed from the accident scene, page one of the Traffic Collision Report will identify who ordered the tow and, if the officer did, the company which towed the vehicle. Towing company records are sketchy. However, the actual towing sheets will have a general description of the accident and may include some comment about your client or the other driver.

Photographs and more

In the top left hand corner of the first page of the standard California Traffic Collision Report will be a notation

of the identity of any police officer who took photographs of the accident scene. These can be obtained through the police department, usually shortly after the TCR is available. Most photographs are now taken by digital cameras. You can and should get digital copies of the photograph files from the police agency. It's always fun to cross-examine the defense accident reconstructionist who has been given only Xerox copies of photographs when you have the much clearer digital version.

More and more agencies are using electronic surveying equipment to generate accident diagrams. The Arizona Department of Public Service (analogous to our CHP) uses a system which integrates with the Global Positioning System. This information, both in raw form and as incorporated into the program used to generate the accident scene diagram, is available on disk. Some California agencies use the same type of equipment. Less sophisticated programs are used by the California Highway Patrol to create computer generated accident diagrams. With a little work, you can get a copy of the data set used to generate the accident diagram, as well as the actual computer file of the accident diagram. Your accident reconstructionist will take you out to lunch if you give her a copy of these files. You

may also save yourself and your client substantial costs (not including the free lunch).

The 911 call

Digital recordings of 911 calls are available but they are not kept for long periods. Such calls are often made by passing motorists. Many times these witnesses either do not stop or leave the scene before they are identified on the police report. Such witnesses are particularly important as they are most likely to actually have seen the accident. The recordings will help you identify potential witnesses (usually by name and phone number) and will include a description of the accident by a percipient witness.



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