Los Angeles Police Department
LD 29 Traffic Collision Investigations
EV4 Traffic Enforcement
S20 Traffic Collision

Date Revised: 10/2019

Course Goal: Peace officers need to know how to effectively manage traffic collision scenes to ensure their safety, the safety of others and protect the integrity of the collision scene to preserve evidence. The recruit officer will be provided with basic skills necessary to investigate a collision scene and how to properly document it in a report.

Learning Objectives:

- Discuss safety hazards that officers should be aware of when approaching the scene of a traffic collision**. [29.I.A]**
- Demonstrate appropriate peace officer actions when managing a vehicle collision scene, including: Caring for injured and involved parties, protecting the collision scene, collecting and preserving evidence **[29.I.B] [29.I.B.1,2,3]**
- Distinguish between different types of physical evidence that may be located at a collision scene and recognize the type of information they may provide. **[29.II.A]**
- Distinguish between a skid mark and a tire impression. [29.II.B]
- Describe ways of linking a tire mark with a vehicle. **[29.II.C]**
- Classify the three causes of skid marks. **[29.II.D]**
- Describe the variables to consider when determining the order of taking measurements at a vehicle collision scene. **[29.II.E]**
- Determine appropriate reference points/lines to use when taking measurements at a vehicle collision scene. **[29.II.F]**
- Distinguish between primary collision factor and associated collision factor. **[29.II.G]**
- Describe the components of standardized reporting formats used to document a collision. **[29.III.A]**
- Distinguish between the types of collision documentation, including: Collision investigation format, Collision report format. **[29.III.B] [29.III.B.1,2]**
- Prepare components of a traffic collision report, including: Description of injuries, identification of involved parties and vehicles, Time and location of collision events, Chronology of the collision events, Elements unique to hit-and-run and Driving-Under-the-Influence (DUI) collisions. **[29.III.C] [29.III.C.1-5]**
- Primary and associated collision factors, Area(s) of impact, Scene sketch. **[29.III.C.6,7]**

Time: 2 Hours

Resources:

- Laptop with media software developed for this session.
- LD 29
- Flipchart paper and markers.
- CHP 555 blank form
- CHP 555 box by box (2 documents)
- CHP 556 short form

- AOI Traffic Collision Exercise Worksheets (6 Pages)
- Quadrant method of measurement handout
- 4.37 Exchange of info only Handout

Session Summary: The recruit will learn the basics in traffic collision investigation.

Outline	Instructor Notes
I. Traffic Accident Investigation A. Vehicle Collisions 1. A collision is an unintended event that produces damage or injury (including fatal injury). 2. A vehicle collision is any collision between at least one vehicle and anything else, whether man, beast, inanimate object, or another vehicle. 3. Law enforcement responsibilities. a. Manage the collision scene b. Perform the investigative tasks c. Document the collision B. Collision Scene Management 1. Take Control 2. Officers Primary Objectives 3. Factors that officers may consider when responding to a call 4. Emergency response 5. From the time of notification and before arriving at the scene, responding officers should develop a plan of action. 6. Scene safety hazards officers should be aware of when approaching a collision scene. II. Collision Investigations A. Collision Related Evidence	**Ask**: How many recruits have been involved in a traffic collision? **Ask**: What are some leading causes of traffic collisions? • Speeding 22350 VC • Stop required 22450(a) VC • Left turns 21801(a) VC • Following too close 21703 VC • Red lights 21453(a) VC • Starting or backing 22106 VC • Misdemeanor DUI 23152(a) VC **Lecture**: • Type of collision • Parties involved • If injuries • Police response **[29.I]** **Lecture:** Managing a Traffic Collision **[29.I.B.1]** **Lecture:** Caring for Injured **[29.I.B.2]** **Lecture:** Protecting Collision Scene **Ask:** Are there hazards at the scene of a traffic collision? **[29.I.A]** **Lecture:** Scene Safety **[29.IB.3]**

1. Evidence is any testimony, writings, material objects, or other things 2. An involved party is anyone who is directly involved in a vehicle collision. This include: a. Driver b. Pedestrian c. Bicycle d. Person other e. Noncontact involved party f. Contributing violation(s) of a noncontact involved party must be corroborated by independent witnesses, physical evidence, or the person themselves. g. Independent witness(es) h. Passenger(s) i. Uninvolved party 3. A successful interviewer has the ability to obtain information from all parties and record it accurately. a. Prepare for the interview. 1) Separate the involved parties, witnesses, and other individuals. 2) If possible, move the person to a location where there will be no interruptions or distractions. 3) Focus the person's attention on speaking with the officer rather than interacting with others. b. Established Rapport c. Gather identification information. 4. Field interviews	**Lecture:** Collect and Preserve Evidence **Ask:** Do we always require a report for every traffic accident? No report is required when the vehicle is only damaged as a result of a traffic collision and when no injuries or complained of pain. Exchange of information. (Property damage only) LAPD form 4.37 No Injury/Crime exchange only. Complete a traffic report when: Class I • Fatality • Severe injury • Un-booked DUI driver • All CPI vehicles with injuries or without Class II • Any complained of pain or other visible injuries. • Hit and run misdemeanor with the possibility of follow-up. • Misdemeanor DUI arrest when there is no possibility of a traffic felony filing. • Felony DUI with a verified complained of pain or other visible injury, or where the felony booking is based on priors only (23550 VC) • City vehicles with no injury. Private conveyances involved must be unoccupied.

a. Involved parties and witnesses b. An interview is not an interrogation. 5. Officers must consider many possible variables a. Direction of travel of vehicles involved, lane location, mechanical conditions, speed and number of vehicles involved. b. Involved person, Number of occupants, Injuries, Rescue activities/first aid required. c. Environment, weather conditions before, after collision. Location of debris from collision. 6. Elements of the violation a. Every person interviewed should state for each element b. Elements of a traffic violation may also be supported by physical evidence and/or the injuries sustained by the involved parties. 7. Physical evidence that may be found at the scene of a vehicle collision are: a. Debris:. b. Vehicle Fluids: Spatters, trails, Puddles/ pools, Run-off c. Road scars: d. Tire marks, skids marks, tire prints and impressions. 8. Preventing contamination: a. Rain, snow, heat and humidity, sun, wind, or cold	Traffic Collision Report, CHP Form 555-03, may be completed at scene, at a Station desk, or telephonically for any number of parties involved when: • No unusual circumstances exist. • There is property damage only. • If the collision is a misdemeanor hit and run. • The person reporting is the party involved, registered owner, lessee, property owner, or person responsible for the property; and • There is no anticipated prosecution of possibility of follow-up (Department Manual 4/415.07) • Document the collision **[29.II.A]** **Lecture:** Different Types of Evidence **Physical Evidence** • Tire marks • Roadway scrapes and gouges • Items ejected from vehicles • Debris patterns • Body fluid stains, pools, smears • Footprints, hand prints, scuff marks • Fabric, human tissue, clothing, personal objects • Paint transfers on roadway **Officer safety** • Use barricades, signal devices, cones, flares, patrol vehicles, etc. to divert traffic away from the area. • Wearing reflective vests or other types of identification equipment.

b. Officers may need to take actions to protect at-risk evidence at the scene c. Officers should not automatically assume that evidence has been compromised. 9. Collision Scene Documentation a. Maintaining accurate and complete field notes. b. Create an evidence list. c. Take photographs or videotapes of the area and evidence. d. Take accurate measurements identifying the location of each piece of evidence 10. Photographs a. Each photograph should be marked properly to identify, contents of the photograph, location, date and time, and name of photographer. 11. Evidence collection. a. Relevant items that can be collected b. Chain of custody. 1) Absolutely essential 2) Written, witnessed, unbroken record of all individuals who have maintained control of or had access to any physical evidence. 12. Tire Marks and tire impressions. a. Two types of tire marks: 1) Skid mark: Darkened roadway material left by a tire that is	• PPE • Requesting additional resources when necessary. **Ask:** What factors should officers consider when responding to a collision scene? **[29.II.B]** **Lecture:** Skid Mark Vs. Tire Impression

not free to rotate or slid or slip over a surface. 2) Tire Impression: Marks left by a rotating tire that has gone through a liquid or other soft material leaving a "print" of the tire's tread pattern. May also be found in snow, slush, sand, mud, grass, or other impressionable surface. b. Tire marks and vehicles 1) Investigating officers may link a particular tire mark left at a collision scene with a specific vehicle in a number of different ways. a) Check the condition of the vehicle's tires. b) Compare the width of the tires in relation to the width of the tire mark. c) Compare the track width of the vehicle to the skid mark. d) Look for sidewall scuffing. e) Determine the number and condition of the grooves note the position of the vehicle at the collision scene. 2) Causes of skid marks. a) Extreme deceleration: When the braking system of the vehicle causes the wheels to cease rotating or rotate slower than the	**[29.II.C]** **Lecture:** Linking Tire to a Vehicle **[29.II.D]** **Lecture:** Three Causes of Skid Marks

speed of the vehicle. May also occur with an opposing force applied to the vehicle from any direction. b) Extreme acceleration: Occurs when a propelling force or thrust is generated in an amount exceeding the roadway efficiency (e.g., asphalt is more efficient than gravel) Residual tire debris may be observed just prior to the beginning of the mark. c) Extreme change of direction: May result from an intentional effort on the part of the driver, or impact/contact with a fixed object or other vehicle. B. Collision Scene Measurements 1. Measurements are taken to determine where an object is located relative to other objects. Complete and accurate measurements taken at the collision scene are the foundation for speed estimates and conclusions how a vehicle collision occurred. 2. Officer safety a. Prior to taking any type of measurement at a collision scene, officers should make all necessary efforts to protect their own safety	**[29.II.E]** **Lecture:** Taking Scene Measurements Collision Scene Measurement • Complete and accurate measurements taken at the collision scene are the foundation for speed estimates and conclusions how a vehicle collision occurred.

as well as the safety of any physical evidence at the scene.

b. Safety measures may include:
    1) Using barricades, signal devices, cones, flares, patrol vehicles, etc. to divert traffic away from the area.
    2) Wearing reflective vests or other types of identification equipment.
    3) Using personal protective equipment (e.g., gloves).
    4) Requesting additional resources when necessary to deal with bystander and involved parties if necessary.

3. Measurements should be taken to determine the location and possibly the size of anything the officer feels will be important to the investigation.
    a. Roadway widths.
    b. Lane widths.
    c. Crosswalk widths.
    d. Roadway markings (e.g., painted lines)
    e. Traffic devices (signs, lights, etc.)
4. Physical Evidence
    a. Tire marks
    b. Roadway scrapes and gouges
    c. Items ejected from vehicles
    d. Debris patterns
    e. Body fluid stains, pools, smears
    f. Footprints, hand prints, scuff marks

g. Fabric, human tissue, clothing, personal objects h. Paint transfers on roadway 5. Collision Related Points a. Positions of rest of involved vehicles b. Location of dead or injured parties c. Area(s) of impact 6. Measurement priorities. a. The order in which measurements are taken should be based on the stability of the evidence. b. Items which are at risk or easily moved should be given first priority (e.g., c. Fluid stains that could be washed away by rain, debris that could be moved by shifting winds, etc.). d. The officer's next priority should be items that will be moved from the scene (e.g., involved vehicles, broken glass, or other debris, etc.). e. Measurements involving fixed objects or areas can be saved until last (e.g., roadway widths, position of signal equipment, etc.). 7. Reference points/lines. a. A reference point/line is a point from which a measurement is taken to locate a single spot in a given area. Reference points/lines should be based on fixed objects. A fixed point is any permanent object or landmark that does not	**[29.II.F]** **Lecture:** Determine Appropriate reference points Reference points/lines • A reference point is a point from which a measurement is taken to locate a single spot in a given area. Reference points/lines should be based on fixed objects. A fixed point is any permanent object or landmark that does not move. • The location should be noted by using measurements from two different reference points/lines to a single location **Lecture:** Collision Investigations. • When investigation begins.

move (e.g., the roadway edge or curb, a permanent signal device, a fire hydrant, light pole, etc.). b. The location of any item should be noted by using measurements from two different reference points/lines to a single location. 8. Prolongation reference lines. a. Reference points/lines used as fixed points when taking measurements may include painted or imaginary prolongation. b. Prolongation line can be an existing curb line, roadway edge, or sidewalk edge, painted cross walk lines. C. Collision Analysis 1. Statements taken during a field interview, evidence identified at the scene, along with the investigating officer's observations and training, all play a part in determining the cause of a vehicle collision and whether a violation of the law has taken place. 2. During the course of the investigation, officers must establish the area of impact. The area of impact (AOI) is the geographical location at which the involved parties came into contact. 3. Establishing the area of impact. Officer can use a. Statements and information gathered during field interviews,	• Evidence from the scene • Involved party. **[29.III.C.7,8]** **Lecture:** Area of Impact The area of impact (AOI) • The area of impact (AOI) is the geographical location at which the involved parties came into contact, as a result of the vehicle collision, with one another, another object, or a surface. **Establishing the area of impact**. Officer can use • Statements and information gathered during field interviews, • Vehicle speed(s). • Point of rest of vehicle(s)/pedestrian. • Vehicle damage (location, amount, severity, etc.). • Damage to fixed objects, fluids on the roadway (spatters, trails, pools, etc.). • Gouges and other road scars on the roadway or other objects. • Debris at the collision scene (type, location, direction, pattern, etc.). • Tire marks on the roadway (indicating change of direction, acceleration deceleration, etc.).

b. Vehicle speed(s). c. Point of rest of vehicle(s)/pedestrian. d. Vehicle damage (location, amount, severity, etc.). e. Damage to fixed objects, fluids on the roadway (spatters, trails, pools, etc.). f. Gouges and other road scars on the roadway or other objects. g. Debris at the collision scene (type, location, direction, pattern, etc.). h. Tire marks on the roadway (indicating change of direction, acceleration deceleration, etc.). 4. Point of Rest. a. The point of rest (POR) is the geographical location at which the involved vehicles come to a final position of rest after impact with one another, another object, or a surface. 5. Primary collision factor. a. Investigating officers must also determine the primary collision factor in the course of their investigations. The primary collision factor (PCF) is the one element or driving action which in the officer's opinion best describes the primary or main cause of the collision. b. The primary collision factor may be categorized as a specific vehicle code violation, improper	**[29.II.G]** **Lecture:** Primary Collision Factors Vs Associated Collision Factors **[29.III.C.6]** **Lecture:** Primary Collision Factors Associated Collision Factors **Primary Collision Factor** • The primary collisions factor (PCF) is the one element or driving action which in the officer's opinion best describes the primary or main cause of the collision.

driving, other than driver, unknown. 6. Improper driving. a. When no specific vehicle code section violation is applicable, officers may determine that "improper driving" alone is the primary collision factor. b. There may be times when the primary cause of the collision is something beyond the control of a driver. Ex: 1) A large animal running in front of the vehicle. 2) A medically induced difficulty causing the driver to lose control 3) An environmental condition (e.g., "black ice") 4) Mechanical failure not known or foreseeable through normal and reasonable maintenance. c. Some collisions are determined "unknown" due to conflicting statements and/or lack of physical evidence. It is not possible for the investigating officer to determine the primary cause of a collision. 7. Associated collision factors. a. An associated collision factor is a factor or vehicle code violation(s) that contributed to the collision, but was not the main cause. Depending on the situation, there may be more than one associated factor related to the collision.	**Distribute:** AOI Traffic Collision Exercise Handouts. 6 pages. Allow recruits in their teams to work together on the exercise Demonstrate the first AOI (e.g. asterisk, shoe) and cover the quadrant, coordinates, and curb lines. Allow the recruits to complete the exercise in class. Advise they will have time in the next T/C class (session 25) to complete the report. **Facilitate:** Learning Activity #1

Associated collision factors may include: 1) Obscured vision 2) Inattention (e.g., using a cell phone, tuning a radio, etc.), 3) Stop and go traffic. 4) Entering or leaving a ramp. 5) A previous collision. 6) Unfamiliarity with the highway 7) Defective vehicle equipment. 8) Another uninvolved vehicle. 9) Runaway vehicle. b. There may be a number of vehicle code violations in the course of a vehicle collision. Although the violations took place and the driver of the vehicle should be charged with their commission they may not be what actually caused the collision.	