New York State Office of the Attorney General

Special Investigations and Prosecutions Unit

Report on the Investigation into The Death of Edson Thevenin

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EXECUTIVE SUMMARY

On July 8, 2015, Governor Andrew Cuomo signed Executive Order No. 147 (the "Executive Order"), appointing the Attorney General as special prosecutor "to investigate, and if warranted, prosecute certain matters involving the death of an unarmed civilian . . . caused by a law enforcement officer." The Executive Order also authorizes the Attorney General to "investigate and prosecute in such cases where, in his opinion, there is a significant question as to whether the civilian was armed and dangerous at the time of his or her death."

On Sunday, April 17, 2016, Edson Thevenin died after being shot by a member of the Troy Police Department ("TPD"). Many of the circumstances concerning the shooting are clear: (a) TPD Sergeant Randall French stopped Mr. Thevenin for suspicion of driving while intoxicated; (b) Mr. Thevenin fled in his car; (c) Sgt. French, in a TPD vehicle, pursued Mr. Thevenin's car until Mr. Thevenin's car struck a concrete barrier; (d) Sgt. French's vehicle blocked Mr. Thevenin's car from the front, and another officer's vehicle blocked in Mr. Thevenin's car from behind; (d) Mr. Thevenin began to back up his car with the apparent aim of fleeing again; and (e) Sgt. French stepped from his vehicle and, within moments, fired a total of eight bullets through Mr. Thevenin's windshield, striking Mr. Thevenin seven times and killing him. The time of the shooting was approximately 3:27 a.m.

Two key, related issues concerning this incident are: (1) whether Mr. Thevenin's car was moving backward, at rest, or moving forward when Sgt. French began shooting, and (2) whether Sgt. French fired all eight shots from one location or multiple locations. Sgt. French claims that he started firing his gun because his left leg was pinned between Mr. Thevenin's car and Sgt. French's vehicle, and he feared for his life. In other words, he claims that Mr. Thevenin's car pinned him before he started shooting, and that he fired all eight shots from the same location while (and because) his leg was continuously trapped. As discussed in detail below, Sgt. French's account is contradicted by forensic evidence.

The TPD was the police agency with exclusive control over the investigation for an initial critical period after the shooting.[1] Almost immediately, and without having conducted any real investigation, the TPD publicly adopted the position that Sgt. French was pinned when he began shooting and that the shooting was therefore justified. The TPD did so notwithstanding its possession of evidence contradicting that version of events, including photographs it took of Mr. Thevenin's windshield showing trajectory rods inserted in each of the eight bullet holes. Those

[1] Investigators from the Office of the Attorney General ("OAG") responded to the incident scene the morning of the shooting in an attempt to determine which agency – the OAG or the Rensselaer County District Attorney's Office ("RCDA") – would ultimately have jurisdiction over the matter. The TPD, however, removed the OAG investigators from the incident scene and TPD Chief John Tedesco instructed TPD officers not to share any evidence with the OAG. In the two-and-one-half years since Executive Order 147 was issued, this case stands as the *only* one where a local police department did not work professionally and collaboratively with the OAG during the period of jurisdictional determination. The OAG only took control of this investigation after filing a lawsuit to obtain the RCDA file (which contained the TPD file) and other key evidence. The Governor subsequently issued Executive Order No. 147.4, which expressly conferred jurisdiction upon the Attorney General to investigate any potential unlawful acts or omissions by any law enforcement officers with respect to Mr. Thevenin's death.

photographs make clear that some of the bullets were fired from different points across the front of Mr. Thevenin's car (i.e., evidence inconsistent with a pinned, immobile shooter.)

The TPD's investigation was deficient and incomplete in several respects. First, the TPD told two of the three civilian witnesses at the scene to leave without interviewing them or securing contact information, and then failed to take any action in the aftermath of the shooting to locate or follow up with them. Second, the TPD failed to appropriately and thoroughly interview a third civilian witness (who later contradicted Sgt. French's account when interviewed by the OAG). Third, the TPD failed to arrange for key forensic analyses, including incident reconstruction and formal trajectory analysis of the bullet holes through the windshield before making its public (and ultimately inaccurate) declaration that Sgt. French was pinned by Mr. Thevenin before he began shooting.

More than three weeks after the incident, upon taking control of the available evidence from the RCDA and TPD, the OAG commenced its own investigation. The OAG's investigation included, but was not limited to (i) a reconstruction of the incident by an independent forensic analysis company, Precise Simulations, Inc. ("PSI Report"); (ii) interviews of the three civilian witnesses; (iii) a review of the TPD file, including photographs and video of the scene and statements from Sgt. French and other TPD members who responded to the scene; (iv) the acquisition and review of hospital and other medical records for Sgt. French; and (v) a review of the autopsy of Mr. Thevenin, which had not been completed prior to the OAG's involvement in the investigation.

The PSI Report is particularly significant in that it provides a virtual recreation of the incident as it unfolded. In preparing the PSI Report, PSI examined, photographed, and laser-scanned the scene of the incident and each of the vehicles involved. PSI also reviewed all available evidence, including photographs of the scene taken the morning of the incident, police and civilian witness statements, video footage taken immediately after the shooting, the autopsy report, and police reports. PSI employed, among other techniques, forensic video and audio analysis, photogrammetry,[2] and ballistic trajectory modeling.[3]

The PSI Report conclusively established that Sgt. French was not pinned when he began firing his gun. According to the Report, Sgt. French began firing his weapon from a location immediately outside of his driver's side door before moving to his left (toward the rear of his vehicle), from where he fired additional shots and – either as he was firing those additional shots or before or shortly after firing those additional shots – became pinned between the vehicles. Based upon the available evidence, PSI was unable to determine at what point Sgt. French became pinned by Mr. Thevenin's car, and was unable to preclude the possibility that Mr. Thevenin's car was moving forward (as opposed to backward or at rest) when Sgt. French fired

[2] Photogrammetry is the forensic process of making measurements from photographs.

[3] PSI used lasers to perform its bullet trajectory analysis. See, e.g., https://www.flinnsci.com/api/library/Download/274c70fa157f4e4b82b392846fabfc14) (lasers provide a much more precise determination of angles through glass than do trajectory rods). The PSI Report is attached hereto as Exhibit A.

the initial shots. Eyewitness accounts were similarly unable to provide clarity on this issue.[4] No witness (other than Sgt. French) said Sgt. French was pinned when he began shooting, although some reported that Mr. Thevenin's car was moving toward Sgt. French when he fired, while one said the car only began moving forward (and then pinned Sgt. French) after all the shots were fired.

The location of Mr. Thevenin's car at the time of the first shot, and the direction in which it was moving, are critical issues for determining legal culpability. OAG's inability to resolve this question—despite engaging experts to advise on the events that took place—foreclose the possibility of criminal prosecution. Pursuant to Penal Law Section 35.30(1)(c), a police officer is authorized to use deadly physical force if that officer reasonably believes that the use of such force is necessary to defend the officer from what he or she reasonably believes to be the use or imminent use of deadly physical force. In any prosecution where such justification is an issue, the burden rests with the prosecution to disprove the defense of justification. The fact that Sgt. French's account of the shooting was inaccurate does not automatically render the shooting unjustified for purposes of criminal prosecution; one need not be pinned by a vehicle in order for a self-defense justification to apply. If Mr. Thevenin's car was moving toward Sgt. French – or arguably even if it was stationary but appeared poised to move forward – Sgt. French may well have reasonably believed that deadly physical force was about to be used against him. Based on the available evidence, the OAG cannot disprove that Sgt. French's use of deadly force was unjustified.

In addition, as disclosed in public court documents, Sgt. French testified before a Grand Jury concerning the death of Mr. Thevenin without having waived immunity from prosecution. See CPL 190.40(2)(a). As a result, under current New York State statutory and case law, criminal prosecution of Sgt. French for the shooting would be impossible, regardless of the ultimate conclusions reached by the OAG.[5] See Rush v. Mordue, 68 N.Y.2d 348, 355 (1986).

* * *

Executive Order No. 147 provides that the OAG may offer "any recommendations for systemic reform arising from the investigation." We make three recommendations based upon our investigation.

First, the TPD needs to overhaul its investigative approach to officer-involved shootings. Among other things, the TPD should: abstain from prejudging (and publicly announcing) the results of an investigation before it has been completed; make broad efforts to identify and promptly speak with all civilian witnesses (and fully elicit their narratives); properly train TPD members in the evaluation of evidence (particularly bullet trajectory evidence); and readily seek assistance from outside experts when questions arise.

[4] As discussed below, the witness accounts may have provided clarity if the witnesses had been properly handled by TPD from the beginning of the investigation.

[5] The propriety of the manner in which this grand jury investigation was conducted is the subject of a separate prosecution by the OAG concerning the RCDA. Given this separate, ongoing prosecution, this report does not address any involvement of the RCDA in the TPD's investigation.

Second, the OAG recommends that the TPD review and update its training and policies with respect to shooting at vehicles. An ever-increasing number of law enforcement agencies are adopting policies that prohibit an officer from shooting at a moving vehicle if the vehicle itself is the only threat to the officer's safety. The goal of these policies is to trigger in officers confronting a vehicle an automatic response of getting out of the way rather than discharging a firearm. This type of policy change, with the necessary and attendant training, has become the standard for a number of law enforcement agencies across the nation.

Third, the OAG recommends that the TPD outfit officers with body-worn and dashboard cameras. Videotaped evidence would have facilitated the investigation of this incident and would have provided a more reliable account of critical details of the events. The absence of any such digital video evidence in this case underscores the need for police agencies and policy makers to work toward outfitting as many officers and vehicles as possible with body-worn and dashboard cameras.

STATEMENT OF FACTS

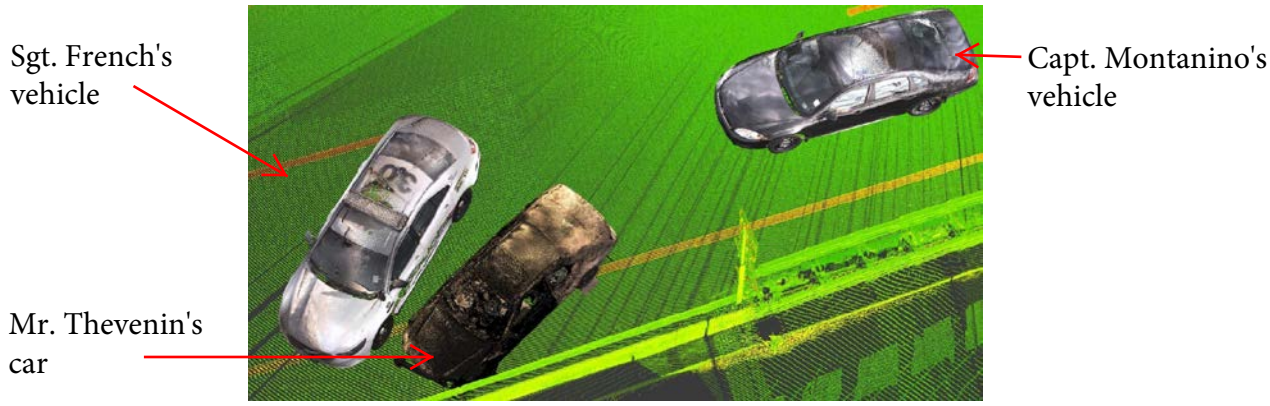
Below are the key events occurring during: (a) Sgt. French's initial car stop of Mr. Thevenin and Mr. Thevenin's flight; (b) the shooting itself; and (c) the immediate aftermath of the shooting.

A. The Initial Stop and Mr. Thevenin's Flight

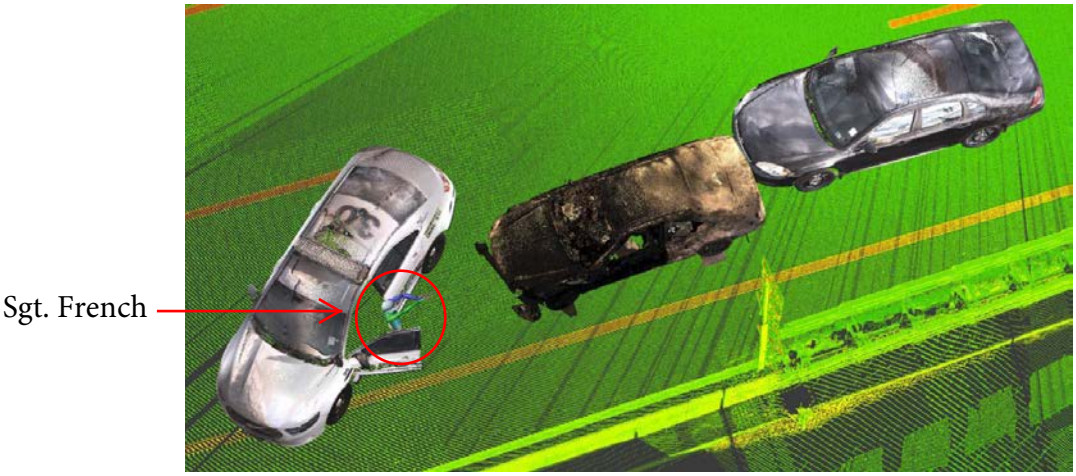
At approximately 3:10 a.m. on April 17, 2016, in the city of Troy, New York, Sgt. French conducted a vehicle stop of Mr. Thevenin's car on suspicion of driving while intoxicated. After being stopped, Mr. Thevenin failed several field sobriety tests administered by Sgt. French. (The Medical Examiner later measured his blood alcohol level at .19 percent.) When Sgt. French attempted to arrest Mr. Thevenin for driving while intoxicated, shortly after 3:26 a.m., Mr. Thevenin fled the scene of the stop in his car. Sgt. French returned to his patrol vehicle and began to pursue Mr. Thevenin, joined shortly by a second TPD officer, Captain Matthew Montanino. At or around 3:27 a.m., the pursuit ended (approximately .2 miles from where it began) when Mr. Thevenin's car struck a concrete highway divider and came to a stop at the entrance to the Collar City Bridge.[6]

Sgt. French positioned his patrol vehicle in front of Mr. Thevenin's car and Capt. Montanino positioned his patrol vehicle directly behind Mr. Thevenin's car. Both police vehicles had their lights flashing, and at least one had its siren still engaged. An image reconstructing the immediate post-crash positions of the vehicles is reproduced below:

[6] A map of the route that Mr. Thevenin's car took is attached hereto as Exhibit B.



Capt. Montanino exited his vehicle. Moments later, in an attempt to again pull away, Mr. Thevenin backed up his car, striking the front of Capt. Montanino's vehicle. As Mr. Thevenin's car backed up, Sgt. French stepped from his own vehicle. The reconstruction of the locations of the three vehicles at or immediately after the time Sgt. French exited his vehicle is below.



In the seconds that followed, (1) Sgt. French fired eight times through Mr. Thevenin's windshield, (2) Mr. Thevenin's car moved forward, and (3) Mr. Thevenin's car pinned Sgt. French against his patrol vehicle.

B. The Shooting

1. Witness Statements

According to Sgt. French, he was struck by Mr. Thevenin's car and his left leg was pinned against his own patrol vehicle "immediately" upon stepping out of the vehicle. He said he pushed both hands against the hood of Mr. Thevenin's car but was unable to free himself; he then realized that Mr. Thevenin's car was "accelerating" and "still in motion." From his pinned leg position immediately outside of his driver's side door, Sgt. French said he fired multiple rounds into the windshield "in defense of himself." However, because Mr. Thevenin's car remained "in motion" and Sgt. French was still pinned, he believed his first rounds had not had an effect. He also realized that, after firing his first round of shots, he began to be "pulled to the

left." Lying now on the hood of Mr. Thevenin's car, while still pinned by his left leg, Sgt. French said he fired additional rounds "to defend himself."[7]

None of the other witnesses' accounts corroborate that Sgt. French was pinned when he began shooting, and one witness statement flatly contradicts Sgt. French's account. According to CW-1,[8] who had stopped at a red light on the bridge, Sgt. French began firing nearly simultaneously with Mr. Thevenin's car striking Capt. Montanino's, and Mr. Thevenin's car did not begin moving forward until after all shots were fired; specifically, CW-1 said Mr. Thevenin's car "rolled" into Sgt. French after Sgt. French fired all of the shots.[9] The three other witnesses – Capt. Montanino, CW-2, and CW-3 – said that Mr. Thevenin's car began moving forward before Sgt. French started firing his weapon, but none described Sgt. French as having been pinned when the shooting began. Rather, CW-2 and CW-3 stated that Sgt. French began firing while the car was in motion. CW-2 (like CW-1) said the car rolled forward and pinned French only after all the shots were fired.[10] CW-3 told the OAG that he was intoxicated and did not see the shooting itself, but said he did see Mr. Thevenin's vehicle pull forward, in an effort to flee, before hearing shots. In the aftermath of the shooting, a responding officer recalled CW-2 and/or CW-3 approaching the scene and yelling words to the effect of, "You shouldn't have done that" and "You didn't have to shoot him."[11]

2. Trajectory Evidence

Trajectory rods placed by TPD through the eight bullet holes of Mr. Thevenin's windshield (shown below), demonstrate that Sgt. French fired shots from multiple locations and

[7] The statements of Sgt. French, Capt. Montanino, and the civilian witnesses are attached hereto as Exhibits C through H.

[8] The three civilian witnesses to the event are referred to as CW-1, CW-2, and CW-3.

[9] CW-1 also used his cell phone to capture video of some of the immediate aftermath of the shooting – with Sgt. French pinned between Mr. Thevenin's car and Sgt. French's patrol vehicle – though not the shooting itself.

[10] This version of events seems implausible considering the space within which Mr. Thevenin's vehicle had to navigate. According to CW-2, Mr. Thevenin's vehicle rolled into Sgt. French *after* Sgt. French fired all of the shots, but CW-2 maintains that Mr. Thevenin's vehicle was moving forward when Sgt. French began shooting. Therefore, according to CW-2, Mr. Thevenin's vehicle accelerated forward, Sgt. French fired all eight shots, and then the vehicle continued to roll forward pinning Sgt. French. As PSI determined, there were only 39 inches within which all of the above had to have occurred, and the minimum amount of time it would have taken for Sgt. French to fire eight rounds from his weapon (assuming the shots were all fired in succession without pause) was 1.7 seconds. We note both that stress can affect memory and that, at the time of the incident, CW-2 was actively in the process of seeking to become a member of the TPD.

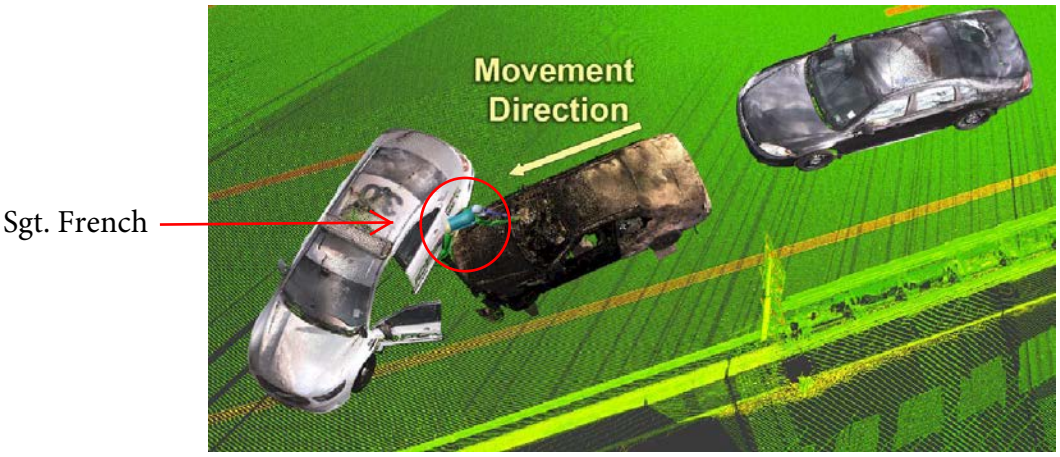
[11] In substance, Capt. Montanino described the shooting this way: After positioning his vehicle behind Mr. Thevenin's car to box him in, Capt. Montanino stepped out of his vehicle. Just as he did, Mr. Thevenin's car backed away from the concrete barrier and into the front of Capt. Montanino's vehicle. Capt. Montanino began to approach the driver's side of Mr. Thevenin's car, which now "accelerated" forward. By this time, Sgt. French was standing outside his own patrol vehicle. Capt. Montanino was just outside the driver's side window of Mr. Thevenin's car, when he heard gunshots; he did not know at that point who was firing. Capt. Montanino then heard Sgt. French yelling and observed that Sgt. French was pinned between the two vehicles. Capt. Montanino's statement does not indicate whether he observed that Sgt. French was pinned prior to the shooting.

thus was not pinned at the time that he started firing. Specifically, the rods show, even to an untrained eye, that (a) two shots were fired toward the driver's seat through the front windshield from a position in front of the driver's side of the vehicle, while (b) six shots were fired toward the driver's seat from a position in front of the passenger's side of the vehicle.

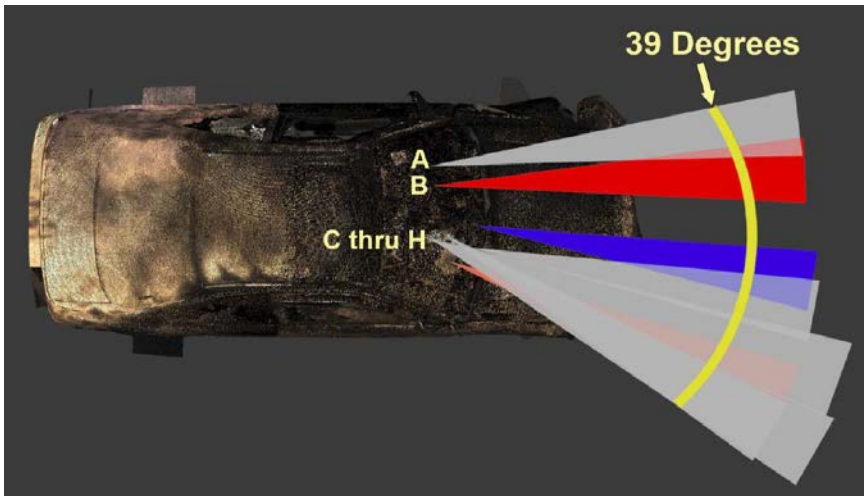
3. The PSI Report

The PSI Report also contradicts Sgt. French's account of when and from what location he fired into the windshield of Mr. Thevenin's car.

The PSI Report shows that Sgt. French – standing just outside his driver's door – fired two rounds straight through Mr. Thevenin's windshield; trajectory evidence gleaned from Mr. Thevenin's autopsy report suggest that one of the two fatal bullets was fired from a forward-facing straight-on trajectory (i.e., one of the first two shots). According to the PSI Report, after firing those first two rounds, Sgt. French moved approximately five feet to his left toward the rear of his patrol vehicle, and Mr. Thevenin's car began (or continued) to move forward; ultimately Sgt. French's left leg became pinned between the front right bumper of Mr. Thevenin's car and the rear left panel of his patrol vehicle. A reconstruction of the movement of Mr. Thevenin's car to the point where Sgt. French was pinned – covering a distance of 39 inches – is below:



The PSI Report confirms that Sgt. French fired six more rounds through Mr. Thevenin's windshield from a position toward the rear of his patrol vehicle. In explaining its conclusions as to the locations from which Sgt. French fired his weapon, the PSI Report places particular emphasis on an examination of the trajectories that each of the eight bullets travelled. As the PSI Report notes, in discussing the graphic immediately below:



> In looking at the orientation of the bullet trajectories with respect to French's position while moving from where he exited his driver side door to where he was eventually pinned, the rounds that exhibit a nearly straight on trajectory (A and B) are aligned with French's position only while near the driver door. They do not align with French's position where he was pinned. . .
>
> The remaining 6 bullet trajectories [C through H] show a pattern of increasing left to right angle, suggestive of a continuously moving lateral relationship between French and [Mr. Thevenin's car], with the 4 or 5 most angled shots all well aligned with French's location while pinned. This suggests a continuous firing as French moved to his left and [Mr. Thevenin's car] approached him, with the last 4 or 5 rounds fired from a position at or very near the location where French was pinned.

* * *

In light of the witness testimony, the available physical evidence, and the PSI Report, Sgt. French's account cannot be regarded as a reliable narrative of the immediate circumstances surrounding the shooting.[12] At the same time, after a proper investigation, the available evidence does not allow a firm conclusion as to whether Mr. Thevenin's car was still backing away from, stopped, or moving toward Sgt. French when he started firing.

[12] The effects of stress and trauma on memory and recall are becoming increasingly known (See, e.g., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1950232/). But, here, Sgt. French provided a highly detailed account of what transpired after at least three sleep cycles.

C. The Immediate Aftermath

Almost immediately after the shooting Mr. Thevenin, fatally injured, was pulled from his car and onto the roadway by Capt. Montanino and then placed in handcuffs. Officers called over the radio for an ambulance, which arrived at approximately 3:32 a.m. Emergency medical personnel found Mr. Thevenin unresponsive and in cardiac arrest, with multiple gunshot wounds to the chest, head, and extremities. EMS inserted an oral airway and applied a bag-valve mask to assist with breathing, started CPR, provided epinephrine, and transported Mr. Thevenin to St. Mary's Hospital, arriving at 3:48 a.m.[13] The hospital's medical staff intubated Mr. Thevenin, continued CPR, and gave multiple additional rounds of epinephrine, but were unable to restore spontaneous circulation. Mr. Thevenin was pronounced dead at 4:04 a.m. There is no evidence in the ambulance or hospital records that Mr. Thevenin was ever conscious or in any way responsive after he was shot.

Sgt. French was freed from between the two vehicles by the arriving officers, assisted by a civilian on the scene (CW-1). He was placed into a patrol vehicle and transported to Albany Medical Center and then was released later that day with an apparent injury to his left knee area.[14]

MEDICAL EXAMINER'S DETERMINATIONS

Mr. Thevenin's body was autopsied by Dr. Michael Sikirica, M.D., the Medical Examiner of Rensselaer County, on April 17, 2016, at 11:30 a.m.[15]

The autopsy identified a total of seven gunshot wounds to Mr. Thevenin's body, including multiple wounds to the head, chest, and arms, with one bullet lodging in the right atrial chamber of the heart.

The autopsy report notes the manner of death as "homicide." The report notes the cause of death as a "hemorrhage and left hemothorax due to perforations of left lung[16] and heart due to gunshot wounds of chest."

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[13] This arrival time is based upon ambulance records. The hospital records indicate an arrival time of approximately 3:44 a.m.

[14] The precise nature of Sgt. French's injury, as reflected in his medical records, is protected by law from public release in the absence of patient consent. At a press conference one day after the incident, Chief Tedesco publicly stated that Sgt. French was discharged from the hospital the day of the shooting with no obvious bone fractures, but with suspected soft tissue or ligament damage.

[15] The autopsy report is attached hereto as Exhibit I.

[16] The trajectory of this wound suggests that it resulted from one of the first two, straight-facing-trajectory bullets that were fired before Sgt. French moved to his left.

A toxicological examination established that Mr. Thevenin had a blood alcohol content of .19 per cent. The testing found no evidence of any other illicit substances in Mr. Thevenin's system.

THE TROY POLICE DEPARTMENT'S INVESTIGATION

The Troy Police Department asserted exclusive control over the investigation into Mr. Thevenin's death from the outset.[17] That investigation was deficient in several respects – and was far from complete as of the date the matter was presented to a Grand Jury, just five days after the shooting. Ultimately, the TPD's mishandling of its investigation not only failed to resolve whether Sgt. French's conduct had been justified, but actually made ultimate resolution of that issue less likely. This section examines the most significant problems with the TPD's investigation. First, as noted above, the TPD, almost from the beginning of its investigation, prejudged the outcome. Second, the TPD grossly mishandled the three civilian witnesses. Third, the TPD failed to arrange for basic forensic analyses to be conducted. Fourth, the TPD overlooked or ignored evidence that conflicted with Sgt. French's account, including the bullet trajectory evidence.[18]

A. The TPD Prejudged the Outcome of the Investigation

The TPD made clear in various public statements and a court application that, from the beginning of the investigation, it had determined that Sgt. French's conduct was justified because he was pinned by Mr. Thevenin's vehicle when he began firing his weapon. For example, the day after the shooting, TPD Chief John Tedesco held a televised press conference, during which he said that Sgt. French had fired his weapon only after being pinned by Mr. Thevenin's vehicle.[19] Chief Tedesco further stated that, "At this juncture in the investigation while it's still ongoing, it would appear that the actions of Sgt. French are certainly in line with the law, department policy, and his training, and we are fully supporting the sergeant and his actions."

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[17] At a press conference one day after the shooting, when asked if other police departments or agencies, such as the FBI or the New York State Police, would be brought in to assist, Chief Tedesco said that the TPD would perform the investigation "exclusively."

[18]The TPD also displayed disregard for the Thevenin family. The TPD initially told the Thevenin family that Mr. Thevenin died in a car accident. After learning from a TPD officer at the hospital that Mr. Thevenin had been shot, the family went – in a futile search for additional information – from the hospital to the incident scene to the police department to the morgue. The family was provided with no TPD victim services information or even a TPD contact person. The family ultimately heard the TPD's account from the TPD press conference the day after the shooting, a press conference that Mr. Thevenin's mother tried to attend but to which she was denied access. The Thevenin family did not hear again from the TPD prior to the grand jury presentation, which the family was not even informed would be taking place. The Thevenins learned of the presentation and its outcome when a member of the RCDA reached out to their pastor in order to obtain Mrs. Thevenin's phone number.

[19] Chief Tedesco stated: "Thevenin reversed his vehicle, backing into Sgt. Montanino's vehicle, then pulled forward and drove towards and eventually struck Sgt. French . . . . Sgt. French then discharged his duty weapon."

The TPD's prejudgment of the investigation's outcome is also evident in a search warrant application seeking permission to process Mr. Thevenin's vehicle. That application, signed the day of the shooting, states that before Sgt. French fired any shots, Mr. Thevenin "drove directly into Sgt. French . . . [causing him] to become pinned and crushed." Further, the search warrant application concludes with the statement: "It is believed that a search of [Mr. Thevenin's vehicle] will provide additional evidence regarding the investigation of the Assault in the 1st Degree toward Sgt. French." Mr. Thevenin was deceased and could not be charged with assault; the focus of the investigation should have been whether Mr. Thevenin's homicide was justified.

B. The TPD Grossly Mishandled the Three Civilian Witnesses

CW-1

The TPD failed to procure a meaningful account of the incident from CW-1. The statement that the TPD took from CW-1 described in some detail what CW-1 did and observed both before and after Mr. Thevenin's fatal encounter with Sgt. French, but it simply skipped past the critical moments in which the shooting itself took place. In its entirety, CW-1's description in the TPD statement of these critical moments was: "I heard shots and took out my camera."

It is remarkable that the account is silent on critical details such as: whether CW-1 saw Sgt. French before the shots were fired; if so, where CW-1 saw him; what Sgt. French was doing when CW-1 first saw him; where Mr. Thevenin's car was at that point; whether CW-1 saw Sgt. French start firing; where Mr. Thevenin's car was at that point; how and at what point Sgt. French became pinned; and whether Sgt. French was pinned when he began shooting. Those significant details are completely missing from the statement TPD members obtained from CW-1; either the questions were not asked, or they were asked and the answers were not noted in the statement.[20]

Later in the day of CW-1's interview, CW-1, in a text message, told a TPD officer, whom he knew personally, that he wanted to change his statement. The officer replied that he would "grab it" for CW-1 the next day. No member of the TPD followed up with CW-1 about changing his statement prior to the RCDA's grand jury presentation of this matter.

When the OAG spoke with CW-1 several weeks after the TPD's original interview, CW-1 provided a more comprehensive account of that night's events. According to CW-1, he observed Mr. Thevenin's car strike Capt. Montanino's vehicle and heard shots fired "almost simultaneously." After the shots stopped, CW-1 "saw the car roll into the police officer. The car rolled about 3 feet forward and pinned the police officer against his car." In other words, according to CW-1, Sgt. French first fired while Mr. Thevenin's car was either still moving backwards or up against Capt. Montanino's vehicle; the car did not begin to move forward until

[20] CW-1 later told OAG investigators that the TPD interview did not seek—and CW-1 did not offer—details concerning what actually happened during the shooting itself. CW-1 acknowledged to OAG investigators, in substance, that he felt intimidated during his interview at the TPD station house and was not comfortable implicating Sgt. French.

all the shots had been fired; and when it did move forward, it rolled rather than accelerated. This narrative is directly at odds with Sgt. French's account.

CW-2 and CW-3

Immediately after the shooting, at least two officers observed CW-2 and CW-3 get out of a vehicle and approach the scene. The officers heard CW-2 or CW-3 (or both) shout words to the effect of, "You didn't need to shoot him" and "You shouldn't have done that." Notwithstanding those comments, no officer on the scene asked the civilians what, if anything, they had observed. Nor did any officer take their contact information. Rather, CW-2 and CW-3 were told to "get the f*** out of here" – which they did. Further, there is no evidence that the TPD made any efforts to locate these civilians prior to the OAG's involvement in the case (and, of course, prior to the April 22, 2016, grand jury presentation).

Although neither CW-2 nor CW-3, when interviewed by the OAG, said that Sgt. French had been pinned when he began shooting, neither said they believed the shooting was unjustified.[21] By this point, however, the official TPD position was publicly known, making it that much more fraught – especially for CW-2, who was in the process of actively seeking to join the TPD – to offer an account that reflected negatively upon Sgt. French. Had these witnesses been promptly identified and properly interviewed, it is possible that their accounts would have been more consistent with the sentiments they expressed at the time of the shooting (i.e., "You didn't need to shoot him"/"You shouldn't have done that.")[22]

C. The TPD Failed to Arrange for Critical Forensic Analyses

Prior to the OAG's involvement in the investigation (and prior to the April 22, 2016, submission of the case to a Rensselaer County Grand Jury), the TPD had failed to arrange for the

[21] CW-2 recalled observing Sgt. French outside of his patrol vehicle with his weapon in hand, repeatedly shouting, "Stop! Stop!," as Mr. Thevenin's car backed up into Capt. Montanino's vehicle. Mr. Thevenin's car then "started to drive forward," and it was at this point that Sgt. French began shooting. CW-2 said that after the shooting stopped, Mr. Thevenin's car began to "roll forward" and "it looked like it could have hit the first cop car." He said nothing about Sgt. French's ultimately being pinned by Mr. Thevenin's car.

CW-3 stated that he observed Mr. Thevenin's car "pull forward" from its position up against Capt. Montanino's vehicle "and turn to the right to get away," only after which CW-3 "heard gunshots." Because CW-2, seated in the driver's seat, was obstructing his view, however, CW-3 was unable to make any other relevant observations regarding the incident.

[22] The only non-civilian witness to the shooting was Capt. Montanino. The TPD seems to have completely overlooked, or at least greatly minimized, the fact that he could have lost his life during this incident. He was walking along the side of Mr. Thevenin's car, approaching the driver's side door, when Sgt. French fired eight rounds in Mr. Thevenin's direction. Six of the eight shots were fired from the passenger side of the hood toward the driver's seat, the area Capt. Montanino was approaching.

Despite Capt. Montanino's being in the very location toward which Sgt. French was firing shots and despite the fact that his jacket was covered in shards of glass after the shooting, when a reporter asked Chief Tedesco, at the press conference following the shooting, whether Capt. Montanino had been in danger, the chief answered that "the way that we're placing the scene he was not directly … in danger but you never know about an errant bullet." In fact, Capt. Montanino was not at risk of being struck by an errant bullet; he was at risk of being struck by a non-errant bullet.

types of forensic analyses one would normally expect as part of a homicide investigation. For example:

- The TPD did not arrange for any formal bullet trajectory analysis, notwithstanding that the windshield trajectory rods contradicted Sgt. French's version of events;

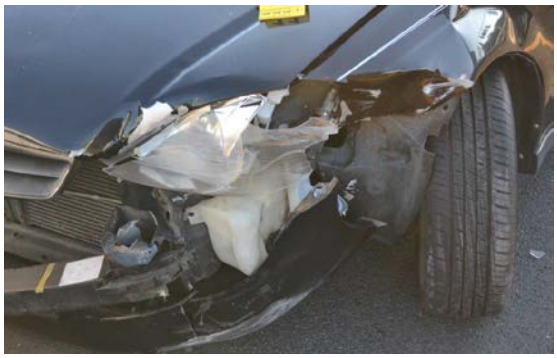
- The TPD did not arrange for a comprehensive reconstruction of the incident;[23] and

- The TPD did not arrange to have Sgt. French's and Capt. Montanino's guns and ballistics evidence processed for ballistics analysis to confirm that all shots fired were fired from Sgt. French's weapon.

D. The TPD Failed to Properly Evaluate Evidence in Its Possession

As discussed at length above, the trajectory rod evidence that the TPD had in its possession at a minimum raised serious questions about the reliability of Sgt. French's account. Indeed, this evidence warranted thoughtful and critical analysis even if Sgt. French had never provided a version of events to the TPD.

But the trajectory rods were not the only evidence available to, and apparently overlooked by, the TPD. Upon colliding with the concrete barrier, Mr. Thevenin's car suffered heavy damage to the left front wheel area, such that the wheels may have simply been incapable of turning to the right, which they would have had to do in order to move the car to its right – and thus to pull Sgt. French to his left. Representative photos of Mr. Thevenin's vehicle are shown below:



When Mr. Thevenin's car was placed on a flatbed truck and brought to the TPD garage several hours after the shooting incident, the wheels were still stuck in this position. There is no

[23] The TPD completed accident reconstruction in early June, more than one month after the matter was presented to a grand jury. The reconstruction, while noting that Mr. Thevenin's car pinned Sgt. French and caused him to suffer substantial pain in his left leg, did not contain any evidence that Mr. Thevenin's car pulled, turned, or moved to its right after pinning Sgt. French, or that the vehicle was even capable of doing so.

indication in any police paperwork that the detectives assigned to the case examined the car's front wheels to confirm whether they were in fact stuck in a leftward-facing direction, or considered the implications of such evidence for the investigation.[24]

Notwithstanding the evidence within the TPD's possession, four days after the shooting, the assigned detectives concluded their report summarizing Sgt. French's statement with the following:

> Sergeant French's account of these events are consistent with the written statement of Captain Montanino, they are consistent with the reports of responding officers and they are consistent with the written statement of [CW-1] (civilian witness.) Physical evidence and video evidence ([CW-1]'s cell phone video) both support Sergeant French's recollection of this incident.

In fact, Capt. Montanino's account and CW-1's statement to the TPD were silent as to whether Sgt. French was pinned when he started shooting; the responding officers arrived after the actual shooting incident was over; the video taken by CW-1 likewise only captured the aftermath of the shooing, not the shooting itself; and physical evidence – in particular, the trajectory rod evidence – directly undermined Sgt. French's account.

LEGAL ANALYSIS

New York State Penal Law Section 35 provides that a police officer is justified in using deadly physical force if the officer: (1) is effecting or attempting to effect an arrest; (2) reasonably believes that the individual committed an offense; and (3) the deadly physical force is necessary to defend the officer or another person from what the officer reasonably believes to be the use or imminent use of deadly physical force. See Williams v. City of New York, 2 N.Y.3d 352 (2004); see also Stevens v. Metro. Transp. Auth. Police Dep't, 293 F.Supp.2d 415, 420 (S.D.N.Y. 2003); Brown v. State, 250 A.D.2d 796, 797 (2d Dept. 1998). Pursuant to Penal Law Section 35, the prosecution must disprove these three elements of a justification defense. See People v. McManus, 67 N.Y.2d 541, 546-47 (1986) ("[W]henever justification is sufficiently interposed by the defendant, the People must prove its absence to the same degree as any element of the crime charged."). In other words, the prosecution bears the burden to disprove that the officer was justified in using deadly physical force.

The first and second elements (i.e., that Sgt. French was trying to effect an arrest of Mr. Thevenin for an offense that Sgt. French reasonably believed Mr. Thevenin had committed) are

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[24] The PSI Report addressed how the orientation of Mr. Thevenin's vehicle relative to Sgt. French's vehicle would have affected the direction of motion of the Thevenin vehicle, if any such motion occurred. Specifically, the Report noted:

> Given the orientation of the [Thevenin car] and French's patrol vehicle at the time French was pinned and the [Thevenin car] being in drive, if Thevenin had accelerated the vehicle and moved it forward towards French, *the relative motion would be to French's right, not his left* (emphasis added).

clear. Sgt. French had probable cause to believe that Mr. Thevenin had committed the offense of driving while intoxicated and tried to effect Mr. Thevenin's arrest for that offense. As Sgt. French attempted to place Mr. Thevenin under arrest, Mr. Thevenin fled from the scene in his vehicle and Sgt. French pursued him.

The third element requires the most analysis. That element necessitates a determination of the reasonableness of Sgt. French's belief that deadly force was being used or was imminently going to be used against him. The speed and direction of the vehicle, the officer's position, and the ability of the officer to get out of the car's path are relevant to the objective reasonableness of an officer's decision to use deadly force against a driver of a vehicle. See generally Cowan v. Breen, 352 F.3d 756, 763 (2d Cir. 2003). The analysis thus requires an assessment of whether Sgt. French reasonably believed that Mr. Thevenin's vehicle was moving toward him or appeared poised to move toward him, and that Sgt. French's positioning was such that he could not have otherwise safely gotten out of the car's path.

Courts in New York have held that, if a vehicle is moving in the direction of an officer, especially at a close distance, such that the officer believes that he or she, or someone else, may be hit by the vehicle, then, as a general rule, the officer may use deadly force. See generally Costello v. Town of Warwick, 273 Fed. Appx. 118 (2d Cir. 2008); Kimbrough v. Town of Dewitt Police Dep't, 08-CV-00003, (N.D.N.Y. Feb. 13, 2012) (use of deadly force was justified because driver was accelerating directly toward officer (citing Waterman v. Batton, 393 F.3d 471 (4th Cir. 2005) and Wilkinson v. Torres, 610 F.3d 546 (9th Cir. 2010)).

Deadly force also has been deemed lawful in situations where, though not yet moving, a driver is poised to operate his or her vehicle, see, e.g., Moody v. City of Newport News, 193 F.Supp.3d 530, 552-554 (E.D. VA 2016) (shots fired before car was moving were justified because officer saw suspect put car into gear and another officer had fallen down next to the vehicle's tire) (citing a collection of cases involving non-moving vehicles); Hunter v. Witchita Police Dep't, 2006 U.S. Dist. LEXIS 84084, **8-9, 17-18 (D. KS 2006) (use of deadly force was justified after vehicle ran over the foot of officer who was half inside and half outside the vehicle window, and another officer – who was 5-6 feet away – shot at the vehicle before it started moving forward).

Finally, deadly force has been deemed lawful in situations where a vehicle is alternately accelerating and reversing, and the officer believes that another abrupt change in direction could inflict serious bodily harm. See Costello, 273 Fed. Appx. at 119 (holding that police officer's decision to use deadly force because he thought the driver was "going to back the car up again," putting an officer in danger of serious injury, was objectively reasonable); Johnson v. Niehus, 491 Fed. Appx. 945, 951 (11th Cir. 2012) (deadly force justified when vehicle was going back and forth doing a three-point turn around police officers, who were injured).

As discussed above, Sgt. French's account of being pinned before the shooting is inconsistent with the PSI Report and the bullet trajectory evidence. However, based at least in part on the incomplete and compromised nature of the evidence available to the OAG due to the manner in which the TPD initially investigated the matter, the OAG cannot disprove that Mr. Thevenin's vehicle was moving forward or poised to move forward. Specifically, the

positioning, speed and direction of Mr. Thevenin's car in relation to Sgt. French when Sgt. French began firing his weapon could not be conclusively determined through the forensic recreation of the incident.

Based on the lack of conclusive evidence on these points, coupled with Mr. Thevenin's obvious determination to avoid arrest, and the PSI Report's estimates concerning the short distance between the cars and the short amount of time between when Sgt. French got out of his car and when he fired, the OAG cannot disprove that Sgt. French reasonably believed that deadly force was necessary to defend himself. See generally Graham v. Connor, 490 U.S. 386, 397 (1989) (stating that officers must make "split-second judgments – in circumstances that are tense, uncertain, and rapidly evolving"); Public Adm'r v. United States, No. 88 Civ. 0190 (BN), 1989 WL 116307, *6 (S.D.N.Y. 1989) (taking into account (a) the "apparent extreme determination and motivation of the occupants of [a car] to escape arrest for a serious crime, even after their vehicle – hotly pursued by a car with a siren and flashing lights – . . . violently crashed into a parked truck" and (b) their flight from the site of the crash, in holding that an officer reasonably believed that it was necessary to use deadly physical force in self-defense.); see generally also Clark v. Bowcutt, 675 Fed. Appx 799 (10th Cir. 2017) (noting that the vehicle continued forward in a confined area, coming within inches of the officer and, therefore, the officer "had mere seconds to react"); Hocker v. Pikeville City Police Dep't, 738 F.3d 150, 154 (6th Cir. 2013) (holding that "escalating risks" created by the driver, including pinning the officer's arm in the door of his vehicle, required that the decision to use deadly force be made immediately); James v. City of Seattle, 2011 U.S. Dist LEXIS 142680, *37 (W.D. WA Dec. 12, 2011) (finding relevant that the "incident had quickly turned from one involving a traffic stop… 'to one in which the driver of a moving vehicle, ignoring police commands, attempted to accelerate within close quarters of two officers on foot'").

POLICY RECOMMENDATIONS

A. The TPD Needs to Overhaul Its Investigative Approach to Officer-Involved Shootings

As discussed above, the TPD's investigation was deficient and incomplete, which ultimately compromised the OAG's ability to properly investigate the shooting of Mr. Thevenin. The issues noted previously should each be addressed and not repeated in future investigations. In particular, the TPD should:

- Abstain from prejudging the results of an investigation that has barely begun and make no premature public statements about any such results;

- Be certain to elicit details when procuring civilian witness statements, regardless of whether those details will corroborate or undermine a claim that a shooting is justified;

- Make broad efforts to identify and speak with all civilian witnesses promptly, while their statements are less likely to be affected by the perceptions of others;

- Properly train TPD members in the evaluation of evidence (particularly bullet trajectory evidence); and

- Readily seek assistance from outside experts when questions arise.

B. The TPD Should Revisit Its Policy on Shooting at Moving Vehicles

Many police departments prohibit an officer from shooting into a moving vehicle unless deadly physical force, other than the moving vehicle, is being used against the officer or another person. This express prohibition favors officers' moving out of the way of a charging vehicle rather than standing their ground and firing into the vehicle. In contrast, the TPD policy permits shooting into a moving vehicle even if the vehicle is the only means of deadly force being used by a civilian. We recommend that the TPD revisit this policy.

The TPD's current departmental policy states:

> Discharging a firearm at a moving vehicle is prohibited unless the officer reasonably believes that the occupant(s) of the vehicle is using or about to use deadly physical force against the officer or another person, and other available options have been exhausted. Officers should note that a motor vehicle presents a formidable shield against most firearms and if the officer disables the operator the vehicle can be expected to continue uncontrolled creating a hazard to the officers and the public.[25]

Under this policy, TPD officers are not instructed that their priority in such situations should be getting out of a vehicle's path.

The policies of the New York City Police Department and police agencies in Denver, Boston, Chicago, Cincinnati, Philadelphia, Washington D.C., and Los Angeles provide that officers may not discharge their weapons at a vehicle unless deadly physical force is being used against the officer by means other than the moving vehicle itself.[26] These jurisdictions have not seen a concomitant increase in their rates of officer injuries.[27] Put differently, when an officer

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[25] TPD General Order No. 06.02 (Deadly Physical Force) - Section IV.

[26] NYPD's Patrol Guide Section 221-01; Prohibitions Section (1)(f) reads: "Members of the service **SHALL NOT:** Discharge their firearms at or from a moving vehicle unless deadly physical force is being used against the member of service or another person present, by means other than a moving vehicle." The NYPD shifted to this policy in 1972, and total police shootings decreased by half in the immediate aftermath of this policy change. See http://www.policeforum.org/assets/reengineeringtraining1.pdf (at page 20 - John Timoney).

[27] Information taken from, http://www.sfchronicle.com/opinion/article/SF-should-ban-officers-from-shooting-at-vehicles-10800139.php See http://www.denverpost.com/2015/06/09/denver-police-change-policy-on-shooting-at-cars; https://www.wsj.com/articles/police-rethink-shooting-at-suspects-in-moving-cars-1423183205 ("More U.S.

fires at a moving vehicle, the officer is "not going to stop the vehicle. It is still going to be moving forward and everything in its path is going to get hit."[28]

C. The TPD Should Increase the Use of Body-Worn and Dashboard Cameras

Indisputably, videotaped evidence would have greatly facilitated the investigation of this incident. We use its absence as an opportunity to recommend that police agencies and policy makers work toward outfitting as many officers and vehicles as possible with body-worn and dashboard cameras. In making this recommendation, we are mindful that TPD and municipal officials have, in the past, made public declarations indicating a desire to bring cameras to the police department.[29] Yet, as of the date of this report, TPD officers are not outfitted with body cameras and their vehicles lack dashboard cameras.

Those agencies that have adopted body-worn camera programs note many associated benefits, including: the documentation of evidence; enhanced officer training; the prevention and/or resolution of citizen complaints; transparency; and performance and accountability.[30] Likewise, dashboard cameras have proven beneficial to officers, law enforcement agencies, and members of the public alike.[31] Moreover, at a time when police-civilian encounters are increasingly recorded by members of the public, body-worn and dashboard cameras provide the additional benefit of ensuring that events are captured from as many perspectives as possible.[32]

We are mindful of the costs associated with digital video technology and the limited resources of law enforcement agencies. Not only do the cameras themselves cost money, but there are enormous expenses associated with data storage as well as training of officers in how cameras are to be used. For that reason, we direct this recommendation not only to law enforcement agencies such as the TPD, but to the policy makers who determine and dictate funding priorities.

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police departments are telling officers not to shoot at vehicles and instead, to move out of the way whenever they can").

[28] https://www.npr.org/2016/09/01/480147373/new-policy-in-la-cracks-down-on-problem-of-police-shooting-at-moving-cars

[29] See e.g. http://www.timesunion.com/local/article/Cameras-for-Troy-police-proposed-8161299.php

[30] See https://www.justice.gov/iso/opa/resources/472014912134715246869.pdf

[31] See http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=358

[32] No video recorder or camera can capture the exact perspective of the officer (or for that matter, the civilian with whom the officer is engaged). See, e.g., http://www.nytimes.com/interactive/2016/04/01/us/police-bodycam-video.html

EXHIBIT A

PRECISION SIMULATIONS

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Expert Report of Craig Fries

Troy
SIP 16-003

February 8, 2017

Expert Report of Craig Fries

Troy

SIP 16-003

February 8, 2017

Qualifications

I am the CEO and founder of Precision Simulations, Inc. I am an expert in the field of Accident and Crime Scene Documentation and Analysis, 3D Laser Scanning, 3D Animation & Modeling, Forensic Video and Audio Analysis, Photogrammetry and Ballistic Trajectory Modeling. I am a board member of the Forensic Expert Witness Association, a member of the Association for Crime Scene Reconstruction, The California Association of Criminalists and the California Association of Accident Reconstruction Specialists. I have provided you with a true and correct copy of my CV, my past publications, fee schedule and my recent testimony. ***(See Exhibit A, attached – Craig Fries Curriculum Vitae, Trial Testimony History and Fee Schedule.)***

I have personal knowledge of the contents of this report to the extent indicated below, and, if called upon to testify, I could testify competently to its contents.

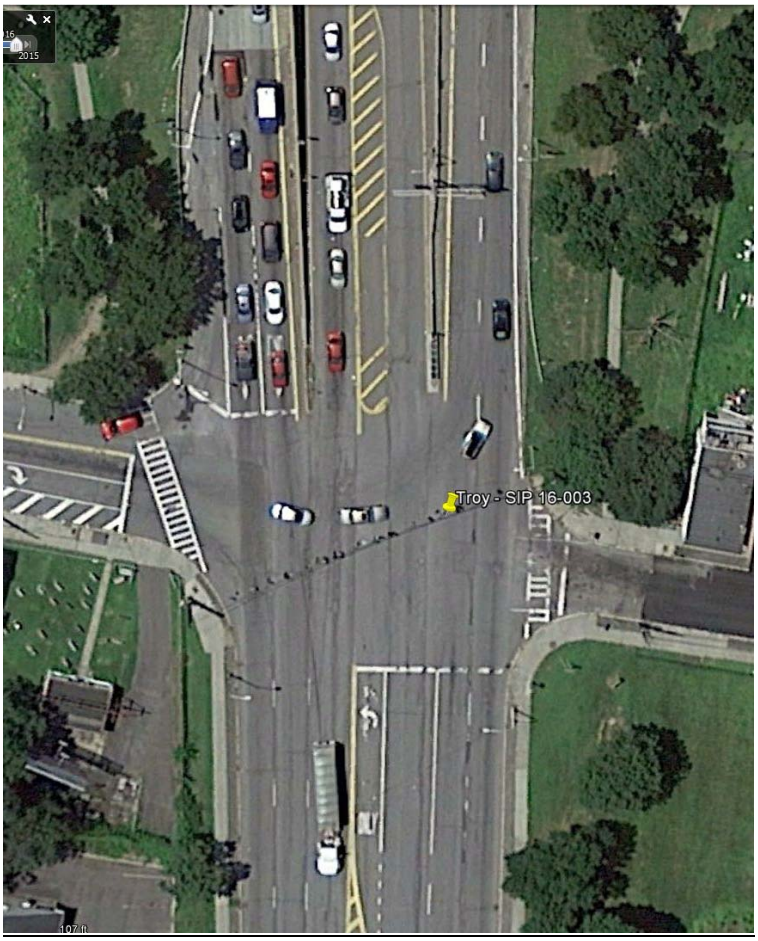
Requested Tasks

I was provided materials related to this incident.

(See Exhibit B, attached – List of Supplied Materials.)

I was instructed to complete an independent analysis of the available evidence and witness testimony related to the shooting of Mr. Edson Thevenin by Troy PD Sergeant R. French on April 17, 2016 at approximately 0330 hours.

Event Summary



Aerial Photo of Incident Location

From the Troy PD report of Patrolman M.K. Magnetto:

On Sunday April 17, 2016 at approximately 0330hrs there was a three-car accident on Alternate Route 7 in Troy, NY 12180. According to Weather Underground, the weather was clear and the temperature was approximately 41 degrees (f). The roadways were dry and traffic was light. The streetlights were on. The section of Alternate Route 7 approximately 35 feet West of Hoosick Street is paved, well-traveled asphalt. The speed limit for this section is 30 mph. The speed limit increases to 55mph a short distance west of this location.
The crash occurred in the south, westbound lane. Vehicle # 1 is a 2000 Honda Civic 2D SD bearing NY registration FYZ9818. It is registered to Cinthia Cyrille and operated by Edson Thevenin. Vehicle #2 is a 2013 Ford Interceptor vehicle #30 bearing NY registration POLICE. It is registered to the City of Troy and operated by Sgt. Randall French. Vehicle #3 is a 2012 Chevrolet Impala 4D SD bearing NY registration GBB3189. It is registered to the City of Troy Police Department. It was operated by Cpt. Matt Montanino leading up to the crash. At the time of the crash vehicle #3 was unoccupied.
Vehicle #1 was fleeing from a traffic stop on 6th Ave. between Jacob St. and Hoosick St. Vehicle # 1 was fleeing north on 6th Ave. Vehicle #2 was a marked TPD patrol vehicle following Vehicle # 1. Vehicle #2 was operating in emergency mode with both lights and sirens activated. Vehicle # 1 made a right turn and began traveling east on Hoosick St. Vehicle #2 followed. At this point Vehicle #3 followed Vehicle #2. Vehicle #3 is an unmarked police car that was operating in emergency mode with lights and sirens activated. Vehicle # 1 then
made a U-Turn from Hoosick St. at 8th St. onto Alternate Route 7, traveling westbound over the Collar City Bridge. Vehicles #2 and #3 followed. Approximately 35 feet after completing the U-Turn, Vehicle #1 crashed into the south concrete barrier of the Collar City Bridge. Vehicle # 1 struck the barrier with the front driver side bumper, causing damage to both Vehicle #1 and the barrier. At this point Vehicle #2 pulled in front of Vehicle #1 at an angle. Vehicle #2 was almost perpendicular to Vehicle # 1. Vehicle #3 pulled up behind Vehicle # 1 and exited the vehicle. Vehicle # 1 reversed. As he reversed the front passenger side bumper struck the driver side door of vehicle #2 and he continued to sideswipe vehicle #2 as he backed up. Vehicle # 1 then backed the rear passenger side bumper into the front bumper of

Vehicle #3 causing damage to both vehicles. The driver of Vehicle #2 exited his vehicle. Vehicle # 1 then travelled forward and pinned the driver of Vehicle #2 between the rear driver side quarter panel of Vehicle #2 and the front of Vehicle # 1.

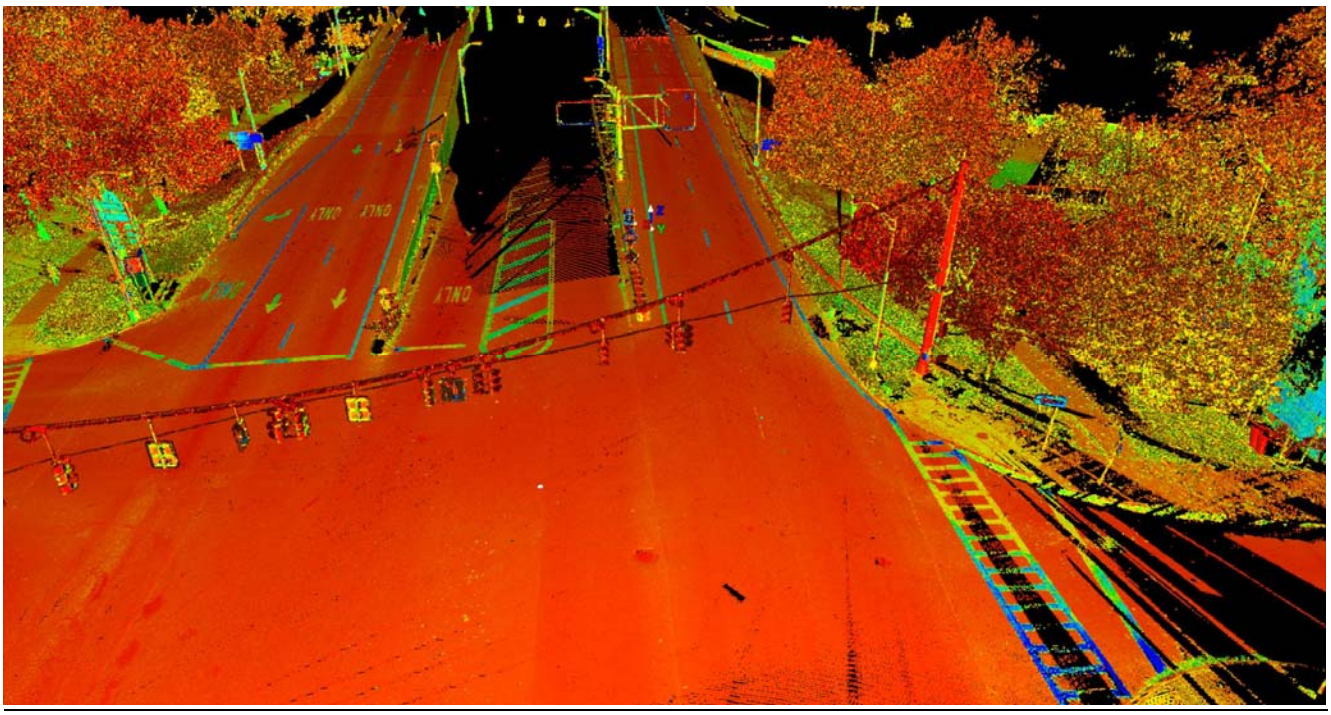
Analysis

To complete my analysis, I undertook the following tasks:

- I performed a 3D laser scan of the scene.
- I reviewed the scene, Officer and vehicle photos taken by the Troy PD.
- I reviewed the reports generated by the Troy PD.
- I developed a 3D working model of the crime scene based upon the 3D laser scan data, the available photography and the measurements of evidence derived by the Troy PD.
- I undertook a 3D laser scan survey of the 2000 Honda Civic driven by Edson Thevenin using the Leica Geosystems P40 laser scanning system.
- I derived a 3D model of the 2000 Honda with the bullet trajectories and imported this model into the 3D working model for advanced analysis of the trajectories and physical evidence at the scene.
- I undertook a 3-day study investigating the effect of the Honda Civic windshield on the trajectories of the specific ammunition fired by Sergeant French.
- I performed a 3D laser scan of Sergeant French's 2013 Ford Taurus, derived a 3D model and imported it into the 3D working model.
- I performed a 3D laser scan of Captain Montanino's 2012 Chevrolet Impala, derived a 3D model and imported it into the 3D working model.
- I reviewed the video taken by the Troy PD and used frames in conjunction with the 3D laser scan data to perform photogrammetry and locate the position of the Honda Civic. I also checked the Troy PD measurements for the location of Sergeant French's vehicle.
- I reviewed the cell phone video taken by witness CW-1 and used it to perform photogrammetry to determine the location of Captain Montanino's vehicle before it had been moved.

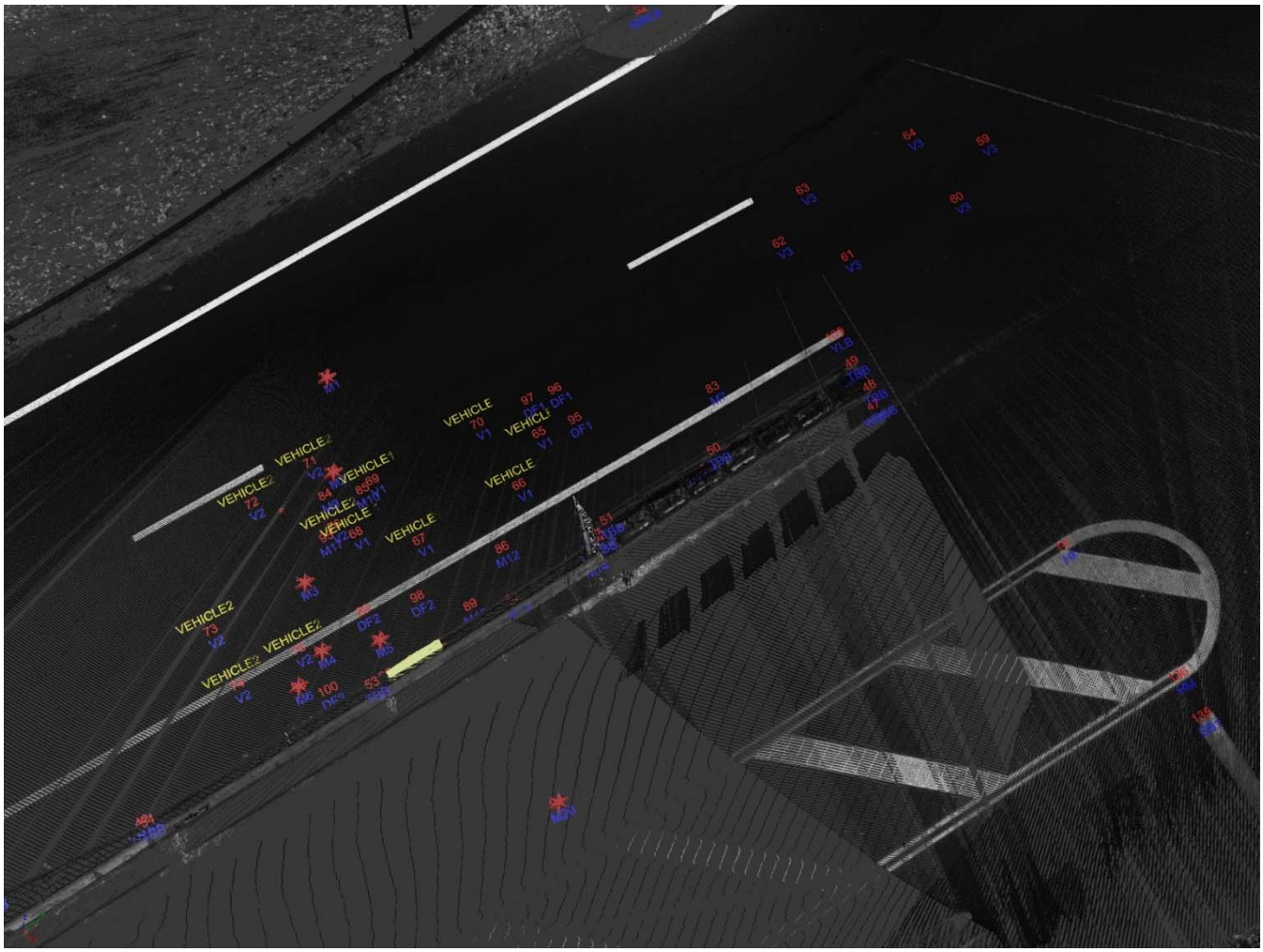
- I reviewed Dr. Michael Sikirica's autopsy report and created a 3D model of the gunshot wounds and wound paths received by Edson Thevenin.
- I reviewed the interview and depositions of the witnesses and involved officers.
- I derived vehicle kinematics for the 2000 Honda Civic.
- I derived shot timing for Sergeant French
- I used the 3D working model to compare the witness statements, including Officer French's, to the physical evidence.
- I reviewed the CAD report and the associated radio transmissions to determine overall timeframe of the event.

- *3D laser scan data of the scene:*
    - I visited the accident scene on November 14, 2016 and performed 3D laser scan. 3D laser scanning uses a laser beam to survey the environment around it, measuring both spatial location and color of everything within its line of sight. The resultant 400,000,000 data points provide a detailed 3D model accurate to within 6mm and were used directly in the analysis. I pioneered the use of 3D laser scanning in forensic analysis in 1998 and was the first person to get laser scan data admitted into trial in 1999. I introduced the technology to the accident reconstruction experts in the US and am among the foremost experts in the field in the utilization of this data for forensic analysis. The data I received covered an area of approximately 600 feet of Alternate Route 7 in the vicinity of the event and included the roadway, curbs, roadway barriers, traffic signals, camera locations, buildings, driveways, trees and textural details of the incident area. I used the scan data as the foundational basis for the 3D working model, 3D ballistic trajectory analysis and 3D animation.
      (*See Exhibit C, attached and below – 3D Laser Scan Data Imagery.)*



- *Develop a 3D working model of the crime scene based upon the 3D laser scan data, the available photography and the measurements of evidence derived by the Troy PD:*
    - Review of the physical evidence located at the scene.
        - The physical evidence found at the scene was documented via Total Station by the Troy PD and consisted of a number of critical items.
            - The point of rest of Sergeant French's patrol vehicle.
            - The location of the 8 expended casings from Sergeant French's Kimber .45 cal firearm.
            - The location of the Honda Civic after it was moved to allow Sergeant French to become unpinned.
            - The location of the Chevrolet Impala after it was moved after the event.
            - The location of the evidence of impact on barrier wall by Thevenin's Honda.
            - The location of body fluids.
            - The location of evidence of medical care efforts.

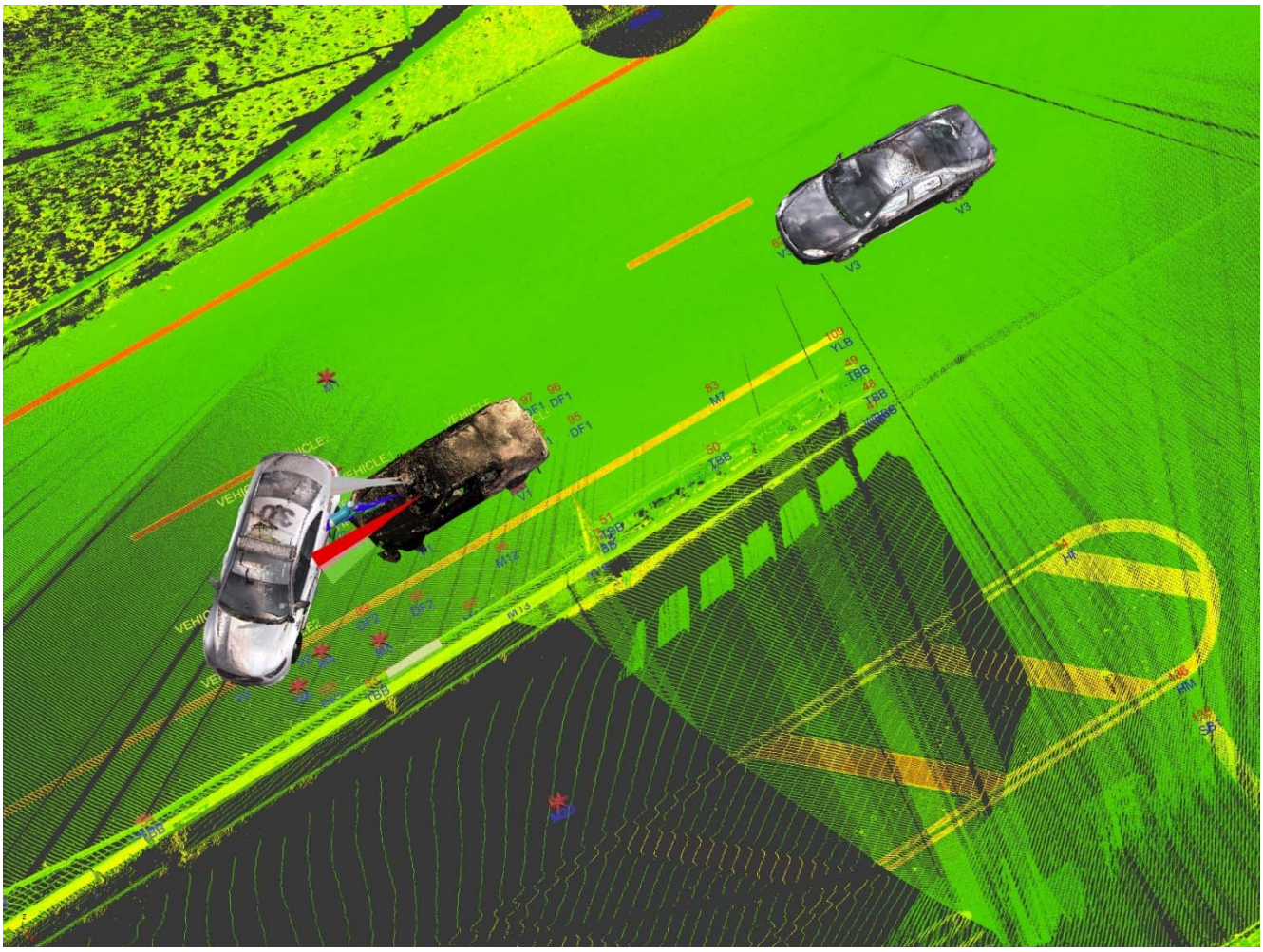
(See Exhibit D, attached – Troy PD Physical Evidence Locations Diagram.)



- To reconstruct the spatial and temporal aspects of this event, I compiled all the physical evidence locations as measured by Troy PD Total Station survey, the 3D laser scan model of the scene and the 3D laser scan model of the three vehicles in their post-event locations. This model maintains fidelity to the spatial and temporal aspects of its individual parts, while allowing fine analysis in the computer and adding the ability to animate and move these elements over time. Using the 3D working model I can see the spatial and temporal relationships between the evidence, the vehicles and the officers and determine which relationships match the physical evidence and which do not. Additionally, the statements made by witnesses and involved parties can be compared to the

physical evidence to determine which are supported and which are not. I undertook this process both to match the relationships to the evidence and to test the statements of the witnesses to the evidence.

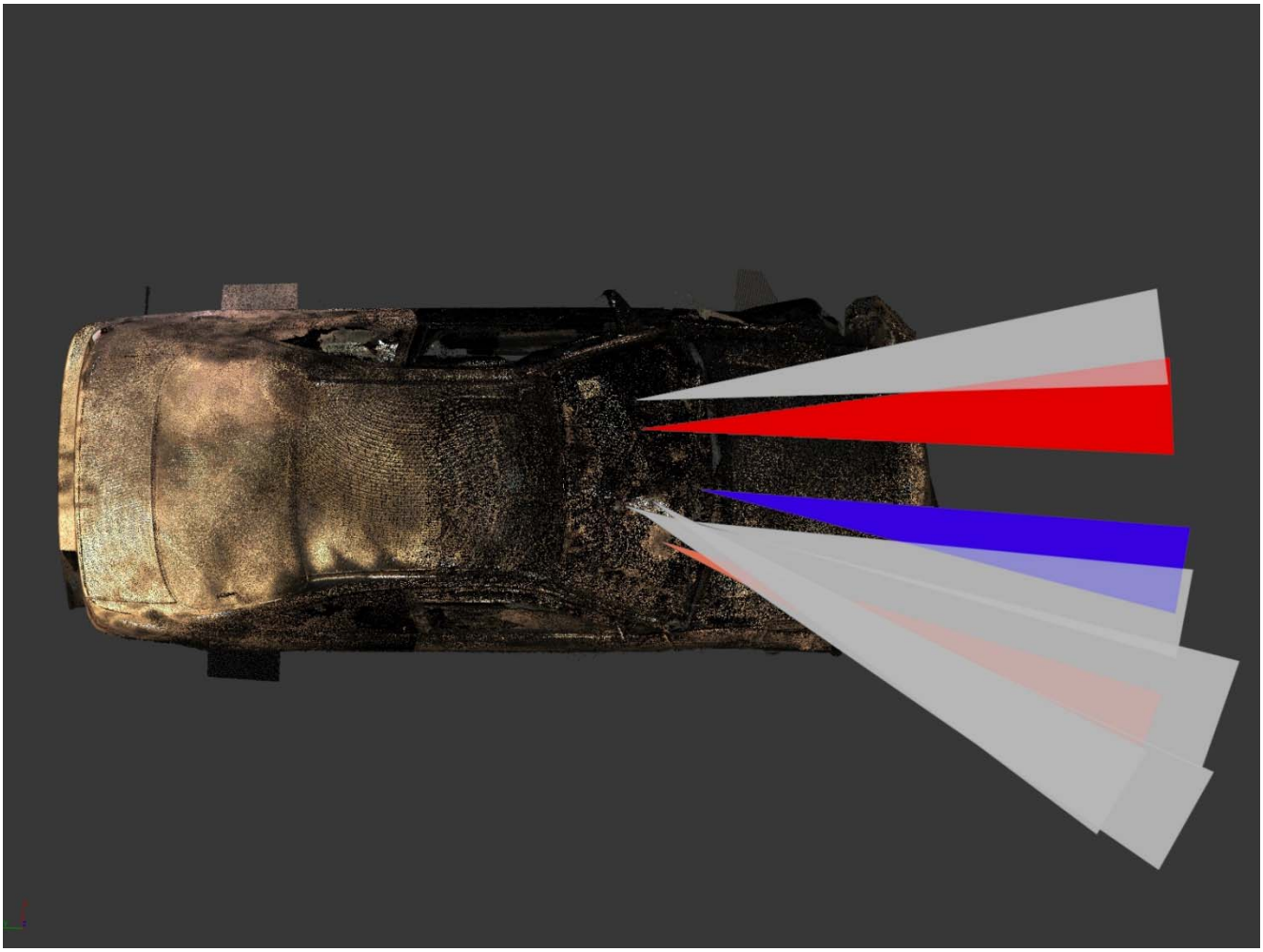
(See Exhibit E, attached and below – The 3D Working Model.)



- *Perform 3D Laser Scan Documentation of subject Honda and Bullet Impact Strikes:*
    - On November 14, 2016, I performed an inspection of the subject Honda. I took photographs of the vehicle interior and exterior and documented the interior and exterior via 3D laser scanning. I used the Leica Geosystems P40 laser scanner. The vehicle and bullet impact strikes on the windshield were documented to create an accurate 3D model of the vehicle for use in the analysis and reconstruction of the event. I inserted custom-designed trajectory rods into each impact strike on the windshield, holding each rod in place to

avoid error due to gravity-induced drop in the rods while deploying the laser scanner to measure the impact site and the trajectory of the rod. When documenting windshield impact strikes it is critical to note that the angle of the windshield interacts with the bullet and causes the bullet trajectory to change its vertical angle and direction. Unless specific testing is performed with the same ammunition and windshield angles, the predictability of this change in vertical angle is poor at best. For this reason, I initially chose to not use the impact strikes in the windshield to predict the vertical angle, and therefore the height of the firearm when fired. I did use the horizontal angle of the elliptical-shaped bullet impact sites and inserted trajectory rods to illustrate the horizontal direction of the bullet trajectory, and therefore the horizontal location of Officer French at the time each round was fired. Based upon experience from previous testing I have performed ***(See Exhibit F, attached – PSI Ballistic Trajectory Study.)***, as well as published work performed by others such as Mike Haag, I illustrated the predicted officer location with a +/- 5-degree cone, to properly account for the variability in this type of data measurement. The resultant vehicle dimensions and bullet trajectories were modeled in 3D inserted into the 3D working model.

(See Exhibit G, attached and below – 3D Laser Scan Data of Honda Civic with Bullet Trajectory Cones.)



- Troy PD collected 8 Winchester Auto +P .45 cartridge expended bullets and 8 casings from the scene. US DoJ Firearms and Toolmark Examiner Arnold Esposito conducted an analysis on the 8 bullets and casings and determined that all 8 were fired from Sergeant French's Kimber .45 cal Auto semi-automatic pistol. As a double check to my horizontal trajectory analysis, I undertook a study using the same Winchester Auto +P .45 cal ammunition fired by Sergeant French, firing ~40 rounds into a series of windshields angled at the same 29-degree angle as the windshield in the subject Honda. The results of this study showed that the elliptical bullet impact shape predicted the horizontal location of the firearm with a bias or offset of approximately 10 degrees to left. In other words, our testing showed that, at the angles French fired and with ammunition

he used, the elliptical shape predicted that French's position is 10 degrees to French's left than he really was. This measured bias is previously unreported in the literature and is reflected (and controlled for) in the results I am showing in this report. The previously used +/- 5-degrees cone of variability still apply. The vertical angle was heavily affected by the aforementioned and expected deflection as the bullet passed through the windshield. Likely due to the robust character of the laminate, the JHP rounds exhibited marked fragmentation and stripping of the jacket from the round itself. Although on average the rounds deflected in the expected downward direction, the variability of the deflection angle prohibits a specific prediction of the distance from which Sergeant French fired the 8 rounds.

(See Exhibit H, attached and below – Results of Honda Civic Windshield Impact Testing.)

	Shot #	**Offset Horizontal Angle Prediction (Positive Angle to the Right Relative to the Windshield)**
	1	11.46
	2	8.41
	3	10.71
	4	9.30
	5	9.36
	6	8.05
	7	9.49
	8	12.14
	9	9.26
	Average	9.80
	Median	9.36
	Std Dev	1.29
5 Degree Traj Cone Angular Offsets		
Angle from Perpindicular	**linear offset from 42 to 0**	**Angular Offset per measured angle degree**
41.8	9.80	0.23
38.9	9.12	
29.21	6.85	
25.6	6.00	
13.7	3.21	
12.4	2.91	
-3.4	(0.80)	
-9.3	(2.18)	

- *3D laser scan of Sergeant French's 2013 Ford Taurus and Captain Montanino's Chevrolet Impala. Derive 3D Models of each and import them into the 3D Working Model*.
    - On November 14, 2016 I performed 3D laser scanning on both Sergeant French and Captain Montanino's car at an outdoor facility. Each vehicle exhibited visible signs of the impacts related to this event: Sergeant French's drive side front and rear doors exhibited distinct and separate patterns of damage. The driver door exhibited a horizontal scrape and intrusion that increased in depth as it traveled front the front edge to the rear edge of the door. The rear drivers-side door was remarkable in that the leading edge adjacent to the deepest intrusion on the front door was devoid of damage or any visible evidence of contact. There was a minor scrape at the rear end of the rear door. This pattern suggests that the driver's door was open when the impact occurred with the Honda Civic, thereby sparing the leading edge of the rear door. The two damage areas appear to be from separate and distinct contacts. Captain Montanino's Impala exhibited visual evidence in the front bumper/grill area that visually matched the impact height of the rear bumper of the Honda Civic – this correlation was confirmed through comparison of the laser scan data of each vehicle. The damage was minor and limited to some scrapes on the bumper and a portion of the plastic grill cracking. I outlined the damage patterns on each vehicle with blue tape markers to highlight these areas in the laser scan data. Each vehicle was scanned and imported directly into the 3D working model and positioned as measured in their post-event locations as per the Troy PD Total Station data. ***(See Exhibit I, attached and below – 3D Laser Scan Data and photos of Sergeant French's and Captain Montanino's Vehicles.)***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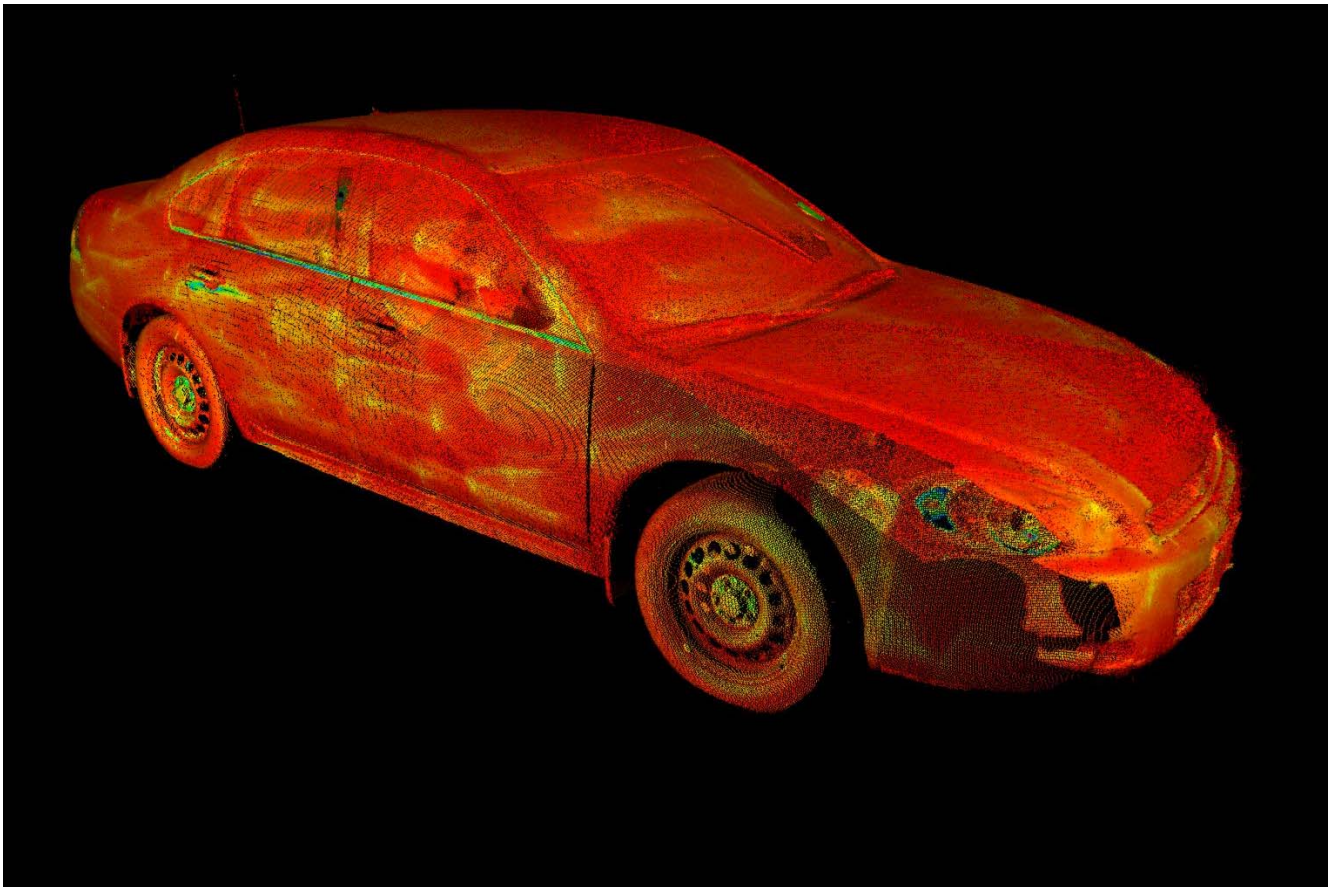


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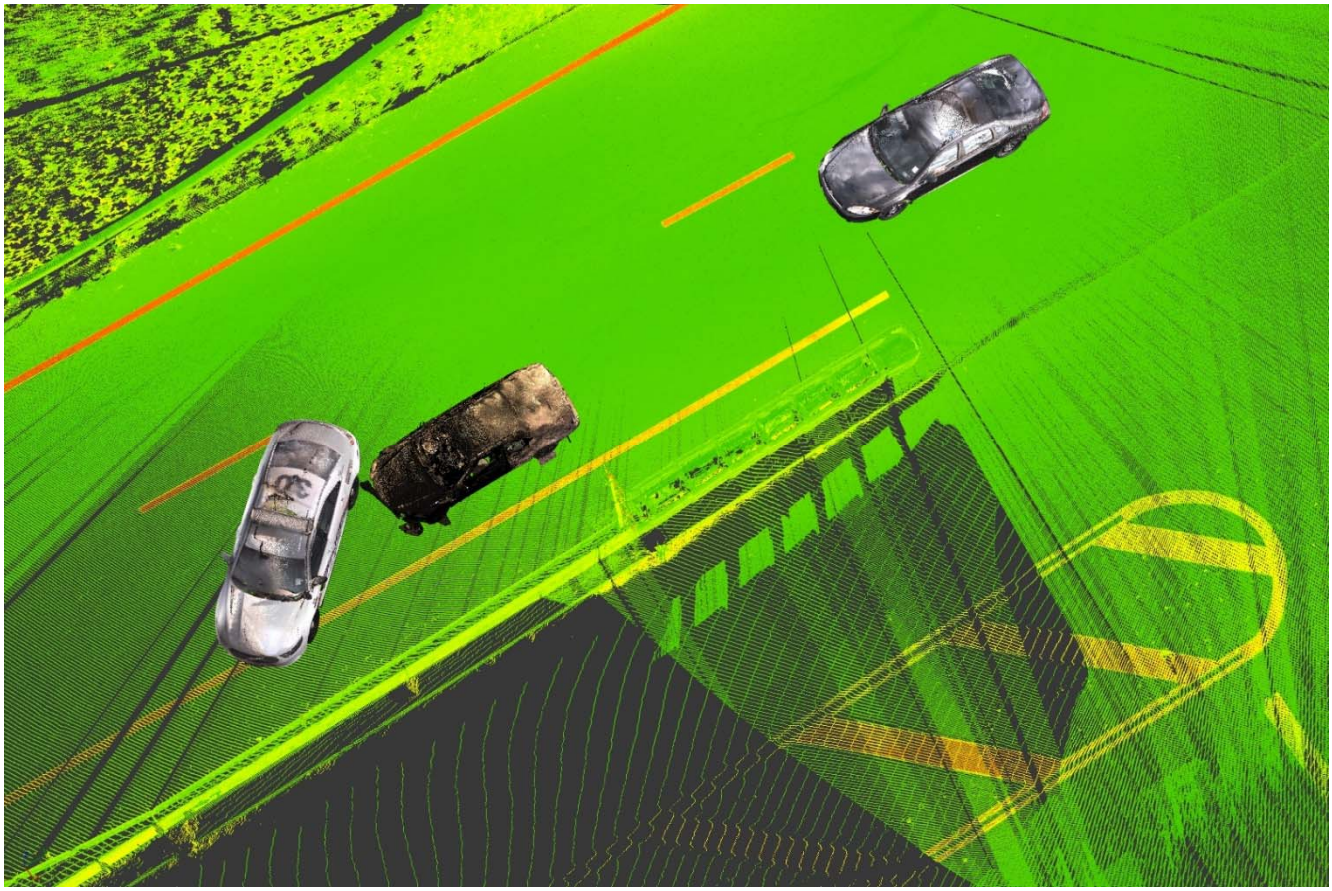
- *Review and utilization of the scene video taken by the Troy PD to perform photogrammetry and locate the position of the Honda Civic. Doublechecking of the Troy PD measurements for the location of Sergeant French's vehicle.*
    - I received a video from the Troy PD 17.4 minutes in length that depicted the post-accident area in detail. One of the benefits of the video is that it is essentially a visual record of the locations of the vehicles and evidence, with 30 images taken of the evidence for every second of the video. This wealth of information provides many images from multiple angles that are very effective backgrounds for performing laser-assisted photogrammetry. Laser-assisted photogrammetry is a statistical technique that uses the imagery in conjunction with the hundreds of million data points contained in the laser scan to accurately determine the location of evidence depicted in the image. I used this video and this process to determine the location of Sergeant French's vehicle, Thevenin's Honda and Captain Montanino's Impala at their respective points of rest. Statements made by Sergeant French, Captain Montanino, CW-1 and others suggest that of the three vehicles only Sergeant French's patrol vehicle are depicted at the position it occupied during the shooting. Captain Montanino's vehicle was moved a considerable distance back from the impact locations and the Honda Civic was moved slightly during the efforts to free Sergeant French's leg. Although the locations have been altered, knowing their final points of rest is useful as a first step in determining their location before they were moved and when the shooting occurred. I imported the resultant locations of the three vehicles into the 3D working model.

      (See Exhibit J, attached and below –Laser-Assisted Photogrammetry Based Upon Troy PD Video.)



- *Review and utilization of the cell phone video taken by CW-1 to perform photogrammetry to determine the location of Thevenin's Honda Civic and Captain Montanino's Impala before they had been moved.*
    - I received a copy of the cell phone video taken by witness CW-1. This video is 1.8 minutes in length; the first 10 seconds of which depict the positions of all three vehicles and Sergeant French immediately after the shooting and before they were moved. Similar to the video taken by the Troy PD, the cell phone video presents a series of images 30 frames per second. I selected an image that frames the location of all three vehicles and a portion of the area that had been measured via 3D laser scan; the frame I selected was frame 271. I then repeated the laser-assisted photogrammetry process on this frame of video and derived the critical distance between the rear of Thevenin's Honda and the front bumper of Captain Montanino's Impala as approximately 39

inches. This distance represents that total travel distance for the Honda as it moved towards Sergeant French's position from its initial position backed into Captain Montanino's Impala. The process also provided the relative locations of the Honda, Impala and Sergeant French to Sergeant French's patrol vehicle. I imported the resultant locations of the three vehicles into the 3D working model. ***(See Exhibit K, attached and below - attached and below – Laser-Assisted Photogrammetry Based Upon CW-1 Cell Phone Video.)***

- As a double-check on this analysis, I performed a basic pixel-based photogrammetry analysis using the known overall length of the Impala as a

scale factor to determine the distance between the Impala and Honda. I consulted the vehicle dimension database *Expert Autostats* which provided an overall length of 200 inches for the Impala. Using this as a scale factor I determined the distance between the Impala and Honda to be Approximately 39 inches – the same value I derived via laser-assisted photogrammetry.

(See Exhibit L, attached and below – Pixel Based Photogrammetry Based Upon CW-1 Cell Phone Video.)

EXPERT AUTOSTATS
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PRECISION SIMULATIONS, INC
115 SOUTH CHURCH STREET
GRASS VALLEY CA 95945-6422

11-29-2016

2012 CHEVROLET IMPALA MSP POLICE PKG 4 DOOR SEDAN

CURB WEIGHT:	3745 lbs.	1699 kg.
Curb Weight Distribution -	Front: 62%	Rear: 38%
Gross Vehicle Weight Rating:	4678 lbs.	2122 kg.
Number of Tires on Vehicle:	4	
Drive Wheels:	FRONT	

HORIZONTAL DIMENSIONS

	Inches	Feet	Meters
Total Length	200	16.67	5.08
Wheelbase:	110	9.17	2.79

- *Develop a 3D Gunshot Wound Path Model based upon Dr. Michael Sikirica's Autopsy of Edson Thevenin:*
    - I used the measurements and descriptions of the wounds in Dr. Sikirica's autopsy report to create a 3D model of Mr. Thevenin and the entry and rest/exit locations for each gunshot wound detailed in the report. I created a bipedal model that matched the 72-inch height of Edson Thevenin and then located the bullets entry and exit/rest locations on this 3D model as listed in the autopsy report. From Dr. Sikirica's autopsy report:

      Mr. Thevenin received 7 gunshot wounds.

      Gunshot Wound 1

      ENTRY:
      6" below top of the head at the left nostril.

      DIRECTION:
      Nearly straight downward along the body.

      EXIT:
      The left portion of the chin. 9" below the top of the head, 3cm to the left of the midline.

      PATH:
      To the rear and downward through the maxilla along the left alveolar process with fracturing through several teeth and extends downward through the left portion of the mandible with additional fracturing of teeth and the bony ramus.

      Gunshot Wound 2

      ENTRY:
      Graze, 9.5" below the top of the head and 7cm to right of the midline across the top and posterior aspect of the right shoulder.

      DIRECTION:
      Front to rear, nearly straight and slightly downward.

      EXIT:
      Graze defect 55 X 9mm, across the top and posterior aspect of the right shoulder.

      PATH:
      Across the top and posterior aspect of the right shoulder.

      Gunshot Wound 3

      ENTRY:
      Right clavicle 12.5" below the top of the head and 7 cm right of the midline.

DIRECTION:
Slightly from decedent's front to rear, from right to left and slightly downward.

LODGMENT:
The right atrial chamber of the heart.

PATH:
Into the right chest cavity passing between the right 2nd and 3rd ribs with slight fracturing and the projectile track extends into the pericardial sac.

Gunshot Wound 4

ENTRY:
The anterior left axillary region, approximately 14.5" below the top of the head and 16cm to the left of midline.

DIRECTION:
Inward and downward.

LODGMENT:
17” below the top of the head and 5cm to the left of the midline in the muscular and subcutaneous
tissue of the left back.

PATH:
Into the left chest cavity
and towards the right passing through the left 3rd rib with a perforation through the upper and lower lobes of the left lung. Outward through the lung passing into the posterior left chest through the 7th rib and into the muscular and subcutaneous tissue of the left back.

Gunshot Wound 5

ENTRY:
Lateral right upper arm, 15cm below the top of the head.

DIRECTION:
Upward and rearward.

EXIT:
13.5” below the top of the head, 20cm to the right of the midline.

PATH:
Upward and rearward along the posterior right axillary region.

Gunshot Wound 6

ENTRY:
Upper medial portion of the dorsal right forearm. 16cm below the elbow.

DIRECTION:
Upward.

LODGMENT:
Muscular tissue of the right forearm.

PATH:
Extends upward into the muscular tissue of the right forearm.

Gunshot Wound 7

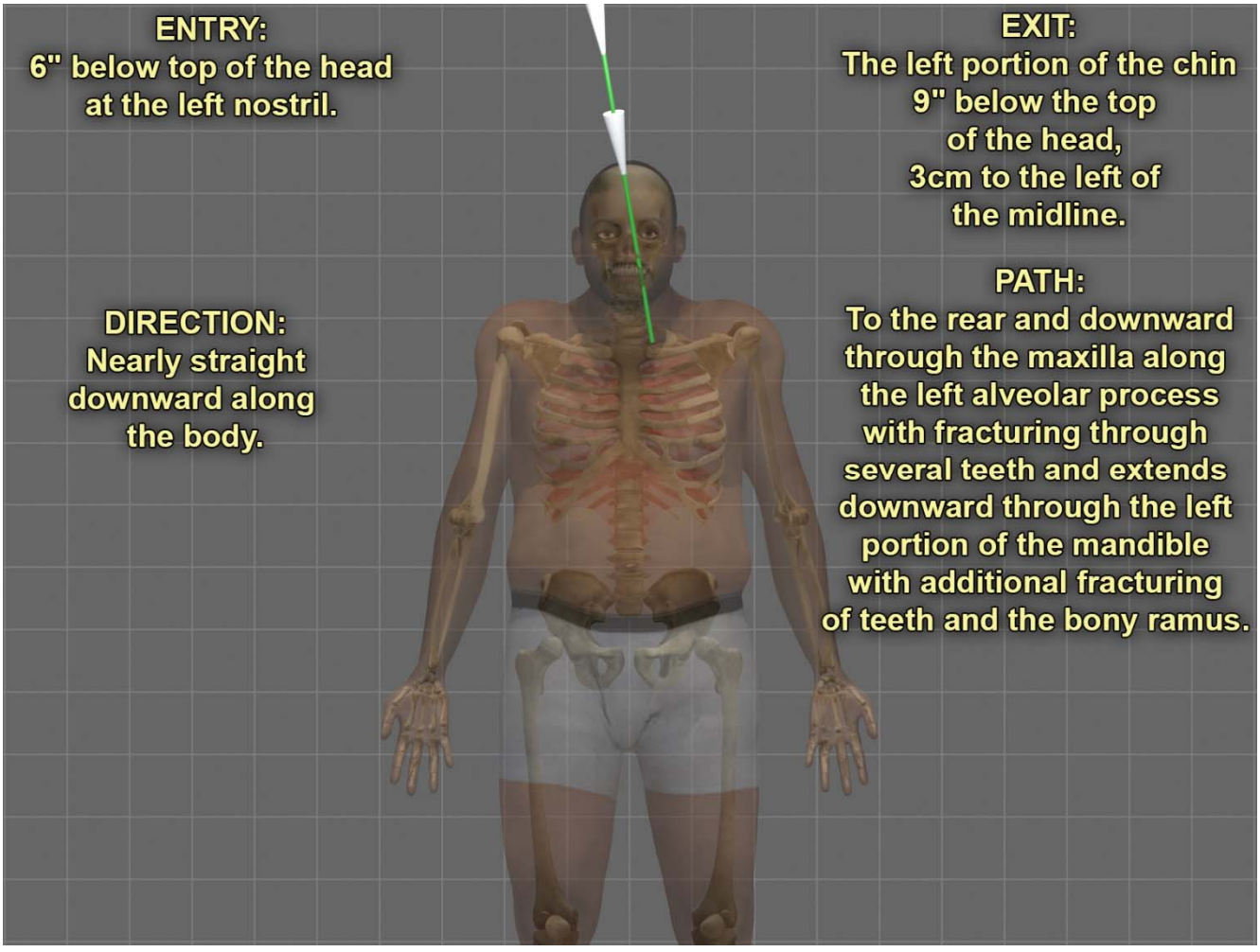
ENTRY:
Medial portion of the dorsal left
forearm.

DIRECTION:
Nearly horizontal across the left arm.

EXIT:
More lateral portion of the arm through a more ovoid defect. 13cm below the elbow.

PATH:
Through the outer muscular tissue and soft subcutaneous tissue.

(See Exhibit M, attached and below – 3D Gunshot Wound Model of Edson Thevenin.)



- *Review of statements made by officer's and witnesses:*
    - I reviewed the statements given by the following witnesses/involved parties:
        - Sergeant French
        - Captain Montanino
        - CW-1
        - CW-2
        - CW-3

      In some areas, there is agreement between the witnesses; in others, there are dissimilarities between their statements. I reviewed in detail the transcripts of each of the statements they provided and noted the critical elements for reconstructing the events.

        - *Sergeant French*
            - States that he could not open driver door but a few inches due to position of Honda against the driver's door.
            - States he exited as soon as he could open door.
            - States upon exiting his vehicle that he was immediately struck by the Honda and pinned between the two vehicles.
            - States he fired only after he was struck by Honda and pinned.
            - States he fired in two separate volleys.
            - States he fired first volley into windshield but this had no effect on cars acceleration or attempted forward motion.
            - States the car began to drag him to his left as he was still pinned.
            - States he fired 2nd volley into windshield and then noticed that car was no longer accelerating but he was still stuck.

        - *Captain Montanino*
            - States Honda backed into his patrol vehicle as he was exiting car.
            - States he heard French yelling at driver to stop.
            - States Honda accelerated towards French.
            - States he heard shots but didn't know who was firing.
                - Does not state when French began firing in relation to French being pinned.

- Does state French was eventually pinned.
- Does say Honda was moving towards French when he fired.
- Not specific about if contact with French made before or after hearing shots.
- States officers and civilians moved car off French as Montanino attempted to drive the car in reverse but was unable to.
- States that the Honda was in drive when he entered the vehicle.

- *CW-1 – CW-1 witnessed the event while on the way to his tow truck and began filming with his cell phone after hearing the shots. CW-1 provided two statements.*
    - First statement says that Honda backs into unmarked car.
    - First statement says that he heard an impact before he heard shots fired.
    - Second statement he clarifies and says that French fired at Honda simultaneously with the Honda striking the unmarked car and that Honda moved forward after shots fired and then struck French.
    - Says French was pinched near rear driver's side door near the rear tire.
    - Says he didn't hear French giving commands to stop.
    - Says Honda backed up 3 to 5 feet into Chevy.

- *CW-2 – CW-2 witnessed the event from inside his vehicle while waiting at the light at Hoosick and 8th.*
    - States he saw Honda back into unmarked car.
    - States that the Honda backed up a "few feet" into unmarked car.
    - States he heard French yelling at the Honda driver to stop, stop as it was backing up.
    - States he saw French get out of vehicle with weapon drawn.
    - States he saw French fire at Honda as it was moving forwards but before it struck French.
    - States Honda continued to roll forward after shots fired and struck French.
    - States the Honda moved quickly both in reverse and when it moved forward.

- *CW-3 – CW-3 witnessed the event as a passenger in the car with CW-2.*

- Saw officers block Honda in.
- Saw and heard Honda back into unmarked car.
- Saw Honda move forward and to the right to escape and that's when he heard French fire.
    - Is not specific about when French fired other than it was as Honda was moving forward.
- Does not say that Honda struck French but also says he couldn't see because CW-2's body was in the way.

- *Areas of agreement:*
    - There is no dispute that Edson Thevenin was the driver of the Honda Civic.
    - There is no dispute that the Honda Civic made contact with Sergeant French and that he was eventually pinned between the two vehicles. All witnesses either corroborate this or admit that they could not see well enough to determine if contact was made. In addition, the photos and records show that Sergeant French did suffer from a minor injury/contusion to his left lower leg.

      (See Exhibit N, attached and below – Photos of Sergeant French's Lower Leg Injury.)

- There is no dispute that Sergeant French fired multiple times at the Honda Civic.
- There is no dispute that the Honda Civic collided with a roadway barrier before reversing into Captain Montanino's Impala and then moving forward into Sergeant French's patrol vehicle.
- There is no dispute that Edson Thevenin died as a result of the gunshot wounds he received from the rounds fired by Sergeant French.

o *Areas of statements with functionally significant differences:*

Unlike the above areas of testimony where the witness statements are in general agreement as to what occurred, the following areas have significant differences in the witness statements. These differences are in areas of importance for reconstructing the event and are valid candidates for further scrutiny and analysis to determine which are supported by the evidence and which are not.

- Sergeant French states he was struck by the Honda immediately upon exiting his vehicle.
  - CW-1 says in his 2nd statement that French was pinned against his patrol vehicle near the rear tire, not near the driver's door.

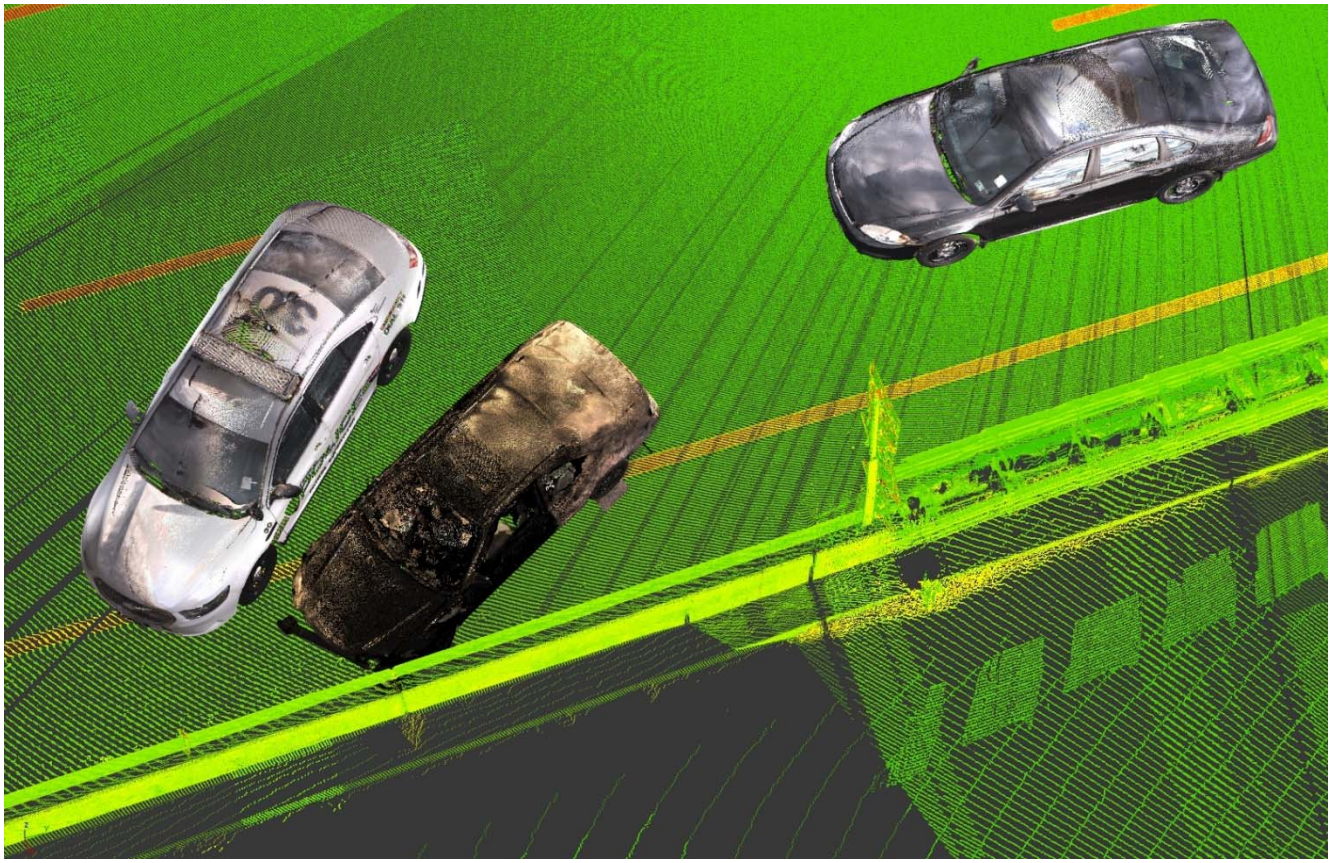
- Sergeant French states that he fired all of his rounds (both volleys) while pinned between his patrol vehicle and the Honda.
  - CW-1 says in his 2nd statement that French began firing as the Honda struck the Impala.
  - CW-2 states that French began firing while the Honda was moving forward but *before* it struck French.
  - Captain Montanino and CW-3 both state that the Honda was moving forward when French fired but are not specific as to whether contact with French had already been made when shots began.

        - Sergeant French stated that he was dragged to his left by the Honda while he was pinned.
            - None of the other witnesses to the event make this statement or mention anything about French being dragged or moved while in contact with the Honda.
    - *<u>French statements that are not addressed by other witnesses.</u>*
        - Sergeant French stated that he was dragged to his left by the Honda while he was pinned.
            - None of the other witnesses to the event make this statement or mention anything about French being dragged or moved while in contact with the Honda.
        - Sergeant French stated that he could only open his driver door a few inches at first due to the presence of the Honda.

- *Derivation of vehicle kinematics for 2000 Honda Civic.*
    - The witness statements are consistent that the Honda Civic was in motion at various times throughout the event and the physical evidence in terms of impact and crush support the statements. The Honda had three impacts and three phases of movement that are important in the analysis of the event:
        1. The impact with the barrier wall. This is supported and indicated by the paint transfer on the wall and the damage to the left front corner of the Honda.
        2. The 1st impact with Sergeant French's vehicle. This is supported and indicated by the damage pattern on the driver's door of Sergeant French's patrol vehicle. The damage starts at the front edge of the driver's door and continues to the very trailing edge of the front door, increasing in intrusion depth as it progresses rearward. The leading edge of the rear door is devoid of any evidence of contact. This is suggestive of Sergeant French having his door open slightly during this side swipe impact, thus sparing the rear door. I used the 3D

working model to derive a turning motion that matched the impact pattern on the front door of Sergeant French's patrol vehicle. The motion starts at the impact point on the barrier wall, continues in a clockwise rotation rearward, contacting French's driver door and ending with the passenger side rear bumper of the Honda impacting the front bumper area of the Impala.

(See Exhibit O, attached and below – Vehicle Kinematics for Honda in Reverse.)



3. The rearward impact between the rear of the Honda and the front bumper area of the Impala. This impact is based upon the evidence of impact seen on the Honda passenger side rear bumper and matched to the damage pattern on the front bumper/grill area of the Impala as documented via 3D laser scan.

(See Exhibit P, attached and below – Derived Orientation for Impact Between Honda and Impala.)

4. The forward motion of the Honda as it makes 2nd impact with Sergeant French/Sergeant French's patrol vehicle. There is no obvious visual evidence of any significant contact with the vehicle but there is evidence of contact with Sergeant French's left lower leg. However, the CW-1 video in conjunction with the documented position of the Honda after it was moved shows that the impact between the two occurs near the rear tire of French's patrol vehicle. This orientation also matches CW-1's statement regarding the location where French was pinned. This phase of motion is of critical importance in analyzing the event and the statements made by Sergeant French.

The largest disparity in the statements relates to whether the Honda was moving forward, in reverse or was stationary at impact when French commenced firing.

To derive the motion of this phase, I animated the Honda from its derived impact location with the Impala, forward to its derived impact location with French/French's patrol vehicle. To derive a speed and therefore a time of travel for this phase I consulted the Expert Autostats database to get a value for the acceleration rate that the Honda can achieve. This rate is the theoretical maximum and by using this rate I am looking at the highest possible speed at impact/ lowest possible time of travel to impact. The database states that the maximum acceleration rate for a new 2000 Honda Civic is 11.3 feet/second/second. Using this value, I calculated the minimum time for the Honda to travel the 39 inches towards Sergeant French as 0.75 seconds and impact at 5.9 mph. Reducing this rate by 25% to account for the age of the vehicle -15 years at time of incident – and the fact that the left front tire appeared to be damaged and may have been dragging somewhat results in a time of 0.9 seconds and an impact speed of 5 mph.

Sergeant French's patrol vehicle is equipped with a EDR that can detect impact events via the Restraints Control Module. This module is set to record an event that passes a set threshold of 5mph of Accumulated Delta Velocity within a 150ms interval. The EDR did not record an impact during in this event and therefore, if functioning properly, suggests that the impact between the Honda and Sergeant French's vehicle did not meet or exceed the 5 mph Delta V threshold. This supports the speeds I have calculated as an impact between 5 and 5.9 mph would not result in a velocity change sufficient to trigger the impact sensors. For vehicles, such as the Honda and French's patrol vehicle, an impact between the two vehicles with at total speed of 5 mph would result roughly in a Delta V for each of half that value,

as each vehicle contributes to the impact physics, resulting in a Delta V of about 2.5 to 3 mph – below the 5 mph threshold. For purposes of this analysis I have used these theoretical maximum values, however it is possible that the speeds are lower, given that Mr. Thevenin may not have accelerated the vehicle at its maximum capacity and therefore may have moved at a slower rate towards Sergeant French. There is not sufficient evidence to determine the actual value.

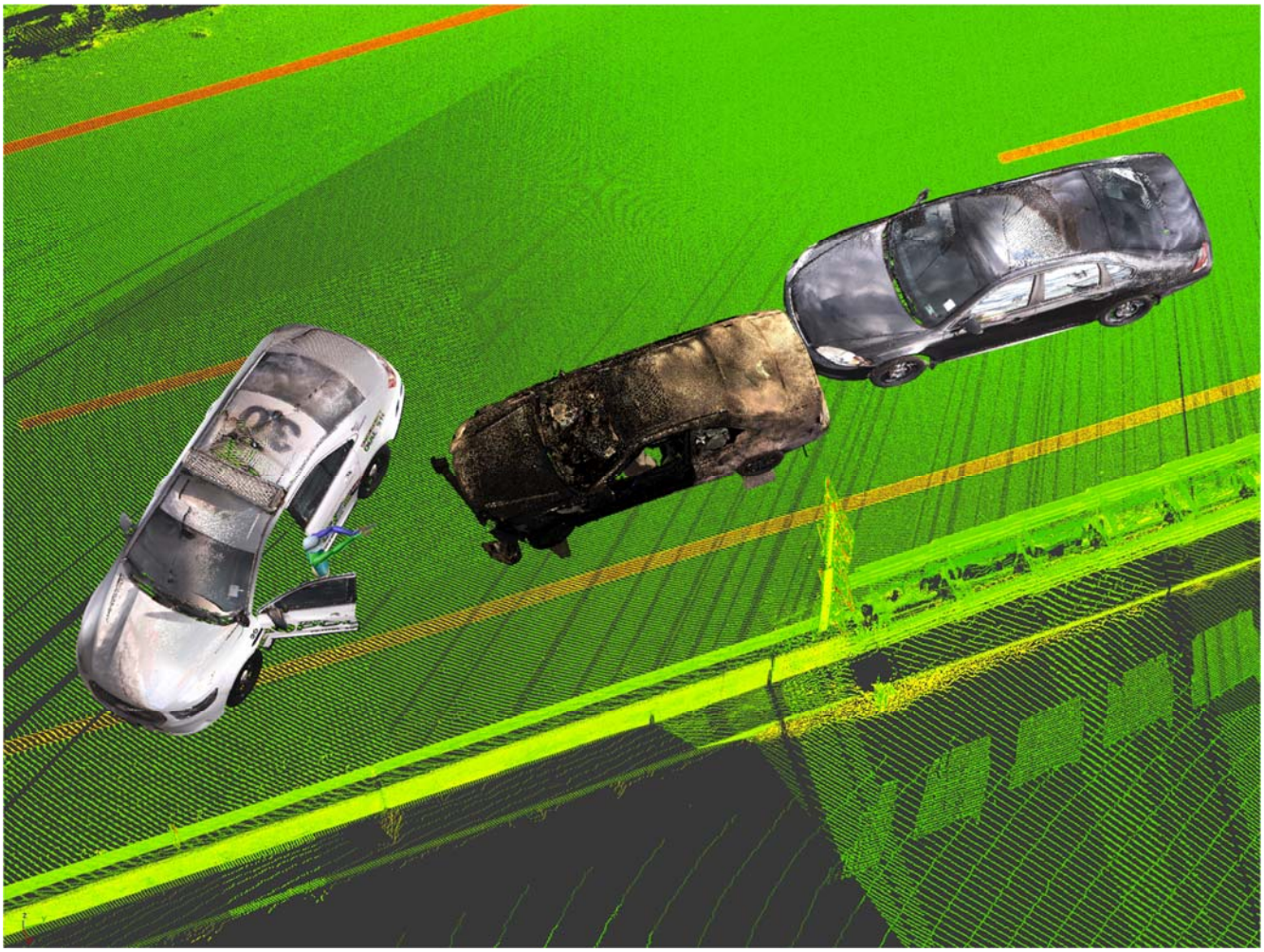
- *Use the working model to compare the witness statements with the available evidence:*
  After reviewing all the statements made by the witnesses, I used the working model containing all the available evidence to test each of the statements that had significant points of disagreement. As previously discussed, the working model contains the location of: the physical evidence collected at the scene; the exact measurements of the environment; the location of the three vehicles at the time shots were fired and before they were moved; the exact dimensions of the three vehicles; the location of the bullet impacts on the Honda's exterior windshield and the derived bullet trajectories and the gunshot wound paths in Edson Thevenin's body. This 3D working model allows for accurate representation and analysis of locations and time.
  For each statement, I entered the appropriate value into the working model and determined whether the statement could be matched with the evidence or if it did not fit the evidence. I also tested the spatial and temporal variables necessary to reconstruct the event and determine the valid ranges for each.
  The critical areas of analysis for the reconstruction:
    - Was Sergeant French struck by the Honda immediately upon exiting his vehicle as he stated?
    - Was Sergeant French pinned when he fired all the 8 rounds as he stated?
    - Was Sergeant French dragged to his left by the Honda as he stated?
    - Where was the Honda in relationship to Sergeant French when he commenced firing?

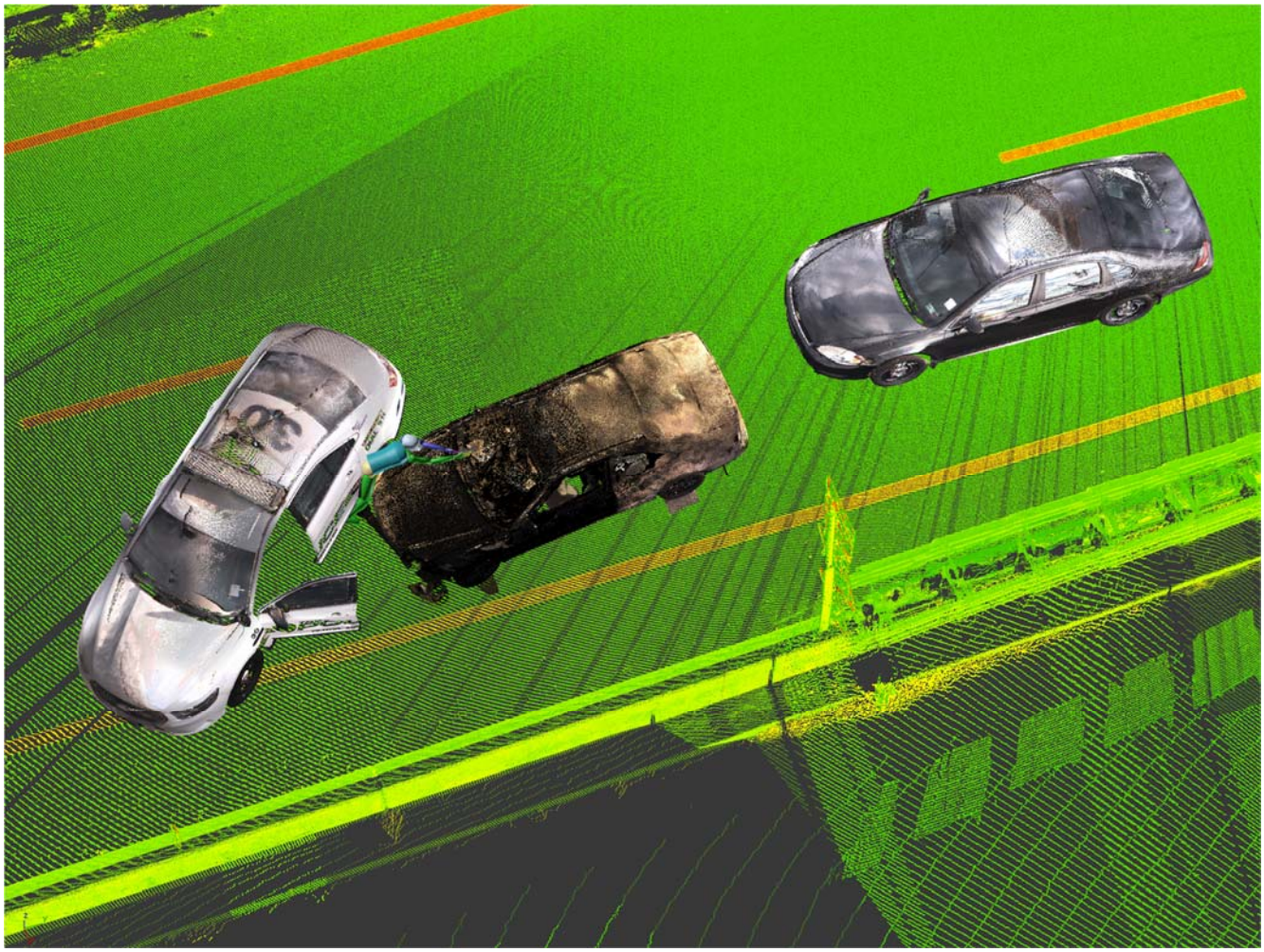
Results

Issue #1 *– Was Sergeant French struck by the Honda immediately upon exiting his patrol vehicle?*

Sergeant French stated that he could not open his driver door enough to exit until the Honda moved away from his vehicle. This is supported by the damage pattern on his drive door. He further stated that he exited the vehicle as soon as it possible to do so. Upon exiting his vehicle Sergeant French would have been adjacent to the driver's door. The CW-1 video and CW-1 statements show that French was pinned by the rear tire of his vehicle, not the front door. The distance between his egress location and where he was pinned is approximately 5 feet.

(See Exhibit Q, attached and below – Distance Sergeant French Traveled Between Exiting Patrol Vehicle and Being Pinned.)



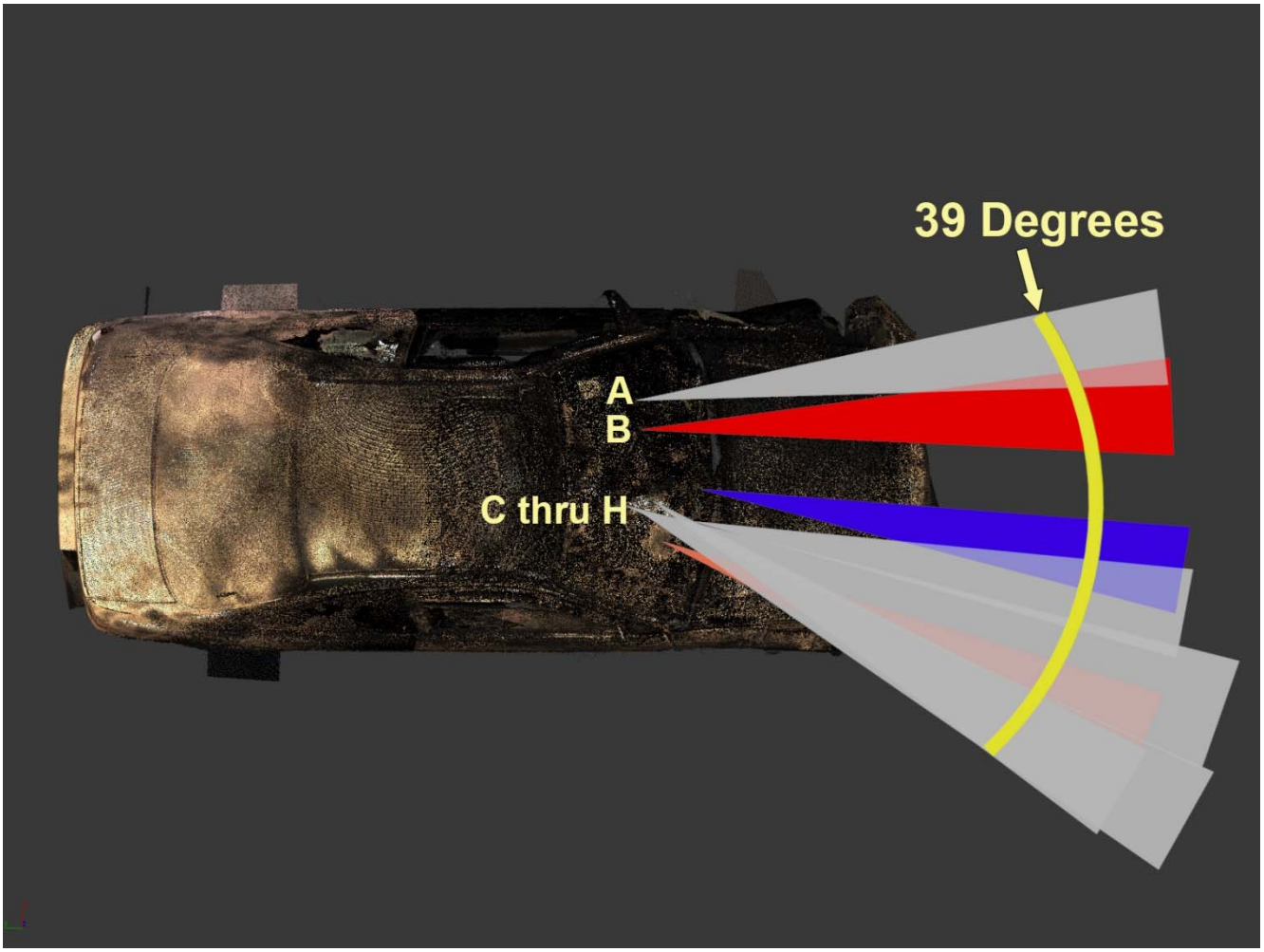


Sergeant French would have to move these 5 feet to be at the point where he was pinned and therefore it could not have been struck immediately upon exiting his vehicle. In looking at the time between exiting his vehicle and being pinched, there are two phases of motion of the Honda that occur, with a pause in between for Thevenin to depress the brake pedal, shift the vehicle and press the accelerator. The minimum time for the travel between the Impala and Sergeant French's vehicle is 0.75 seconds – this distance is traveled twice by the Honda, once in each direction. 1.0 seconds is a reasonable minimum time to use for Thevenin to transition from reverse to forward. This results in a minimum time of 2.5 seconds between the Honda backing away from French's door and returning to pin French. The actual time may have been longer, perhaps significantly so. Given that Sergeant French had a minimum of 2.5 seconds and that he moved at least 5 feet before being pinned by the Honda, his statement

that he was struck immediately upon exiting his vehicle is not supported by the evidence.

Issue #2 *Was Sergeant French pinned when he fired all the 8 rounds as he stated?* Sergeant French stated that he fired at the Honda Civic in two separate volleys. Sergeant French also stated that he did not commence firing at the Honda until he became pinned between it and his own patrol vehicle. In reviewing the evidence related to the impact strikes on the Honda windshield, there are at least two distinct groupings – Impacts A and B are located on the driver's side of the windshield, the remaining 6 impacts are located towards the passenger side. The trajectories of the grouping also differ – A and B have a trajectory that is generally straight on and perpendicular to the plane of the windshield and the other 6 have an angle from French's left to right as they travel towards the windshield. Accounting for the left bias I discovered in my testing and accounting for the standard +/- 5-degree variability in this type of analysis, shots do not have a common start location and the angular change between the driver side impacts and the remaining impacts that have a left to right angle is approximately 39 degrees.

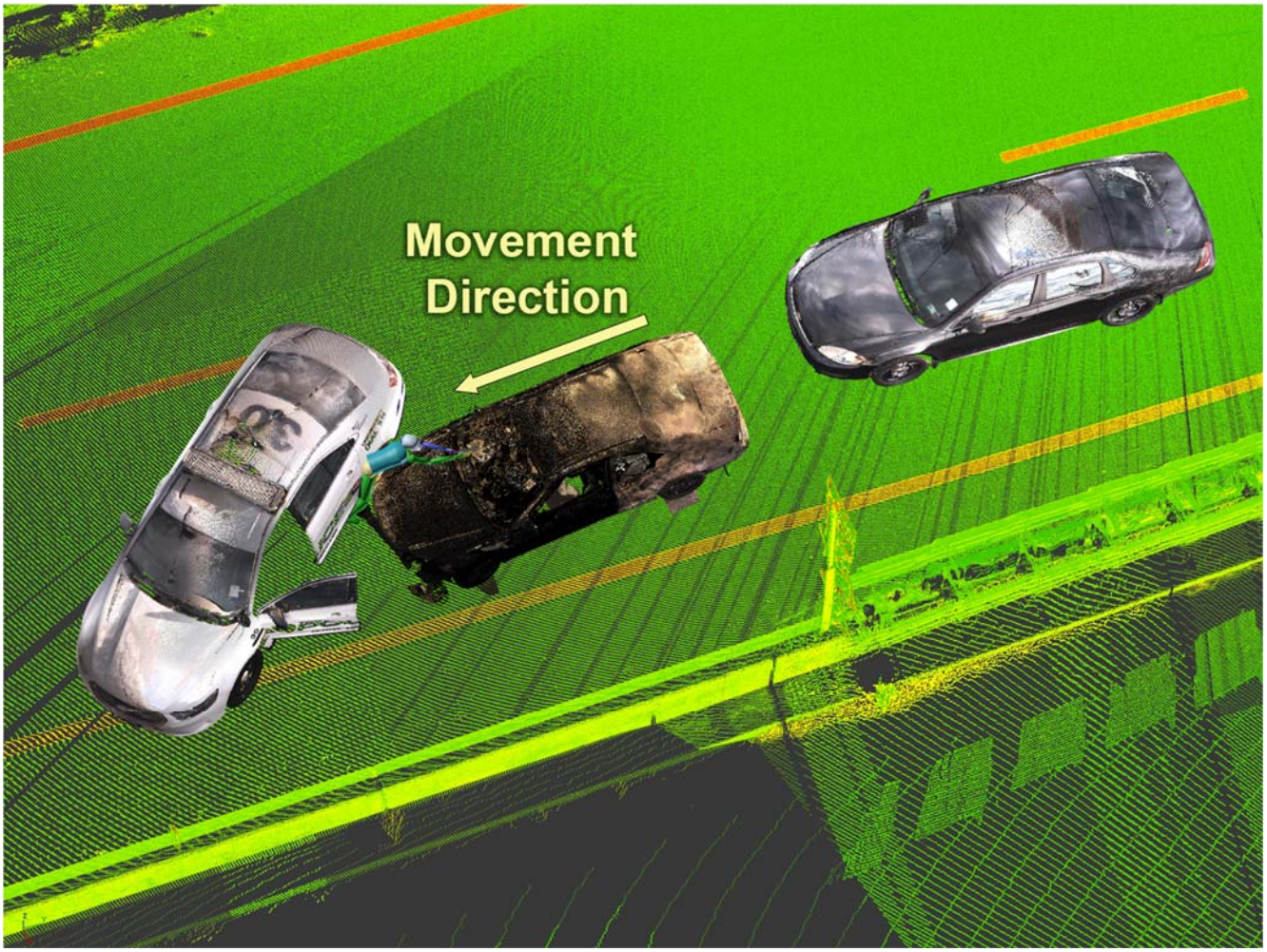
(See Exhibit R, attached and below – Bullet Trajectory and Impact Location Groupings.)



This requires that there was relative motion between the Honda and Sergeant French during the time the 8 rounds were fired. The motion of the Honda itself could potentially account for the 32-degree variance in trajectories. However, given the short travel distance of 39 inches and the impact location with the Impala and French, there is not sufficient room for the Honda to have rotated 39 degrees relative to Sergeant French. Therefore, Sergeant French could not have been pinned when firing all 8 rounds (which would suggest a static relationship between the Honda and French).

Issue #3 - *Was Sergeant French dragged to his left by the Honda as he stated?*
Sergeant French stated that after firing his first volley at the Honda while already pinned, he heard the Honda accelerating and he felt himself being dragged to his left.

He further stated that after this dragging occurred he fired a second volley at the Honda. None of the other witnesses make this statement or address this issue directly. In reviewing the damage to French's patrol vehicle, there is no evidence of any marks that would support this claim. Captain Montanino stated that after the shooting he pulled Edson Thevenin from the driver's seat of the Honda, entered the vehicle and found the transmission to be in Drive as he attempted to reverse it off of French. Given the orientation of the Honda and French's patrol vehicle at the time French was pinned and the Honda being in drive, if Thevenin had accelerated the vehicle and moved it forward towards French, the relative motion would be to French's right, not his left. ***(See Exhibit S, attached and below – Orientation of Honda and Sergeant French's Patrol Vehicle Doesn't Support a Relative Motion to the Left.)***



Issue #4 - *Where was the Honda in relationship to Sergeant French when he commenced firing?*

The evidence does not support Sergeant French's statement that he was pinned by the Honda when he fired all 8 rounds**.** The other witnesses to the event provide varying accounts of the relative location of The Honda and Sergeant French when the shots commenced:

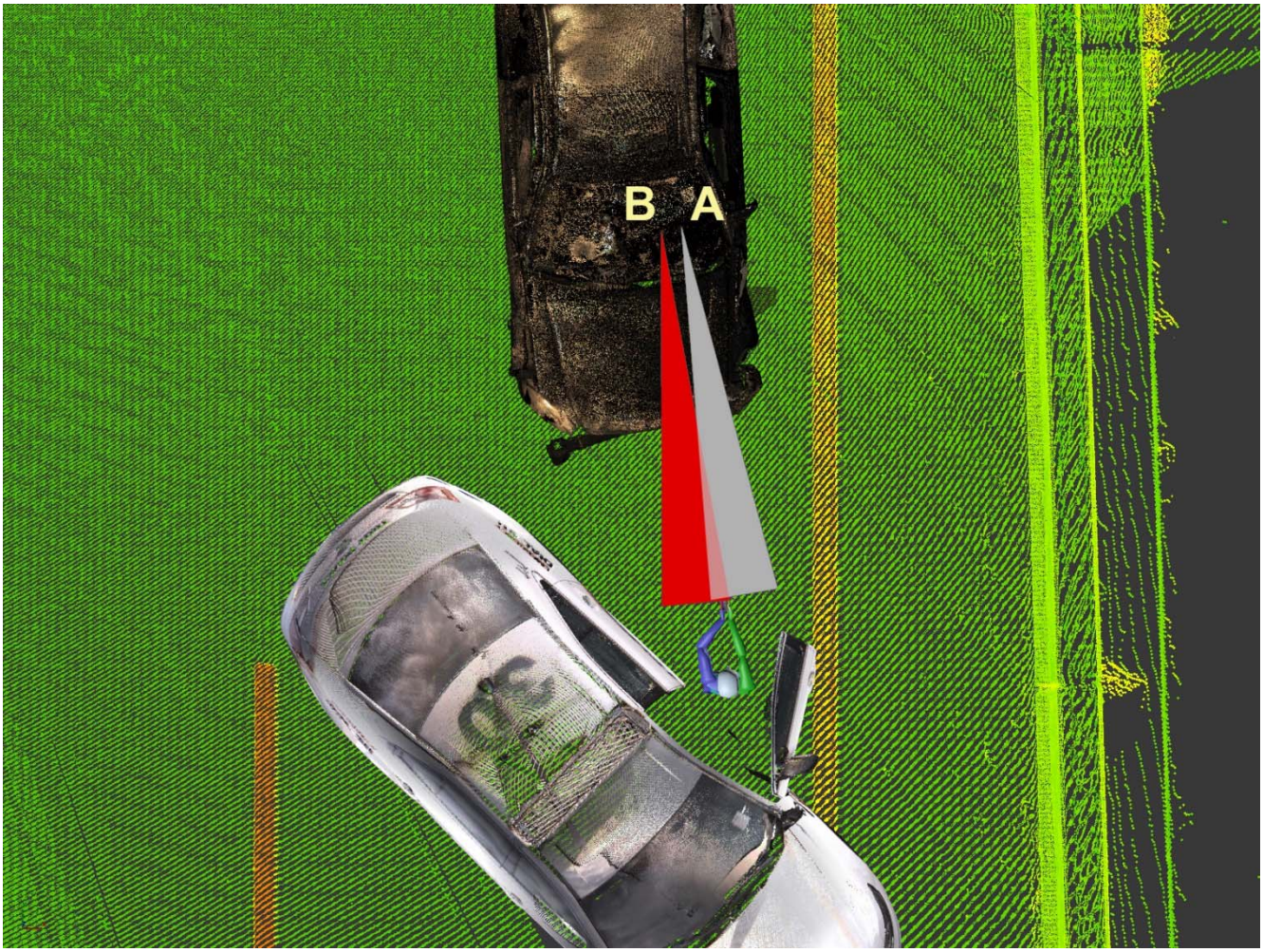
- CW-1 said that he hears gunshots simultaneous with the Honda striking the Impala.
- CW-2 stated that the Honda was moving forward but had not yet struck French when French fired.
- Captain Montanino and CW-3 both stated that the Honda was moving forward when French fired but were not specific about whether impact had occurred before shots began.
- French is the only person to state that he was pinned before firing the first round.

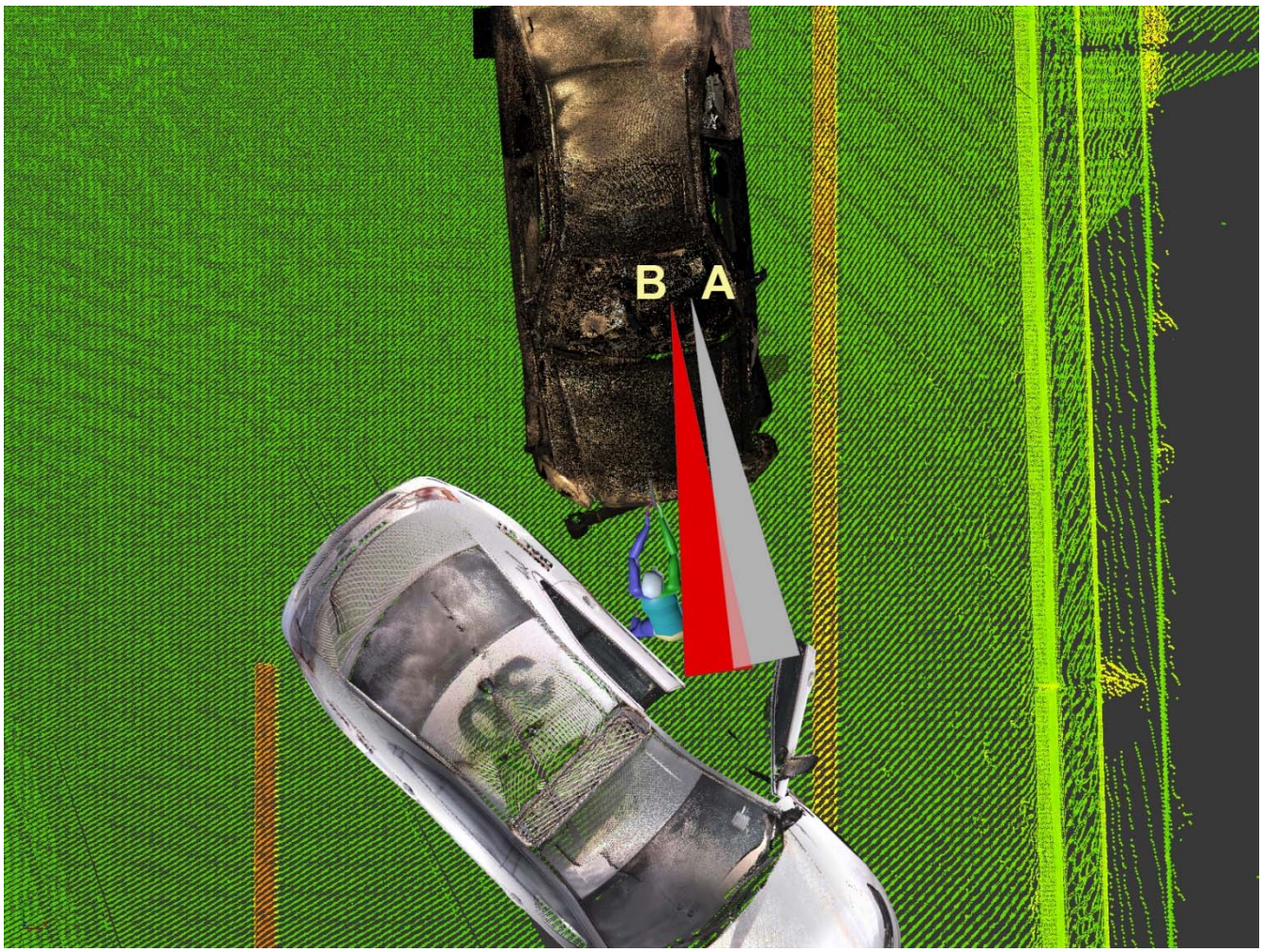
I looked at the trajectories in the Honda windshield and align them with the impacts found within the vehicle. It is known that bullets deflect when striking and perforating a windshield due to the angle of the windshield and the effect of the layer of laminate between the individual layers of glass. In my research, I did not find any specific testing that quantified the amount of deflection. If the amount of deflection was known, it may be possible to reconstruct the distance from which the rounds were fired and resolve the discrepancies in the given statements.

As there was no pre-existing data to assist in predicting the amount of deflection, I performed my own testing, which is referenced earlier in my report. In compiling the statistics, I noted that the vast majority of times the bullet deflected downward upon striking the windshield, with a few exceptions where the rounds either deflected upwards or ricocheted off the windshield and did not penetrate. The amount of deflection varied greatly across the tests, did not exhibit consistent behavior and therefore was not effective in predicting the distance the rounds traveled before striking the windshield with sufficient accuracy to resolve the issue.

In looking at the orientation of the bullet trajectories with respect to French's positon while moving from where he exited his driver side door to where he was eventually pinned, the rounds that exhibit a nearly straight on trajectory (A and B) are aligned with French's position only while near the driver door. They do not align with French's position where he was pinned. As French moves towards his rear tire, the alignment with A and B remains valid starting with French's exit (at which time the Honda is likely traveling backwards or at impact with the Impala) up until the time when French reaches the leading edge of his rear door. After this time the alignment no longer matches.

(See Exhibit T, attached and below – Alignment of Trajectories A and B to Sergeant French's Position.)

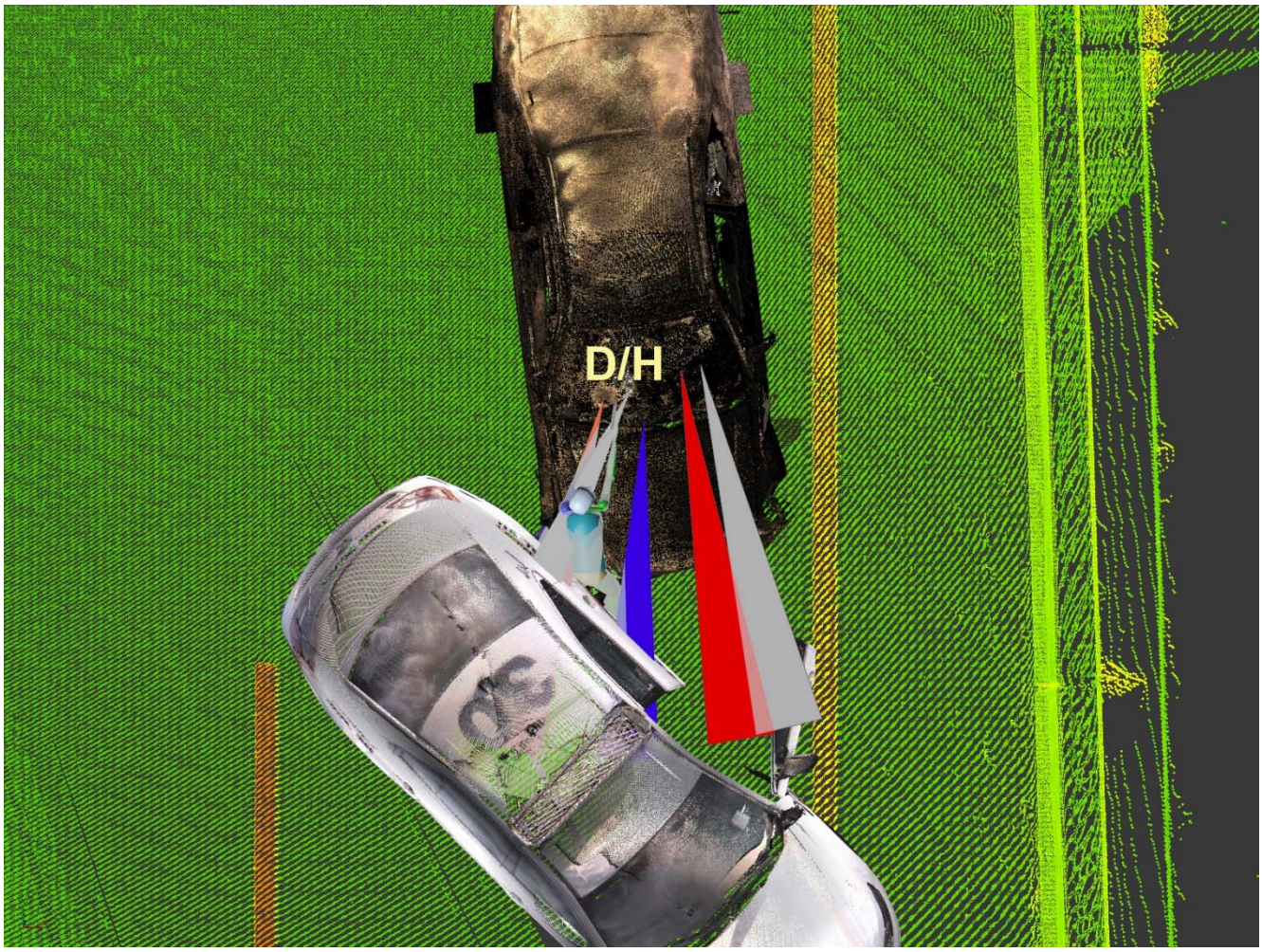




This supports CW-1's statement that the shots commenced at same time the Honda impacted the Impala; it also supports CW-2's statement that the Honda was traveling forward but had not yet made contact with French; and it supports Captain Montanino's and CW-3's statements that the Honda was moving forward when the shots commence. It does not support French's statement that he was pinned.

The remaining 6 bullet trajectories show a pattern of increasing left to right angle, suggestive of a continuously moving lateral relationship between French and the Honda, with the 4 or 5 most angled shots all well aligned with French's location while pinned. This suggests a continuous firing as French moved to his left and the Honda approached him, with the last 4 or 5 rounds fired from a position at or very near the location where French was pinned.

(See Exhibit U, attached and below – Alignment of Trajectories D thru H to Sergeant French's Position.)

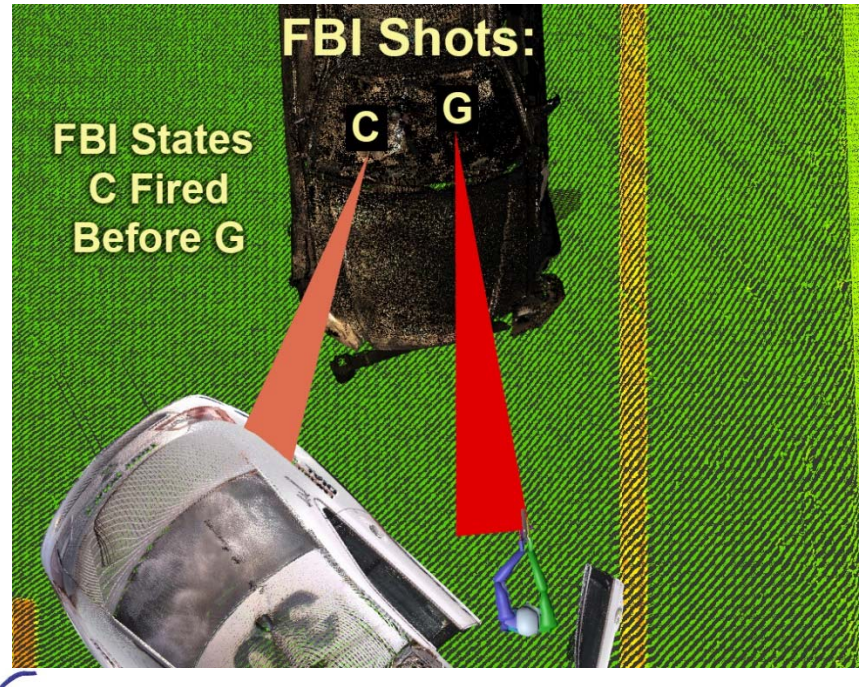


From this data I can conclude that French's statement that he was pinned immediately and for the duration of the time during which he fired is not supported. As to when the first shots occurred relative to the Honda's location, I can conclude that the remaining witness statements are all potentially supported by the evidence. French may have commenced firing while the Honda was reversing towards the Impala; it may have occurred while the Honda was stationary at impact with the Impala and it may have occurred in the early portion of the Honda's motion back towards French.

- *General observations:*
    - *Order of shots*

      The FBI performed a glass fracture pattern analysis on the cracks in the Honda windshield and determined that the shots that impact C (FBI's nomenclature; impact G in my nomenclature) occurred before impact G (B in my system); and that impact A occurred before E. In simple terms, they concluded that the most angled shot occurred before one of the straight on shots. This conclusion is counter to my analysis based on the entirety of the evidence. For this to be true, French would have to been aligned with the passenger corner of the Honda and fired *before* later being aligned directly in front of the Honda and firing. In other words French, would have been located at the pinned orientation first, fired from this location, and *then* moved to a location directly in front of the Honda and fired, before moving back to the pinned orientation where he was found after the event.

      (See Exhibit V, attached and below – Rebuttal of FBI Shot Order Analysis.)



Craig Fries

Craig Fries, CEO

PSI PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
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Exhibit A -
Craig Fries Curriculum Vitae, Trial Testimony History and Rate Schedule

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CURRICULUM VITAE

CRAIG T. FRIES
Precision Simulations, Inc.
Phone: (530) 477-5820
Fax: (530) 477-5819
craig@precisionsim.com
TIN: 91-1842702

SUMMARY:

Craig Fries founded Precision Simulations, Inc. (PSI) after working as director of computer simulations for Visual Forensics, a senior analyst for Visual Science Research Corporation and a lead research assistant for NASA sponsored studies.

As a leading proponent of the use of computer generated simulations and forensics animations, Craig developed the first forensic animations developed using laser scanning data admitted into a court trial in the United States.

Since Craig founded Precision Simulations Inc. in 1997, the company has become one of the foremost forensic analysis and animation firms in the United States. In this role he has created or directed over 1,000 3D forensic animations and presentations for use in criminal and civil litigation as well as eminent domain. Craig has written articles on accident and crime reconstruction and animation that were published in Forensic Magazine, Claims Magazine, the California District Attorneys Association Quarterly Journal, Right of Way Magazine and other publications.

Over the last 10 years he has created a library of case studies and methodology documents that have been distributed widely at conferences, conventions and through Internet delivery.

Craig has taught extensively in the areas of 3D animation, Laser scanning, Photogrammetry, Video Analysis, 3D Ballistic Trajectory Analysis and admissibility of animation.

PROFESSIONAL HISTORY:

1997 - Present
PRECISION SIMULATIONS, INC., - Founder and President. Combining scientific analysis with 3D computer technology, Craig created a unique process to produce 3D computer generated reconstructions and animations. These animations are very precise and accurate, earning PSI a record of never being excluded in the courtroom over a twenty one (21) year period. Craig has pioneered the adaptation of Laser Scanning to add accuracy and realism to computer generated reconstruction of crimes and accidents. PSI created the first laser generated 3D reconstruction and animation to be admitted into court in the US.

These tools are now being routinely used to recreate computer accident and crime scenes where evidence has been lost or compromised and where access to the scene is severely restricted or totally prevented. Craig previously pioneered the use of computer generated 3D graphics in condemnation litigation and the use of 3D visualization and animation to create virtual environments, to show "drive throughs" and "fly-overs" of planned projects.

1992 – 1997
VISUAL FORENSICS- Director of Computer Animation. Developed forensic visualization programs and created complex aviation animations for cases involving US government. Directed and created first computer animation accepted in Santa Clara superior court. Contributed to first human vision simulation based on empirical data to be accepted into trial in US. Developed image processing techniques to display visual function for litigation.

1992 - 1997
VISION SCIENCES RESEARCH CORPORATION- Senior Analyst. Active in research and development of advanced functional vision test methods and products. He designed and built a unique Night Driving Simulation System (NDSS), approved for use in FDA protocols and clinical trials. He pioneered the use of the NDSS in vision related litigation. Designed and created EyeView™, a patented software system to measure and demonstrate human functional vision levels. Worked extensively on mathematical analyses for injury accident cases.

1991 - 1992
CALIFORNIA STATE UNIVERSITY, HAYWARD - Lead Research Assistant, working on NASA funded basic research into sense and perception of astronauts. Performed statistical analysis for study data and presented extensively at NASA meetings at the Ames Research Center.

EDUCATION:
B.A. Psychology, California State University, Hayward, 1991.

AFFILIATIONS:

Member California Attorneys for Criminal Justice
Member California Association of Accident Reconstruction Specialists
Member California Association of Criminalists
Member International Right of Way Association
Member Transportation Research Board – Task Force on Visualization
Member Forensic Expert Witness Association
Member Association of Crime Scene Reconstructionist

PATENTS:

Co-Inventors, Dr. Arthur P. Ginsburg, Lawrence H. Tessler and Jonathan Tifft, "Objective Patient Vision Comparison Process and Apparatus", No. 5,552,842.

PUBLICATIONS:

Right of Way Magazine – "Virtual Valuation-Simulating an "After" Condition" Nov/Dec 2005
Claims Magazine – "New Tools for Reconstruction" - February 2006
Forensic Magazine – "Reconstruction with 3D Laser Scanning" - August/September 2006
Prosecutor's Brief – The California District Atty. Association Quarterly Journal – Sept. 2006
Plaintiff Magazine – "Caught in the act!" – August 2007
Advocate Magazine – "Accident reconstruction from video footage"- Sept. 2007

BOOK CITATIONS:

Edited by: Gregory A. Elmes, Geirge Roedl and Jamison Conley. Forensic GIS, The Role of Geospacial Technologies for Investigating Crime and Providing Evidence

PEER REVIEW PAPERS:

Catching A Bullet: Gunshot Wound Trajectory Analysis Used To Establish Body Position. Butler B, Fries C, Panock J, Jorden M and Melinek J. Images in Forensic Pathology - Academic Forensic Pathology (accepted with minor revisions August 2016)

Gunshot Wound Trajectory Analysis Using Forensic Animation to Establish Relative Positions of Shooter and Victim. Galligan A, Fries C, Melinek J. Forensic Science International. (in press, accepted for publication December 2016)

CASE STUDIES / METHODOLOGY DOCUMENTS / RESEARCH PAPERS:

The 3D Working Model - Head-on Automobile Collision
3D Laser Scanning and Photogrammetry - Automobile Chase and Officer Involved Shooting
Construction and Municipal Bus Accident Reconstructions
Nighttime Visibility Study - Big Rig Nightime Collision
Accident Reconstruction from Surveilence Video
Complete Ballistics Study - AR15 rifle and .45 caliber handgun
Complex Officer Involved Shooting Reconstructions
Complex Rural Single Vehicle Accident Reconstruction
Reconstruction of a Power Line Wire Strike Event
Reconstruction of an Officer Involved Shooting using 911 Audio for Timeline of Events

SEMINARS / COURSES TAUGHT:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
10/04/2016	Sacramento Safety and Health Summit	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
12/02/2015	PARMA - Public Agency Risk Management Association Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
10/14/2015	PARMA - Public Agency Risk Management Association Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
10/08/2015	IRWA - International Right of Way Association - Sacramento, CA	3D Laser Scanning and Visualization for Future Developments
05/20/2015	CSAC - California State Association of Counties - Webinar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
05/07/2015	CAC - California Association of Criminalists - Semi Annual Seminar	3D Ballistic Trajectory Analysis
02/16/2015	AAFS - American Academy of Forensic Sciences - Annual Meeting	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
10/23/2014	CAARS - California Assocation of Accident Reconstruction Specialists - Fall Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
10/22/2014	CAC - California Association of Criminalists - Semi Annual Seminar	3D Ballistic Trajectory Analysis
10/21/2014	CACLD - California Association of Crime Laboratory Directors - Fall Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
10/15/2014	World Forensic Festival - Seoul Korea - IAFS - International Association of Forensic Sciences, AFSN - Asian Forensic Sciences Network, APMLA - Asian Pacific Medico Legal Agencies, WPMO - World Police and Medical Officers	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis, The Future of Forensics Presentations - New Technology
07/14/2012	FARO Technologies - 8 Hour Course	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry

SEMINARS / COURSES TAUGHT CONTINUED:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
06/05/2012	Hexagon Geosystems - Worldwide Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
03/07/2012	CHIA - California Homicide Investigators Association Annual Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
02/22/2012	CalFire - California Department of Forestry and Fire Protection Quarterly Meeting	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Fire Scene Reconstruction
02/14/2012	ACSR- Association of Crime Scene Reconstruction - Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
02/09/2012	CAARS - California Assocation of Accident Reconstruction Specialists - 8 Hour Course	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
01/24/2012	CDAA - California District Attorneys Assocation - Annual Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
01/11/2012	Riverside County Risk Management Division - Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry
01/09/2012	CAARS - California Assocation of Accident Reconstruction Specialists - Southern California Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
11/18/2011	CACLD - California Association of Crime Laboratory Directors - Fall Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
10/06/2011	CSAC EIA - California State Association of Counties Excess Insurance Authority - Annual Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Scene Reconstruction
05/17/2011	CAC - California Association of Criminalists - Semi Annual Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction

SEMINARS / COURSES TAUGHT CONTINUED:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
04/14/2011	CAC - California Association of Criminalists - Quarterly Meeting	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
09/20/2010	SWAFS - Southwest Association of Forensic Scientists - Annual Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
12/11/2008	IBA West - Insurance Brokers and Agents of the West & CPCU - Chartered Property Casualty Underwriters - Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
03/05/2008	Spar Point Research & IAFSM - International Association of Forensic and Security Metrology	3D Laser Scanning - Capturing and Managing Existing Conditions Data for Design / Construction Operations
02/13/2008	FEWA - Forensic Expert Witness Association, San Francisco Chapter	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Scene Reconstruction
09/27/2007	Center for Judicial Education and Research / Eduction Division - 2007 Bench-Bar Biannual Conference	Admissibility of 3D Laser Scanning Data and Animations in Trial
06/05/2007	CLE International - Continued Legal Education International	3D Laser Scanning in Eminent Domain from Appraisal Issues to Tiral Techniques
03/27/2007	IAFSM - International Association of Forensic and Security Metrology	Measurements and 3D Data Capture for Investigations, Reconstructions and Security
12/12/2006	CLE International - Continued Legal Education International	3D Laser Scanning in Eminent Domain Creating Exhibits and Using Experts
05/11/2006	CLE International - Continued Legal Education International	Creating Compelling Graphics for Eminent Domain Trials and Settlements
11/03/2005	CLE International - Continued Legal Education International	Computer Visualization for Eminent Domain Trials
09/07/2005	2005 California Statewide Judicial Branch - Annual Conference	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry

CLE - CONTINUED LEGAL EDUCATION PRESENTATIONS:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
05/17/2016	Municipal Pooling Authority - Police Liability Workshop - Walnut Creek, California	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
10/30/2015	Stanislaus County, California	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
03/31/2015	San Luis Obispo, California District Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
01/15/2015	CSAC - California State Association of Counties - Oakland	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
10/06/2014	PG&E - Pacific Gas and Electric	Preserving Existing Conditions with 3D Laser Scanning and Laser Assisted Photogrammetry
07/17/2014	The City of Oakland, California	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
05/28/2014	Caltrans - California Department of Transportation	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
08/29/2013	San Diego, California City Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
04/04/2013	Napa County, California Sheriff's Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
03/14/2013	San Bernadino, California Public Defenders Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
01/18/2013	Portland, Oregon District Attorneys and Law Enforcement	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis

CLE - CONTINUED LEGAL EDUCATION PRESENTATIONS:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
10/26/2012	ABOTA - American Board of Trial Advocates	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
10/18/2012	CALI - California Assocation of Licenced Investigators	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
08/17/2012	Portland, Oregon District Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
02/07/2012	Sedgwick Attorneys at Law	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
12/07/2011	Solano County, California District Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime Scene Reconstruction
11/11/2011	The Arnold Law Firm	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
11/1/2011	Sacramento, California City Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
07/27/2011	California Attorney General's Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry, 3D Ballistic Trajectory Analysis
04/14/2011	NCIB - National Insurance Crime Bureau	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
01/12/2011	McNamara Law Firm	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
12/07/2010	Bremer, Whyte, Brown & O'Meara	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction

CLE - CONTINUED LEGAL EDUCATION PRESENTATIONS:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
09/30/2010	Gordon Rees Scully Mansukhani	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
07/23/2010	Knox Ricksen, LLP	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
07/22/2010	The City of Oakland, California	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
02/26/2010	The Arnold Law Firm	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
06/26/2008	NBI - National Business Institute Annual CLE Seminar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
05/07/2008	City of New York, New York City Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
04/05/2008	American College of Trial Lawyers	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
02/29/2008	Stanislaus County, California Bar Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
02/05/2008	Morris, Polich & Purdy	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
01/11/2008	Los Angeles, California City Attorneys Office	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
09/28/2007	California State Bar Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction

CLE - CONTINUED LEGAL EDUCATION PRESENTATIONS:

DATE	ORGANIZATION / EVENT	SEMINAR / COURSE DESCRIPTION
05/24/2007	Santa Barbara, California Bar Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
03/15/2007	Arizona Claims Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
03/08/2007	Sacramento Claims Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
02/21/2007	DRI - The Voice of the Defense Bar	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Crime & Accident Scene Reconstruction
09/07/2006	IRWA - International Right of Way Association	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Eminent Domain
01/18/2006	NBI - National Business Institute	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction
07/22/2005	Lorman	The 3D Working Model - 3D Laser Scanning, Animation, Laser Assisted Photogrammetry in Accident Scene Reconstruction

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Trial Testimonies given by Craig Fries since January 2005:

- June 22, 2005 – Garcia vs. Paramount Citrus
- July 19, 2005 – Fyfe vs. State of Hawaii
- Sept. 29, 2005 - US 95 Masonic/NV
- Oct. 7, 2005 - Mitchell vs. CCSF
- Feb. 3, 2006 - Mendenhall vs. State of CA
- June 28, 2006 - Baires vs. CCSF
- Sept. 20, 2006 - Kennedy vs. CCSF
- Oct. 5, 2006 - Megison vs. General Motors
- Dec. 4, 2007 - Mauck vs. City of Sacramento
- Sept. 8, 2008 - Ridgley vs. City of Sacramento
- Dec. 18, 2008 - Allen vs. Bottlomley Distributing
- Nov. 24 & 25, 2009 – Torrente vs. CCSF
- Sept. 7, 2011 – People vs. Topete
- Jan. 17, 2012 – Pinasco vs. State of CA
- Jan. 26, 2012 – Hechavarria vs. CCSF
- August 14, 2012 – Vallejo – People vs. Keith Ford
- October 22, 2012 – Sacramento – Jacobs v SRTD
- September 12, 2013 - Quincy - Plumas County vs. Wallin-Reed
- February 10, 2015 - Sebastopol - Bertoli vs. City of Sebastopol
- June 22, 2015 - Fairfield - People vs. Henry Smith
- March 7, 2016 - San Francisco - Nieto vs. CCSF
- April 29, 2016 - Napa - People vs. Joseph Brooks Conkright
- October 6, 2016 - San Jose - Carpio vs. Aubin
- December 5, 2016 - Eureka - Anderson vs. CalTrans

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2016 RATE SCHEDULE
TIN: 91-1842702

*** Rates listed below are hourly or approximate.*
A specific quote will be given for all projects when project specifications are known.

Forensic animation and the design, development and production of 2D and 3D computer generated graphics and visualizations.

Principals……....$450/hour to include travel time
Associates……..$225 to$325/hour to include travel time

Consultation Fee on projects where PSI does not produce animation or graphics, such as review of opposing animation.

Principals……....$475/hour to include travel time

Travel and Transportation Expenses:

Reimbursement for actual travel, lodging and subsistence expenses.

Retention policy:

Retainer is 50% to 75% of project estimate (see specific project contract), with first $3,000 non-refundable.

Expert Testimony:

Depositions…….....$475/hour
Trial Testimony/Admissibility Hearing…$2,200 minimum for up to half day (4 hours) and $4,400 for full day, not including travel time or expenses.

Laser Scans:

$15,000/day for scanning in the field. Most jobs completed in one day.

Projects with a due date less than thirty (30) days from date of signed contract and receipt of retainer, may incur a rush charge of fifty (50%) percent.

For Principals, after hour and weekends, (after hour rates begin before 8:00 AM and after 5:00 PM, Monday through Friday at client's request) add $325 per hour to hourly rates listed above. Overnight fees due to client scheduling morning inspections and / or appearances are invoiced at $1500 per night not including incurred expenses. For national holidays: New Year's Day, Memorial Day, Independance Day, Labor Day, Vetran's Day, Thanksgiving Day and Christmas Day, add $650 per hour to hourly rates listed above.

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Exhibit B -
List of Supplied Materials

List of Supplied Materials:

Death Certificate with X-rays

CW-1 Video with Still Photographs

Autopsy Photographs

Autopsy Report

Scene Photographs

Analysis Reports

Audio

Civilian Witness Statements

Death Certificate

Hospital Records for Thevenin

Police Reports

Incident Report Accident 120's Car

FBI Photographs

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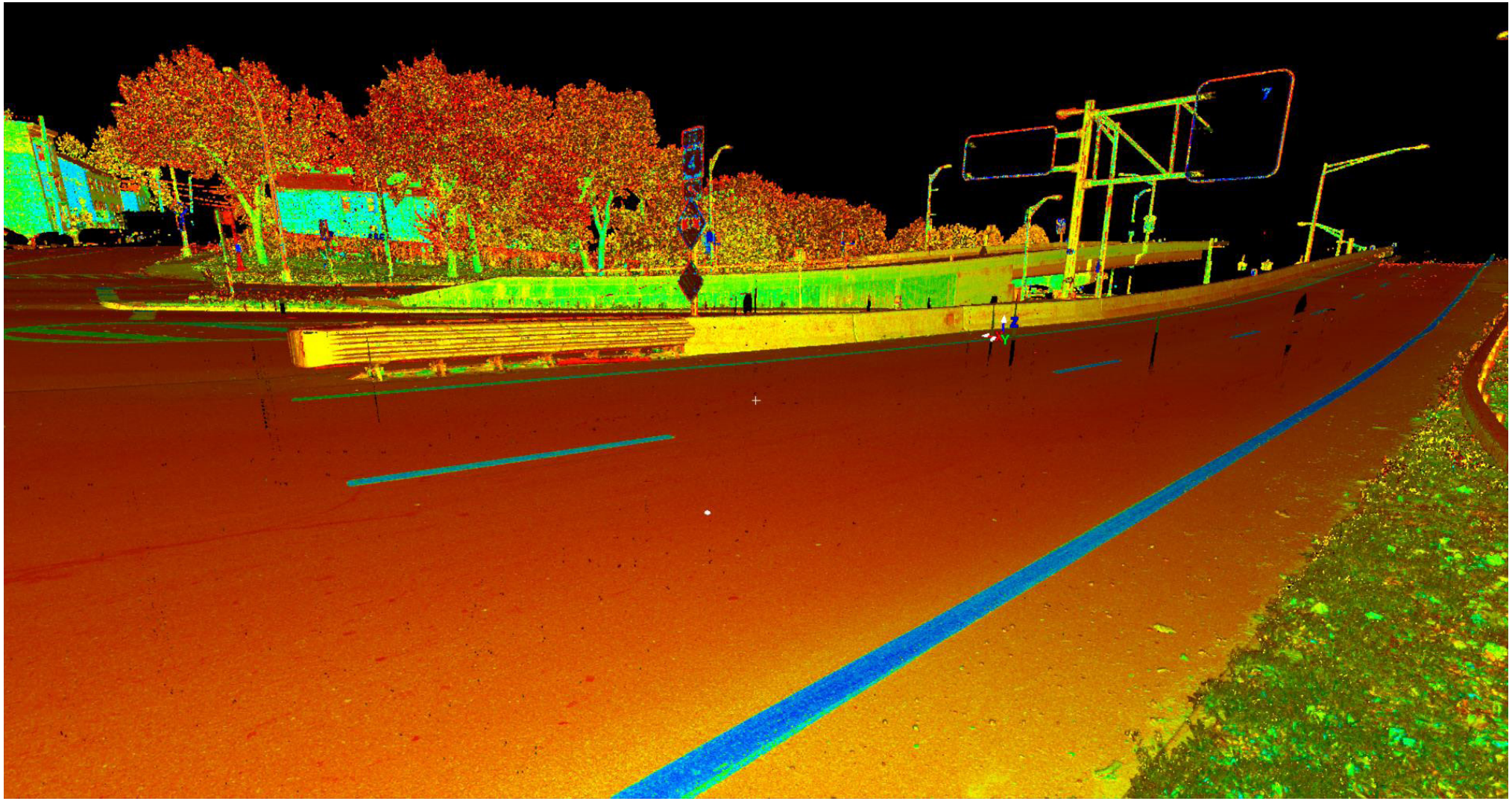
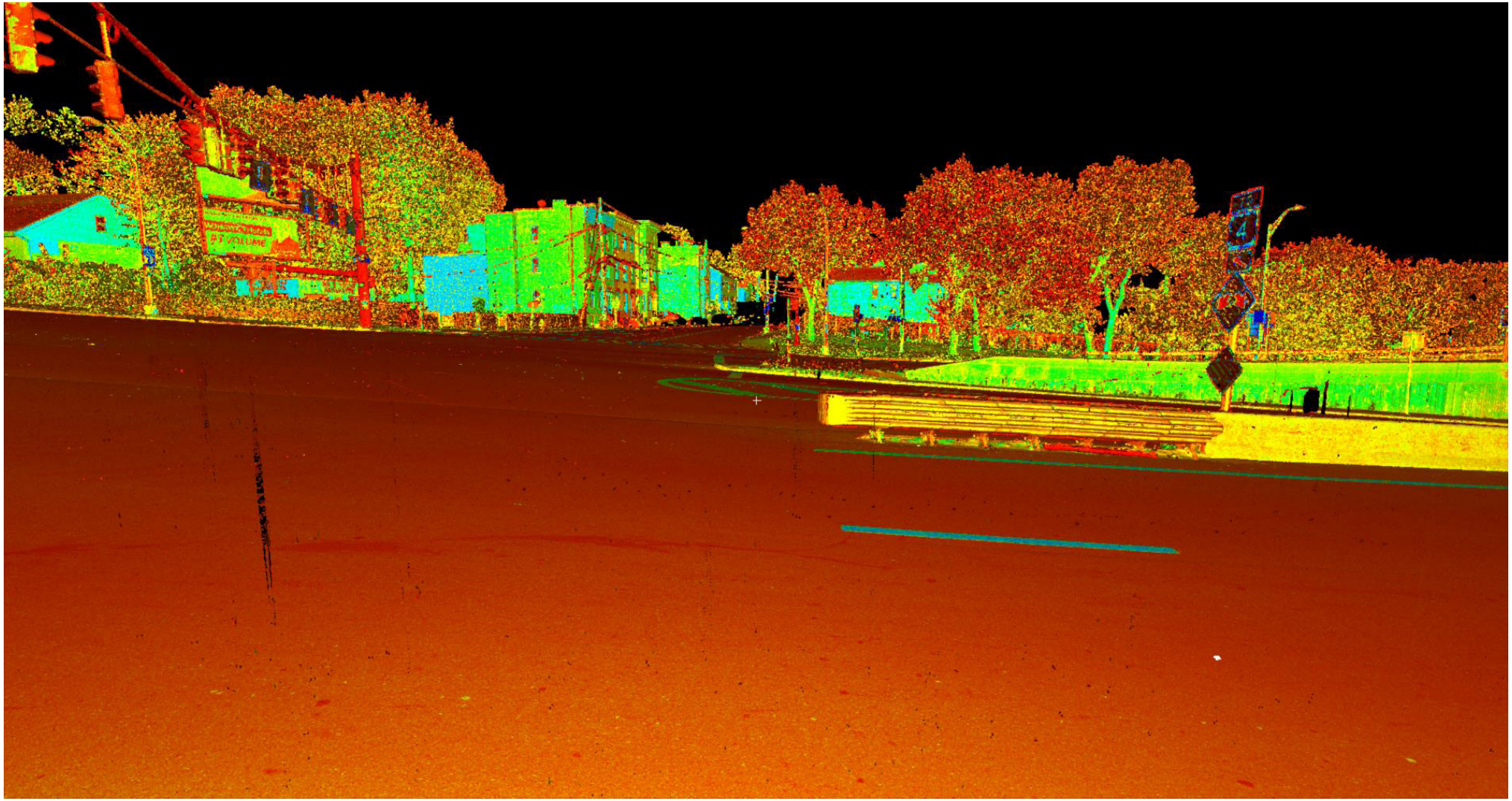
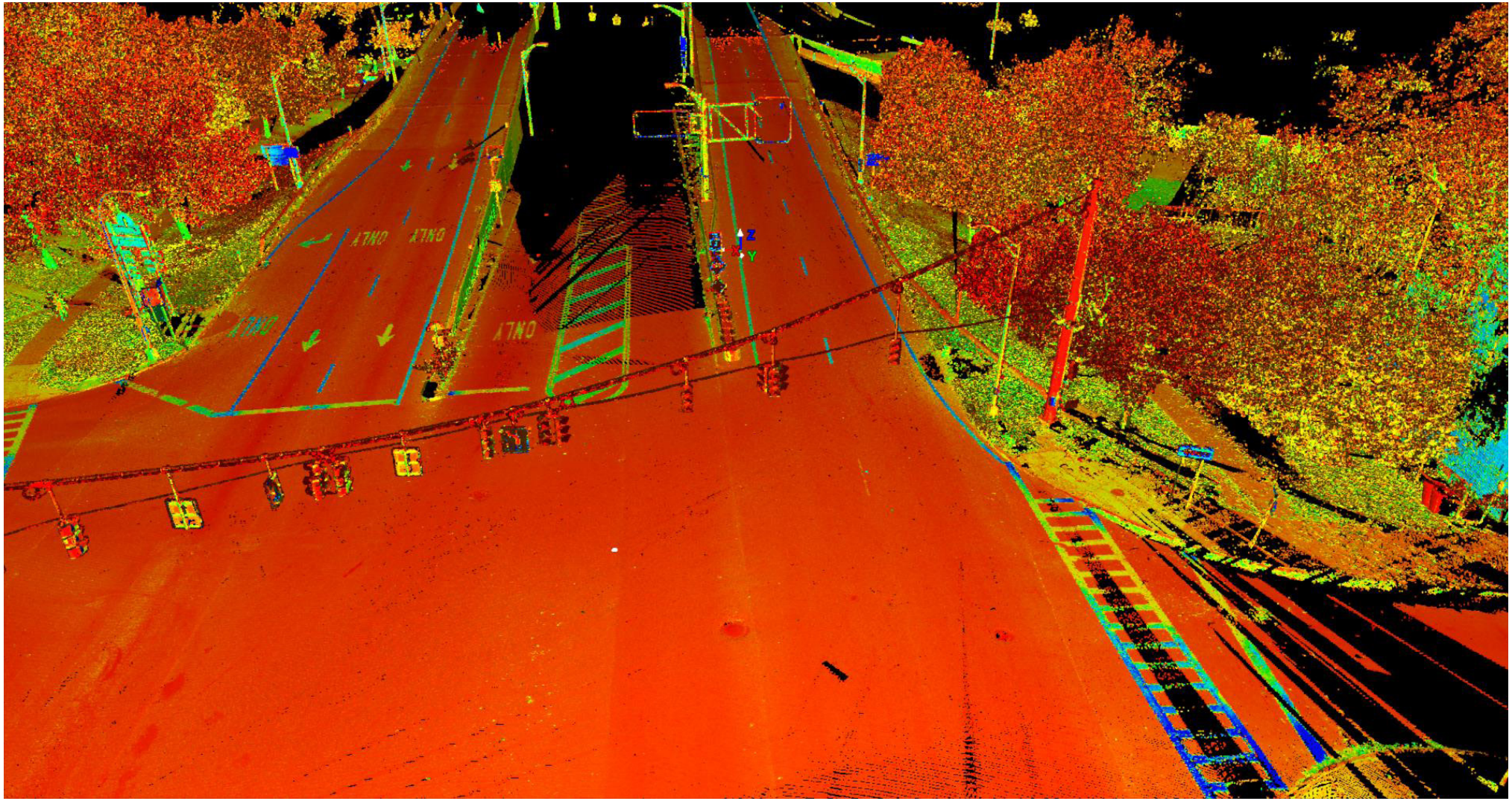
Exhibit C -
3D Laser Scan Data Imagery



3D Laser Scan Data Imagery



3D Laser Scan Data Imagery

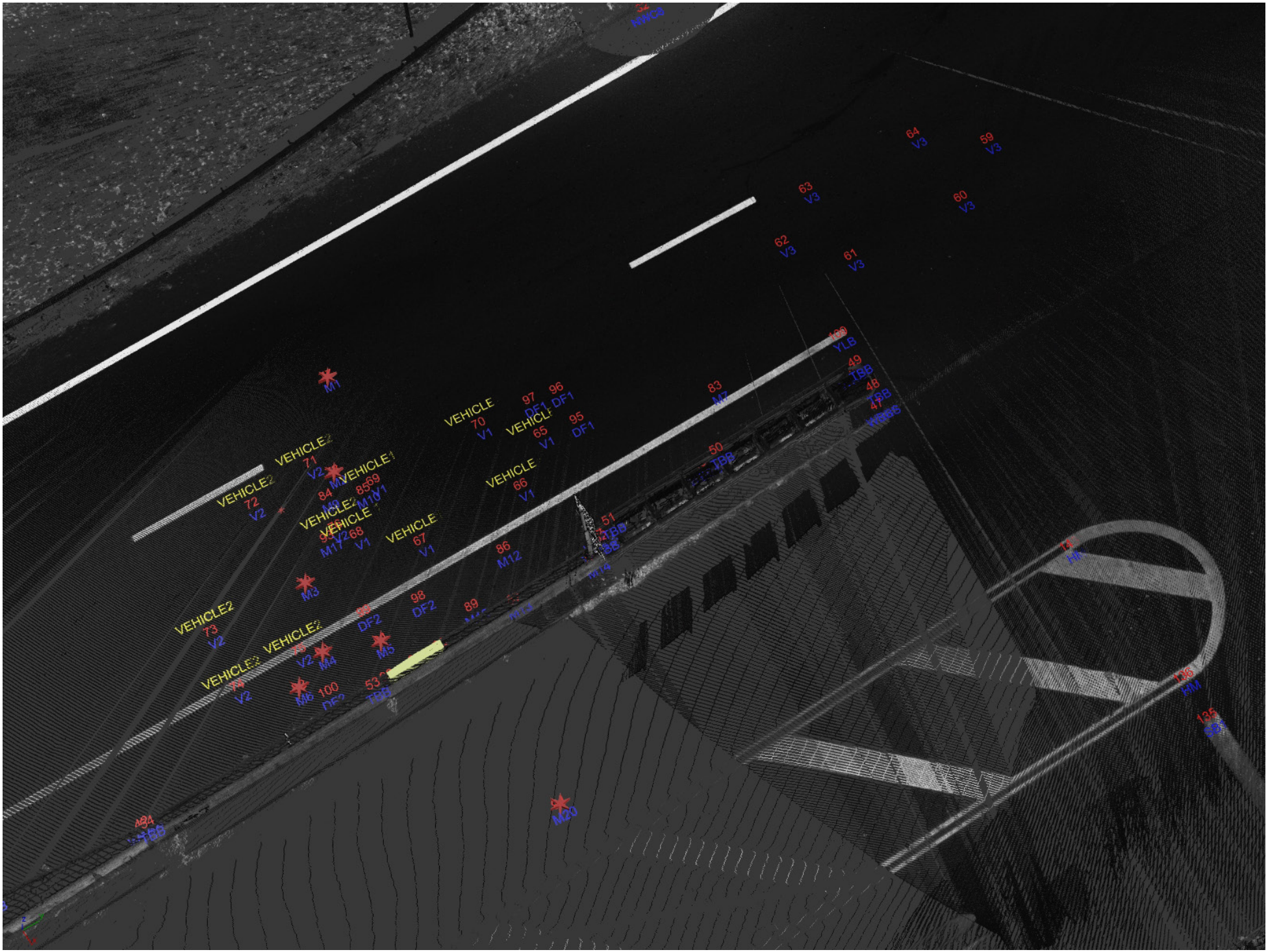


3D Laser Scan Data Imagery

PSI PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit D -
Troy PD Physical Evidence Locations Diagram



3D Laser Scan Data Imagery

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530.477.5819 Fax
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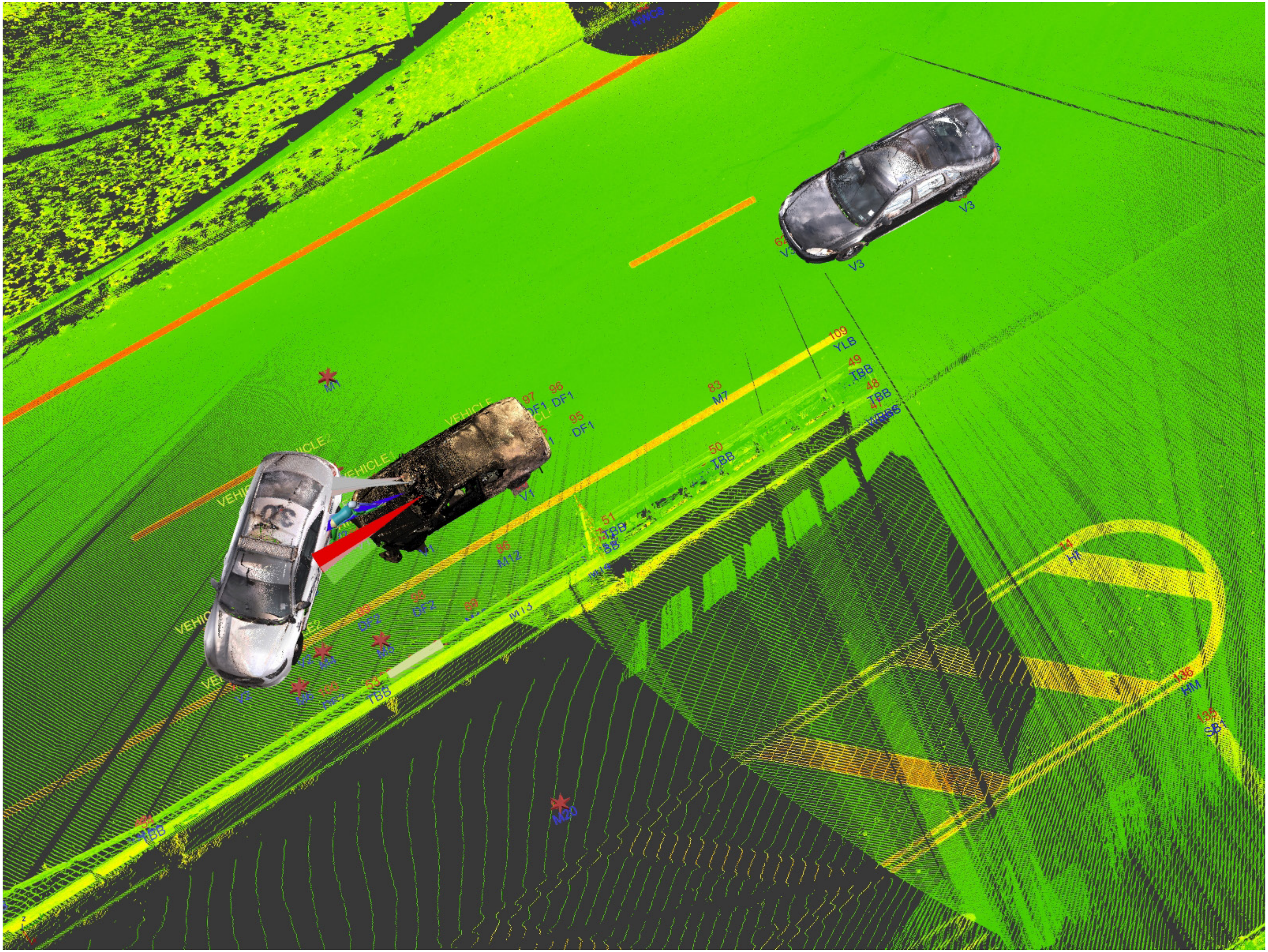
Exhibit E -
The 3D Working Model



The 3D Working Model

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Exhibit F -
PSI Ballistic Trajectory Study

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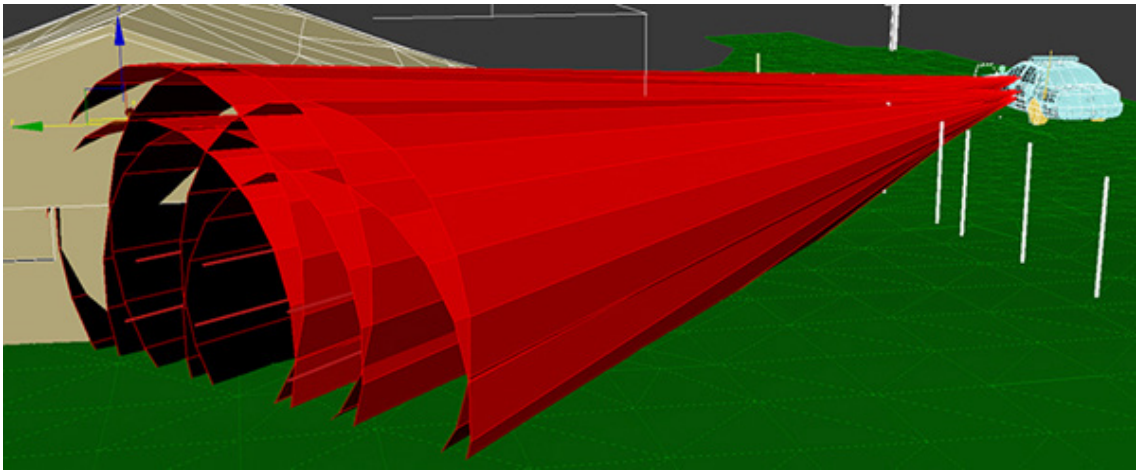
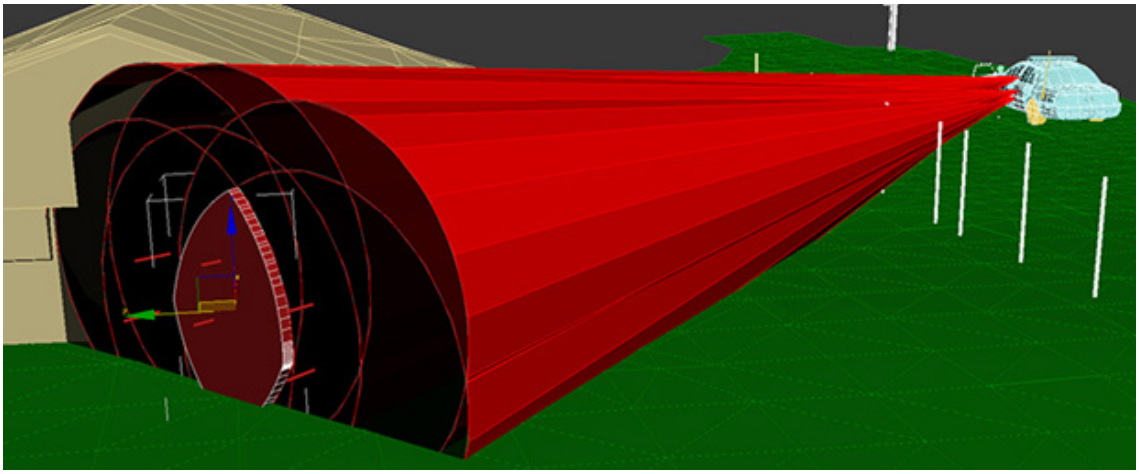
Ballistic Trajectory Analysis

This study was conceived as a method to test a previous theory regarding predicting a shooter's location from multiple gunshot strikes into the sheet metal of a patrol car.

In 2010, I testified in a tragic capital punishment case involving a deputy shot at seventeen times with an AR15 from approximately 80 feet away. One round pierced the deputy's chest plate and he died shortly after. In analyzing the available physical evidence to locate the shooter's specific location, I used Mike Haag's previously derived "error" or variance rate of +/- 5 degrees for each individual trajectory. When visualized in the 3D Working Model, this variance value appears as a 3 dimensional cone surrounding the derived trajectory. The cone's base grows in size as one moves farther away from the impact point for each round, developing into a fairly large area at the distances we were analyzing. This large area made determining whether the shooter was inside or outside the adjacent residence difficult, as the variance extend to a diameter of approximately 16 feet for each individual shot.



I noted, however, that if I analyzed the shots as a group as opposed to individually, a different picture began to emerge. When visualized in 3D as a group, there was an area where all the trajectories overlapped – an area within which all the data was being matched, and therefore an area that contained locations for the shooter that were consistent with all of the physical evidence.



At the time of the trial, I calculated and testified that the statistically most likely location for the shooter was at the geometric center of this overlap area. This location had the lowest mean squared error when compared to the individual derived trajectories. (See more at: http://tinyurl.com/kk8ec4w)

The current study provided an opportunity to test this theory and potentially provide a method to increase the accuracy of our prediction of the shooter's location over that afforded by using the trajectories individually.

GENERAL SETUP:

The study was comprised of eight different test conditions – two caliber/weapon types (.45 caliber handgun vs .223 caliber AR15 semi-automatic rifle), two targets (dual-ply drywall with 4 inches of airspace between them vs. car doors) and two angles of impact (90 degrees vs 45 degrees).

Each test was conducted at a distance of 90 feet to avoid drop in the relatively slow handgun rounds.

Gun Type	Target Type	Target Angle
.223 AR15 Rifle	Drywall	90°
.223 AR15 Rifle	Drywall	45°
.45 Handgun	Drywall	90°
.45 Handgun	Drywall	45°
.223 AR15 Rifle	Car Door	90°
.223 AR15 Rifle	Car Door	45°
.45 Handgun	Car Door	90°
.45 Handgun	Car Door	45°

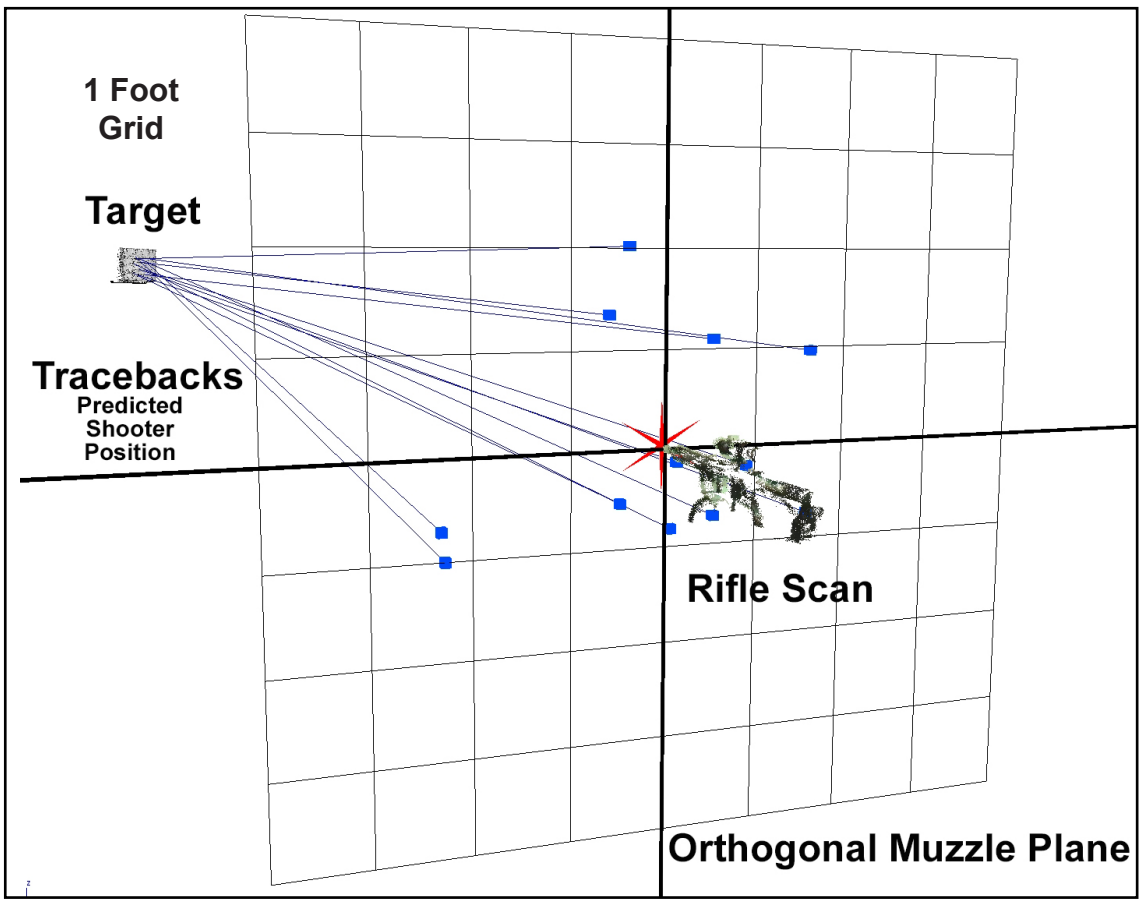
The weapons were located in a fixed position using a Ransom Rest to lock down the AR15 and to support the .45 handgun. The targets for each weapon type were laid out side by side and fired in series before switching them out for the next weapon type. The entire scene, including the weapon location in the Ransom Rest and the targets were documented through a 3D laser scan using our Leica® Geosystems ScanStation C10.

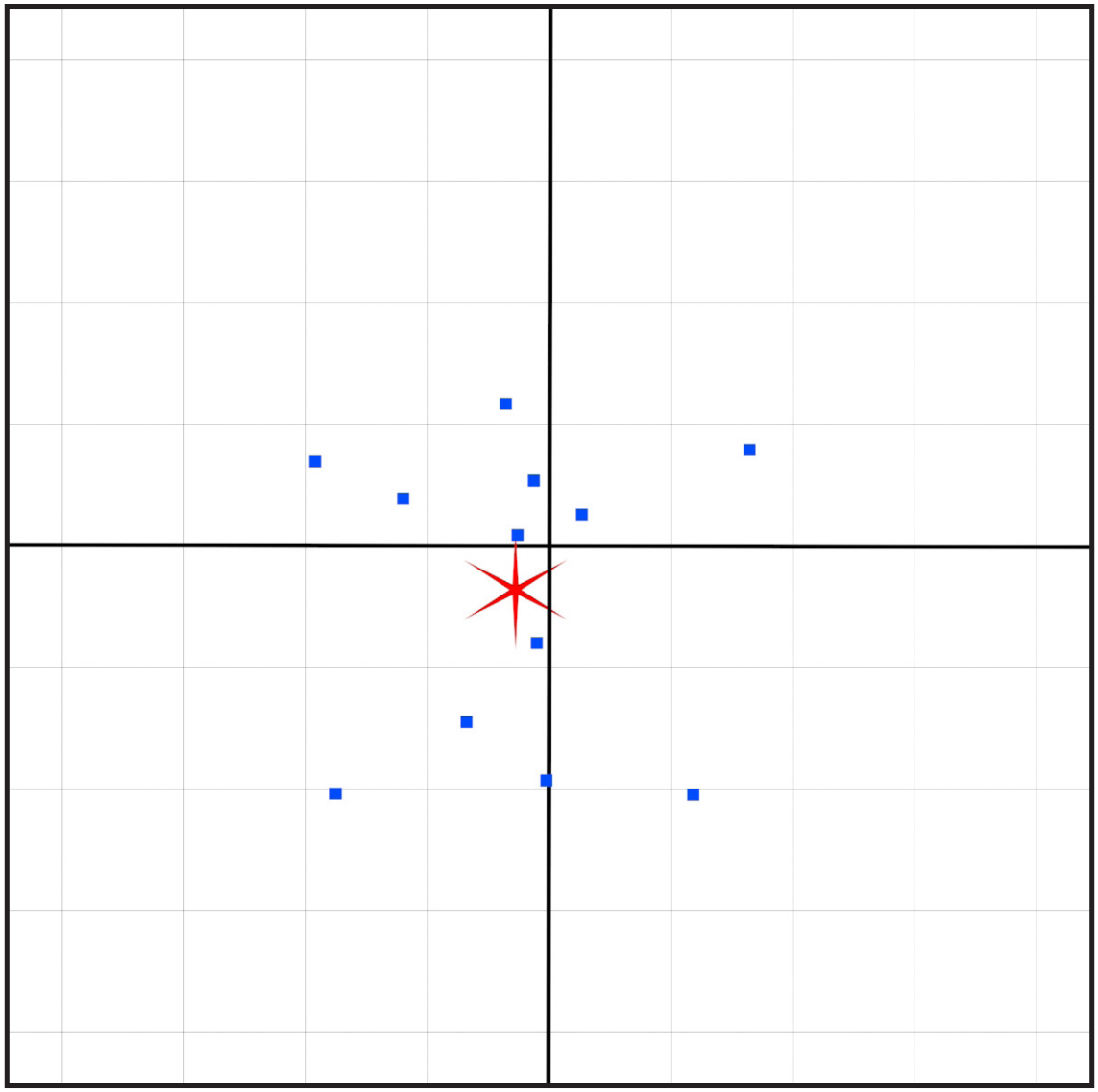
Each target/angle setup was fired at twelve times from each weapon. Each round fired was clocked using radar to determine the speed of the round at a distance of approximately 1 foot after leaving the weapon's muzzle.

After the twelve rounds were fired, each impact location was fitted with a custom made trajectory rod. The rods used in the study were powder coated a flat primer gray to increase the resolution of the scan data and limit the artifacts often seen with traditional trajectory rods. After the set of twelve impact sites were fit with the trajectory rods, each rod was documented for azimuth and elevation with the ScanStation.

Once all the test data had been captured with the ScanStation, it was imported into Autodesk's 3D Studio MAX software for 3-dimensional analysis. Each of the eight test conditions were analyzed separately in the computer. The trajectory rods that were scanned in each impact site were traced back in a straight line to the plane of the weapon's muzzle. One of many benefits of doing this work in the computer and using the 3D Working Model, is that if the computer is good at anything, drawing straight lines is certainly one of them. Given the lack of drop expected in the rounds over a distance of 30 yards, a straight line is the best model of the bullet's true trajectory. Performing this work in the field would add unnecessary error to the underlying analyses as projecting truly straight lines would prove all but impossible.

For each test condition, the location of the straight line traceback (predicted shooter's position) where it crossed the plane of the muzzle was visualized and compared to the known location of the weapon. This comparison resulted in a 2-axis Cartesian grid, with the weapon's known location located at the grid's origin and each individual predicted location (the point where the traceback intersected the muzzle's plane at 30 yards or 90 feet) shown on the grid. This method provided an intuitive and functional data set for visualizing and measuring both the spread of the data and the accuracy.





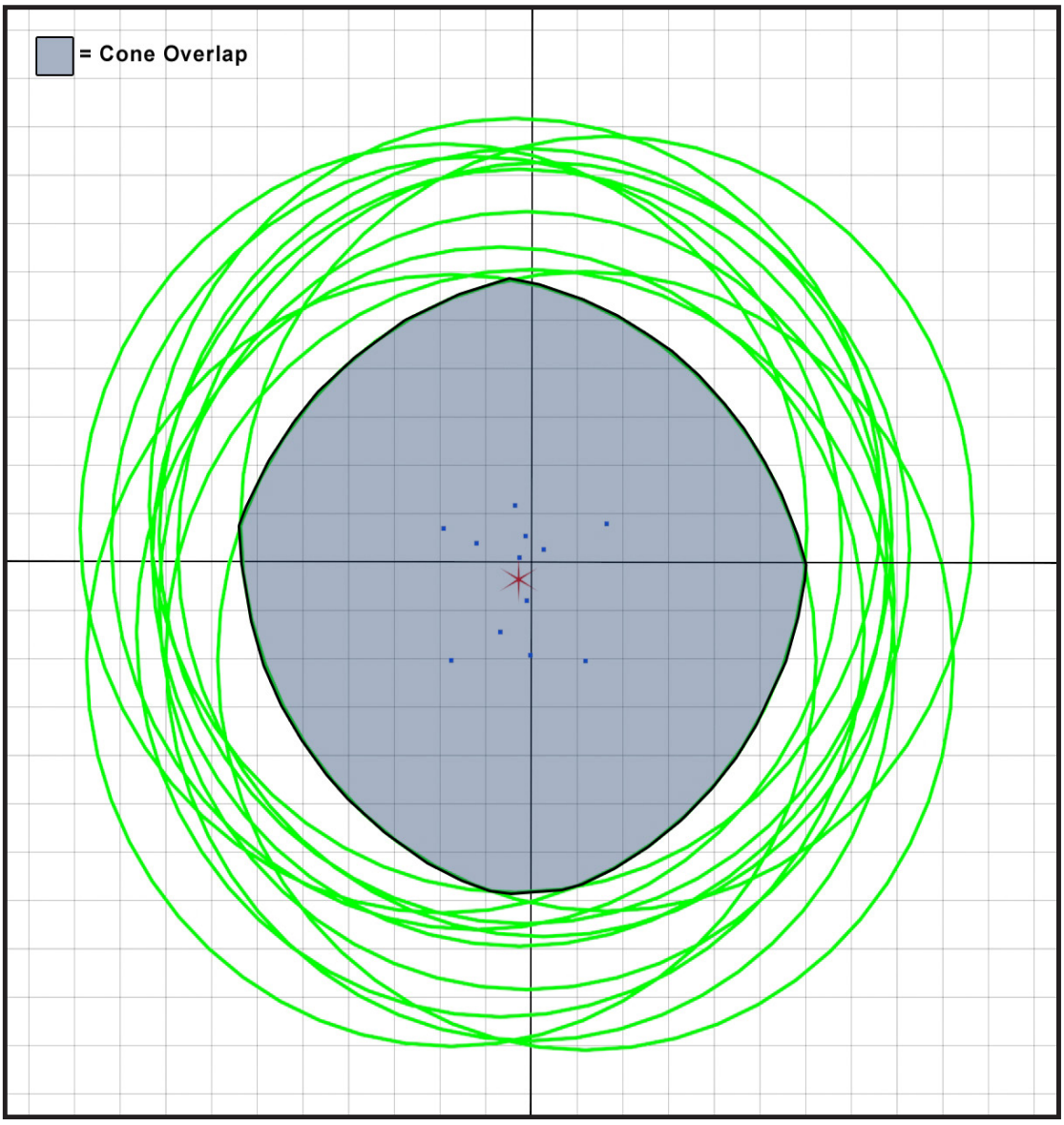
.45 Handgun - Drywall - 90° - 1 Foot Grid

As shown in the above diagram, the known location of the weapon is located at the origin of the grid, with1 foot intervals for the gridlines.
The blue boxes illustrate the predicted location of the weapon for each of the twelve rounds fired, based upon the traceback's position at the plane of the weapon's muzzle at 90 feet.
The red "star" is the geometric center of the group of predicted locations (tracebacks).

Analysis of the data:

Using the grid method illustrated above, each test condition was reviewed and important data extracted regarding the relative accuracy and spread of the predicted locations. Basic data compiled included sample size, maximum/minimum errors from known accuracy of predicted locations - individual, maximum/minimum and average spread of error (standard deviation of error/precision).

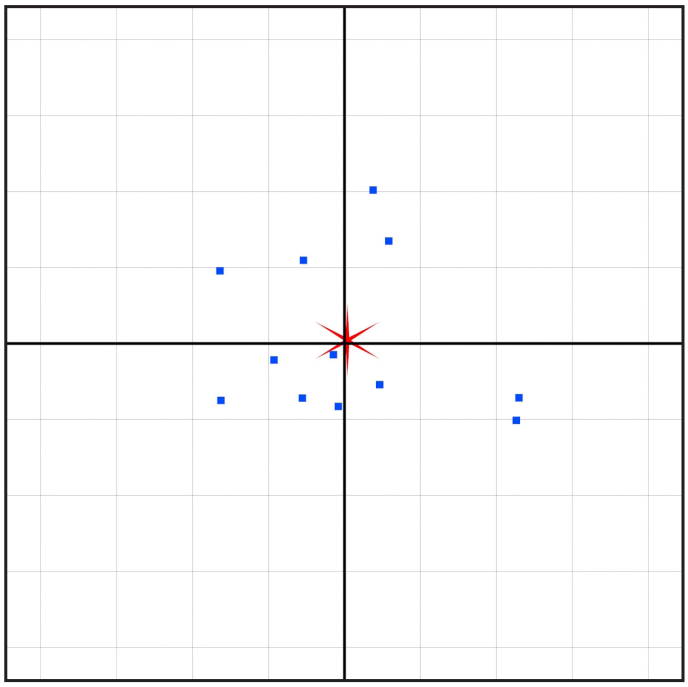
Each trajectory was fitted with the currently accepted +/- 5 degree cone of uncertainty and the overlap of these cones was visualized on the 2D grid. In the example below, the known weapon location is at the grids origin, the predicted locations are shown as blue boxes, the +/- 5 degree cones are shown in green and their overlap area is shaded in light blue:



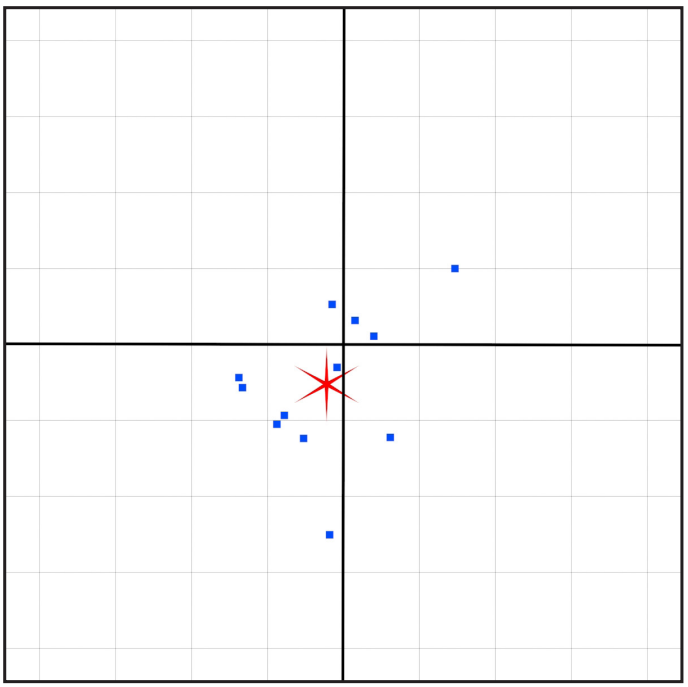
.45 Handgun - 45° Incidence Angle Drywall - Default 5° Cones - 1 Foot Grid

What we discovered was that, although using the geometric center of the overlap area did indeed increase the accuracy over the individual trajectories, it was not the most accurate indicator to fall out of the data. As it turned out, the geometric center of the group of predicted locations was the most accurate indicator, reducing the error in predicted locations by as much as 20 times over using the average error across the dataset. In the above example, the red star illustrates the predicted location using the geometric center of the individual tracebacks – an error of less than 0.5 feet over 90 feet! The following graphics illustrate this effect for all 8 test conditions:

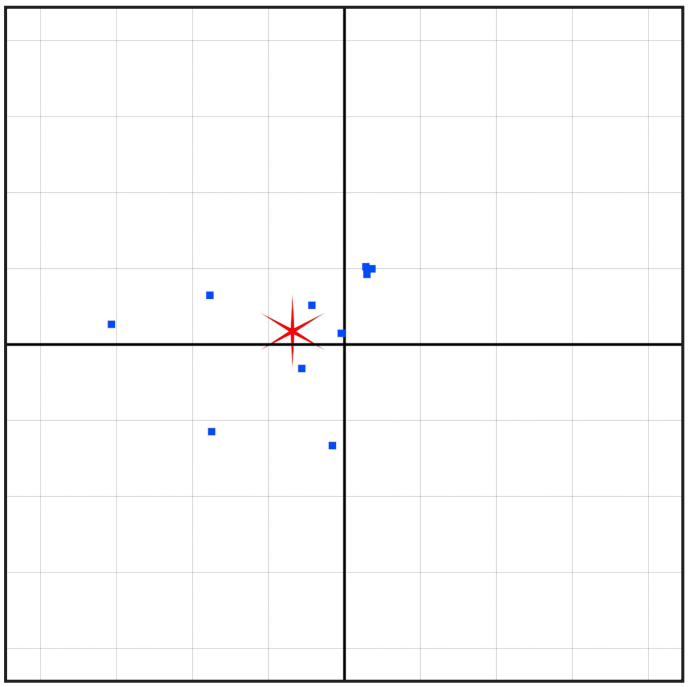
The following graphics illustrate the results of tracebacks (predicted shooter location) with both weapons shot through drywall:



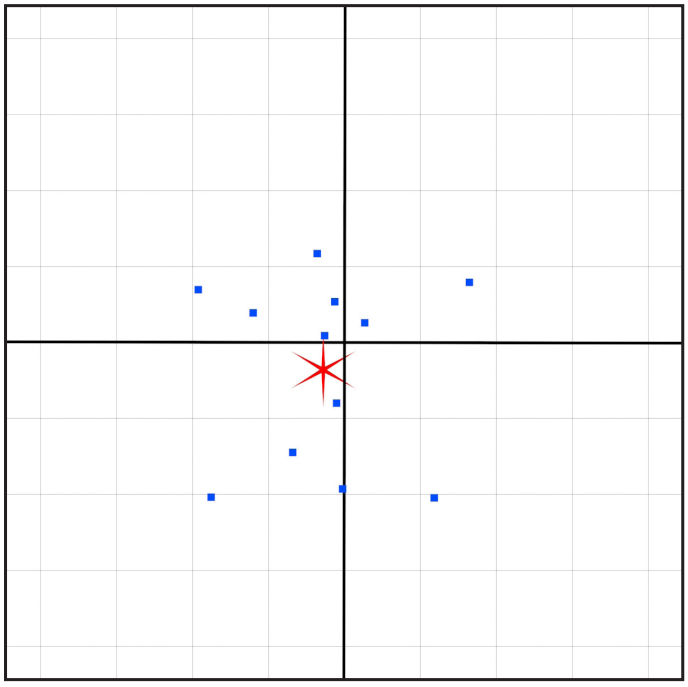
.223 AR15 - Drywall - 90° - 1 foot grid



.223 AR15 - Drywall - 45° - 1 foot grid



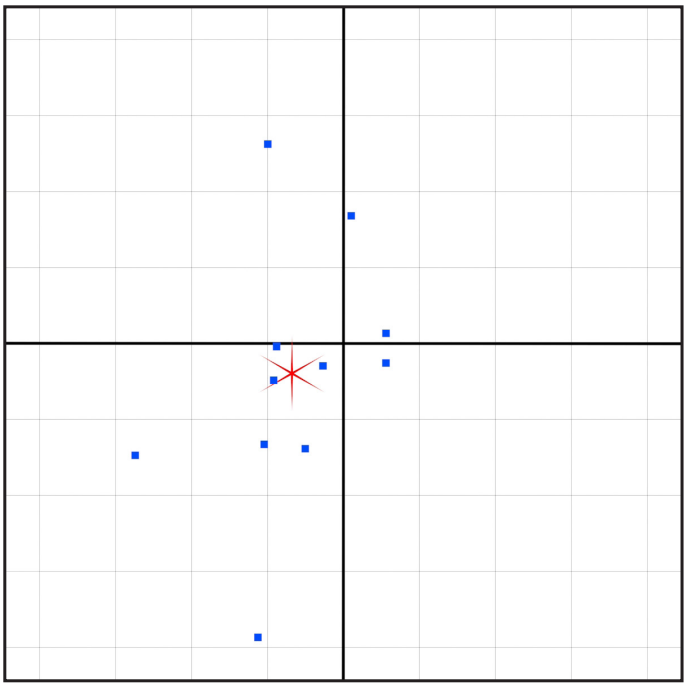
.45 Handgun - Drywall - 90° - 1 foot grid



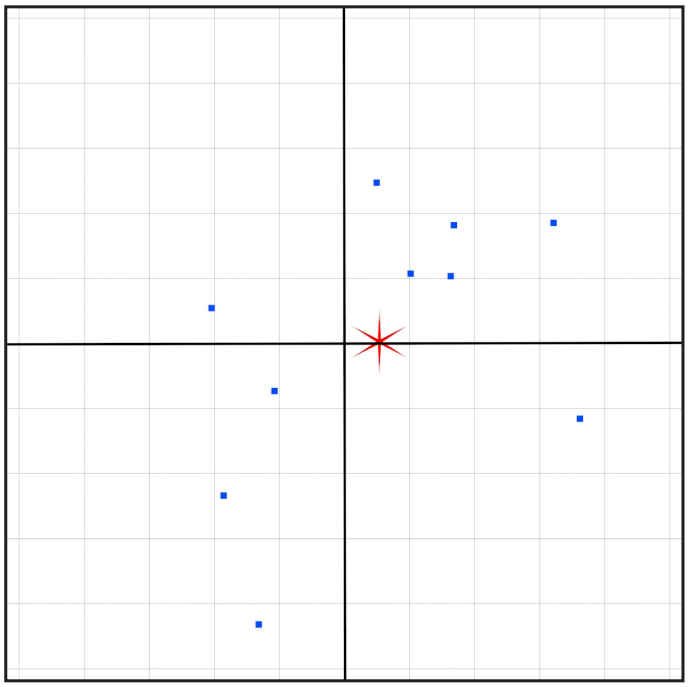
.45 Handgun - Drywall - 45° - 1 foot grid

The known location of the weapon is located at the origin of the grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).

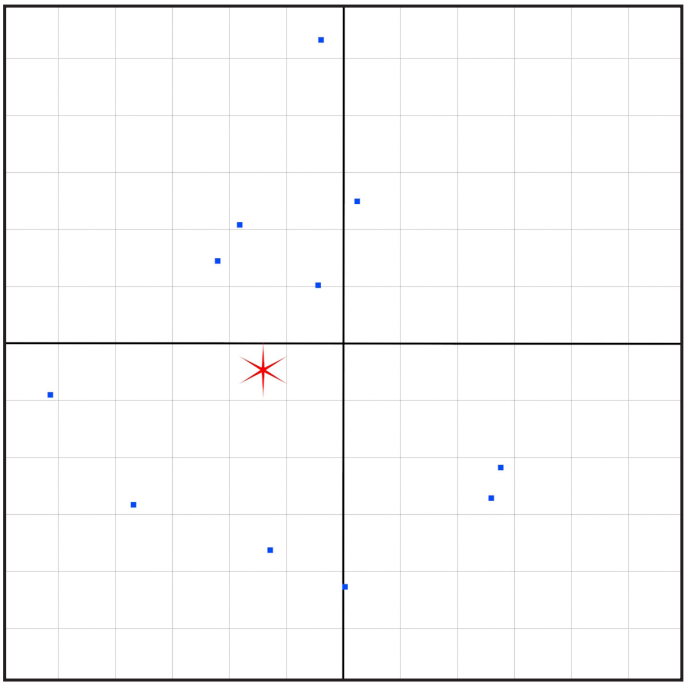
The following graphics illustrate the results of tracebacks (predicted shooter location) with both weapons shot through car door:



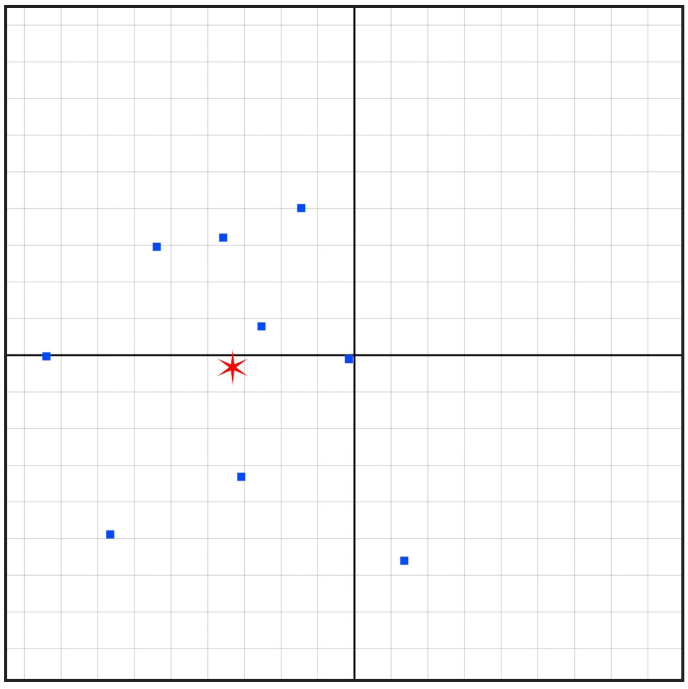
.223 AR15 - Car Door - 90° - 1 foot grid



.223 AR15 - Car Door - 45° - 1 foot grid



.45 Handgun - Car Door- 90° - 1 foot grid



.45 Handgun - Car Door - 45° - 1 foot grid

The known location of the weapon is located at the origin of the grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).

As is apparent from a brief review of the data plots, the predicted location based upon this geometric average greatly reduces the error over both the maximum error and the average error of the individual traceback locations. The following illustrates this effect numerically:

Gun Type	Target Type	Target Angle	Average Error of Traceback at 90 Feet	
.223 AR15 Rifle	Drywall	90°	0.90°	1.41 ft.
.223 AR15 Rifle	Drywall	45°	0.75°	1.18 ft.
.45 Handgun	Drywall	90°	0.82°	1.30 ft.
.45 Handgun	Drywall	45°	0.90°	1.41 ft.
.223 AR15 Rifle	Car Door	90°	1.02°	1.60 ft.
.223 AR15 Rifle	Car Door	45°	1.71°	2.69 ft.
.45 Handgun	Car Door	90°	2.51°	3.95 ft.
.45 Handgun	Car Door	45°	3.18°	5.00 ft.

			Geometric Center of Individual Tracebacks at 90 Feet	
Gun Type	Target Type	Target Angle	Total Error Degrees	Total Error Feet
.223 AR15 Rifle	Drywall	90°	0.45°	0.706 ft.
.223 AR15 Rifle	Drywall	45°	0.36°	0.570 ft.
.45 Handgun	Drywall	90°	0.04°	0.057 ft.
.45 Handgun	Drywall	45°	0.29°	0.455 ft.
.223 AR15 Rifle	Car Door	90°	0.50°	0.784 ft.
.223 AR15 Rifle	Car Door	45°	0.34°	0.538 ft.
.45 Handgun	Car Door	90°	0.94°	1.484 ft.
.45 Handgun	Car Door	45°	2.12°	3.338 ft.

Traceback = Predicted Shooter Position

Confidence Intervals/Validity per test Condition

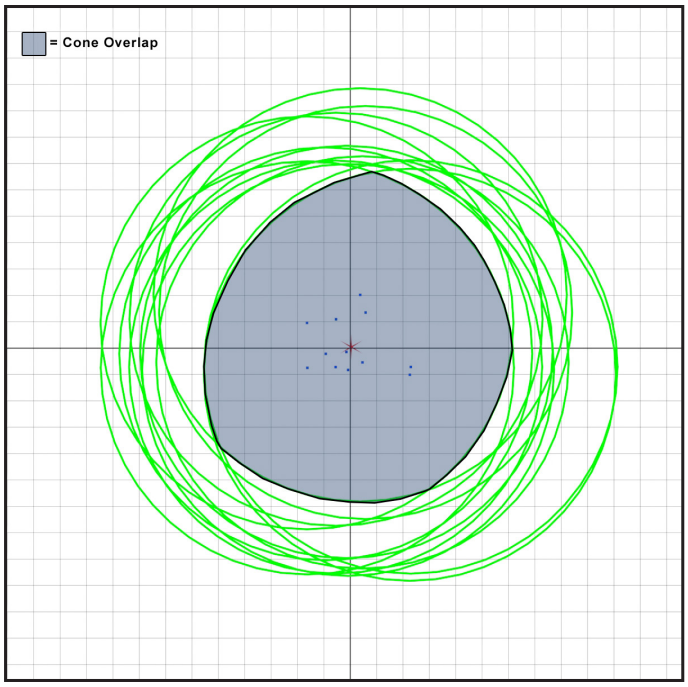
Previous work performed by others explored the concept of confidence intervals for the accuracy of any given trajectory traceback. Based upon this work, the value of +/- 5 degrees has been suggested and adopted by many who work in the field. The previous work on this issue has focused on a statistical approach based upon standard deviation of the error in large sets of predicted locations. We were unsatisfied with this approach for reasons of both mathematical validity, as well as having a single value of +/- 5 degrees for any and all measurement conditions.

A new approach was developed and applied to the data in this study. As the concept of "cones of uncertainty" presented by previous authors was well accepted and intuitive, we chose to work with the existing framework of an error cone. However, the calculation of the error cones we used was graphical as opposed to statistical.

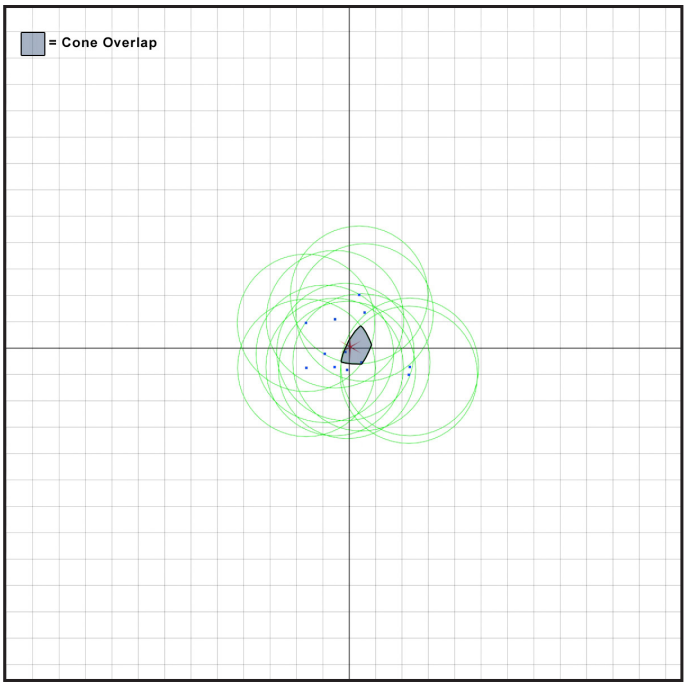
The data in our study provided direct comparison for each round fired between the predicted location and the actual (known) location of the weapon, as previously shown. When viewed on a Cartesian grid, the predicted locations are readily compared to the known (which lies at the origin of each Cartesian grid) and the direction and amount of error for each traceback is readily apparent. This method of illustrating the resultant predicted locations as opposed to analyzing the angular components provides a more intuitive and functionally useful illustration of the ultimate goal – determining the shooters location, not the angles of the individual shots themselves.

Although none of the rounds tested exhibited zero error – none of them exactly predicted the true shooters location – the degree of and error pattern for each condition provides a visual reference for the relative accuracy. In determining what type of confidence or size of error cone would best be applied to each test condition we chose to look at the minimum size of error cone that would still result in every cone containing the known shooter's location. This approach has the benefit of being visual and intuitive – if we are after a high degree of certainty in our predictions, our error cones should always contain the known location. The resulting cones would take into account both the average error and the spread of each set of predictions, as would be expected in an analysis of validity and confidence. The tighter the spread and closer to the known location, the smaller the level of uncertainty and therefore the smaller the error cone. In addition, this method ensures that our ultimate prediction of a shooters location takes into account all of the available evidence, an important requisite when presenting this data in trial.

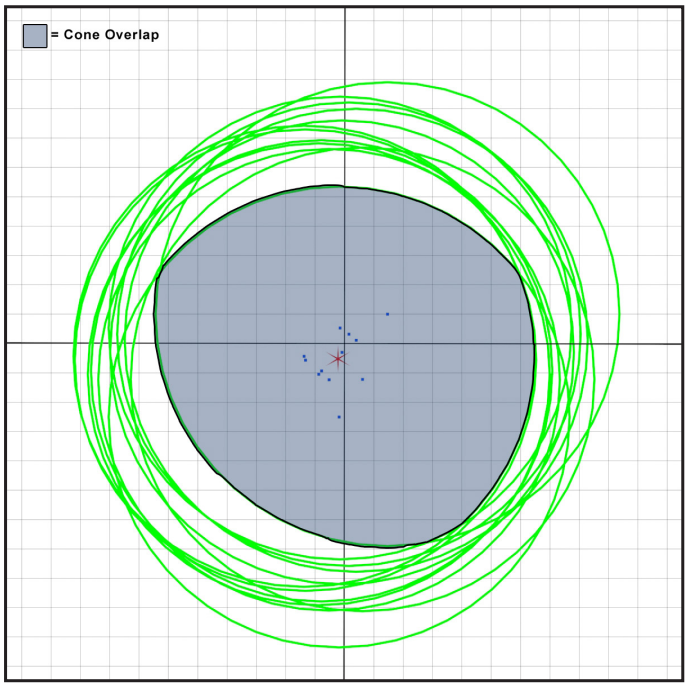
The following graphics illustrate this method. Each test condition is shown twice – first with the previously accepted +/- 5 degree cones and then again with the resultant cones scaled to the smallest size where all the cones contain the known shooter's location. Note that in the .45 handgun, car door, 45° impact angle condition, the cone size needed to encompass the known location was *larger* than 5 degrees*;* and in the .45 handgun, car door, 90° impact angle condition, the scaled cone size need to encompass all the data *was* 5 degrees.



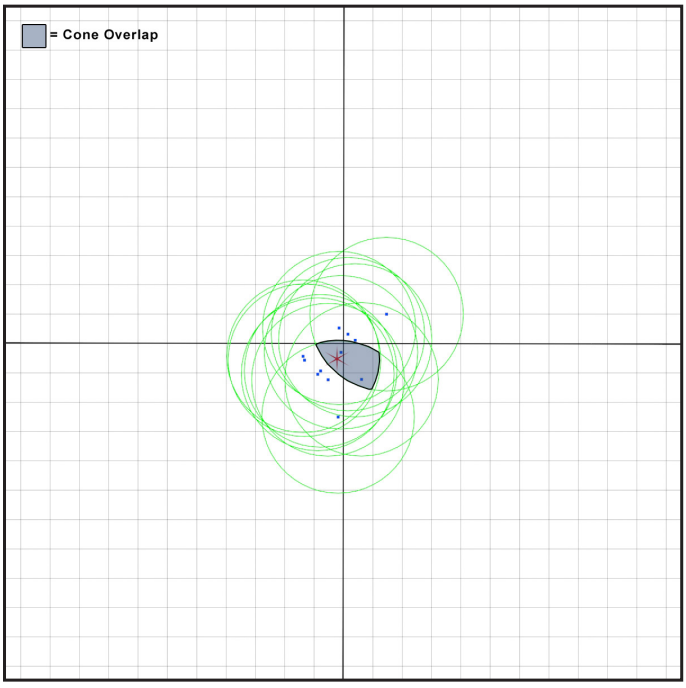
.223 AR15 Rifle - 90° Incidence Angle - Drywall - Default 5° Cones - 1 Foot Grid



.223 AR15 Rifle - 90° Incidence Angle - Drywall - Minimum Cone Radius = 1.7° - 1 Foot Grid

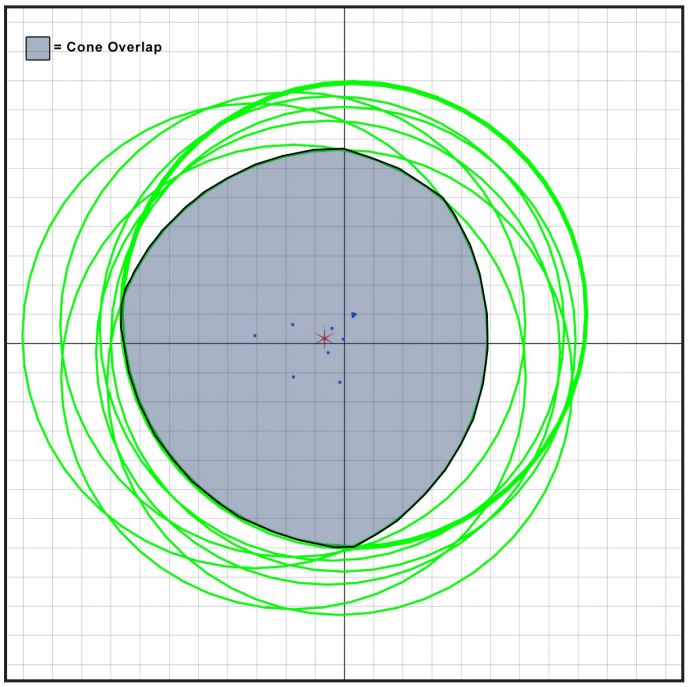


.223 AR15 Rifle - 45° Incidence Angle - Drywall - Default 5° Cones - 1 Foot Grid

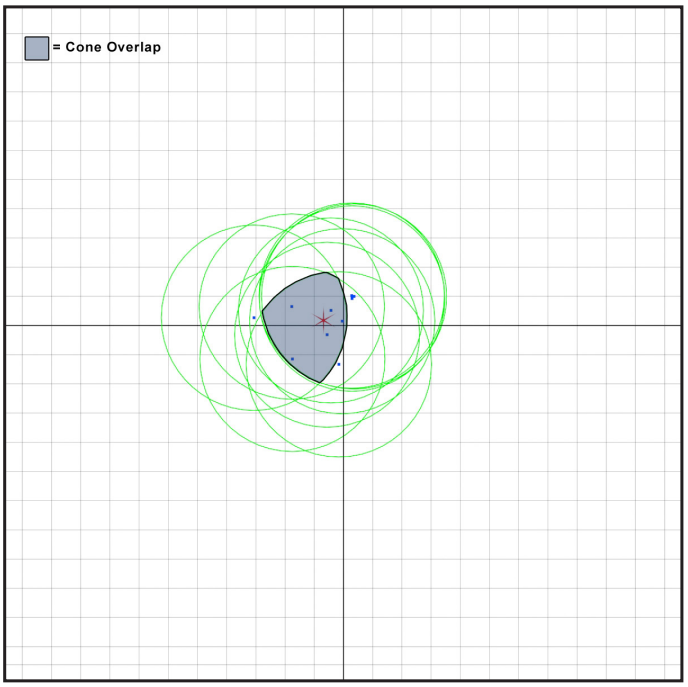


.223 AR15 Rifle - 45° Incidence Angle - Drywall - Minimum Cone Radius = 1.7° - 1 Foot Grid

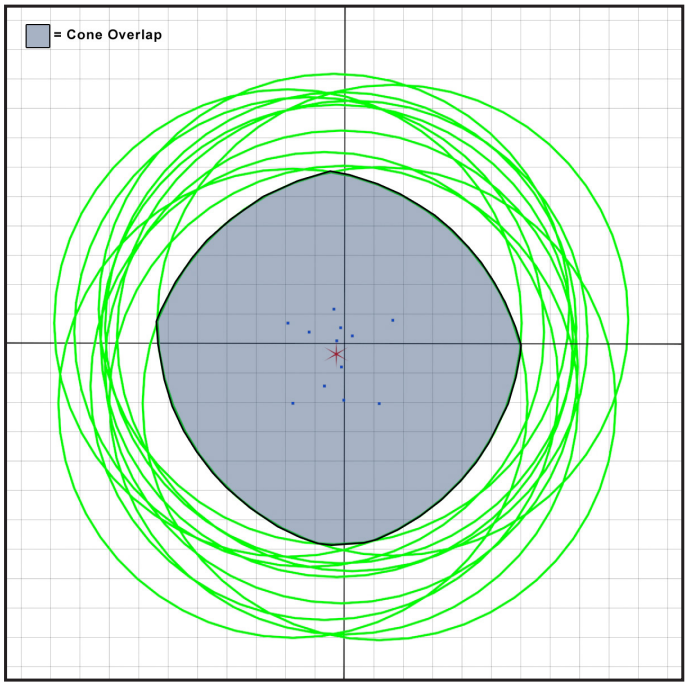
The known location of the weapon is located at the origin of the 1 foot grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).



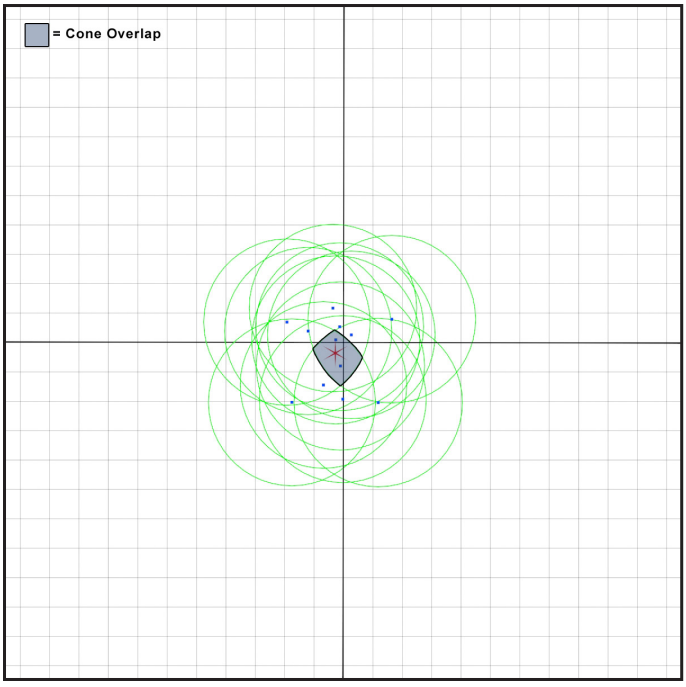
.45 Handgun - 90° Incidence Angle - Drywall - Default 5° Degree Cones - 1 Foot Grid



.45 Handgun - 90° Incidence Angle - Drywall - Minimum Cone Radius = 2.0° - 1 Foot Grid

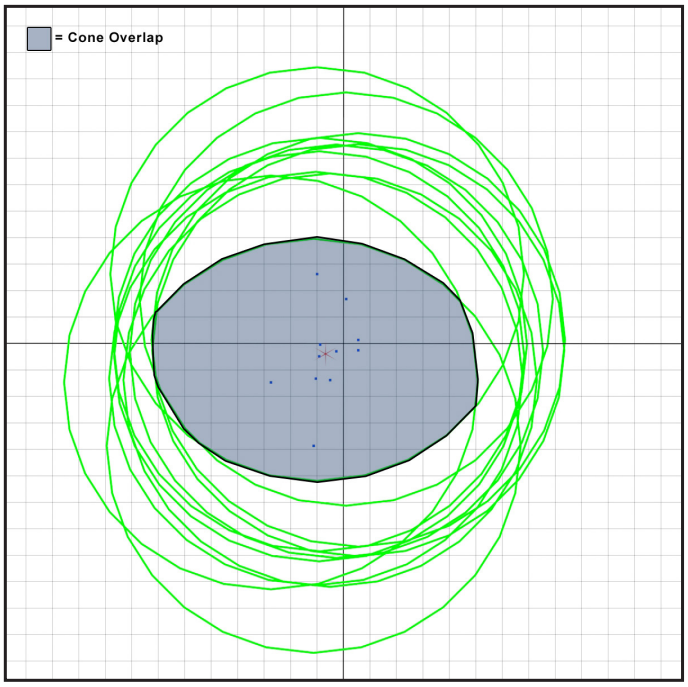


.45 Handgun - 45° Incidence Angle - Drywall - Default 5° Cones - 1 Foot Grid

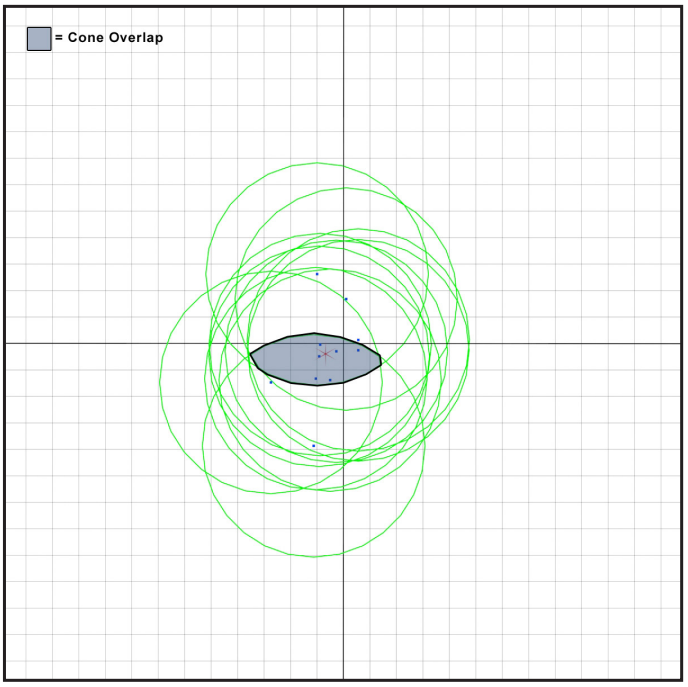


.45 Handgun - 45° Incidence Angle - Drywall - Minimum Cone Radius = 1.80° - 1 Foot Grid

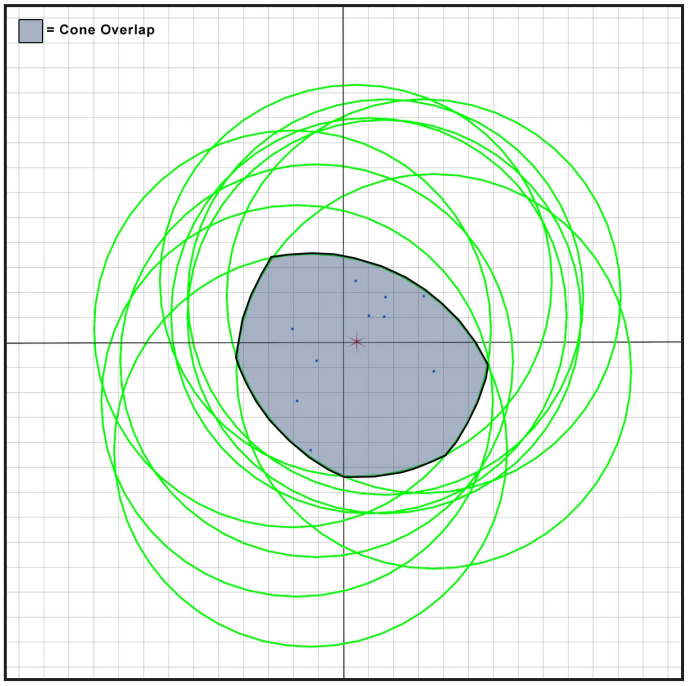
The known location of the weapon is located at the origin of the 1 foot grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).



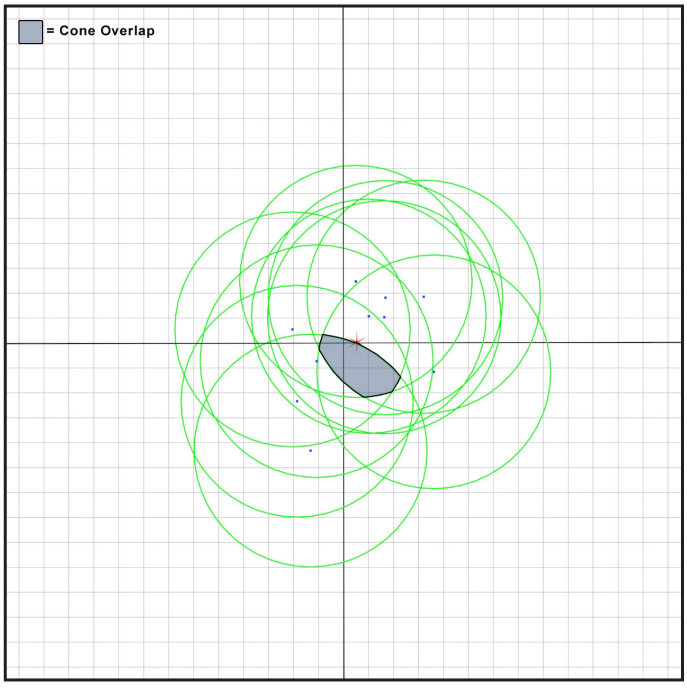
.223 AR15 Rifle - 90° Incidence Angle - Car Door - Default 5° Cones - 1 Foot Grid



.223 AR15 Rifle - 90° Incidence Angle - Car Door - Minimum Cone Radius = 2.6 - 1 Foot Grid

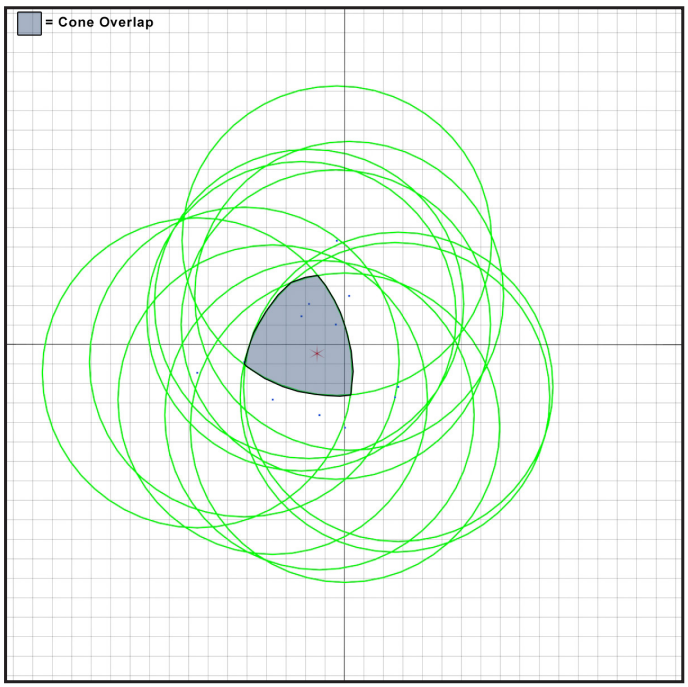


.223 AR15 Rifle - 45° Incidence Angle -Car Door - Default 5° Cones - 1 Foot Grid

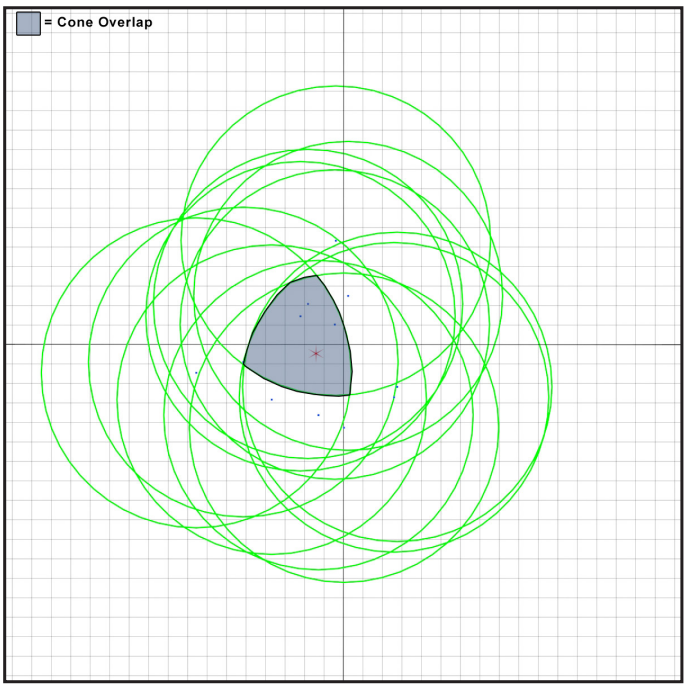


.223 AR15 Rifle - 45° Incidence Angle- Car Door - Minimum Cone Radius = 2.9° - 1 Foot Grid

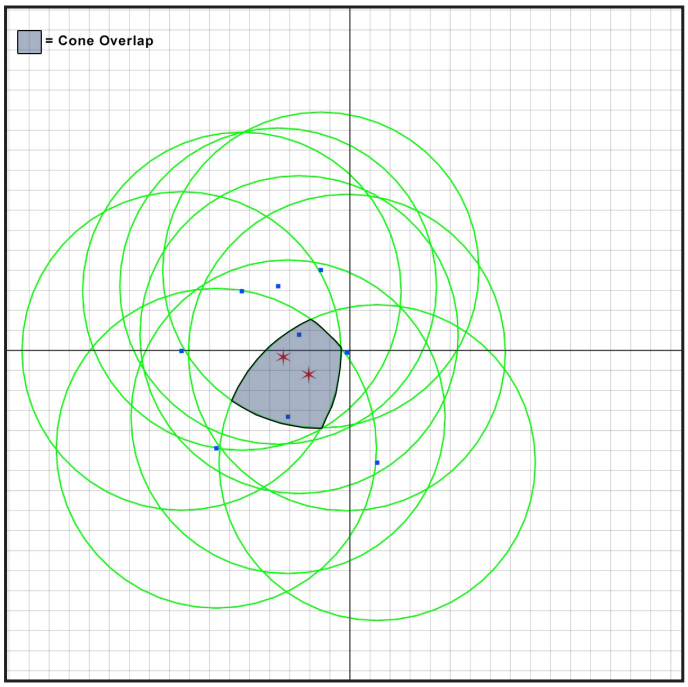
The known location of the weapon is located at the origin of the 1 foot grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).



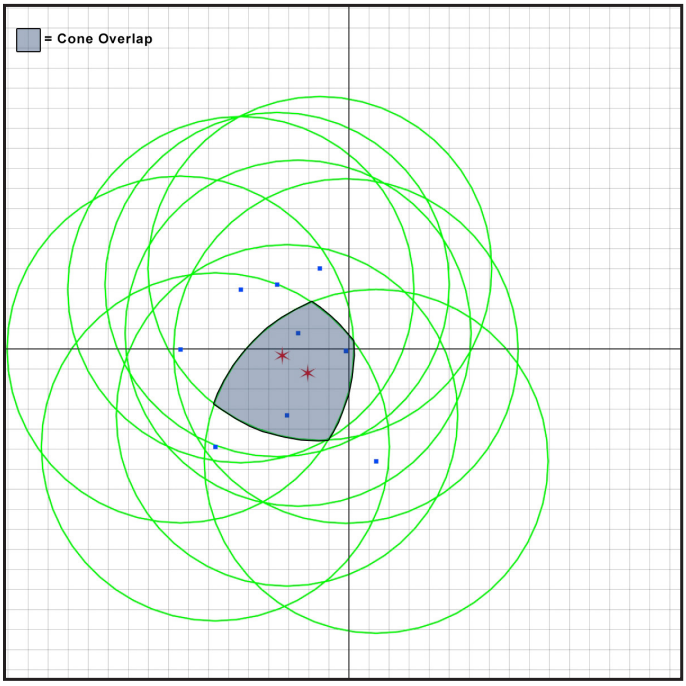
.45 Handgun - 90° Incidence Angle- Car Door -
Default 5° Cones - 1 Foot Grid



.45 Handgun - 90° Incidence Angle - Car Door -
Minimum Cone Radius = 5.0° - 1 Foot Grid
** Minimum Radius same as Default 5.0°*



.45 Handgun - 45° Incidence Angle - Car Door -
Default 5° Cones - 1 Foot Grid
**Default 5° cone overlap did not encompass known location*



.45 Handgun - 45° Incidence Angle - Car Door -
Minimum Cone Radius = 5.4° - 1 Foot Grid
**Default 5° cone overlap did not encompass known location*

The known location of the weapon is located at the origin of the 1 foot grid.
The blue boxes illustrate the predicted location (traceback) of the weapon.
The red "star" is the geometric center of the group of predicted locations (tracebacks).

When analyzed numerically in this manner, the error cones, or "cones of uncertainty" are as follows for each test condition:

Gun Type	Target Type	Target Angle	Cone Radius in Feet	Cone Radius in Degrees
.223 AR15 Rifle	Drywall	90°	2.60 ft.	1.7°
.223 AR15 Rifle	Drywall	45°	2.60 ft.	1.7°
.45 Handgun	Drywall	90°	3.18 ft.	2.0°
.45 Handgun	Drywall	45°	2.85 ft.	1.8°
.223 AR15 Rifle	Car Door	90°	4.16 ft.	2.6°
.223 AR15 Rifle	Car Door	45°	4.63 ft.	2.9°
.45 Handgun	Car Door	90°	7.80 ft.	5.0°
.45 Handgun	Car Door	45°	8.50 ft.	5.4°

Relative Contribution to Variance of Test Variables

When looking at the raw data, the largest contribution to the variance in predicted location accuracy comes from the target material. Of the eight test conditions, the data for the car doors displayed the lowest accuracy, occupying all four of the lowest rankings; the data for the drywall occupied all four of the highest accuracy. This affect is also illustrated by the difference in the average errors – the comparison between the four car door conditions and the four drywall conditions nets the largest difference – 2.1° for the car door data vs 0.84° for the drywall data, a difference of 1.26°.

The variable that contributed the 2nd most to the predicted variance was the weapon/caliber. The data for the AR15 rifle firing .223 caliber rounds had an average error of 1.09° versus the handgun firing .45 caliber rounds with1.85° across test conditions. The variable that contributed the least to the variance was the angle of incidence – the 1.63° average error for the .45° condition vs the 1.31° of error for the 90° condition results in a difference of only 0.32°.

Test Conditions Rankings in Ascending Order:

Gun Type	Target Type	Target Angle	Average Error in Degrees
.223 AR15 Rifle	Drywall	45°	0.75°
.45 Handgun	Drywall	90°	0.82°
.223 AR15 Rifle	Drywall	90°	0.90°
.45 Handgun	Drywall	45°	0.90°
.223 AR15 Rifle	Car Door	90°	1.02°
.223 AR15 Rifle	Car Door	45°	1.71°
.45 Handgun	Car Door	90°	2.51°
.45 Handgun	Car Door	45°	3.18°

Comparison by Weapon Type:

Gun Type	Average Error in Degrees
.223 AR15 Rifle	1.09°
.45 Handgun	1.85°
Difference	***0.76°***

Comparison by Angle of Incidence:

Angle of Incidence	Average Error in Degrees
90°	1.31°
45°	1.63°
Difference	***0.32°***

Comparison by Target Type:

Target	Average Error in Degrees
Drywall	0.84°
Car Door	2.10°
Difference	***1.26°***

Errors at 90 Feet - Per Test Condition:

.223 AR15 Rifle through Drywall at 90°

Sample Size (N)=12
Maximum Error = 2.48 ft./1.58°
Minimum Error = 0.21 ft./0.13°
Average Error = 1.41 ft./0.90°
Standard Deviation Errors = 0.72 ft./0.46°
Error from Arithmetic Average = 0.06 ft.
Error from Cone Overlap Center = 0.51 ft.

.223 AR15 Rifle through Drywall at 45°

Sample Size (N)=12
Maximum Error = 2.51 ft./1.60 °
Minimum Error = 0.31 ft./0.20°
Average Error = 1.17ft./0.75°
Standard Deviation Errors = 0.66 ft./0.42°
Error from Arithmetic Average = 0.54 ft.
Error from Cone Overlap Center = 1.62 ft.

.45 Handgun through Drywall at 90°

Sample Size (N)=10
Maximum Error = 3.08 ft./1.96 °
Minimum Error = 0.15 ft./0.10 °
Average Error = 1.30 ft./0.82°
Standard Deviation Errors = 0.85 ft./0.54°
Error from Arithmetic Average = 0.71 ft.
Error from Cone Overlap Center = 1.45 ft.

.45 Handgun through Drywall at 45°

Sample Size (N)=12
Maximum Error = 2.69 ft./1.71°
Minimum Error = 0.28 ft/0.18 °
Average Error = 1.41 ft./0.90 °
Standard Deviation Errors = 0.79 ft./0.51°
Error from Arithmetic Average = 0.45 ft.
Error from Cone Overlap Center = 0.57 ft.

.223 AR15 Rifle through Car Door at 90°

Sample Size (N)=12
Maximum Error = 4.03 ft./2.56°
Minimum Error = 0.40 ft./0.25°
Average Error = 1.60ft./1.02°
Standard Deviation Errors = 1.15 ft./0.73°
Error from Arithmetic Average = 0.784 ft.
Error from Cone Overlap Center = 1.87 ft.

.223 AR15 Rifle through Car Door at 45°

Sample Size (N)=10
Maximum Error = 4.51 ft./2.87 °
Minimum Error = 1.30 ft./0.83°
Average Error = 2.68ft./1.71°
Standard Deviation Errors = 1.06 ft./0.67°
Error from Arithmetic Average = 0.54 ft.
Error from Cone Overlap Center = 1.62 ft.

.45 Handgun through Car Door at 90°

Sample Size (N)=12
Maximum Error = 7.69 ft./4.89 °
Minimum Error = 1.12 ft./0.71°
Average Error = 3.94ft./2.51°
Standard Deviation Errors = 1.78 ft./1.08 °
Error from Arithmetic Average = 1.48 ft.
Error from Cone Overlap Center = 2.16 ft.

.45 Handgun through Car Door at 45°

Sample Size (N)= 9
Maximum Error = 8.4 ft./5.3°
Minimum Error = 0.19 ft./0.12°
Average Error = 5.0 ft./3.18°
Standard Deviation Errors = 2.59 ft./1.64°
Error from Arithmetic Average = 3.34 ft.
Error from Cone Overlap Center = 2.38 ft.

Speed of Fired Rounds, for each Test Condition (feet per second)

.223 AR15 Rifle				
Round Number	**45° - Drywall**	**45° - Car Door**	**90° - Drywall**	**90° - Car Door**
1	2917	2879	2949	2949
2	2911	2911	2917	2909
3	2871	2917	2898	2917
4	2861	2867	2892	2917
5	2892	2898	2879	2749
6	2830	2911	2930	2930
7	2867	2904	2930	2949
8	2911	2911	2923	2873
9	2892	2390	2892	2911
10	2855	2911	2936	2898
11	2867	2930	2911	2923
12	2886	2949	2898	2867
Average Speed	***2880***	***2865***	***2913***	***2899***

.45 Handgun				
Round Number	**45° - Drywall**	**45° - Car Door**	**90° - Drywall**	**90° - Car Door**
1	802	816	804	829
2	799	825	803	820
3	838	826	839	824
4	827	819	828	825
5	836	840	836	825
6	832	832	822	819
7	828	834	819	812
8	822	828	817	812
9	847	817	817	835
10	823	826	819	835
11	819	825	809	806
12	827	829	826	806
Average Speed	***825***	***826***	***820***	***821***

Conclusion

This study was conceived in 2010 after we faced the challenge of determining the shooters location from seventeen shots fired from an AR-15 semi-automatic rifle. Upon examination of the evidence in that case and subsequent cases two things became clear: the previously derived +/- 5 degree cones of uncertainty were prohibitively conservative; and that there was functionally useful data to be gleaned from assessing the fired rounds as a set, as opposed to individually.

From visualizing the data in 3D as was first done in our 2010 case work, it was apparent that in cases with multiple rounds fired from a single location, the individual tracebacks described a s tatistical "cloud" surrounding the actual shooters location. What was needed was a method to utilize the multiple predicted locations in a way that took into account both their spread and their relative accuracy. The concept of the overlap area of the +/- 5 degree cones was appealing both visually and by the virtue of this location matching all the available evidence – a critical component of validity when testifying to the results.

After our tests were completed, analysis of the results revealed the following:

1. The intended goal of the study was to determine whether the geometric center of the overlap of the +/- 5 degree cones accurately predicted the shooters location. In all 8 test scenarios this datum did predict the shooters location with increased accuracy over using the average error of the set of traceback predictions. However it was determined that a more accurate prediction was provided by using the geometric center of the set of traceback predictions, essentially ignoring the cones and their common overlap area. It should be noted that this more accurate datum always lies within the cones overlap error – however it was not located at the overlaps geometric center.

2. For all but one of our test conditions (pistol firing .45 caliber rounds through a car door at a 45 degree angle of incidence) the previously derived +/-5 degree cones were larger than necessary to fully account for the spread and absolute values of the errors in predicting the shooter's location.

3. Given that one of our condition resulted in an error cone of 5.4 degrees and a second resulted in error cones of 5.0 degrees, the previously derived +/- 5 degree cones are valid for a broad value that applies over a wide range of conditions.

4. The test conditions that resulted in large error were both from relatively large and slow .45 caliber rounds fired into car doors. In these test conditions, many of the rounds lacked sufficient velocity to make a secondary hole in the back of the target, thereby limiting the accuracy of the resultant traceback. If encountered in live casework, it would be necessary to hold the rods resting in the single bullet hole against the "pinch or wipe" point to increase predictive accuracy. In the scenarios using the .45 caliber handgun fired into the car door at a 45 degree angle, a few of the rounds lacked sufficient momentum to make a single hole in the front side of the target, causing the data to be discarded as there was no hole into which a trajectory round could be inserted.

5. The single largest factor in resultant prediction accuracy was the target material. The ability of each caliber to fully perforate both layers of the drywall provided two points of data between which a straight line traceback could be derived. The .45 caliber handgun had particular difficulty in perforating the car door.

6. The weapon/caliber variable was the second most important variable affecting prediction accuracy.

7. The angle of incidence contributed the least to the prediction accuracy. As long as two holes were available, the accuracy in predicting the shooters location was very high regardless of weapon type.

8. The use of the ScanStation, the custom-made trajectory rods and analysis of the data in the computer using the 3D Working Model provided for very high prediction accuracy across most condition (all conditions where two holes were available.) At a distance of 90 feet from the physical evidence in the form of bullet holes, this method was able to predict shooters location to within an average of 1.6 feet in 5 of the test conditions and within 5 feet in the worst condition, using the average error.

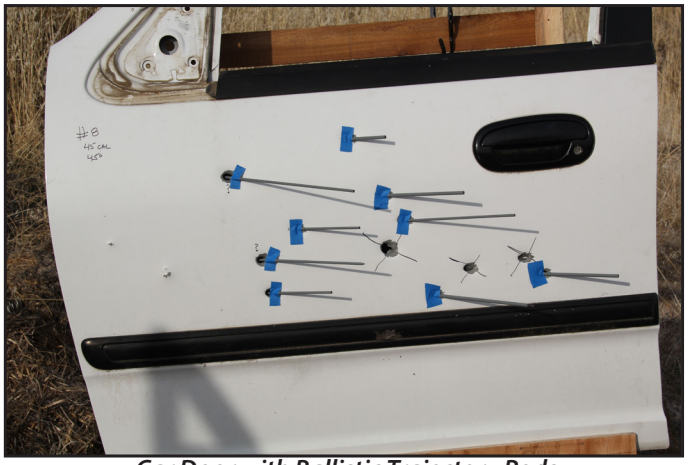
9. Using the set of the data and analyzing the geometric center of the individual predictions of shooters location provided even greater accuracy – up to 20x better than using the average error. At 90 feet from the physical evidence, this datum predicted the shooters location to within 3.3 feet in the worst case scenario and as accurate as ***0.05 feet*** in the best.

In conclusion, the tested hypothesis was determined to be valid in that it increased predictive accuracy over previously used methods. However the better predictive accuracy was provided by a datum we had not considered previously, namely the geometric center of the "cloud" of predicted shooter locations.

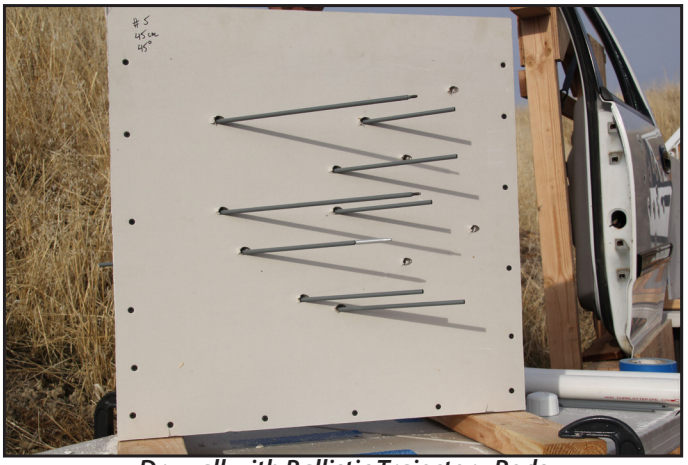
Many thanks to Mike Haag for his groundbreaking work on creating the concept of cones of uncertainty and providing an overall value to work with. I would also like to thank Leica Geosystems for the incredibly valuable ScanStation C10 that was used in this study and all of our case work in this area. Although I have not personally tested the alternative method of using strings or similar methods for trackback from trajectory rods, I am confident that the accuracy and resolution provided by the ScanStation is responsible for a large portion of the accuracy we were able to demonstrate in predicting the shooters location in this study and our casework. And finally, I am grateful to the thousands of scientists from history who conceived and implemented the idea of the "working model". At PSI our use of the 3D working model has consistently allowed us to achieve the type of accuracy and foundational validity that is required for forensic analysis.

.223 AR15 Rifle

.223 AR15 Rifle and Drywall Target

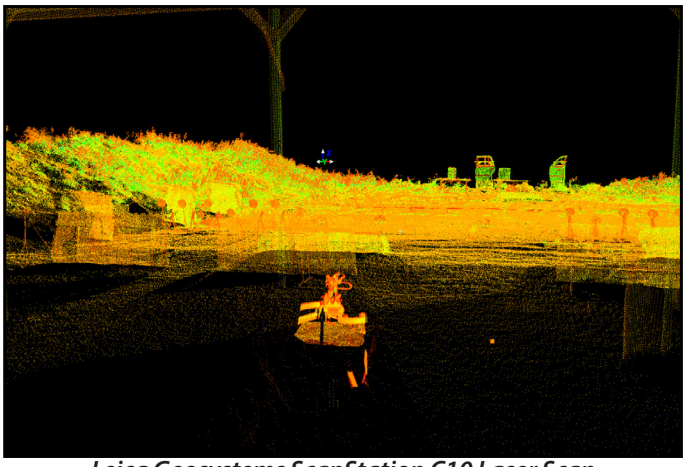


Car Door with Ballistic Trajectory Rods



Drywall with Ballistic Trajectory Rods

Leica Geosystems C10 ScanStation with Targets



Leica Geosystems ScanStation C10 Laser Scan of .45 Handgun Set-up

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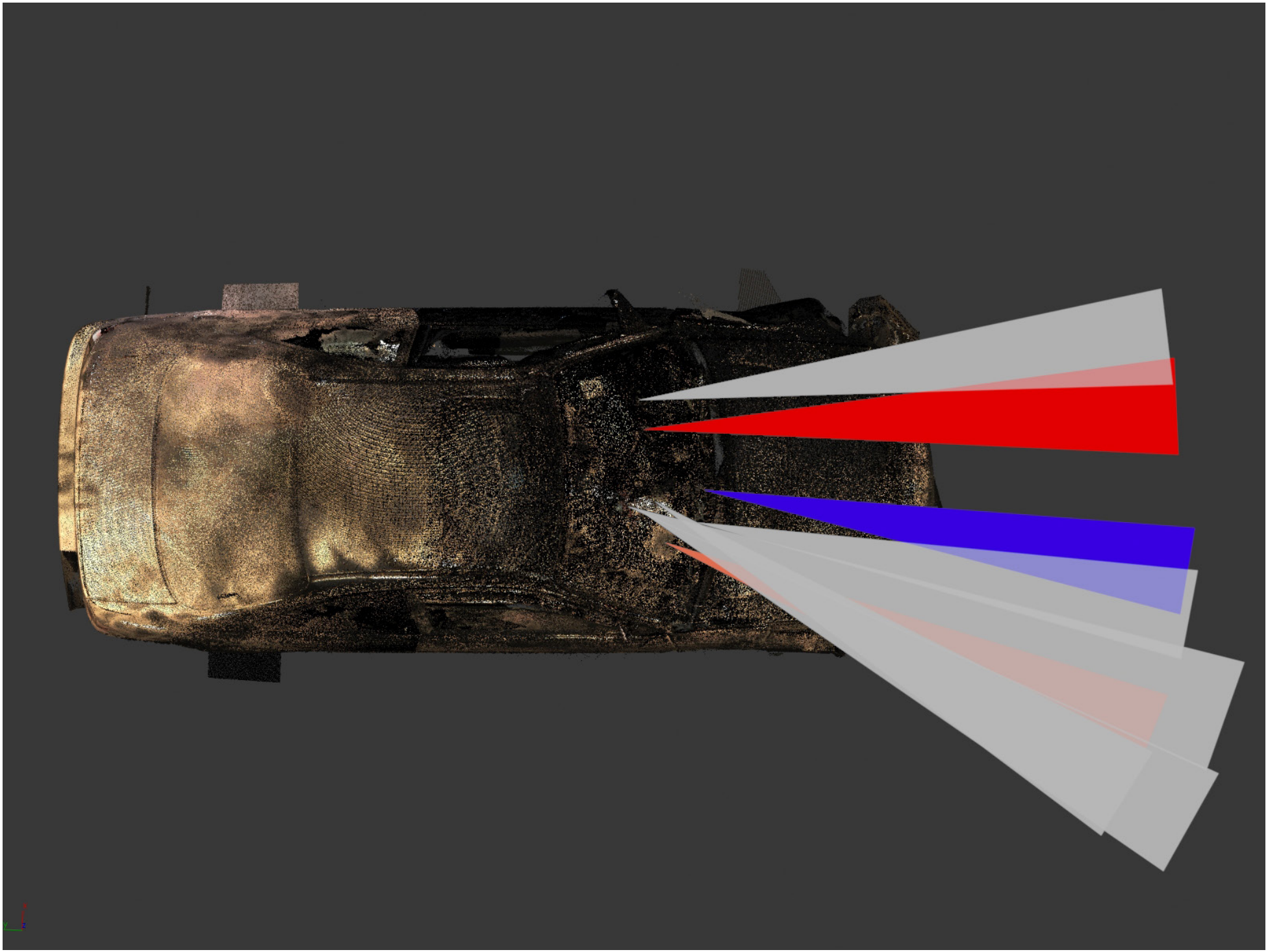
Exhibit G -
3D Laser Scan Data of Honda Civic with Bullet Trajectory Cones



3D Laser Scan Data of Honda Civic with Bullet Trajectory Cones

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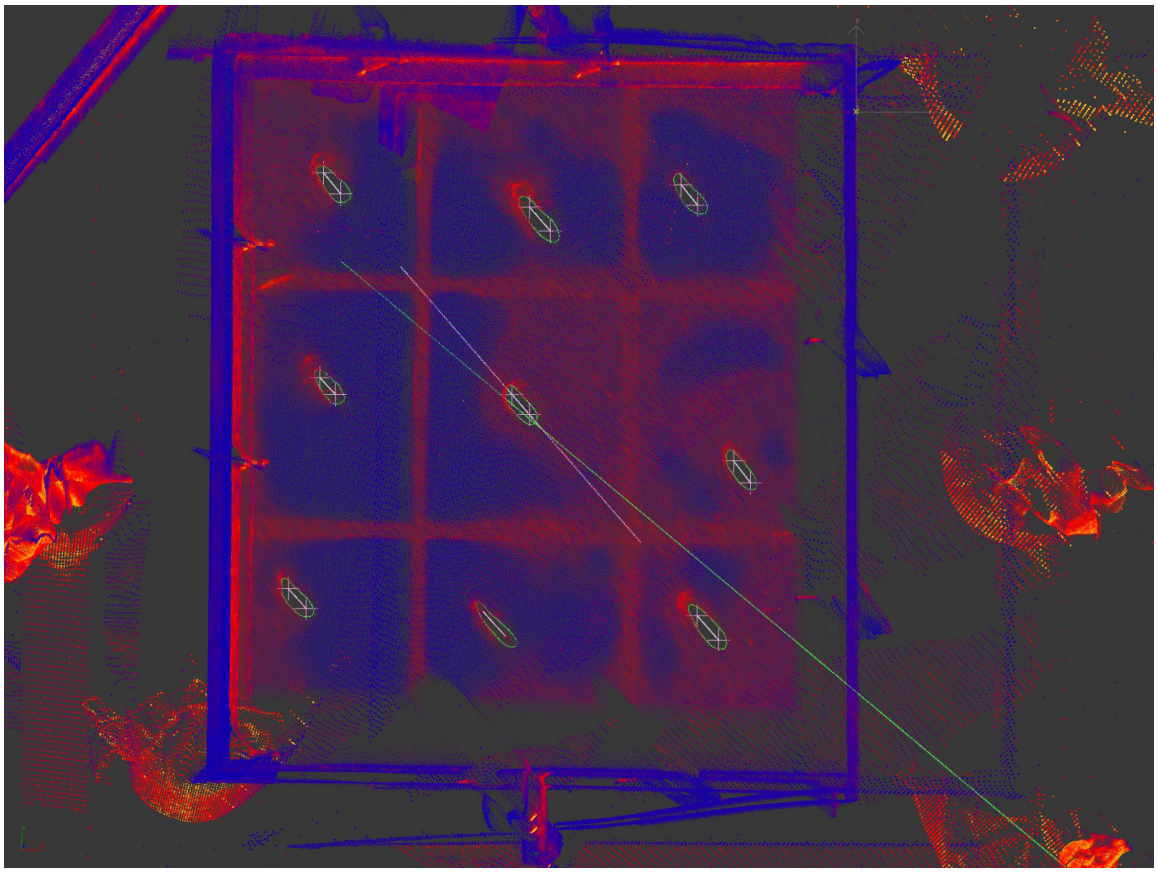
Exhibit H - Results of Honda Civic Windshield Impact Testing

	Shot #	Offset Horizontal Angle Prediction (Positive Angle to the Right Relative to the Windshield)
	1	11.46
	2	8.41
	3	10.71
	4	9.30
	5	9.36
	6	8.05
	7	9.49
	8	12.14
	9	9.26
	Average	9.80
	Median	9.36
	Std Dev	1.29

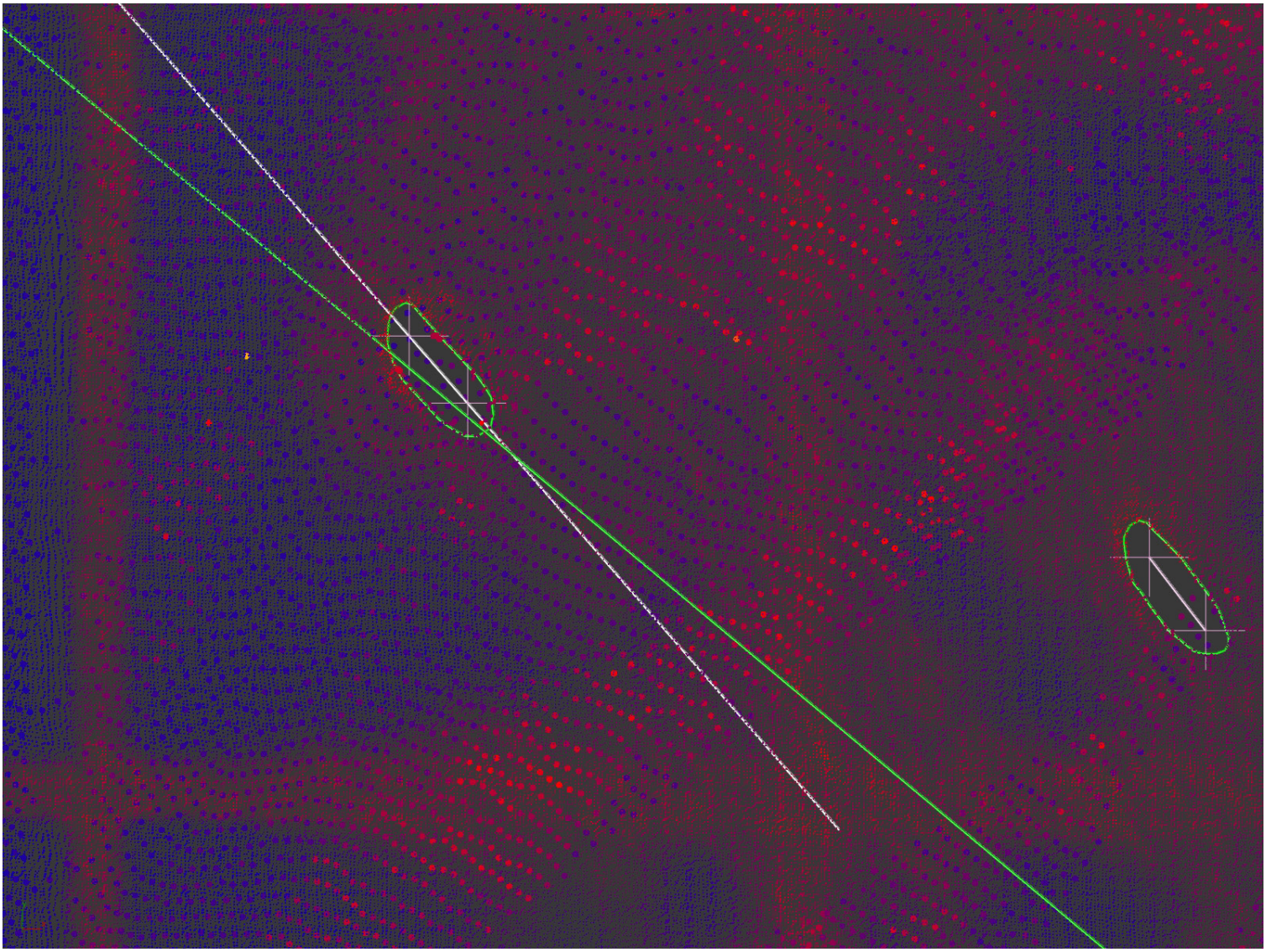
5 Degree Traj Cone Angular Offsets		
Angle from Perpindicular	linear offset from 42 to 0	Angular Offset per measured angle degree
41.8	9.80	0.23
38.9	9.12	
29.21	6.85	
25.6	6.00	
13.7	3.21	
12.4	2.91	
-3.4	(0.80)	
-9.3	(2.18)	

Results of Honda Civic Windshield Impact Testing

Results of Honda Civic Windshield Impact Testing
From Muzzle to Windshield



Results of Honda Civic Windshield Impact Testing
Illustration of Angular Offset ~10 Degrees



Results of Honda Civic Windshield Impact Testing
Illustration of Angular Offset ~10 Degrees

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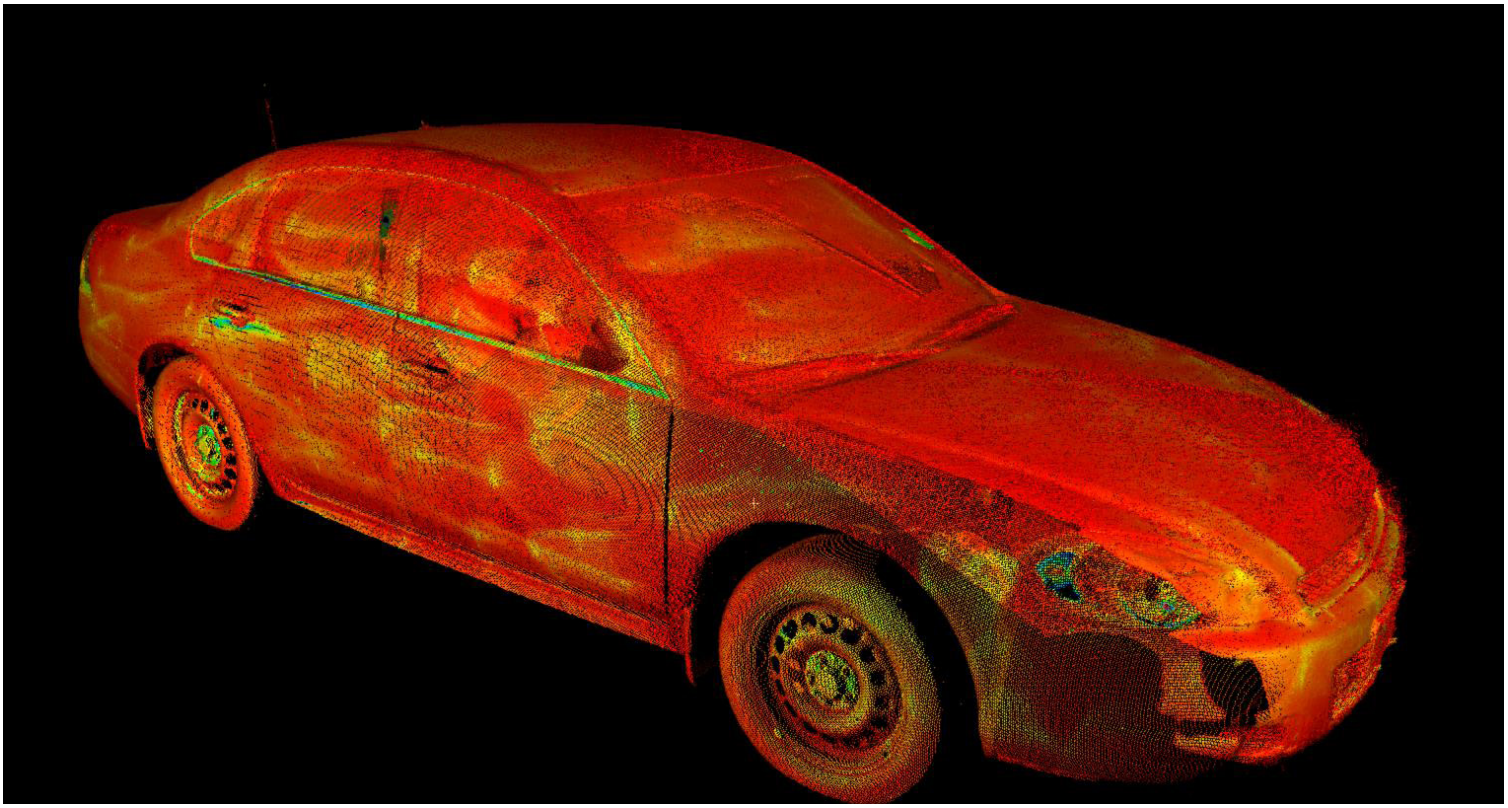
Exhibit I -
3D Laser Scan Data and Photos of Sergeant French's and Captain Montanino's Vehicles

Laser Scan Data of Sergeant French's Vehicle

Photo of Sergeant French's Vehicle Showing Damage

Photo of Sergeant French's Vehicle Showing Damage

Photo of Sergeant French's Vehicle Showing Damage



Laser Scan Data of Captain Montanino's Vehicle

Photo of Captain Montanino's Vehicle

Photo of Captain Montanino's Vehicle Showing Damage

Photo of Captain Montanino's Vehicle Showing Damage

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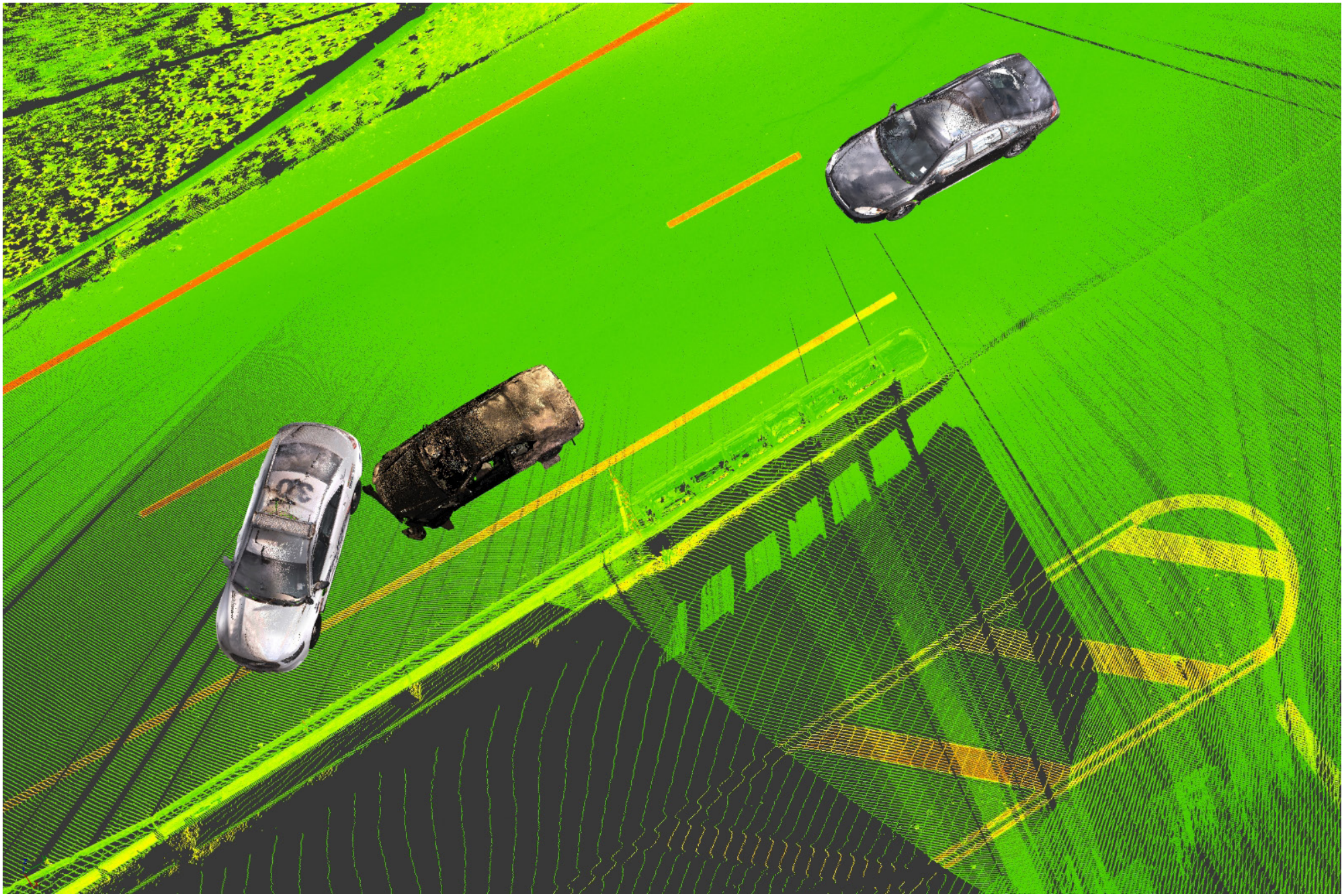
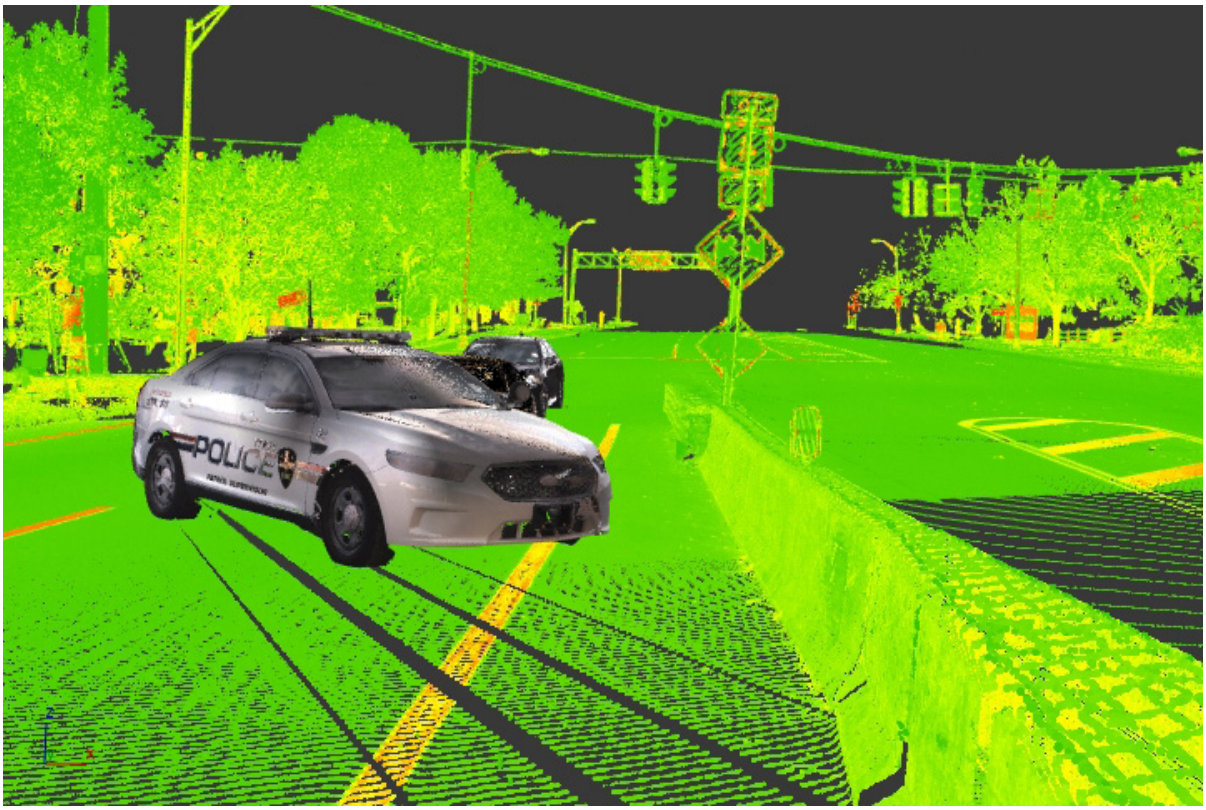
Exhibit J - Laser-Assisted Photogrammetry Based Upon Troy PD Video

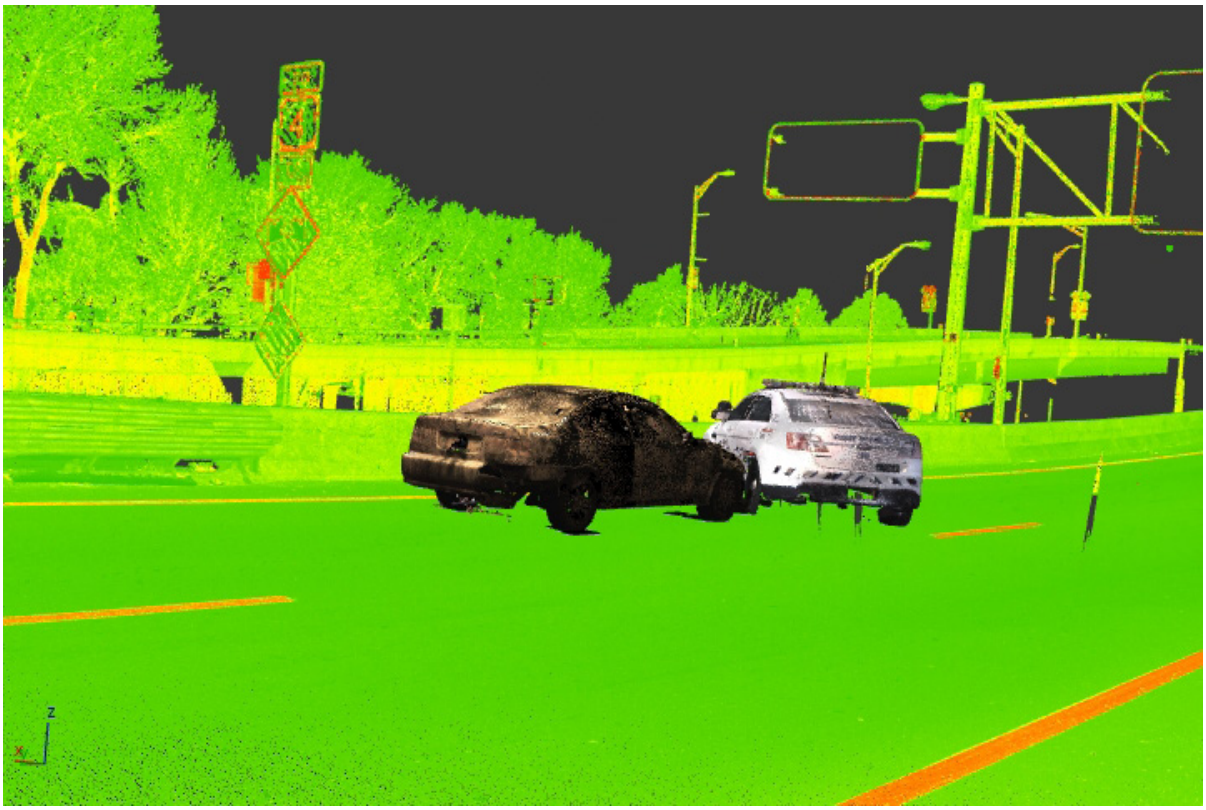


Top Down View of 3D Working Model from PD Video Photogrammetry



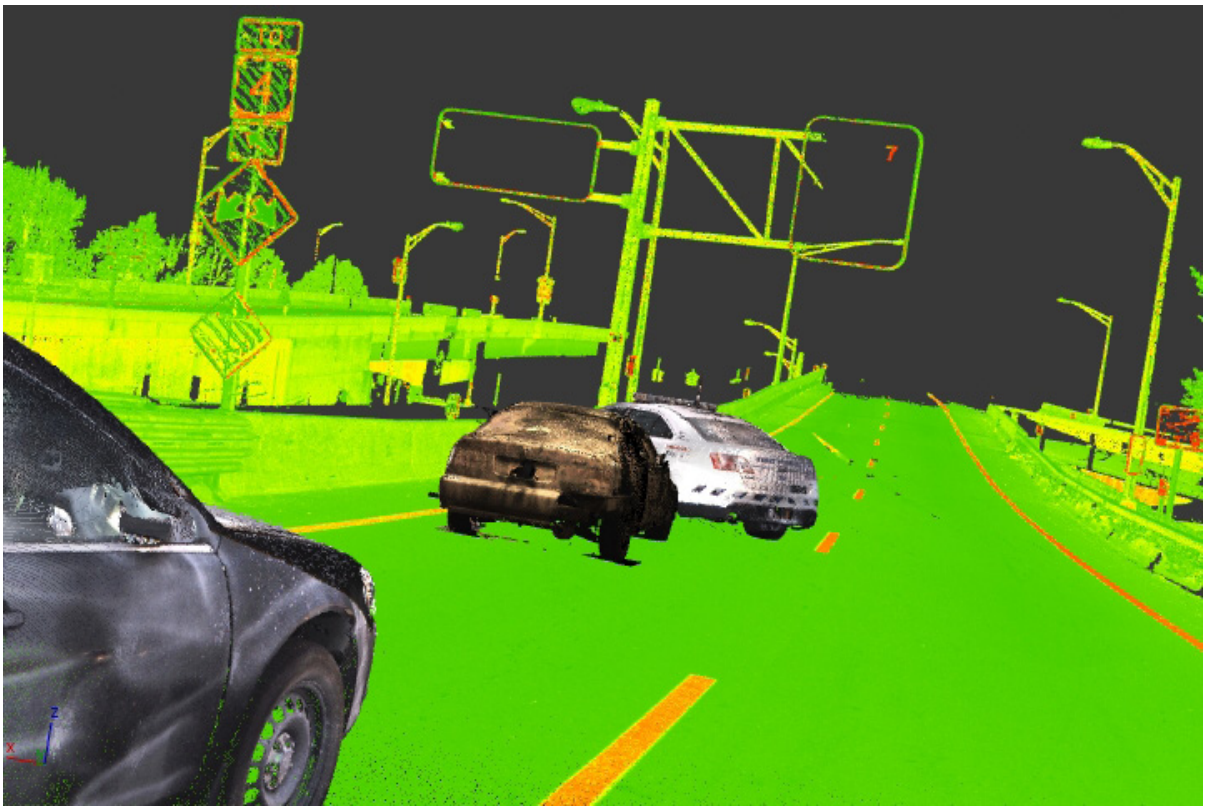
3D Working Model from PD Video Photogrammetry

Video Frame from PD Video



3D Working Model from PD Video Photogrammetry

Video Frame from PD Video



3D Working Model from PD Video Photogrammetry

Video Frame from PD Video

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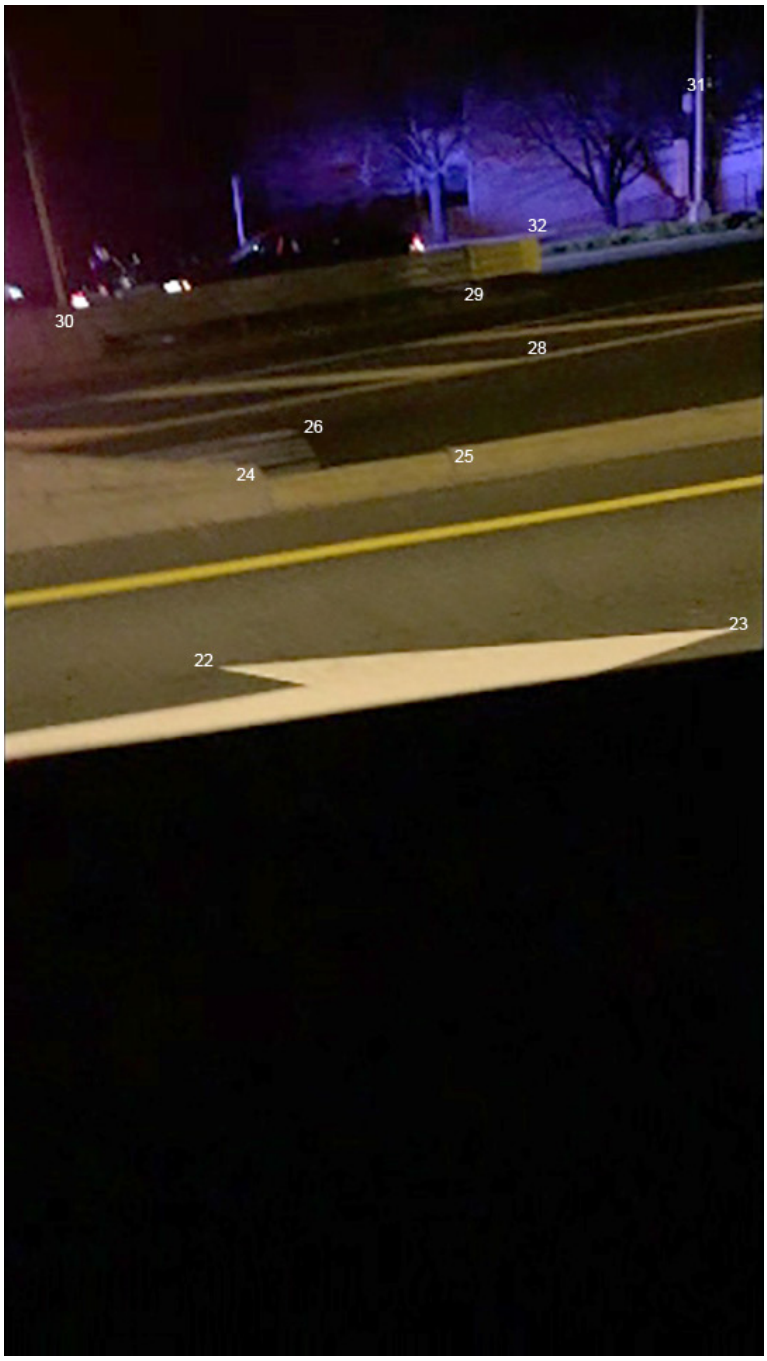
Exhibit K - Laser-Assisted Photogrammetry Based Upon CW-1 Cell Phone Video

Video Frame (Left) and
3D Working Model from CW-1 Cell Phone Video Photogrammetry (Right)



Video Frame (Left) and
3D Working Model from CW-1 Cell Phone Video Photogrammetry (Right)

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Exhibit L -
Pixel Based
Photogrammetry Based
Upon CW-1 Cell Phone Video

EXPERT AUTOSTATS
Ver. 5.3.0

PRECISION SIMULATIONS, INC
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GRASS VALLEY CA 95945-6422

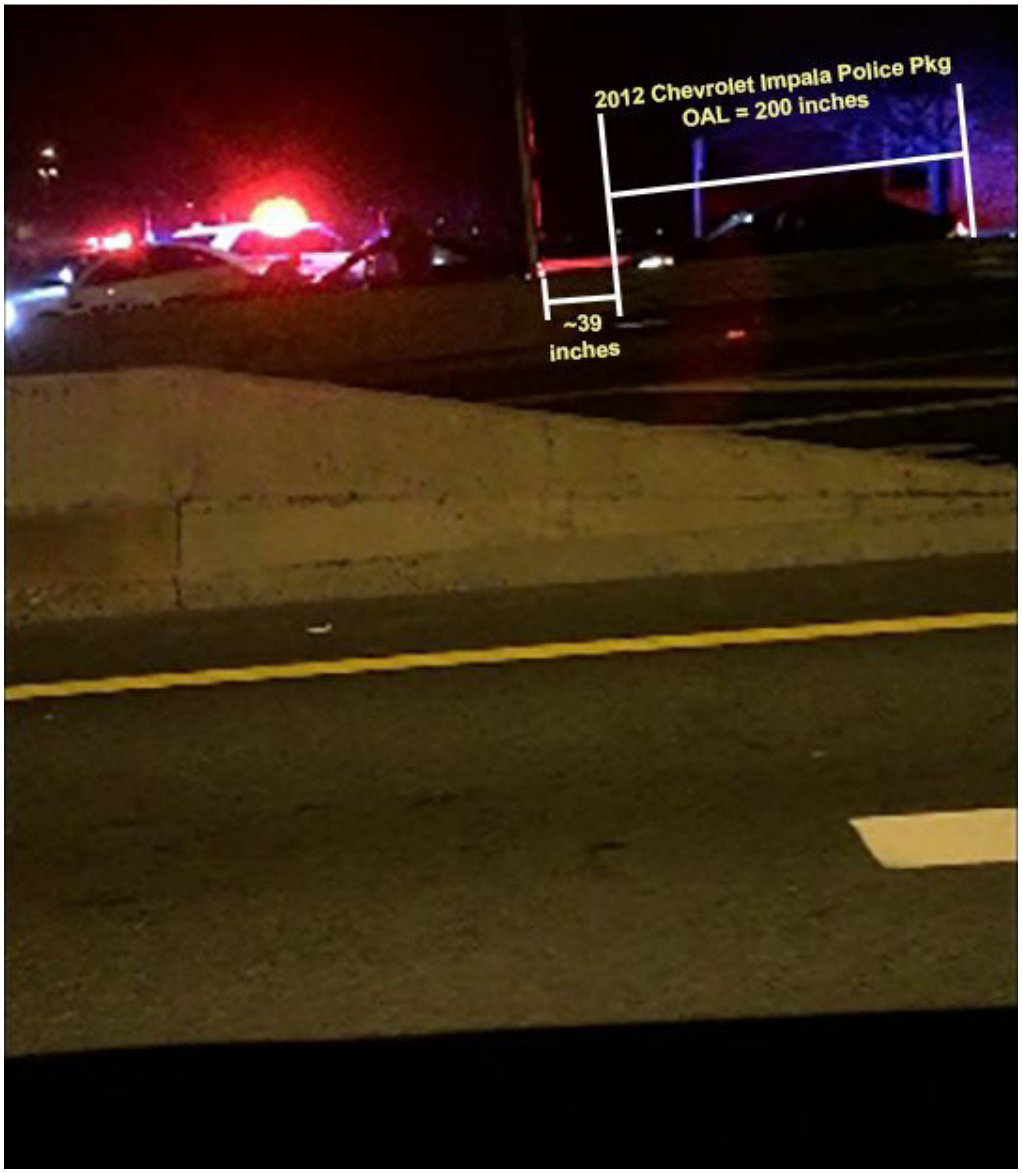
11-29-2016

2012 CHEVROLET IMPALA MSP POLICE PKG 4 DOOR SEDAN

CURB WEIGHT:	3745 lbs.	1699 kg.
Curb Weight Distribution -	Front: 62%	Rear: 38%
Gross Vehicle Weight Rating:	4678 lbs.	2122 kg.
Number of Tires on Vehicle:	4	
Drive Wheels:	FRONT	

HORIZONTAL DIMENSIONS

	Inches	Feet	Meters
Total Length	200	16.67	5.08
Wheelbase:	110	9.17	2.79



Pixel Based Photogrammetry Based Upon CW-1 Cell Phone Video

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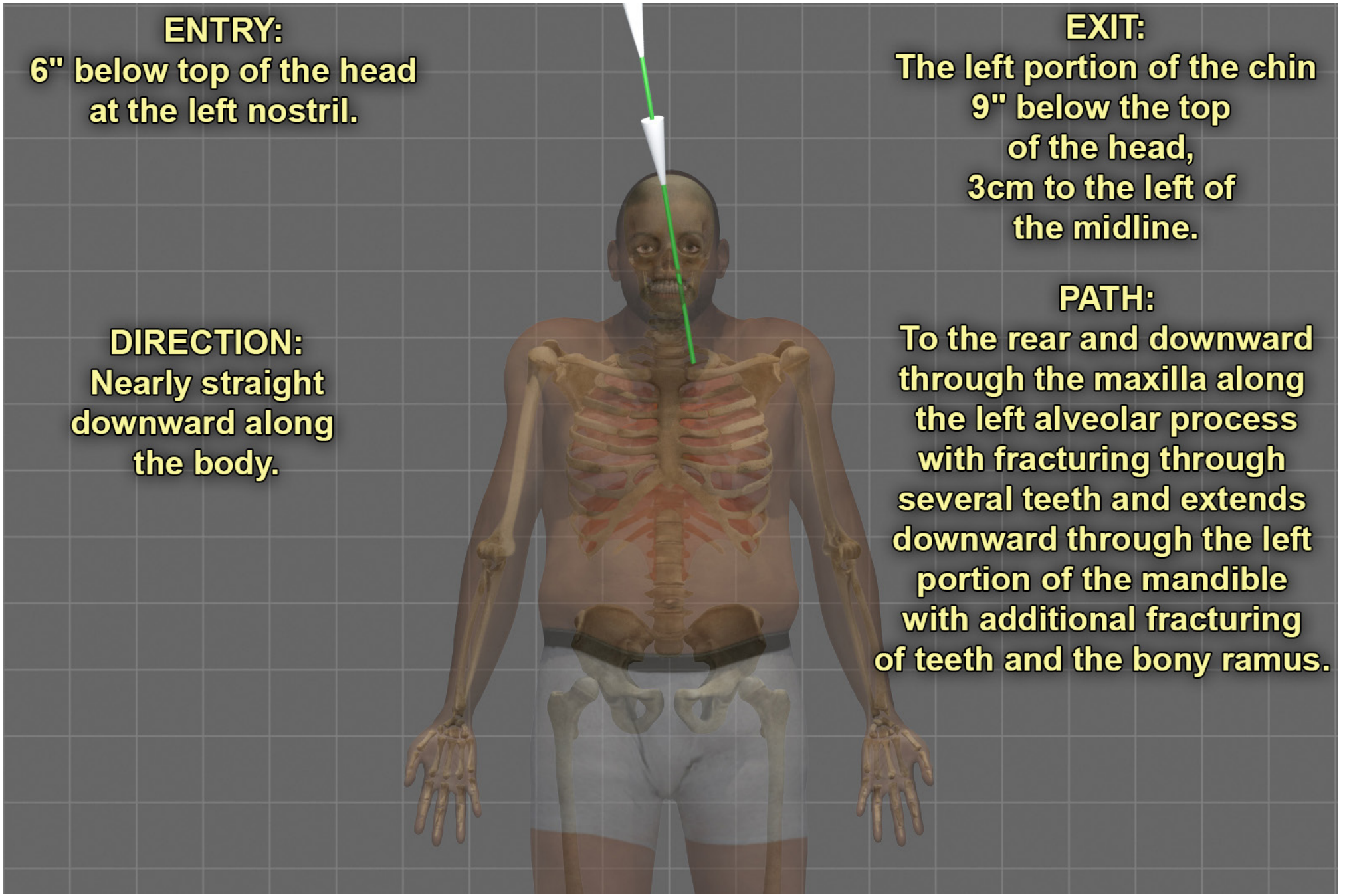
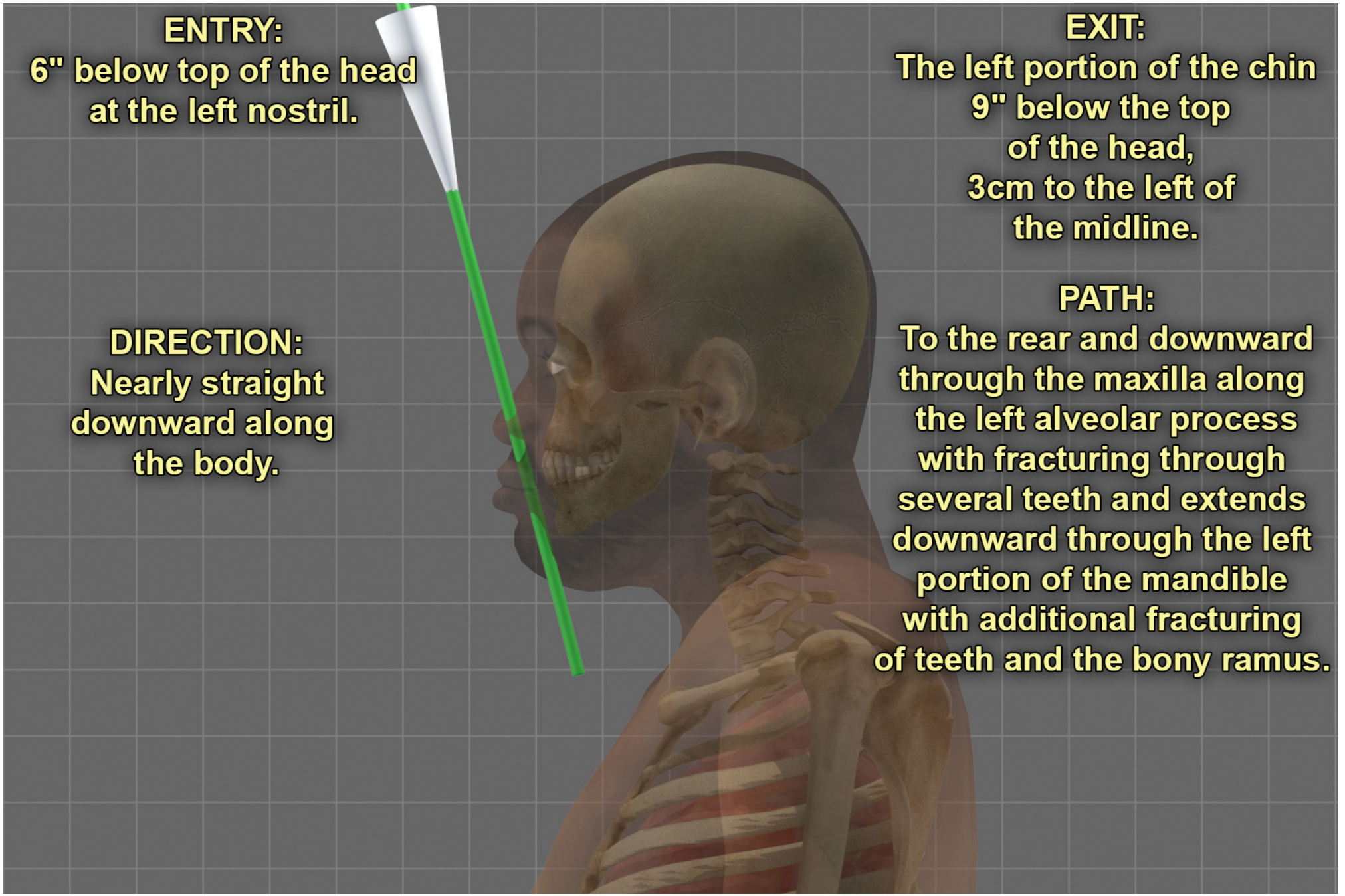
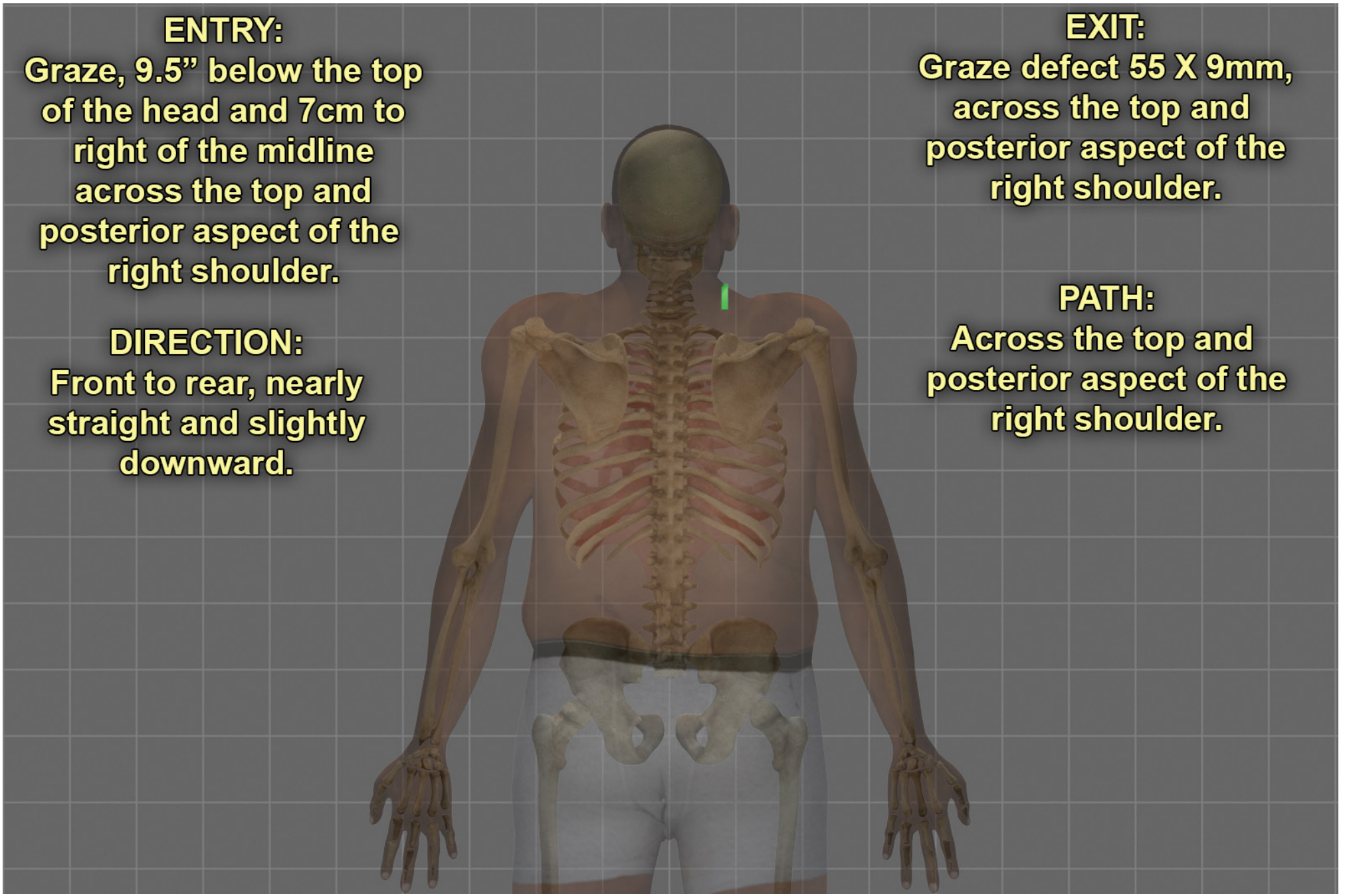
Exhibit M -
3D Gunshot Wound Model of Edward Thevenin



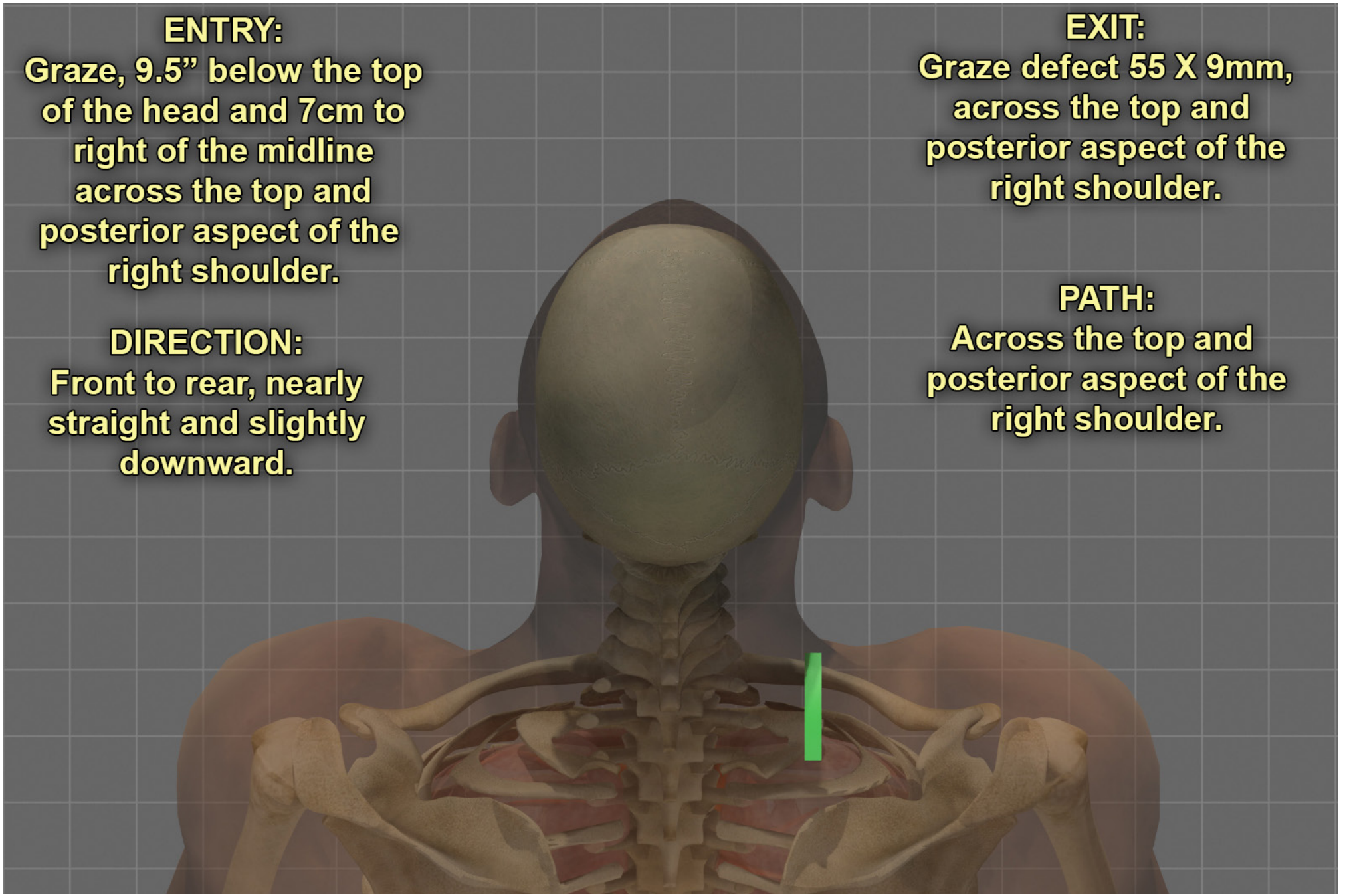
Gunshot Wound 1 Front View



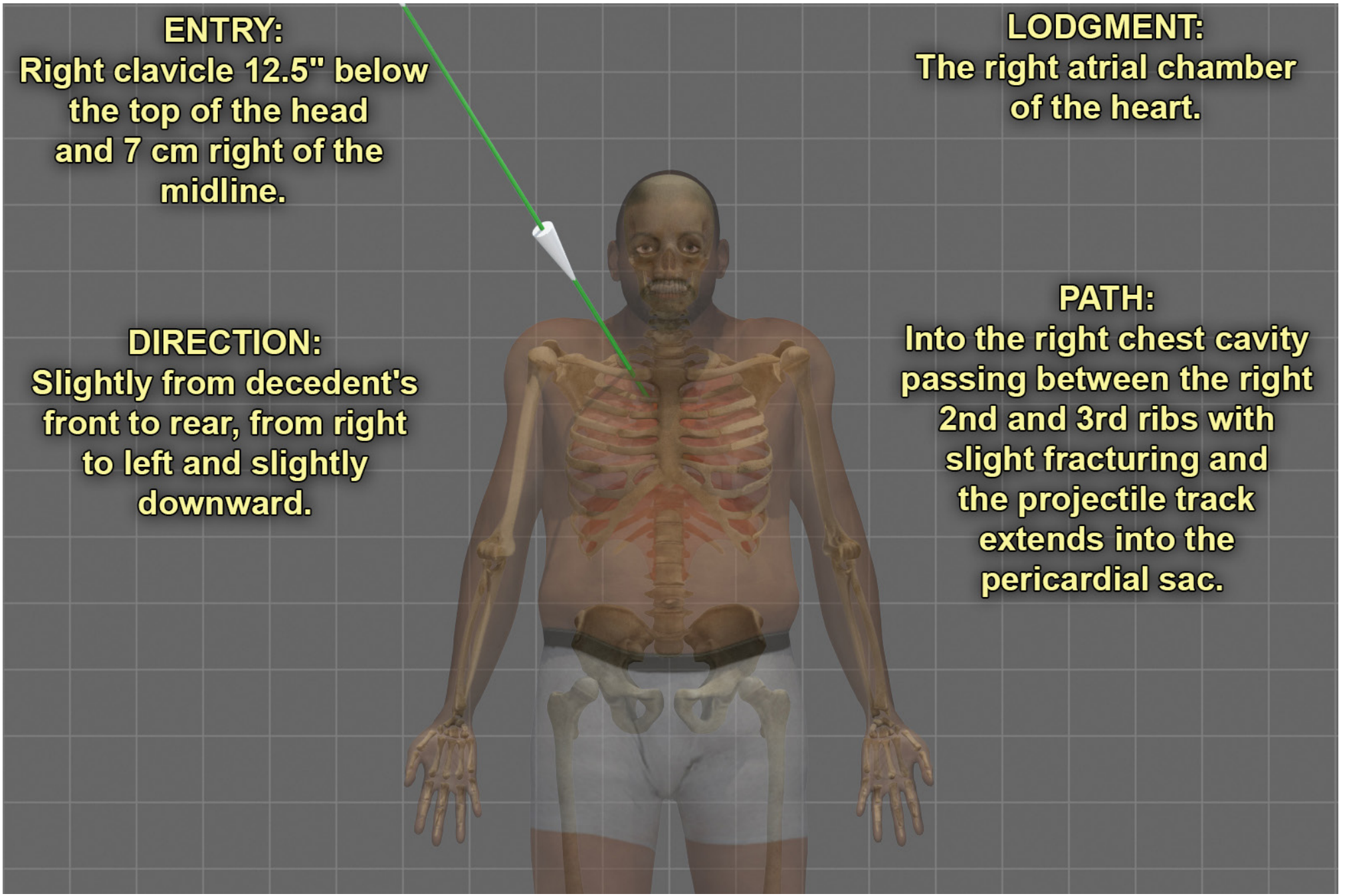
Gunshot Wound 1 Left View



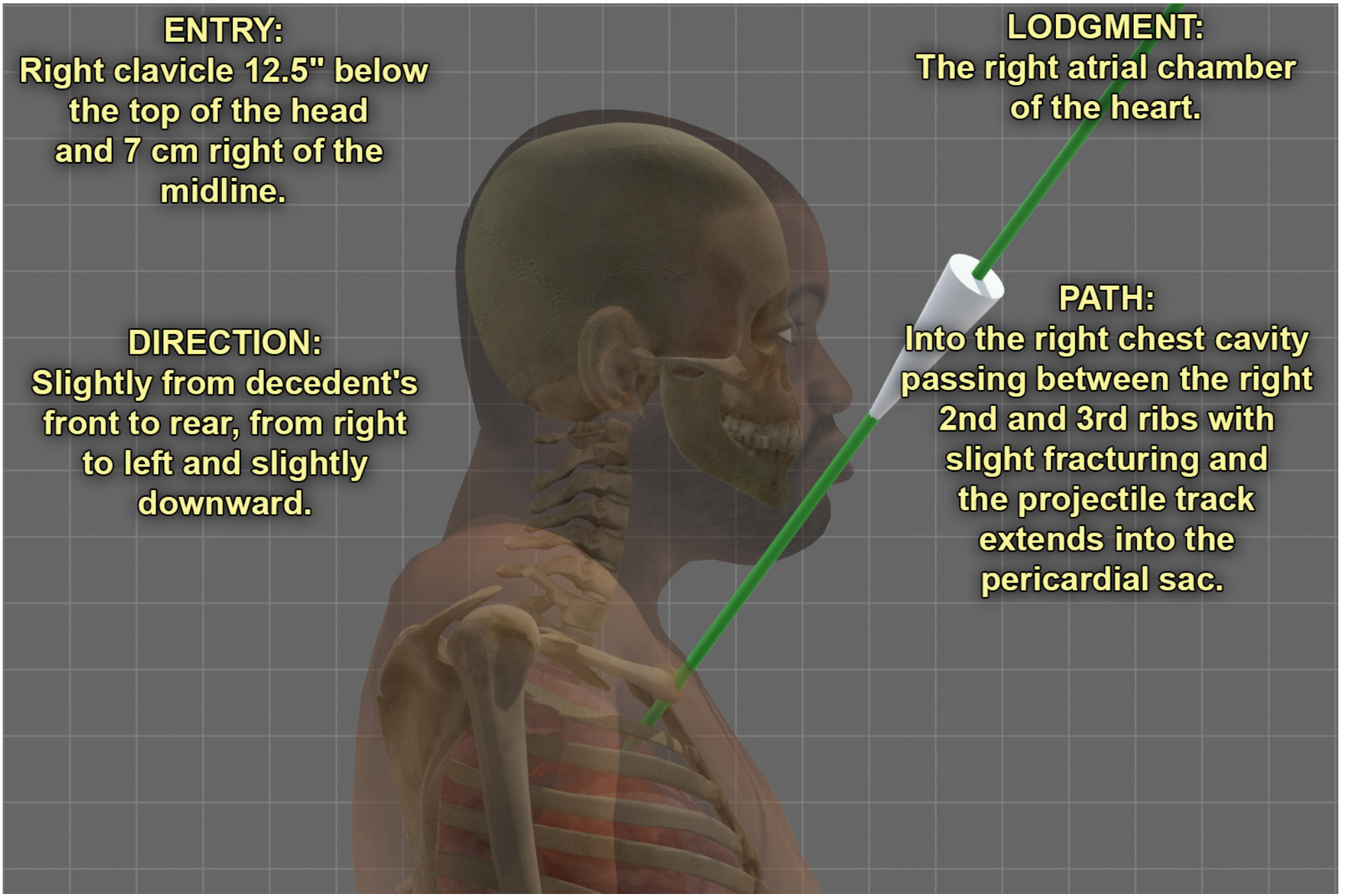
Gunshot Wound 2 Rear View



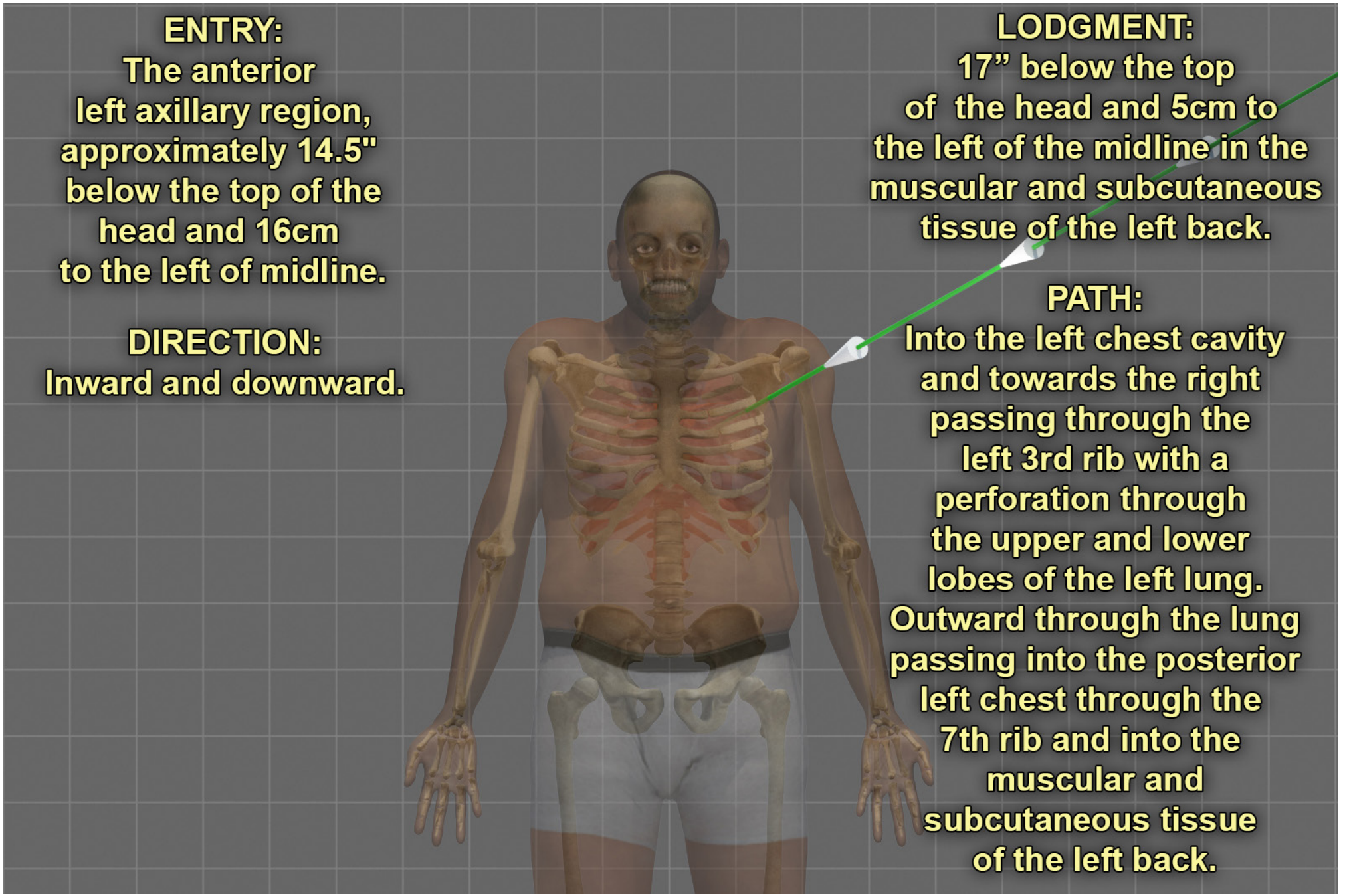
Gunshot Wound 2 Rear View Zoomed In



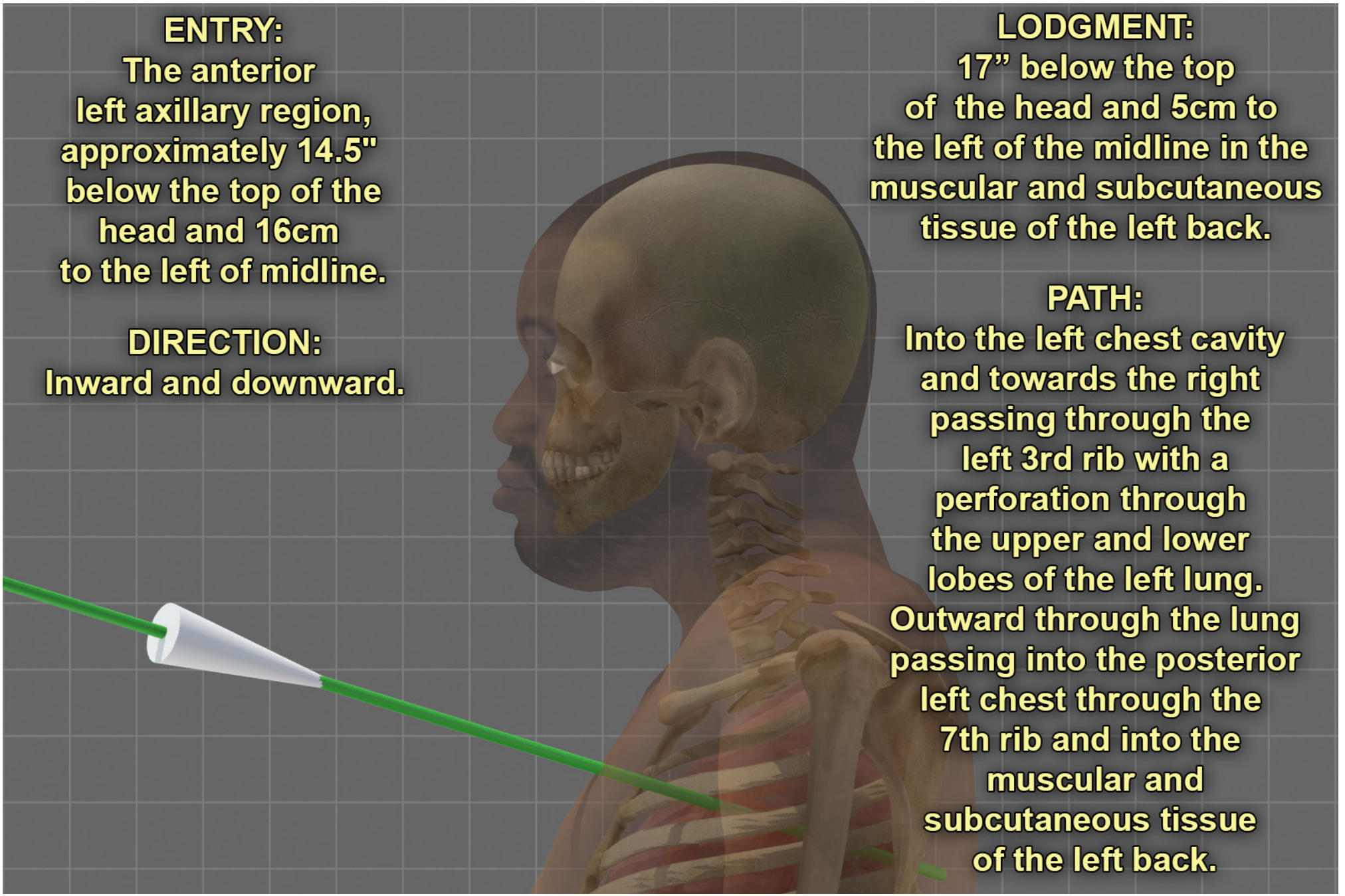
Gunshot Wound 3 Front View



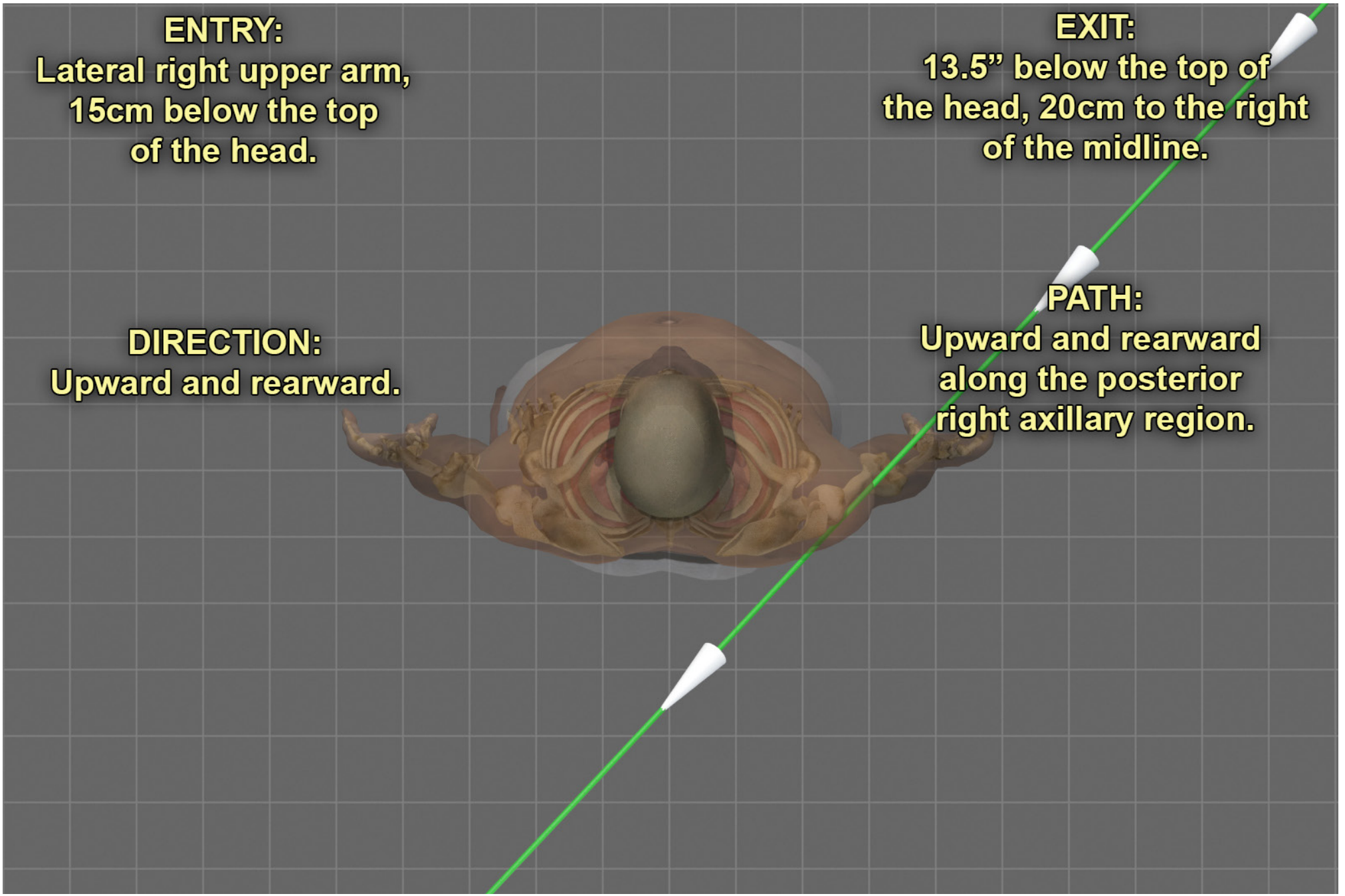
Gunshot Wound 3 Right View Zoomed In



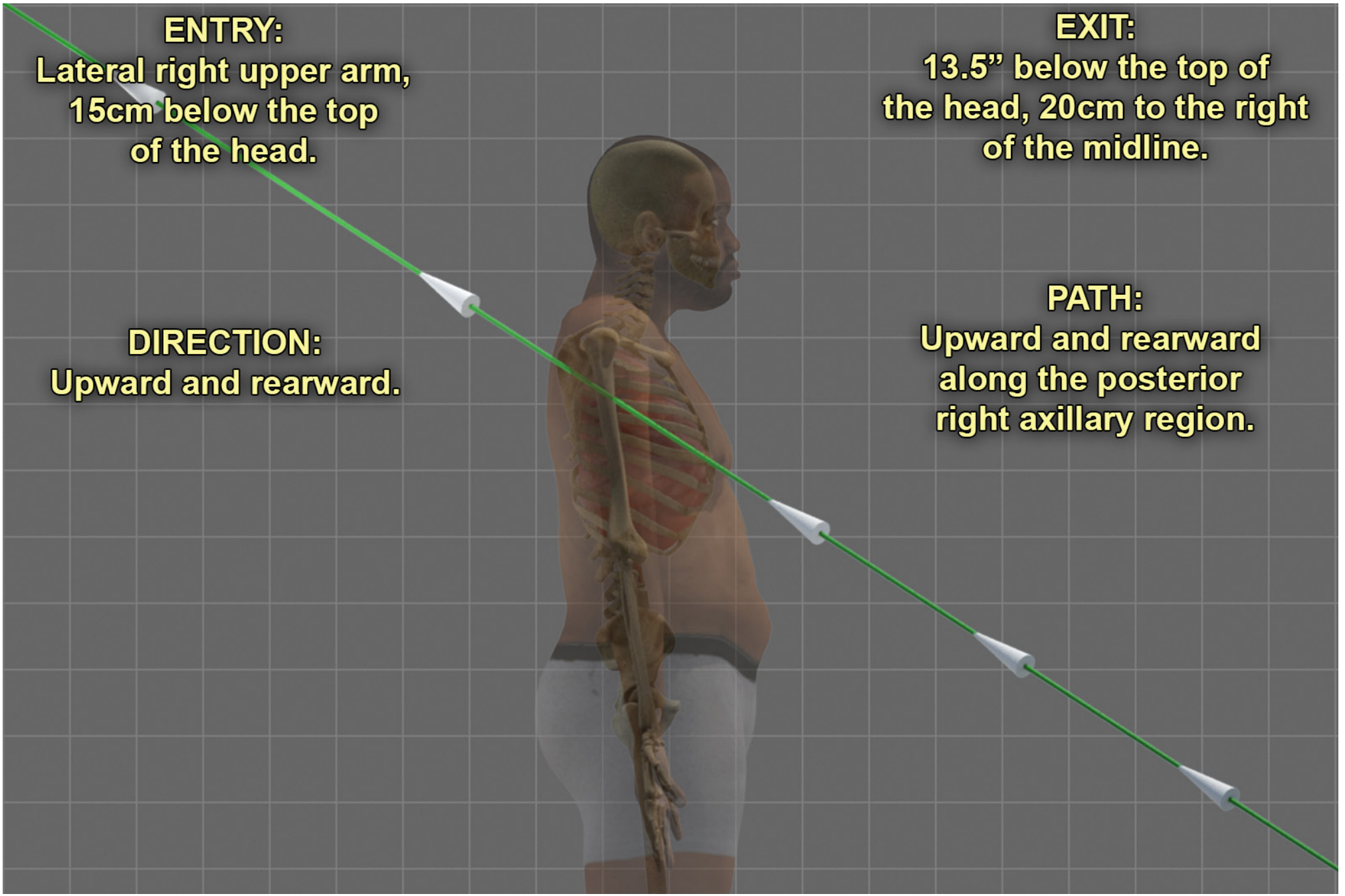
Gunshot Wound 4 Front View



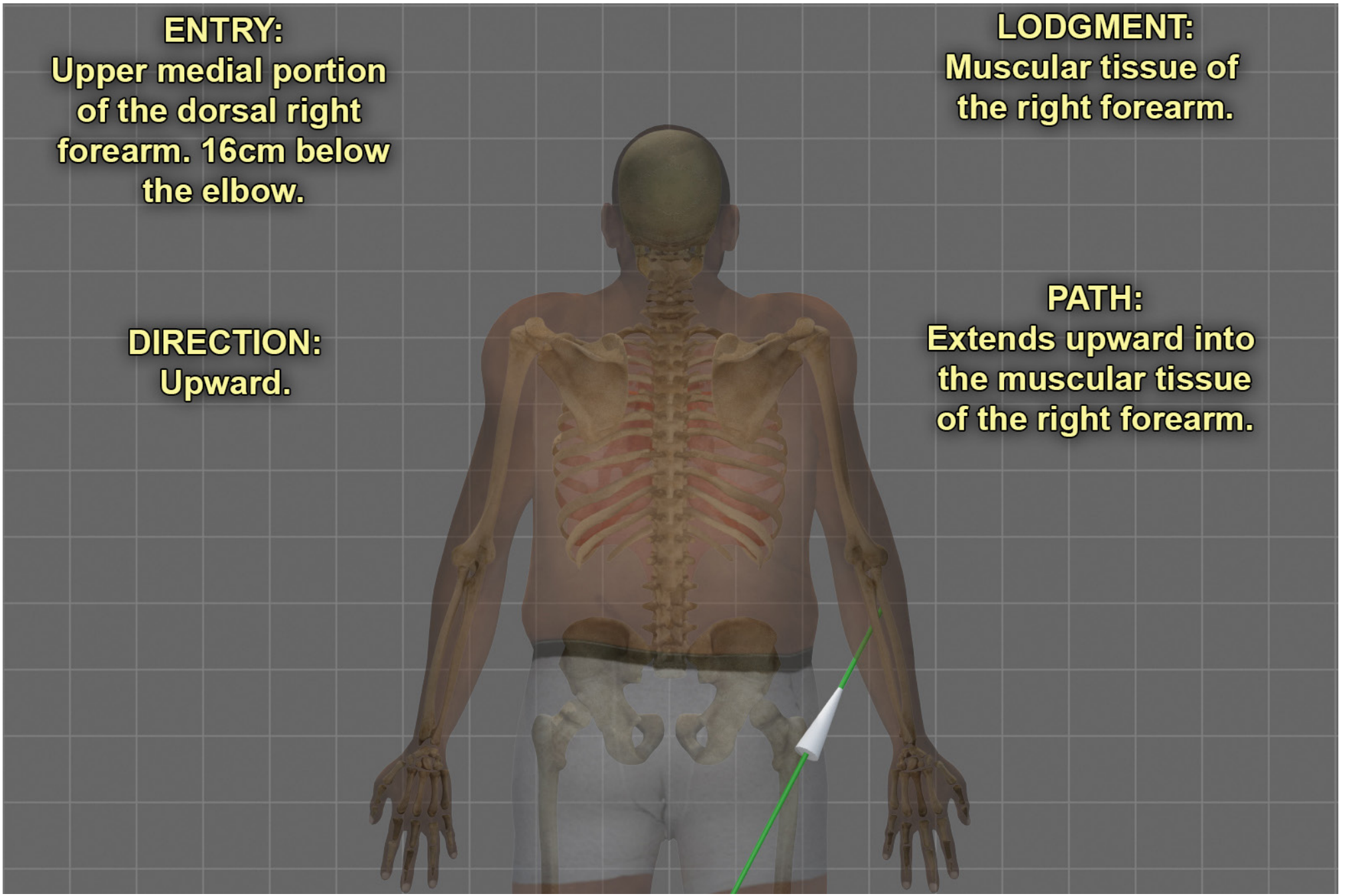
Gunshot Wound 4 Left View Zoomed In



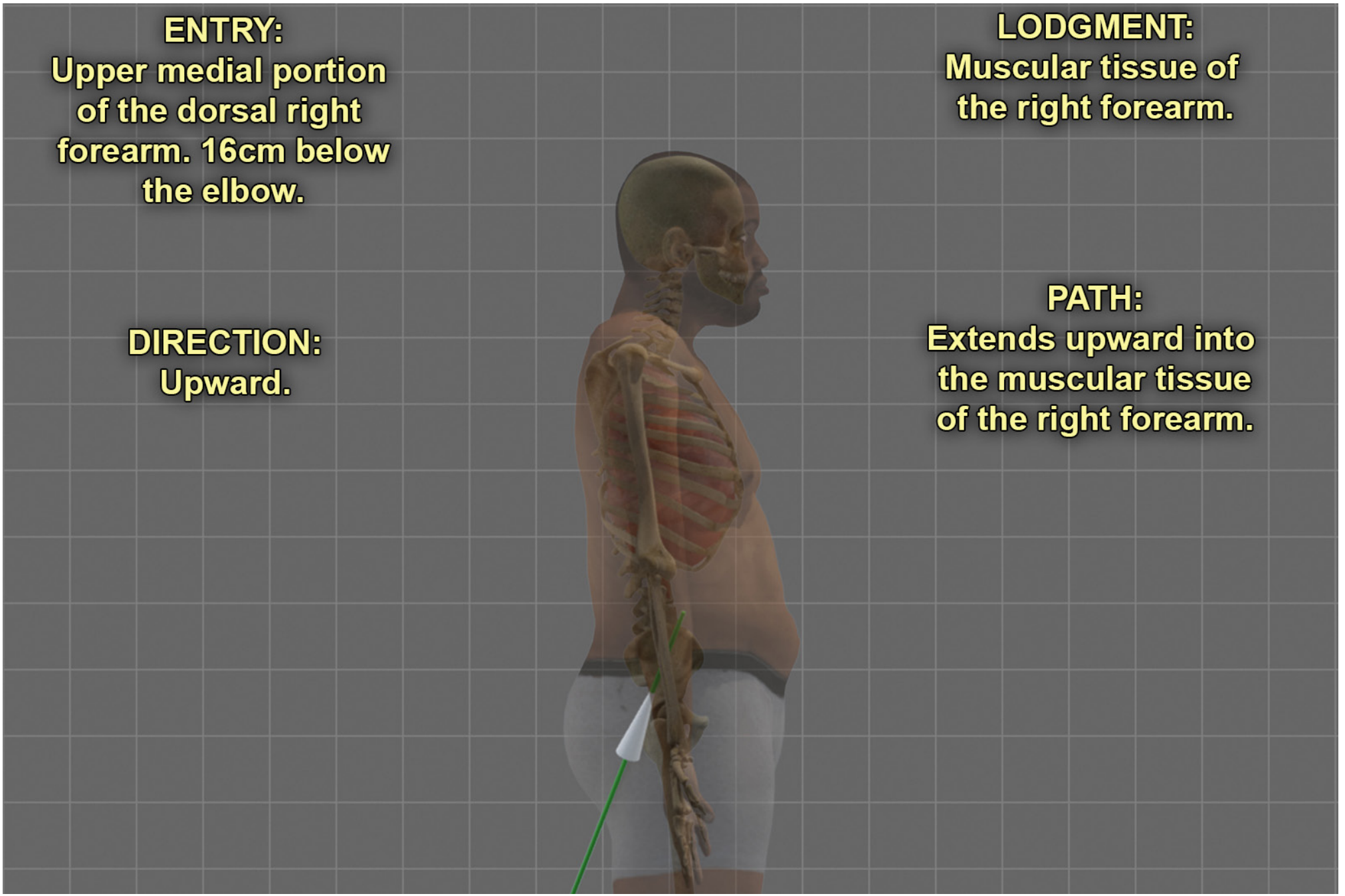
Gunshot Wound 5 Front View



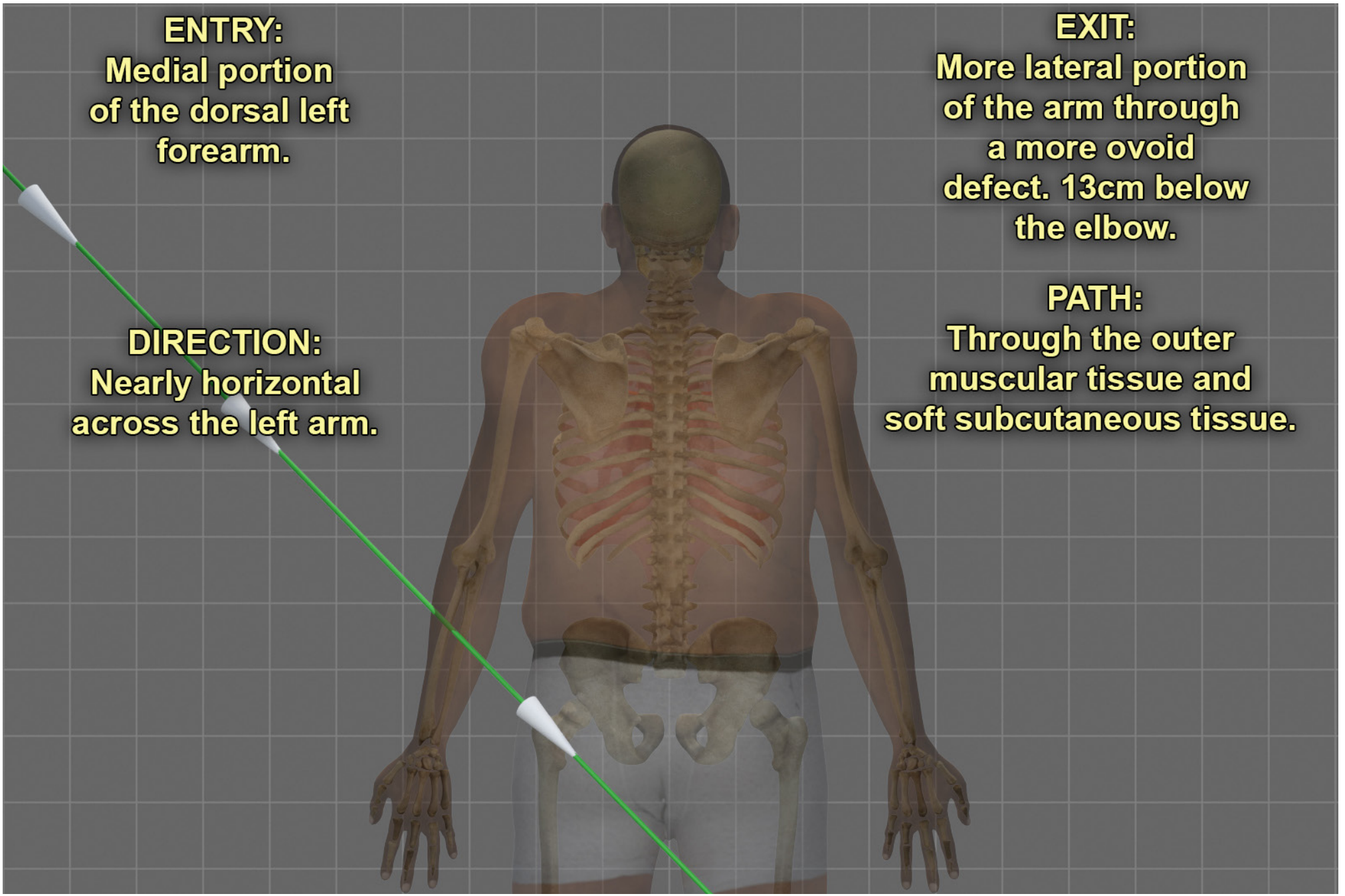
Gunshot Wound 5 Right View



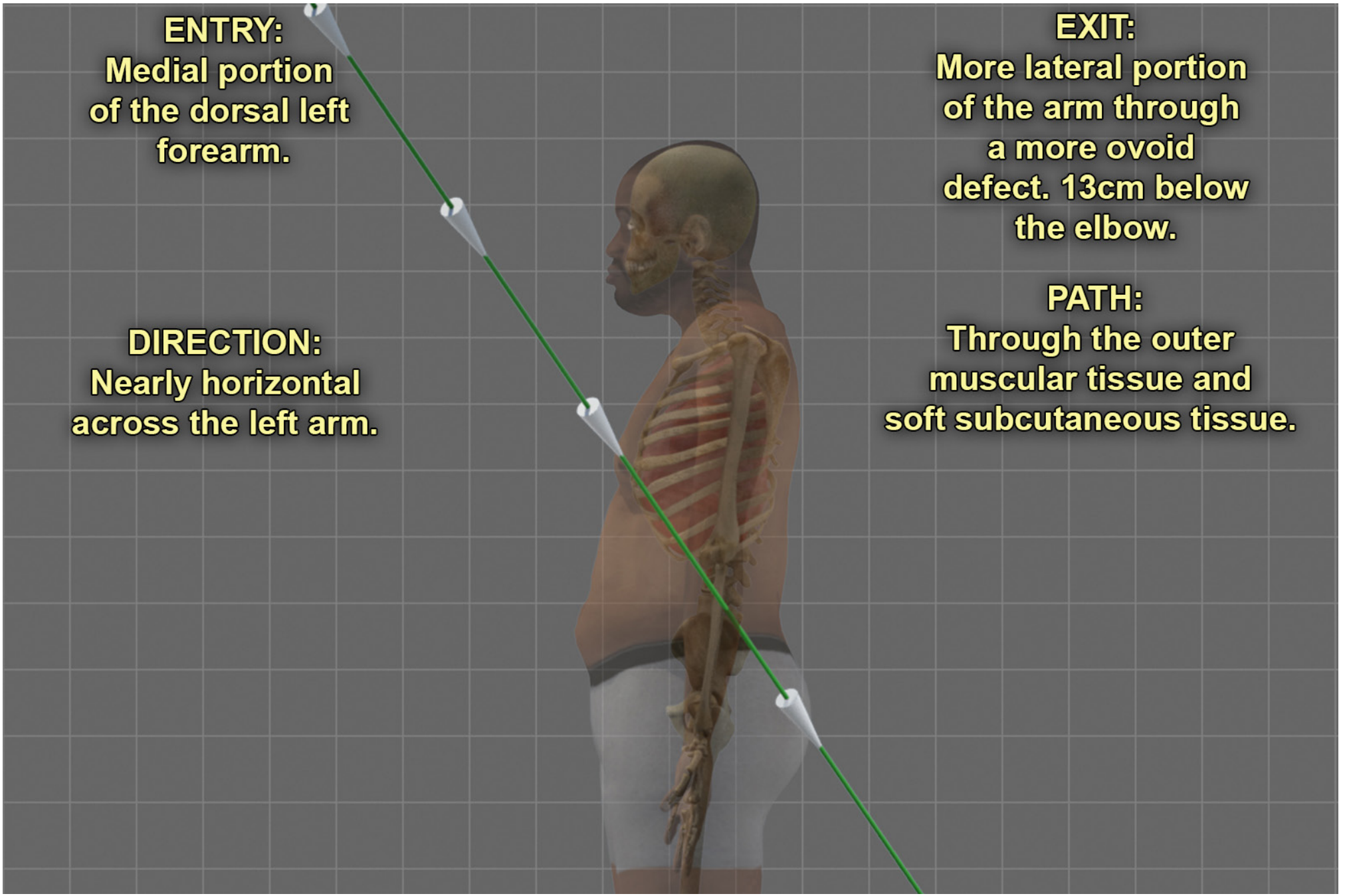
Gunshot Wound 6 Rear View



Gunshot Wound 6 Right View



Gunshot Wound 7 Rear View



Gunshot Wound 7 Left View

PSI PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit N - Photos of Sergeant French's Lower Leg Injury

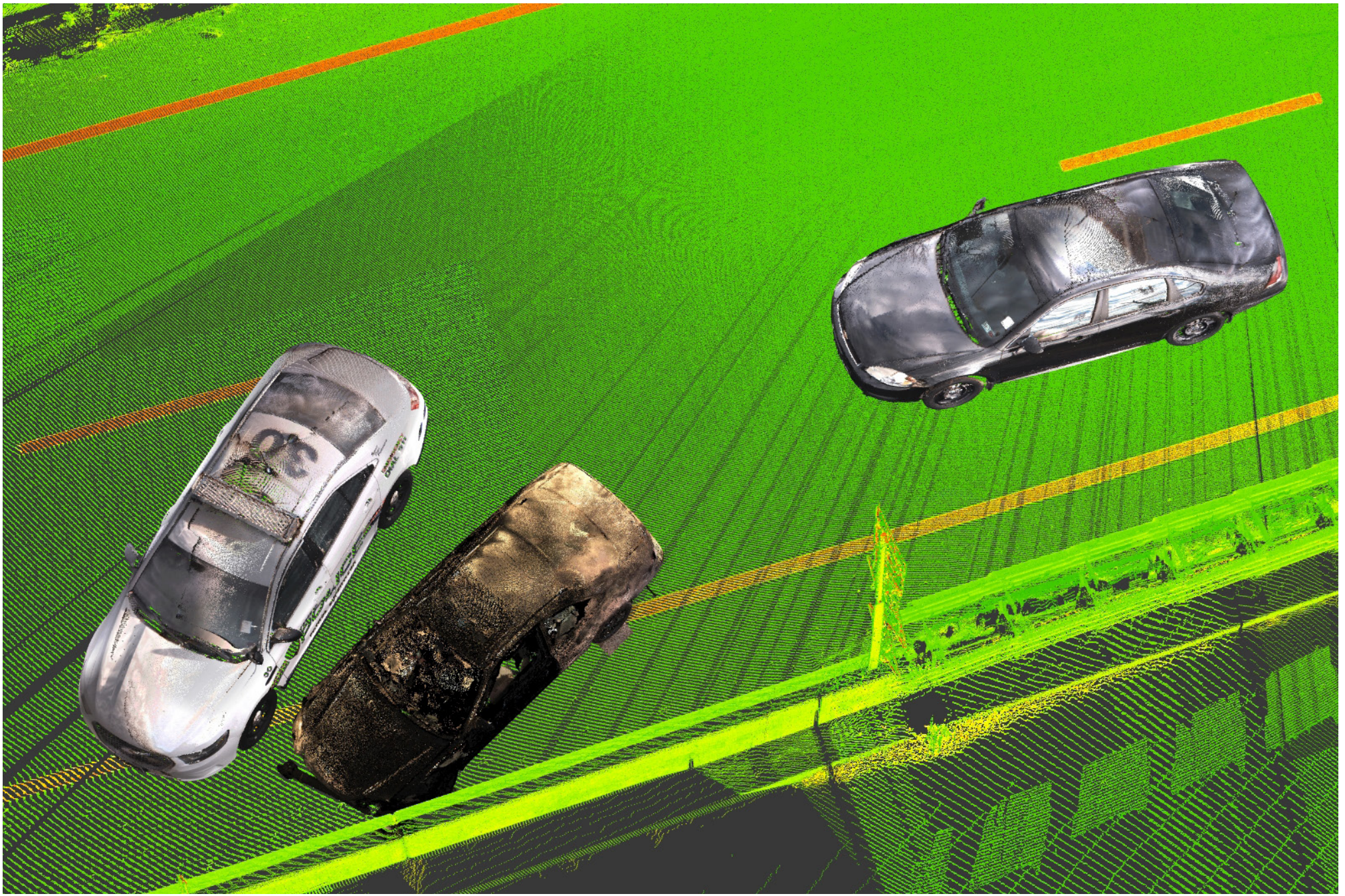
Photo of Sergeant French's Lower Leg Injury

Photo of Sergeant French's Lower Leg Injury

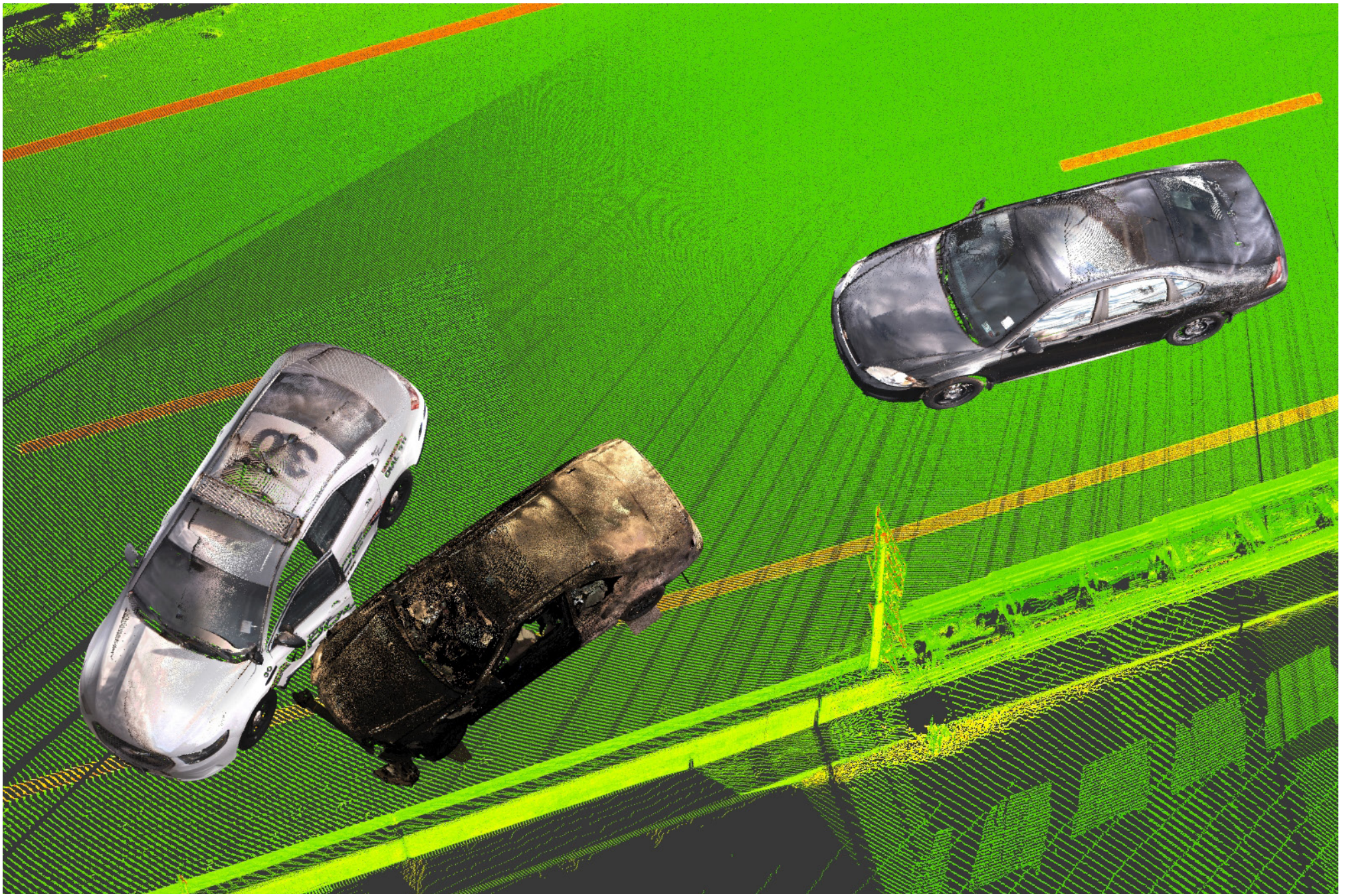
PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

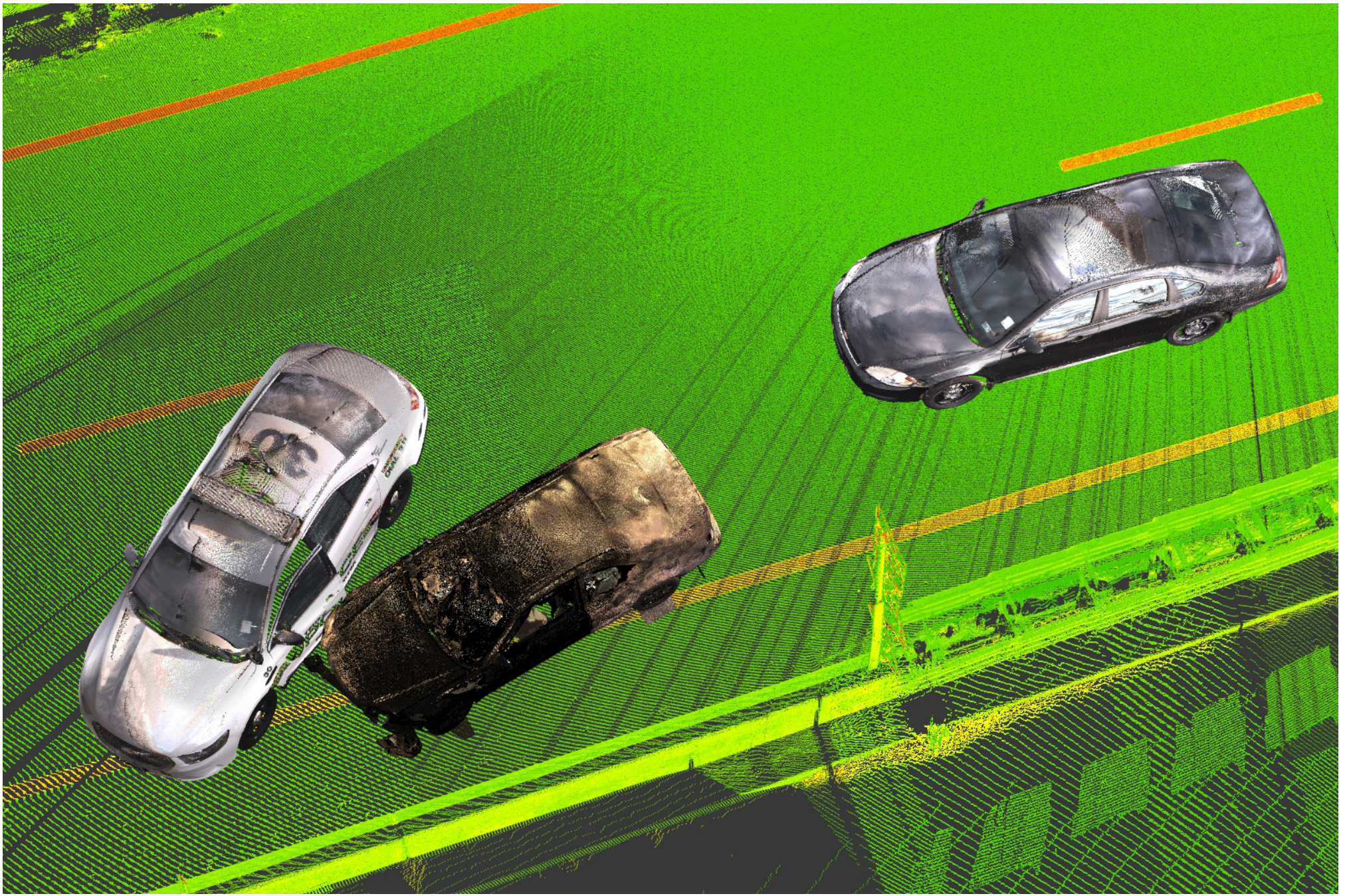
Exhibit O - Vehicle Kinematics for Honda in Reverse



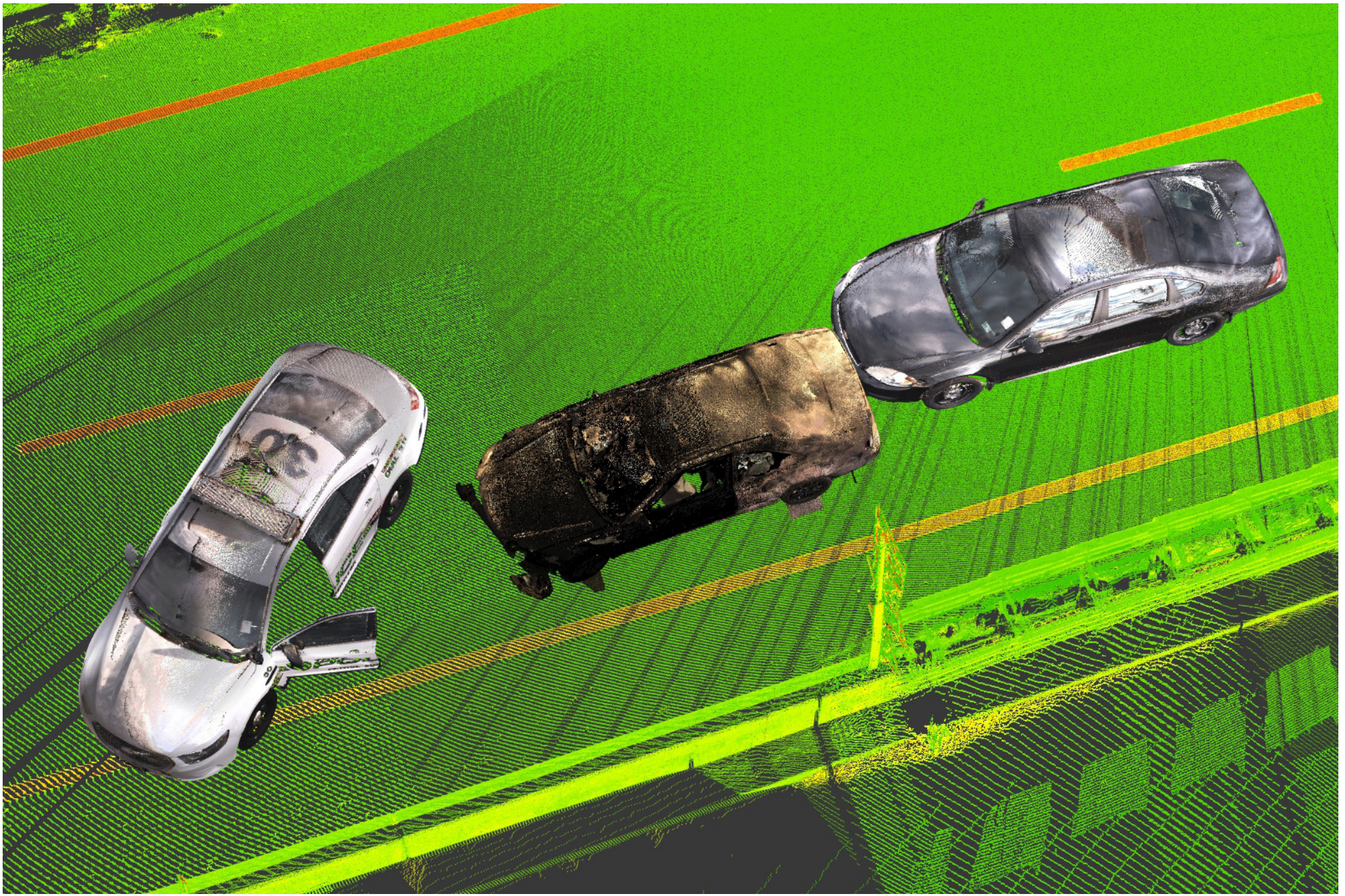
Vehicle Kinematics for Honda in Reverse - Impact with Wall



Vehicle Kinematics for Honda in Reverse - First Impact with Door



Vehicle Kinematics for Honda in Reverse - Deepest Impact with Door



Vehicle Kinematics for Honda in Reverse - Deepest Impact with Impala

PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

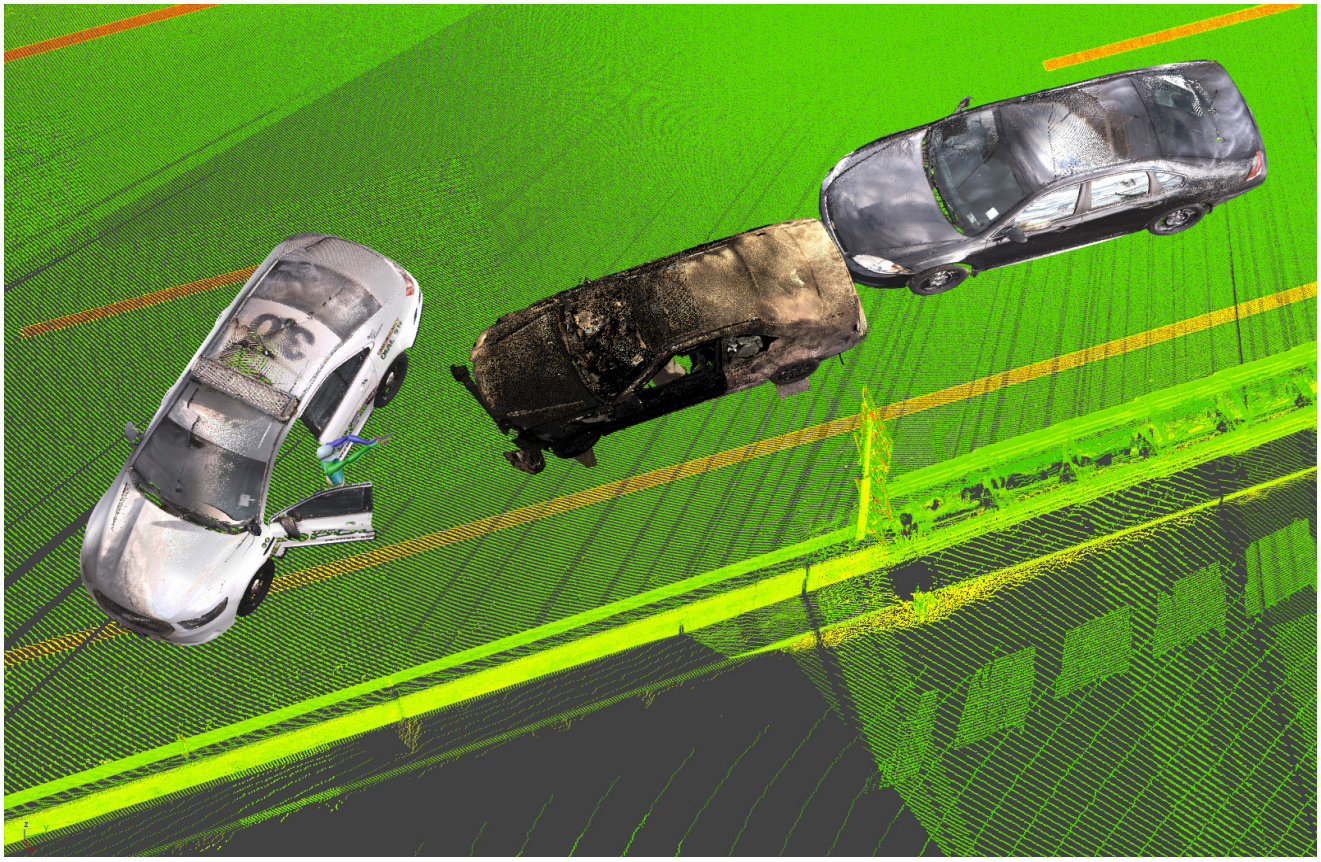
Exhibit P -
Derived Orientation for Impact Between Honda and Impala

Derived Orientation for Impact Between Honda and Impala

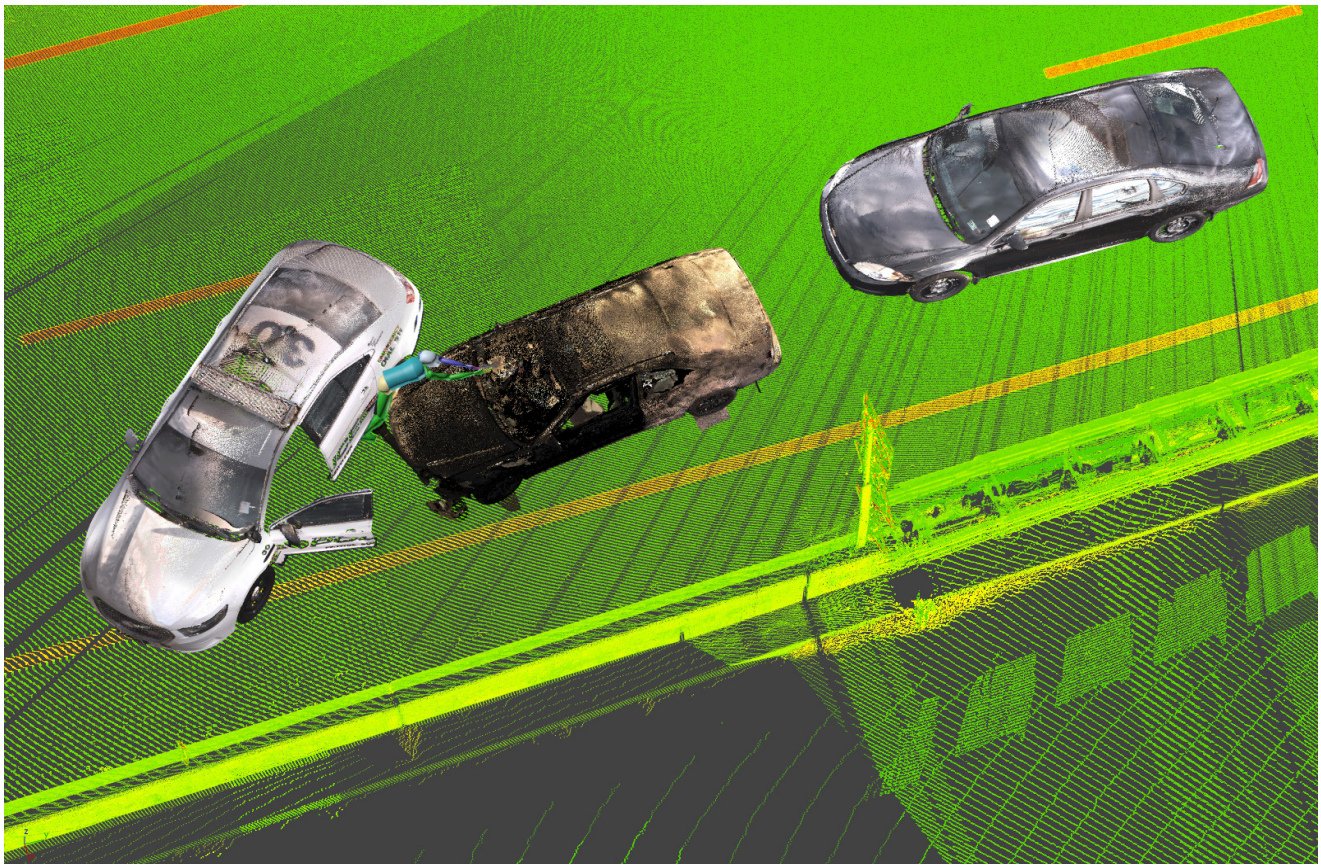
PSI PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit Q -
Distance Sergeant French Traveled Between Exiting Patrol Vehicle and Being Pinned



Distance Sergeant French Traveled Between Exiting Patrol Vehicle and Being Pinned - Position 1

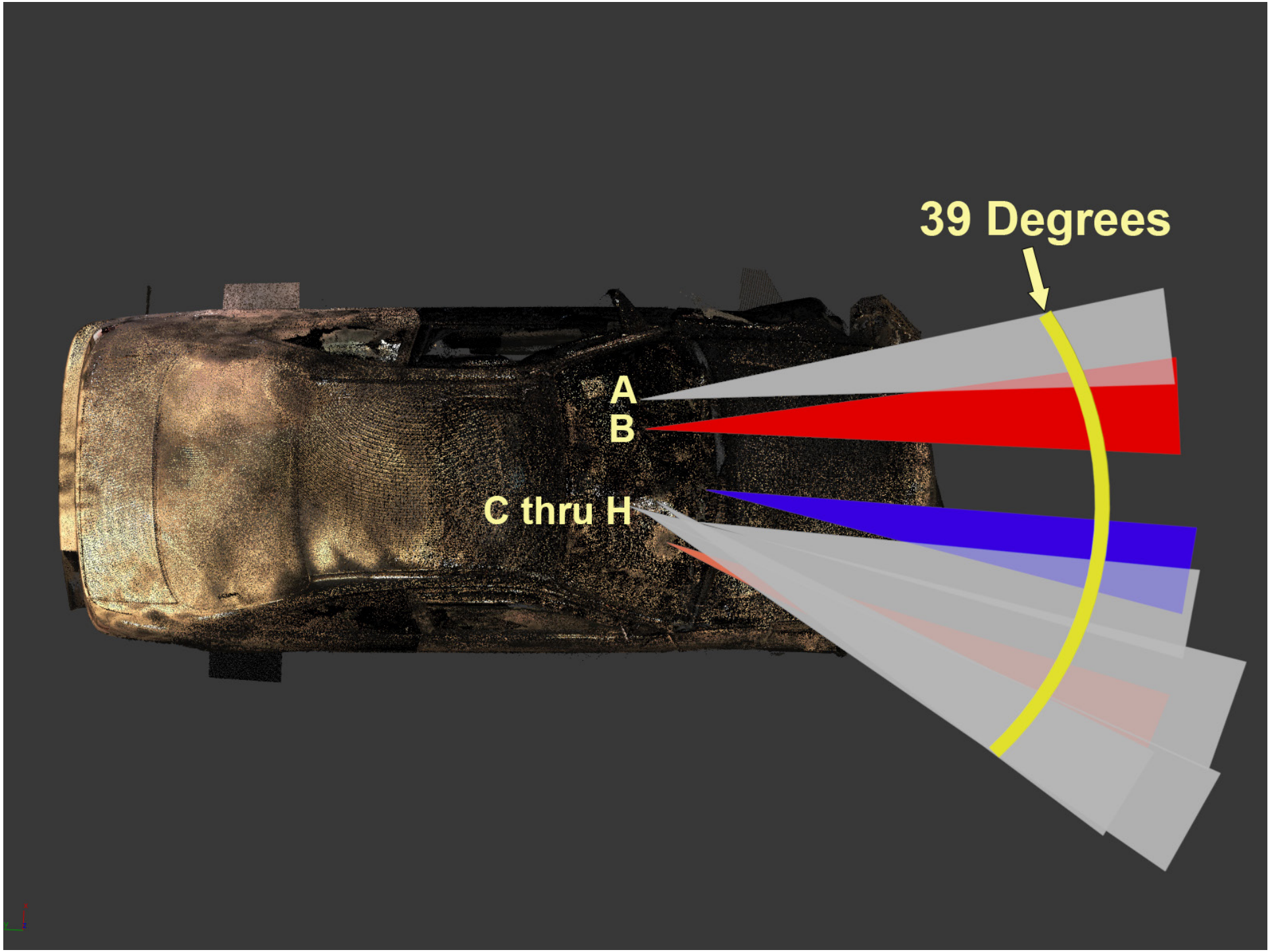


Distance Sergeant French Traveled Between Exiting Patrol Vehicle and Being Pinned - Final Position ~ 5 Feet

PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit R -
Bullet Trajectory and Impact Location Groupings

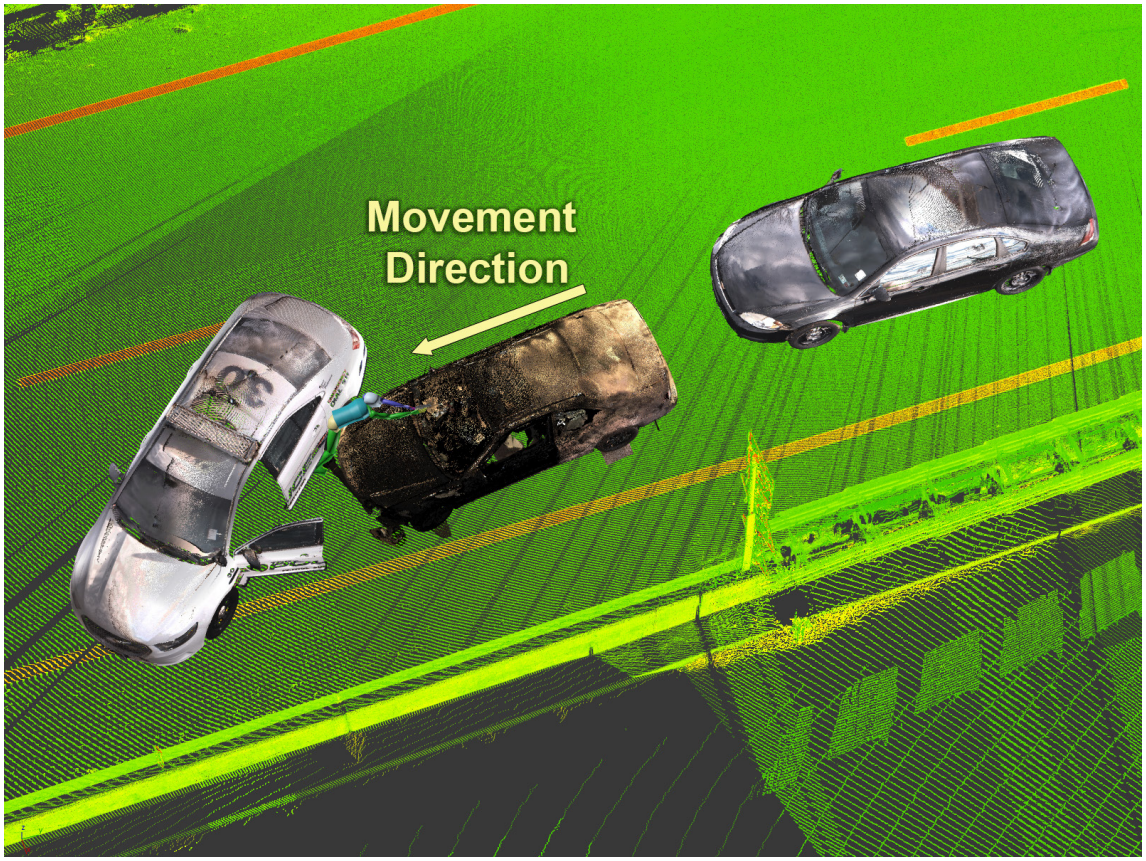


Bullet Trajectory and Impact Location Groupings

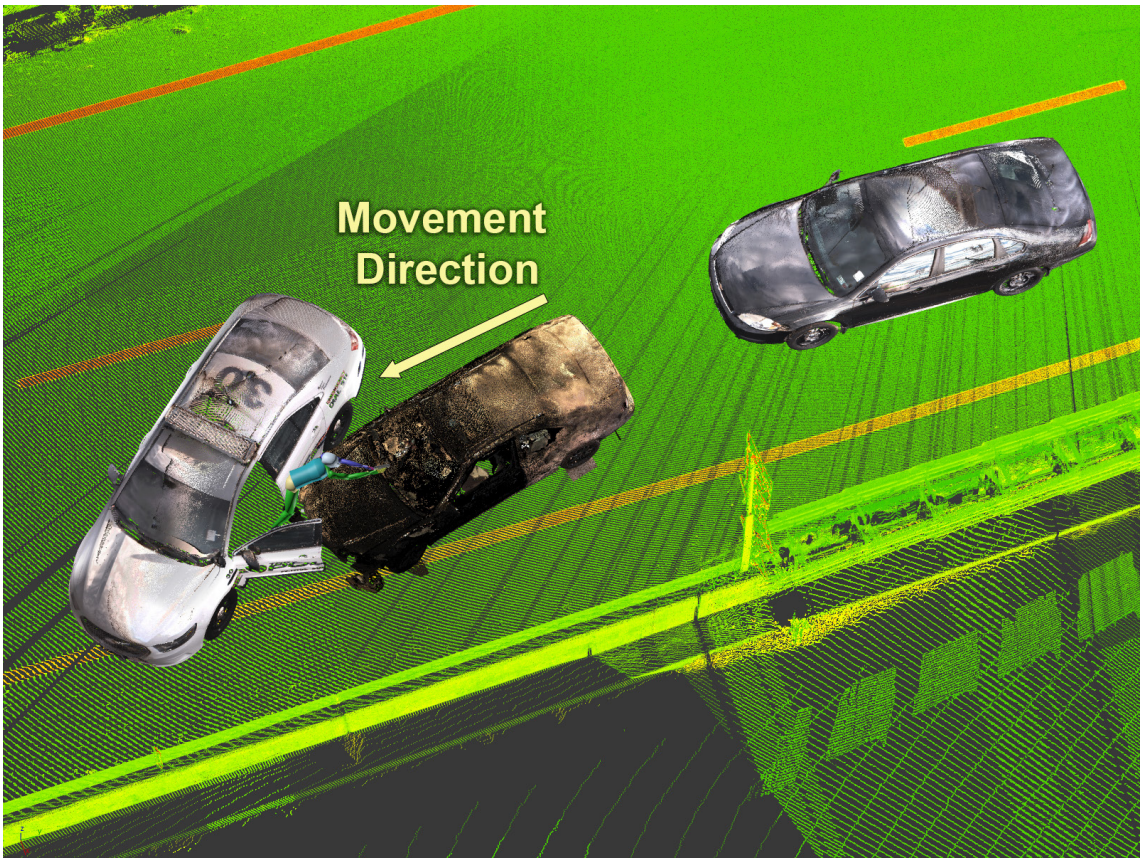
PSI PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit S - Orientation of Honda and Sergeant French's Patrol Vehicle Doesn't Support a Relative Motion to the Left



Orientation of Honda and Sergeant French's Patrol Vehicle Doesn't Support a Relative Motion to the Left - Point of Rest

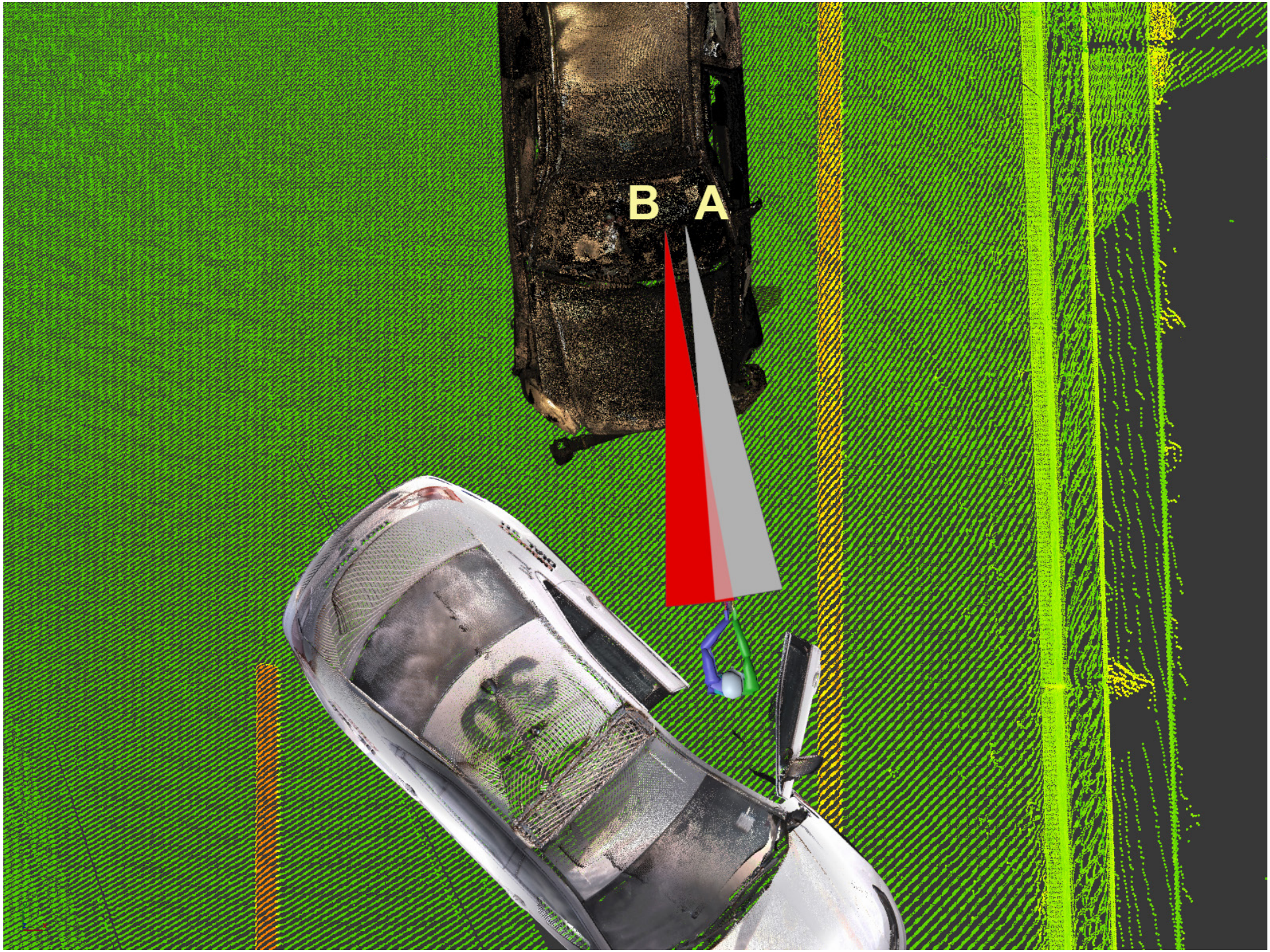


Orientation of Honda and Sergeant French's Patrol Vehicle Doesn't Support a Relative Motion to the Left - Theoretical

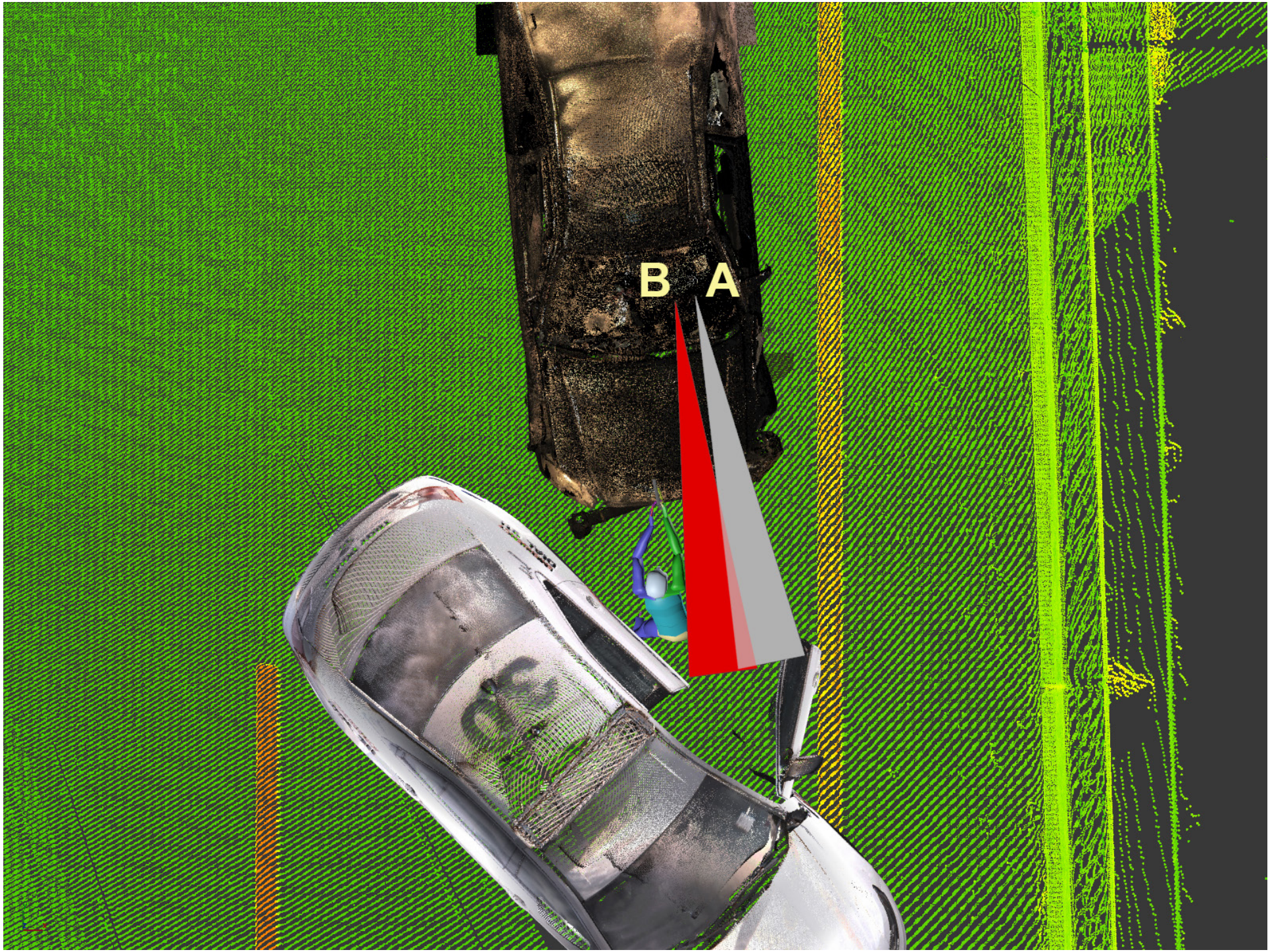
PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

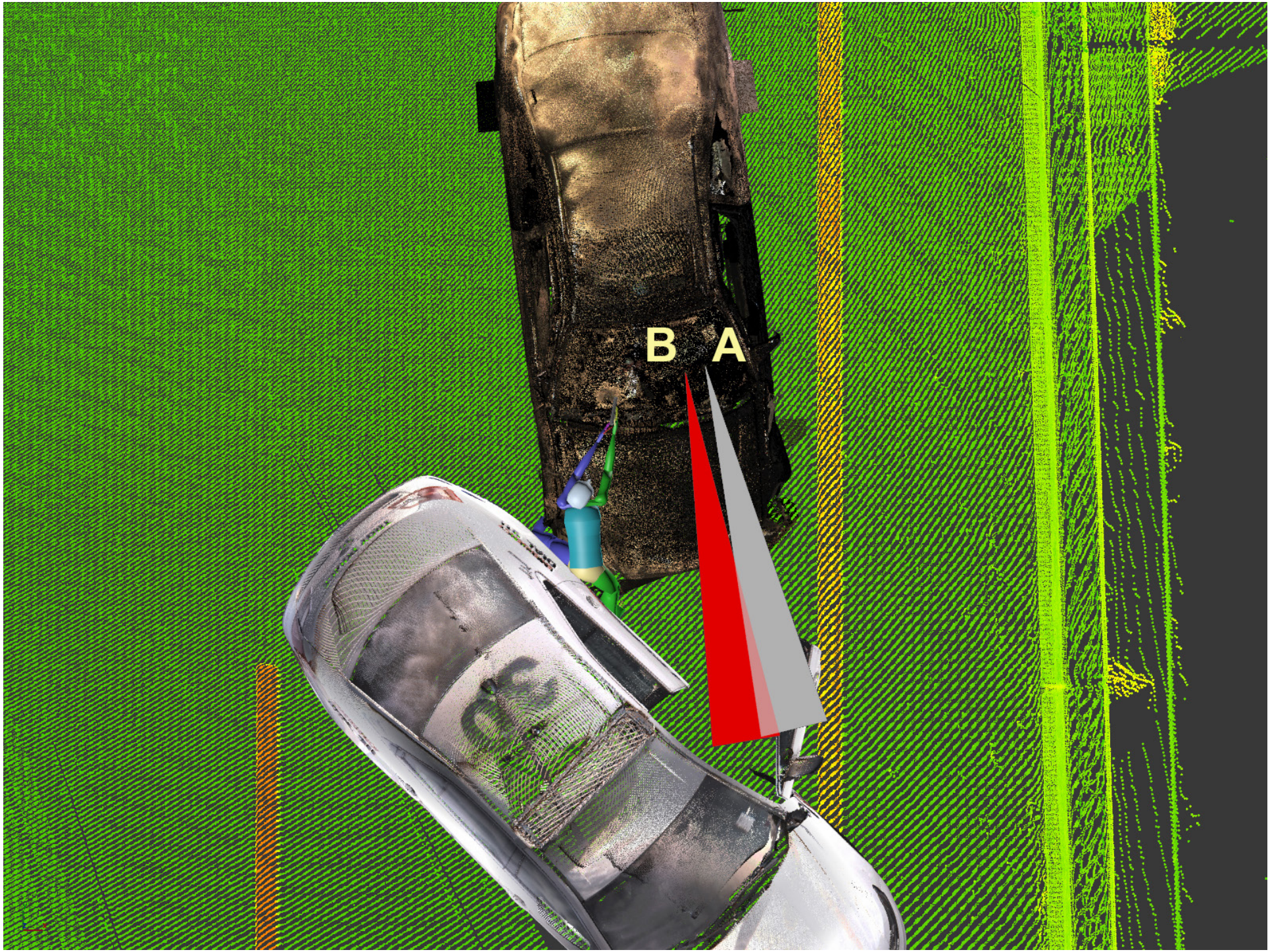
Exhibit T - Alignment of Trajectories A and B to Sergeant French's Position



Alignment of Trajectories A and B to Sergeant French's Position



Alignment of Trajectories A and B to Sergeant French's Position



Alignment of Trajectories A and B to Sergeant French's Position

PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
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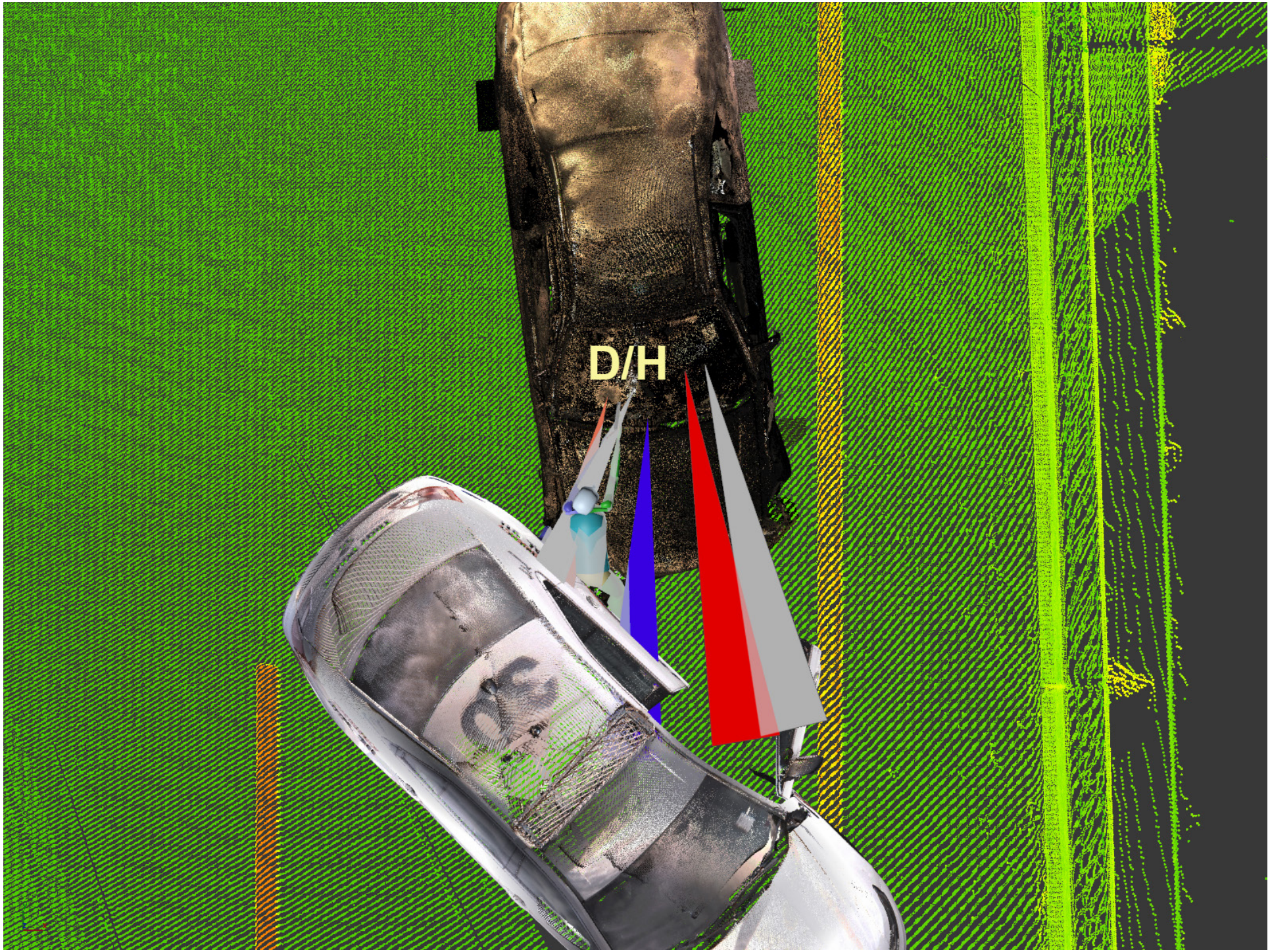
Exhibit U -
Alignment of Trajectories D thru H to Sergeant French's Position

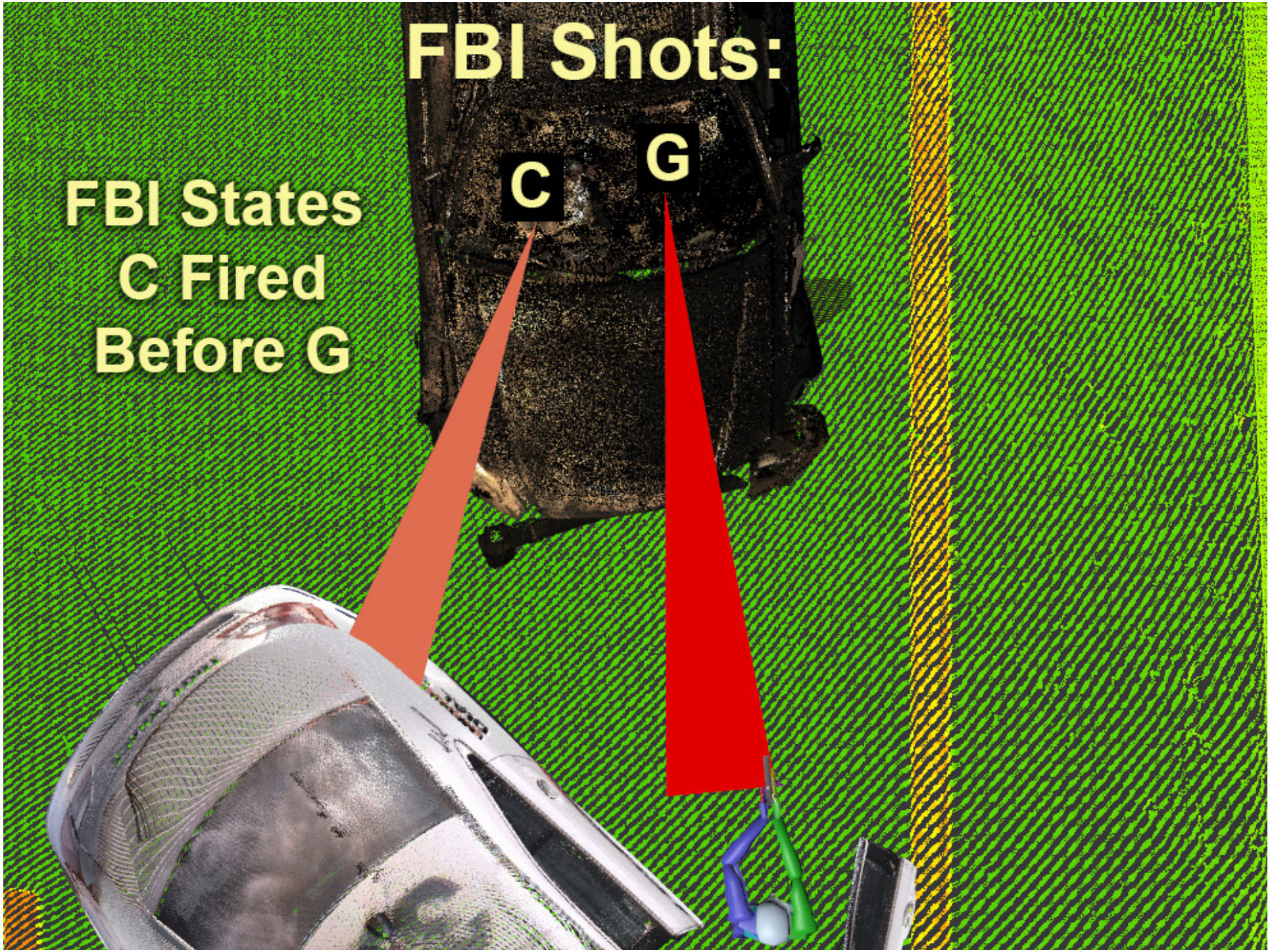


Alignment of Trajectories D thru H to Sergeant French's Position

PRECISION SIMULATIONS

115 South Church Street,
Grass Valley, CA 95945
530.477.5820 Voice
530.477.5819 Fax
http://precisionsim.com

Exhibit V -
Rebuttal of FBI Shot Order Analysis



Rebuttal of FBI Shot Order Analysis

EXHIBIT B

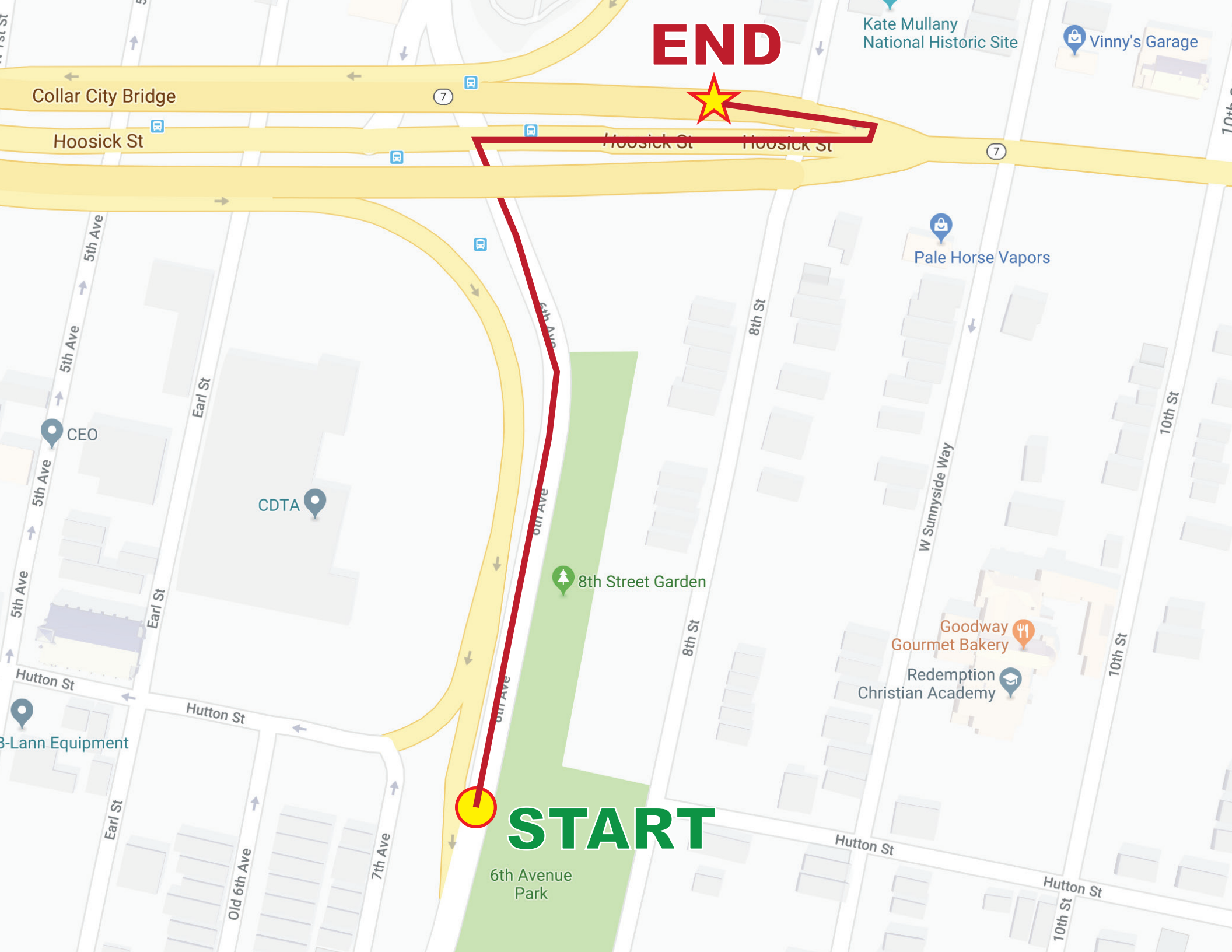

END
Kate Mullany
National Historic Site
Vinny's Garage
Collar City Bridge
7
Hoosick St
Hoosick St
Hoosick St
7
Pale Horse Vapors
5th Ave
5th Ave
5th Ave
5th Ave
Earl St
Earl St
CEO
CDTA
6th Ave
8th Ave
8th Ave
8th St
8th St
W Sunnyside Way
10th St
10th St
8th Street Garden
Goodway
Gourmet Bakery
Redemption
Christian Academy
Hutton St
Hutton St
B-Lann Equipment
Earl St
Old 6th Ave
7th Ave
START
6th Avenue
Park
Hutton St
Hutton St
10th St

EXHIBIT C

TROY POLICE DEPARTMENT
INVESTIGATION REPORT

VICTIM'S NAME:	REPORT DATE:	INCIDENT NUMBER:	DB NUMBER:
Sergeant Randall French	4/22/2016	38338-16	

NARRATIVE

On 4/21/16, at about 10:00 am, Sgt. Bornt and I interviewed Sergeant French. Sergeant French's attorney Andrew Safranko was present for the entire interview. Mr. Safranko expressed that Sergeant French was having trouble going up and down stairs and requested the interview take place in the TPD roll call room on the first floor. Sgt. Bornt and I complied with this request. We asked if Sergeant French would be willing to provide a written statement but Mr. Safranko informed us they would not provide a written statement at that time. Mr. Safranko informed us Sergeant French would like to give a verbal account of the events and would be willing to answer any questions that came up. Sergeant French then gave his verbal account of the events starting from when he first observed the suspect vehicle a black Honda. During Sergeant French's recall of the events, Sgt. Bornt and I asked him a few questions to help clarify details and Sergeant French answered all of these questions. At no time did Sergeant French or Mr. Safranko decline to answer a question raised by Sgt. Bornt or myself. Sergeant French described the incident as a traffic stop involving a possible intoxicated operator. This stop took place on 6th Avenue north of Jacob Street. Edson A. Thevenin was the operator of the vehicle and was the sole occupant of the vehicle. During the stop, Sergeant French conducted SFST's. These tests consisted of HGN, VGN, walk and turn and one leg stand. Sergeant French stated Thevenin failed each test. Sergeant French then asked Thevenin to submit to a pre-screen device (PSD). Thevenin refused the PSD and Sergeant French then informed Thevenin that he was under arrest. Thevenin physically resisted Sergeant French's attempt to apply handcuffs. Thevenin pulled his hands away from Sergeant French and began to make his way back to his vehicle. Sergeant French attempted to prevent Thevenin from getting back in his vehicle but was unsuccessful. At some point in this altercation Sergeant French made a radio transmission for help and discharged his OC spray. Thevenin, now in his driver's seat, reached for the keys to the vehicle which were in the ignition. Sergeant French reached into the vehicle and attempted to stop Thevenin from starting the ignition. Thevenin successfully starts the ignition and Sergeant French reached for the gear shift lever to prevent Thevenin from putting the vehicle into drive. At some point Sergeant French discharged his OC spray a second time inside the vehicle. Thevenin successfully places the transmission into drive and begins to operate the vehicle northbound on 6th Avenue. Sergeant French is partially inside the vehicle while the vehicle is in motion. As the vehicle travelled north on 6th Avenue, Sergeant French feared he's in danger of being run over by the vehicle. Sergeant French then pushed himself out of and away from the vehicle. This caused Sergeant French to fall onto the roadway of 6th Avenue. Thevenin continued northbound on 6th Avenue and Sergeant French made a radio transmission that Thevenin attempted to run him over. Sergeant French made his way to his patrol vehicle and pursued Thevenin. Thevenin turns east on Hoosick street and makes a U-turn onto the Collar City Bridge (westbound). Thevenin crashes his vehicle into a concrete barrier on the south side of the Collar City Bridge westbound ramp. Sergeant French stopped his patrol vehicle toward the front of Thevenin's vehicle in an attempt to prevent Thevenin's vehicle from continuing westbound and attempting to end the pursuit. Sergeant French then attempted to exit his vehicle but

Thevenin's vehicle is now in a position preventing Sergeant French's driver's side door from opening more than a few inches. When Sergeant French is able to open his door wide enough for him to make an exit, he exited his vehicle on the driver's side. Sergeant French stated that upon exiting his vehicle he is immediately struck by the front of Thevenin's vehicle. Sergeant French is now pinned between the two vehicles and Sergeant French is unable to free himself at this point. Sergeant French attempted to free himself by pushing both hands against the hood of Thevenin's vehicle. Sergeant French stated this had no effect and realized that the engine of Thevenin's vehicle is accelerating. Sergeant French also realized Thevenin's vehicle is still in motion. Sergeant French stated he was now in fear for his life. Sergeant French feared being crushed between the two vehicles. Sergeant French also feared being pulled under Thevenin's vehicle causing him to be dragged down the highway. Sergeant French stated he then discharged his duty pistol in defense of himself. Sergeant French fired rounds into the windshield of Thevenin's vehicle. Sergeant French stated he did not recall how many rounds were fired. After he fired these rounds Sergeant French realized his left leg is still pinned between the two vehicles. Sergeant French also realized that Thevenin's vehicle is still in motion. Sergeant French stated he is now being pulled to his left and believed his first rounds did not have an effect. Fearing he is about to be pulled under Thevenin's vehicle Sergeant French fired additional rounds to defend himself. These rounds are fired into the windshield of Thevenin's vehicle. Sergeant French believes his upper body is lying on the hood of Thevenin's vehicle at this time. Sergeant French stated he does not recall how many rounds he fired in the second series of shots. Sergeant French then reassessed the situation and realized his left leg is trapped and he is still pinned between the two vehicles. Sergeant French attempted a magazine change but the position of his body, in relation to Thevenin's vehicle, prevented him from retrieving a magazine. Sergeant French then refocused his attention to Thevenin and realized that Thevenin is no longer in the driver's seat of the vehicle. Sergeant French also realizes that Thevenin's vehicle is no longer in motion and the engine in no longer accelerating. Sergeant French again attempted to free himself and is soon assisted by responding officers. Sergeant French does recall a civilian attempting to assist officers in freeing him. Sergeant French stated the vehicles are moved a few inches apart and he falls to his left side. Sergeant French stated his boot is now caught on something under Thevenin's vehicle preventing officers from pulling him free. Once his boot is freed from the vehicle Sergeant French is assisted to Officer Dean's patrol vehicle. Sergeant French then recalls being transported to Albany Medical Center, by Officer Dean, for treatment.

Sergeant French's account of these events are consistent with the written statement of Captain Montanino, they are consistent with the reports of responding officers and they are consistent with the written statement of [redacted] (civilian witness). Physical evidence and video evidence ([redacted] cell phone video) both support Sergeant French's recollection of this incident.

DETECTIVE ASSIGNED: Sgt. White / Sgt. Bornt	SUPERVISOR APPROVAL:	PAGE NUMBER 2 of 2
CASE STATUS: Open		

EXHIBIT D

Control # __38338-16__

DEPOSITION OF A WITNESS
STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Phone #

Home _____

Work __270-4425_____

Cell _____

Name ____Matthew Montanino____ Date of birth _____

Residing at __Troy Police Department_____ Age _____

Occupation _____Patrol Captain_____

Depose and say:

On 4/17/2016, at about 3:00 am, I was working as the patrol captain for the 1st platoon. I responded to the area of River Street, south of 101st Street, for the report of a loud party and a large group. While in my police vehicle, I heard Sergeant French radio out that he needed some help. I heard him radio out that he was on a traffic stop while I was in route to the loud party call. Dispatch gave Sergeant French's location as 6th Avenue between Hoosick Street and Jacob Street. As I was responding to his location, while I was on River Street, in the area of Jay Street, I heard Sergeant French radio out that a guy just tried to run him over. As I turned left, to go east on Hoosick Street, I saw a dark colored car north bound on 6th Avenue. This car then made a right hand turn and traveled east up Hoosick. At that time Sergeant French radioed that a black Honda had just turned right onto Hoosick Street. As I was approaching the intersection of Hoosick and 6th, Sergeant French then made a right hand turn from 6th onto Hoosick. Sergeant French had a marked patrol vehicle (car 30) and his emergency lights and sirens were activated. Sergeant French was attempting to stop this black Honda. At that time I got behind Sergeant French's vehicle and all three vehicles were now east bound on Hoosick Street. I then observed the black Honda cross over the west bound lane on Hoosick Street at the entrance to the Collar City Bridge. The black Honda then continued to turn, around

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date 4/17/16 Time 9:15 AM

Signed [signature] Page 1 OF 4

Witness [signature] #6030

Control # __38338-16__

Phone #

Home _____

DEPOSITION OF A WITNESS

STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Work __270-4425_____

Cell _____

Name ____Matthew Montanino____ Date of birth _____

Residing at __Troy Police Department_____ Age _____

Occupation _____Patrol Captain_____

the traffic barrier, and began traveling west onto the Collar City Bridge. After traveling a short distance on the bridge, the black Honda crashed into the concrete barrier on the south side of the west bound lanes. The black Honda was now stopped. Sergeant French then drove his vehicle around the black Honda and positioned his patrol vehicle at an angle in front of the black Honda blocking the left west bound lane. I then pulled my vehicle behind the black Honda, leaving a few feet between us. At that time the black Honda appeared to be attempting to back out away from the barrier. I could hear the engine accelerating and it sounded like the tires were spinning. I then exited my vehicle and started to approach the black Honda. At that time the black Honda began to travel in reverse and the rear of the black Honda struck the front of my patrol vehicle. I could see that Sergeant French had exited his patrol vehicle. Sergeant French was now standing between the front of the black Honda and the driver's side of his patrol vehicle. Sergeant French was between the open driver's side door of his patrol vehicle and the patrol vehicle's rear bumper. I heard Sergeant French yelling commands to the operator of the black Honda. I believe he was yelling for the operator to stop. I continued to approach, on foot, and as I reached the driver's side of the black Honda, the vehicle accelerated forward toward Sergeant French. I continued my approach alongside the black Honda and I heard gun shots. I did not know who was firing the gun shots at that time. I drew my duty pistol and pointed

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date 4/17/16 Time 9:15 AM

Signed Capt. Montanino Page 2 OF 4

Witness Sgt. [illegible] #6030

Control # __38338-16__

Phone #

Home _____

DEPOSITION OF A WITNESS

STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Work __270-4425_____

Cell _____

Name ____Matthew Montanino____ Date of birth _____

Residing at __Troy Police Department_____ Age _____

Occupation _____Patrol Captain_____

it at the operator of the black Honda. I was standing a few feet from the driver's window at this time. I could hear Sergeant French yelling and I observed that the front of the black Honda had Sergeant French pinned against his patrol vehicle. Sergeant French was yelling to get the car off of him but it was hard for me hear over the sirens. I yelled several orders for the operator to get out of the vehicle but I was not getting any response. I could see that Sergeant French was still pinned between the two vehicles. Sergeant French's upper body was lying on the hood of the black Honda and I could see that Sergeant French had his duty weapon in his hand. I was getting no response from the operator and I opened the driver's door. I then reached into the vehicle and grabbed the operator's clothing. I pulled the operator out of the driver's seat and pulled him to the ground. I could see that a Troy police officer was attempting to free Sergeant French and I believe a civilian was also helping. I jumped into the driver's seat of the black Honda to pull it off of Sergeant French. When I got in, I could see that the car was still in drive. As I attempted to reverse the car, they were able to free Sergeant French. I exited the vehicle and I requested for dispatch to send EMS to our location. I ordered an officer to handcuff the operator. I also had Sergeant French loaded into Officer Dean's patrol vehicle and had Officer Dean transport him to Albany Medical Center. As the medics arrived, I directed them to the operator and ordered an officer to remove the handcuffs

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date 4/17/16 Time 9:15 AM

Signed Capt. Montano Page 3 OF 4

Witness SGT [illegible] #6030

Control # __38338-16__

Phone #

Home _____

DEPOSITION OF A WITNESS

STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Work __270-4425_____

Cell _____

Name ____Matthew Montanino____ **Date of birth** _____

Residing at __Troy Police Department_____ **Age** _____

Occupation _____Patrol Captain_____

for treatment. I then began notifications and had the area secured as a crime scene. At no time in this incident did I fire my duty weapon. When I returned to the police station, I turned my duty uniform over to Assistant Chief VanBramer and turned my duty belt, including my duty weapon and ammunition, over to Officer Furciniti.

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date 4/17/16

Time 9:15 am

Signed Capt. Montano

Page 4 OF 4

Witness SGT. [redacted] #6030

EXHIBIT E

[CW-1]

Control #: 38338-16

DEPOSITION OF A WITNESS
STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Phone:
Home: [redacted]
Work:
Cell: [redacted]

Name: [redacted] Date of birth: [redacted]

Residing at: [redacted] Age: [redacted]

Occupation: [redacted]

Depose and say:

On 4/17/2016, no later than 3:30 am, I was driving on route 7 coming in to Troy. I could see lights and hear sirens as I got into Troy. I stopped just before 8th Street because I thought the cops were going to go up Hoosick Street. I could see the cops loop around and go to get on the highway. I saw a cop car stop sideways with a black Honda behind it. I also saw a second police car stop behind the black Honda. I heard an impact and thought the guy hit a cop car. I could see a cop standing outside his car. I heard some yelling. I then heard gunshots and I took my phone out and started taking a video. I could hear the cop yelling "My leg, my leg". I realized the cop was hurt and I didn't know where the second cop was. I jumped out of my truck and ran over to help the cop. As I got there, I could see the Honda had bullet holes in the windshield. The cop was pinned between the two cars and I could see his leg was trapped. I could see that there was a black male in the driver's seat of the Honda. I started trying to get the car off the cop. I saw the second cop pulled the black male out of the car and jumped in the driver's seat. I think the second cop tried to back the Honda up but it wasn't working. We were able to move the car back, inch by inch. Another cop showed up and started to help. I think the cops boot was stuck on some metal of the car and the other cop cut his boot. Once we got the cop free from between the cars, I left to complete my call. I was on

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date: 4/17/16 Time: 10:50AM

Signed: [redacted] Page: 1 OF 2

Witness: SGT. [redacted] #6030

Control #: 38338-16

Phone:

Home: [redacted]

DEPOSITION OF A WITNESS

STATE OF NEW YORK
COUNTY OF RENSSELAER
CITY OF TROY

Work:

Cell: [redacted]

Name: [redacted] Date of birth: [redacted]

Residing at: [redacted] Age: [redacted]

Occupation: [redacted]

my way to do a tow call when this all happened and as soon as I was done with the tow I went back and gave my information to a Troy police officer.

I came to the Troy police station to give my statement. While I was at the station, Sgt. McMahon asked me for consent to copy the video from my phone. I signed a consent form and Sgt. White copied the video. I only took the one video and I did not take any pictures.

[redacted]

FALSE STATEMENTS MADE HEREIN ARE PUNISHABLE AS A CLASS "A" MISDEMEANOR PURSUANT TO SECTION 210.45 OF THE PENAL LAW OF THE STATE OF NEW YORK.

Date: 4/17/16 Time: 10:50AM

Signed: [redacted]

Page: 2 OF 2

Witness: SGT [redacted] 6050

EXHIBIT F

[CW-1]

OFFICE OF THE ATTORNEY GENERAL
INVESTIGATIONS DIVISION
VOLUNTARY STATEMENT

STATE OF NEW YORK
COUNTY OF ALBANY

Date: May 5, 2016 Location: 311 STATE ST. ALBANY, NY Time Started: 7:35 AM/PM

I, the undersigned, [redacted] am [redacted] years of age, born on [redacted]

I now reside at [redacted]

I have been duly warned and advised by INV. Ronald M. ENFIELD a person who has identified himself/herself as a Police Officer/Investigator with the New York State Office of the Attorney General, that:

I am currently not under arrest, and that I am free to leave at any time that I so desire.

I declare that the following voluntary statement is made to the aforesaid person of my own free will without promise, hope or reward, without fear or threat of physical harm upon me or another person, without coercion, favor or offer of favor, without leniency or offer of leniency, by any person or persons whomsoever.

On April 17, 2016 at approximately 3:17 AM I received a phone call from the New York State Police for a tow service call. I was to tow a car for them. The was a Congress St. and Pawling Ave. I got dressed, got into my personal vehicle which is a 1997 GMC Pick-up extended cab. I was heading over the Collins City Bridge from Green Island heading east. I was slowing down as I approached the red light. I had my windows down and was smoking a cigarette As I sat at the red light I heard sirens and saw the red-lights I then saw a white marked police car, chasing a dark colored car. Then a dark unmarked car was following. The dark colored car does a U-turn, he was going EAST on Hoosic Street underneath the Bridge 1st. then does a U-turn onto the Collins City Bridge going WEST. The white marked police car goes on the outside of the dark colored car and stops in front of the dark colored car. The dark colored car stopped because the white colored police car stopped at an angle in front of the dark colored car. The front of the white marked police car was facing southwest. The dark unmarked police car was behind the dark colored car at an angle also. I watched the back-up lights go on, this was the car that the police had boxed in. This car backs-up about 3 feet to 5 feet and hits the

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This voluntary statement was completed at 10:45 AM/PM on the 5th day of May, 20 16

WITNESS: INV. R. [redacted]

Signature of person giving voluntary statement

WITNESS: _____

the unmarked car. I see the police officer at the front of the car that just backed up into the unmarked car. The police officer at the front was about 4 ft away. The police officer at the front had gotten out of his patrol car and was standing near the rear drivers side door of his patrol vehicle. I had my window open on my truck and I think this maybe when I took a picture to send it to my wife. When the dark colored car backs up and hits the unmarked car almost simultaneously I hear gun shots. When the gun shots went out I started to switch over to video. I thought it was the guy being chased because I never heard the police yelling at this person driving the car. I thought the person being chased was shooting at the police. When the shots stopped, that's when I saw the car roll into the police officer. The car rolled about 3ft forward and pinned the police officer against his car. The police officer was pinned at the rear drivers side door near the rear tire. After the shots stopped, someone grabbed the driver of the vehicle being chased and threw him to the ground. While still in my truck I could hear the police officer yelling for help. That was the only time I heard this police officer say anything. The police officer never said anything to the driver of the car prior to shooting. I then got out of my truck and ran over, jumped the concrete barrier and almost landed on the driver of this car. I looked down at this guy and saw blood. The police officer was still yelling for help. Other marked units arrived. After I jumped the barrier I went to one side of the police car, this would be the side where the ~~Police~~ Officer drivers side door. Another officer was at the trunk area of the police car. I heard someone say to the person who was at [redacted] ~~drivers~~ car the car that was being chased "Cuff that motherfucker". Officer Marble was trying to pull the police officer out from being pinned. When the officers boot was ~~got~~ to get him free. They sliced him over a copy of foot and got the police officer out. The police took that pinned officer out of the area, once this happened I went to leave and someone wanted to put cuffs on me and officer Marble said no, "let him go, he helped us". I then went back to my vehicle and drove to my shop to do the tow for the State Police

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This voluntary statement was completed at 10:45 AM/PM on the 5th day of May, 2016

WITNESS: [redacted]

X [redacted]
Signature of person giving voluntary statement

WITNESS: _____

Around 8:15 - 8:30AM I get a phone call from the Troy Police Dept. They called my cellphone and my mother's house. The Troy Police called my house 3 times and I finally answered. I spoke with someone by the name of JACK. JACK asked me if I would come over and speak with them about what happened on the bridge. I agreed and drove to the Troy Police Station. I got to the Police Station around 10:30 AM. Once at the Police Station I took a Stairwell to the 2nd Fl. A Sgt. White met me and escorted me to the 2nd Fl. Once upstairs I sat in the Detective Bureau office right at a desk. While sitting there, officers were making small talk with me, they asked how my brother was doing and thanked me for helping with getting the car off the officer. I heard someone say, we are not doing anything until someone from the DA's office is here. While sitting there and the detectives were talking I then told them I have video of the incident. Once I said that they literally surrounded me. They got around me because I started showing the video. The officers then moved me over to Sgt. Whites desk and that is when I started giving my statement to Sgt. White. The police then called someone to help get the video off my phone and they walked me into a darkroom. The police watched the video and I was there, and asked me to sign a consent form to get just the video off my phone. The Troy Police used a 35mm camera to take pictures off my phone. This is when he introduced himself to me. This person I did not know. He said his name was Joel Abelove, Rensselaer County DA. Joel Abelove asked if he could view the video. I gave him permission to look. We then exited the room and went over to Sgt. White's desk to finish the statement. The I saw Chief McAvoy and Abelove went into a back room and sat at Sgt. White's desk. While giving this statement I was under pressure from them. They made me feel uncomfortable and they sat right around me I felt like I better say what they want to hear. Sgt. White asked me the majority of the questions, but other officer's sitting around were asking questions too. I then heard someone say my brother's name and I got pissed off. I then said I'm not saying anything to anyone else, I'm only talking to Sgt. White. I finished my statement and left the police Station.

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This voluntary statement was completed at 10:45 AM (PM) on the 5th day of May, 20 16

WITNESS: [signature]

[redacted]

Signature of person giving voluntary statement

WITNESS: _____

The day I gave my Statement to the Troy Police I knew something was not accurate and I called Troy P.D. desk # and asked for Sgt. White. They told me he was unavailable. I asked for them to have Sgt. White contact me. I waited a couple of hours and then contacted my brother [redacted] My brother made a few phone calls and Sgt. White never got back to me. Around 10:00pm Sunday night Officer Marty Fuccion texted me and thanked me. I texted Marty back saying "That shit was crazy. How is the cop doing" Marty replied "he's doing good thanks send me the video. I just put it into evidence without looking at it." Still in a text I text Marty saying can I get a copy of my Statement. "I fucked up" Marty replied "yes I will get it ~~tomorrow~~ tomorrow." and I also sent Marty the video. The next day in a text to Marty I ASK him why my name was released because the media is at my shop. Marty said "don't talk to anyone, just play dumb." "Say you don't know anything". The text started going back forth about how the media already knew when I only spoke with the police. The next contact I have is DA JOEL Abelove on 4/21/16 around 12:15pm. Joel Abelove says to me to come down the the Grand Jury tomorrow morning I told him there are some things that are different from what I am saying had happened to what the Troy Police are saying happened and I wanted to contact my attorney. I told Joel Abelove to contact me back in 20 min. I then shut my phone off. Around 9:40pm on 4/21/2016 I turn my phone back on right before 10:00pm my phone rings I answer the phone and it's Rensselaer County DA Joel Abelove. Joel says I need you to come down to the Grand Jury tomorrow around 9:00AM but he asked me to come earlier to talk about some things. I told him to hold on, I'll get to him that I needed to contact my attorney. Joel's response was "what do you need an attorney for you're not in trouble." I told Joel I have to get ahold of him. Joel said can you try to be here around 8:15AM, you have my cell & call me when your out front. I will come out and get you. I then notified my Attorney Trevor Hannigan and he told me

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This voluntary statement was completed at 10:45 AM/PM on the 5th day of May, 20 16

WITNESS: Ian R

X [redacted]
Signature of person giving voluntary statement

WITNESS: _____

he will take care of that and will Jail in the Morning. On 4/22/2016 I never hear from anyone from the Troy Police Dept or the Rens County DA's office. On 4/29/2016 I drove up to Marty Fruscione's house which is behind my Shop, while at there mailbox I see Marty's wife and I briefly speak with her about the Shooting Her response was he started firing after he was pinned. I shook my head and said to her he wasn't pinned when he opened fire. She kept saying what do you mean. I told her there is a lot more to this Story. On 4/29/2016 2 - Investigators from the Attorney General's office came to my Shop and asked to speak with me. I agreed to meet with them with my attorney present in Albany. Around 3:15pm I received a phone call from Sgt. White saying how am I doing and apologized for not returning my phone call. Let my brother know he is sorry he that Sgt. White ensured me that he did not leak my name and did not give out the video. No-one will even be able to get it not even 2 yrs down the road it will not come out. Sgt. White not to talk to anyone and not to give the video out. Around 4pm I met with Investigators with the Attorney Generals office with my Attorney present. On 5/4/2016 around 12:23pm I receive a phone call from Capt. Joe Centanni of the Troy Police Dept. Capt. talked about the media, he asked me to come to the Police Station, he heard that I wanted to Clarify some things on my Statements. I told him this is interfering w/ my life big-time and I will have to contact my attorney. I told him if you want me down there you will have to pick me up or Contact my Attorney. His response was "I don't have the Authority to Arrest you" I told him the media is Ruining my life, he told me it would be in my best interest to come down and clarify, I told him I'm not coming down without my attorney or if my attorney tells me to. Capt Centanni then said I would not want anything bad to happen to you and your family and your business, I took that as a threat. I put him on hold, gave him my attorney's #. I've had no contact with the Troy Police Dept or the Rens County DA's office. I am not giving this Statement to

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This voluntary statement was completed at 10:45 AM/PM on the 5th day of May, 20 16

WITNESS: [redacted]

[redacted]
Signature of person giving voluntary statement

WITNESS: _____

to the Attorney General's office to get back at the two Police Dept for what they did to my brother & giving this Statement because those Kids lost their Father and it's been killing me inside and I want them to know the truth.

I have read this voluntary statement (had this voluntary statement read to me) consisting of 6 page(s), each page of which bears my signature and corrections, if any bear my initials, and I certify that the facts contained herein are true and correct. I have also been told and I understand that making a false written statement is punishable as a Class A Misdemeanor pursuant to section 210.45 of the Penal Law of the State of New York.

This voluntary statement was completed at 10:45 AM/PM on the 5th day of May, 20 16

WITNESS: Inv. R. [redacted]

[redacted]
Signature of person giving voluntary statement

WITNESS: _____

EXHIBIT G

[CW-2]

OFFICE OF THE ATTORNEY GENERAL
INVESTIGATIONS DIVISION
VOLUNTARY STATEMENT

STATE OF NEW YORK
COUNTY OF ALBANY

Date: 5/3/2016 Location: 146 STATE ST. ALBANY, NY Time Started: 3:40 AM/PM

I, the undersigned, [redacted] am [redacted] years of age, born on [redacted]

I now reside at [redacted]

I have been duly warned and advised by Mitchell Pacurowski a person who has identified himself/herself as a Police Officer/Investigator with the New York State Office of the Attorney General, that:

I am currently not under arrest, and that I am free to leave at any time that I so desire.

I declare that the following voluntary statement is made to the aforesaid person of my own free will without promise, hope or reward, without fear or threat of physical harm upon me or another person, without coercion, favor or offer of favor, without leniency or offer of leniency, by any person or persons whomsoever.

I WOULD like to SAY that ON SUNDAY APRIL 17, 2016 AT ABOUT 2:45 AM I WAS AT A PARTY ON RIVER STREET in the CITY OF TROY, NY. I DON'T KNOW the ADDRESS but it WAS NEAR the KENNEDY FRIED Chicken. The [redacted] I WAS PICKING MY FRIEND [redacted] UP FROM the PARTY BECAUSE he HAD BEEN DRINKING AND COULDN'T DRIVE. The TROY Police WERE AT the PARTY BREAKING it UP AND SO when I got there I got out of my GIRLFRIEND'S VEHICLE FOUND [redacted] AND We got into his JEEP. It WAS ONLY me AND [redacted] AND he got into the passenger front SEAT. [redacted] WHICH IS A JEEP WRANGLER With PLASTIC WINDOWS that ZIP DOWN. I HAD MY WINDOW ZIPPED DOWN A little BECAUSE it WAS A nice night. We HEADED DOWN RIVER STREET TOWARD the DOWNTOWN AND When I got to HOOSICK STREET I TURNED left to HEAD UP HOOSICK STREET BECAUSE [redacted] LIVES UP BEHIND R.P.I. I GOT to the TRAFFIC LIGHT AT HOOSICK STREET AND 8TH STREET AND the light WAS RED SO I STOPPED. When the light TURNED GREEN I STALLED OUT the JEEP BECAUSE it'S A STICK SHIFT AND I'VE ONLY DRIVEN STICK 3 TIMES. MY GIRLFRIEND [redacted] WAS BEHIND ME With HER CAR AND I MOTIONED HER to GO AROUND ME BECAUSE I KEPT STALLING OUT. She DID AND CONTINUED UP HOOSICK STREET. AS I WAS SITTING AT the LIGHT With the PARKING BRAKE ON WAITING FOR it to TURN GREEN I LOOKED in MY REARVIEW MIRROR AND I SAW WHAT LOOKED LIKE A GREEN COLORED HONDA COMING UP FAST With NO LIGHTS ON. The CAR WENT PAST ME AND THAT'S When I SAW TWO TROY COP CARS COMING

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This voluntary statement was completed at 5:10 AM/PM on the 3RD day of MAY, 2016

WITNESS: [signature]

[redacted]
Signature of person giving voluntary statement

WITNESS: [signature]

UP Behind the HONDA With their Red lights and sirens on. The HONDA MADE A QUICK U-TURN onto the COLLAR City BRIDGE to go West AND the COPS followed. The HONDA MADE the U-TURN too QUICK AND it CRASHED into the Cement BARRIER ON the DRIVERS SIDE front. AS SOON AS this HAPPENED the one COP CAR WAS ABLE to ~~Pulled~~ Pull In FRONT Of the HONDA AT AN Angle to Block the HONDA in. The SECOND COP CAR Pulled Behind the HONDA. The FIRST COP got out of his Police CAR AND he had his gun out. THAT'S When the HONDA BACKED UP AND hit the SECOND Police CAR that WAS Behind it. The HONDA BACKED UP ONLY A couple of feet Before it Hit the SECOND COP CAR. AS SOON AS the HONDA WAS BACKING UP the FIRST COP Who WAS out of his CAR STARTED Shouting "STOP!" "STOP!" "STOP!" The COP Pretty Much Yelled this the whole time. After the HONDA BACKED UP AND Hit the SECOND COP CAR the DRIVER of the HONDA STARTED to DRIVE FORWARD TOWARD the FIRST Police Officer. THAT'S When the COP STARTED SHOOTING. I DON'T KNOW how MANY TIMES he SHOT, But it WAS A LOT. It SOUNDED like he EMPTIED his CLIP. After the COP SHOT, the HONDA KEPT Rolling FORWARD AND it looked like it COULD Have hit the FIRST COP CAR. The COP In the SECOND CAR then RAN up to the HONDA AND Pulled the GUY Who WAS DRIVING the HONDA out of the CAR AND onto the GROUND Where it looked like the COP GAVE the GUY A KICK. The SECOND COP HAD gotten out of his CAR AS SOON AS the HONDA BACKED UP AND hit his Police CAR. AND SO this SECOND COP WAS out of his CAR ALREADY When the FIRST COP STARTED SHOOTING. After getting the GUY out of the HONDA, the SECOND COP got into the HONDA AND it looked like he WAS TRYING to BACK the HONDA UP. A couple MINUTES AFTERWARDS A Bunch of OTHER COPS showed UP AND One of them SAID to ME, "Get the Fuck out of here!" I then DRove AWAY EAST on HOOSICK STREET AND WE went to the McDONALDS on HOOSICK Street AND 15th STREET Across from the SPEEDWAY GAS STATION. I WANT to SAY that MY FRIEND [redacted] WAS DRINKING At that PARTY that night But I DIDN'T HAVE ANYTHING to DRINK, that's WHY I WENT to the PARTY to Pick him UP. I WANT to SAY When the HONDA BACKED UP AND hit the SECOND COP CAR He WAS GOING PRETTY FAST AND When he STARTED Pulling FORWARD, he WAS GOING PRETTY FAST to Get AWAY. To me it looked like he WOULD HAVE HAD to either GO All the WAY AROUND the COP OR go THROUGH Him to GET AWAY. [redacted]

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This voluntary statement was completed at 5:10 AM (PM) on the 3RD day of MAY, 2016

WITNESS: [redacted]

[redacted]
Signature of person giving voluntary statement

WITNESS: [redacted]

EXHIBIT H

[CW-3]

OFFICE OF THE ATTORNEY GENERAL
INVESTIGATIONS DIVISION
VOLUNTARY STATEMENT

STATE OF NEW YORK
COUNTY OF Rensselaer

Date: 05/06/2016 Location: 44 BOLIVAR AVE. TROY, NY Time Started: 8:50 (AM)/PM

I, the undersigned, [redacted] am [redacted] years of age, born on [redacted]

I now reside at [redacted]

I have been duly warned and advised by Mitchell Packowski a person who has identified himself/herself as a Police Officer/Investigator with the New York State Office of the Attorney General, that:

I am currently not under arrest, and that I am free to leave at any time that I so desire.

I declare that the following voluntary statement is made to the aforesaid person of my own free will without promise, hope or reward, without fear or threat of physical harm upon me or another person, without coercion, favor or offer of favor, without leniency or offer of leniency, by any person or persons whomsoever.

I WAS AT APARTY IN TROY NEAR North TROY ON SUNDAY APRIL 17 2016 WHEN I CALLED MY FRIEND [redacted] TO COME TO PICK ME UP. I HAD ABOUT 6 BEERS AND I DONT WANT TO DRIVE. I DON'T Remember WHAT time IT WAS But IT WAS 2:00AM OR SO. When [redacted] GOT TO THE PARTY I GAVE him ~~his~~ MY KEYS TO MY CAR. IT'S A 1997 JEEP CHEROKEE AND IT'S REGISTERED TO MY MOM [redacted] [redacted] DOESN'T DRINK AND THAT'S THE ONLY REASON I LET him DRIVE. I GOT IN THE PASSENGER FRONT SEAT AND WE HEADED DOWN RIVER STREET AND TURN UP HOOSICK STREET When WE GOT TO THE LIGHT AT HOOSICK STREET Right At the BRIDGE WE WERE THE FIRST CAR AT the light, THERE WAS NOBODY IN FRONT OF US. When WE GOT TO THE LIGHT [redacted] STALLED the JEEP OUT. THE JEEP IS A STANDARD AND [redacted] CAN'T DRIVE STICK VERY Well. The light TURNED GREEN AND then [redacted] AND I STARTED Busting ON [redacted] BECAUSE he KEEP STALLING OUT. [redacted] WAVED his GIRLFRIEND to go AROUND BECAUSE She WAS behind US IN HER CAR. All OF A SUDDEN A GREEN CAR DRIVE BY US AND MADE A U-TURN ONTO the BRIDGE TOWARDS ALBANY. When he got ON the BRIDGE he LOST CONTROL AND HIT the BRIDGE on the left SIDE OF his CAR. THAT'S When I SAW the TWO TROY Police CRUISERS BY him. HIM. ONE CRUISER PINNED him IN the BACK AND the OTHER PINNED him FROM the FRONT. THE GUY IN the GREEN CAR then BACKED UP AND HIT the CRUISER BEHIND him. I COULD HEAR the CARS HIT. I then SAW

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This voluntary statement was completed at 9:20 (AM)/PM on the 6th day of MAY, 2016

WITNESS: [signature]

[redacted]
Signature of person giving voluntary statement

WITNESS: [signature]

The GREEN CAR Pull FORWARD AND TURN to the Right to get AWAY. THATS WHEN I HEARD GunShots. I TRIED to look to See WHAT HAPPENED BUT [redacted] WAS LEANING TOWARD the WINDOW. He's Big AND I KEPT TRYING to look AROUND him BUT I COULDN'T. A MINUTE OR SO LATER Some COP to US TO "get the Fuck OUT of here!" SO WE left. We Drove UP HOSICK Street to the McDonALDS.

I have read this voluntary statement (had this voluntary statement read to me) consisting of 2 page(s), each page of which bears my signature and corrections, if any bear my initials, and I certify that the facts contained herein are true and correct. I have also been told and I understand that making a false written statement is punishable as a Class A Misdemeanor pursuant to section 210.45 of the Penal Law of the State of New York.

This voluntary statement was completed at 9:20 AM/PM on the 6th day of MAY, 2016

WITNESS: [redacted]

WITNESS: Toni R

[redacted]

Signature of person giving voluntary statement

EXHIBIT I

FINAL AUTOPSY REPORT

CASE #:	MS-16-278 OC-16-142 (Albany Medical Center) P16-04-09 (RCME)
DECEDENT:	Edson Thevenin
DATE OF BIRTH:	June 30, 1978
PRONOUNCEMENT DATE:	April 17, 2016
PRONOUNCEMENT TIME:	4:00 AM
DATE OF AUTOPSY:	April 17, 2016, 11:30 AM
PLACE OF AUTOPSY:	Albany Medical Center, Albany, NY
PROSECTOR:	Michael Sikirica M.D.
ASSISTING:	Mrs. Sarah Bourdon
INVESTIGATOR:	Mr. Michael Parrow, Rensselaer County
MEDICAL EXAMINER:	Michael Sikirica, M.D., Rensselaer County

Cause of Death:	Hemorrhage and left hemothorax due to perforations of left lung and heart due to gunshot wounds of chest (2)
Manner of Death:	Homicide

Michael Sikirica, M.D./nw
DATE: 10-27-16

External Description

The body is received in a white plastic body pouch. There is a medical examiner's tag attached to the pouch listing the decedent's name and time of death with a date of 04/17/16. The decedent's name is also written in ink on the pouch with the date of brith and time of 4:04 AM along with the name of Investigator Parrow and the case number. Lock number 406948 is also listed and the pouch is secured with a blue plastic lock number 406948. The body is that of a 72", 254 pound normally-developed, mildly obese adult Black male appearing the reported age of 37 years with mild to moderate rigor mortis and slight posterior unfixed livor mortis. The body temperature is cool to the touch after refrigeration. Notwithstanding injuries to be described, the general appearance of the body is of good health and hygiene.

The body is received unclothed. There is no jewelry present on the body or included with it.

The scalp hair is black and short measuring approximately ⅜" in length and there is a full black beard and mustache. The irides are brown. The right and left pupils each measure 5 mm in diameter. The corneas are clear and the sclerae and conjunctivae are unremarkable. The face is symmetric but there is palpable fracturing along the maxilla and mandible. There is bloody fluid in the nostrils and oral cavity. There are no materials in the ears. The teeth are natural and appear in good condition with injuries to be described. The neck is free from masses. There are no unusual marks or lesions on the skin of the neck. The larynx is midline and the thyroid not palpable. The chest is of normal contour. There is mild gynecomastia. The abdomen

is mildly protuberant. The posterior torso shows no significant abnormalities except for injuries to be described under "Evidence of Injury." The upper extremities are symmetric, and the fingernails are intact and show no foreign material. There is patchy bloody staining along the dorsal, lateral and palmar left hand. There is no evidence of clubbing or cyanosis noted. The external genitalia are those of a mature male. There is no evidence of injury or abnormal secretions. The buttocks and anus are unremarkable. The skin is black in color and smooth. There is a tattoo of praying hands with angel wings and a rosary design along the left lateral upper arm. There is a sun and scroll like design tattoo along the right upper chest. There is a tattoo of an illegible name or word on the dorsal portion of each forearm. There is no evidence of acute or chronic intravenous narcotism. Passive motion of the head, neck and extremities reveals abnormal mobility around the maxilla and mandible but no other unusual mobility. There is no unusual odor about the body. The body hygiene is good.

Evidence of Recent Medical Therapy

There is an endotracheal tube protruding outward from the oral cavity. There is a bandage partially covering a gunshot wound overlying the right clavicular area and a second bandage over a gunshot wound along the left anterior axillary region. There is a bandage covering a gunshot wound along the dorsal right forearm and a bandage covering a gunshot wound along the lateral right upper arm. There is a chest tube protruding outward from the lateral left chest and sutured in place. There are EKG pads

present along the anterior right shoulder, anterior left shoulder, the anterior medial left upper abdomen and anterior medial right upper abdomen.

Evidence of Injury

Gunshot Wound #1

The entrance site to this wound is located along the left nose and nostril region and is centered approximately 6" beneath the vertex of the scalp. There is severe fracturing through the cartilaginous tissue of the nose with a very jagged outline and the defect measures approximately 3 x 4 cm in size. The defect is also centered approximately 4 cm above the angle of the left corner of the mouth. There is no evidence of powder tattooing or soot around the wound. The wound track extends rearward and downward through the maxilla along the left alveolar process with fracturing through several teeth and extends downward through the left portion of the mandible with additional fracturing of teeth and the bony ramus and exits out through the left portion of the chin through a defect measuring 15 x 12 mm in size. The small exit site is located 3 cm to the left of midline and approximately 9" beneath the vertex of the scalp. It is further localized at approximally 3.5 cm beneath the corner of the mouth. There are several small lacerations along the mucosa of the lower left lip and a small zone of contusion injury along the left portion of the tongue.

The path of the projectile extends downward and there are markings along the left and right upper chest and right clavicular area consistent with continuation of the projectile or fragments leaving superficial injuries to the chest and clavicular areas.

Present along the approximate midline of the upper chest is a 25 x 22 mm zone of red abrasion injury limited to the skin with an irregular outline but the abrasion does display an area of circular marking approximately 11 mm in diameter possibly consistent with impact of a bullet base. There are several small abrasions along the right clavicular area consistent with fragmentation or extrusion of bony tissue and there is an additional 12 x 15 mm irregular red abrasion along the left clavicular area also consistent with secondary impact.

No projectile is recovered along the wound track.

Path of projectile: nearly straight downward along the body.

Gunshot Wound #2

This graze type wound is located along the right upper and posterior shoulder and is limited to the skin and subcutaneous tissue. The defect measures 55 x 9 mm in size with an abrasion along each border and extends rearward across the top and posterior aspect of the shoulder. It is centered approximately 9 ½" beneath the vertex of the scalp and approximately 7 cm to the right of midline. There is no evidence of powder tattooing or soot around the wound.

Path of projectile: from decedent's front to rear, nearly straight and slightly downward.

Gunshot Wound #3

This wound is located along the right clavicular area and measures approximately 45 x 15 mm in total size with a 10 mm perforation along the medial border and a zone of red abrasion injury along the lateral border. The defect has a nearly horizontal orientation and is centered 7 cm to the right of midline and

approximately 12 ½" beneath the vertex of the scalp. There is no evidence of powder tattooing or soot around the wound.

The wound track extends into the right chest cavity passing between the right 2nd and 3rd ribs with slight fracturing and the projectile track extends into the pericardial sac. There is a 9 to 10 mm perforation into the right atrial chamber along the superior vena cava and a deformed projectile is recovered in the right atrial chamber measuring approximately 15 x 13 x 11 mm in size with a 10 mm in diameter base. The projectile is jacketed.

Path of projectile: slightly from decedent's front to rear, from right to left and slightly downward.

Gunshot Wound #4

This wound is located along the anterior left axillary region and measures 22 x 10 mm in size. The perforation is centered approximately 14 ½" beneath the vertex of the scalp and 16 cm to the left of midline. It has a nearly oval configuration with no evidence of powder tattooing or soot around it.

The wound track extends inward and downward into the left chest cavity and towards the decedent's right passing through the left 3rd rib with a perforation through the upper and lower lobes of the left lung measuring 1 to 2 cm in diameter with surrounding purple hemorrhage. The track extends outward through the lung passing into the posterior left chest through the 7th rib and into the muscular and subcutaneous tissue of the left back. An incision is made along the left medial back and a jacketed projectile is recovered measuring approximately 16 x 11 mm in size. The projectile is

only partially deformed. The projectile is centered approximately 17" beneath the vertex and 5 cm to the left of midline.

Gunshot Wound #5

This wound is located along the lateral right upper arm and is centered approximately 15 ½" beneath the vertex of the scalp. The defect measures approximately 25 x 15 mm in total size with a 10 mm perforation along the upper border. There is no evidence of powder tattooing or soot around the wound.

The wound track extends upward and rearward along the arm and shoulder region passing out through a small exit site along the posterior right axillary region located approximately 20 cm to the right of midline and approximately 13 ½" beneath the vertex of the scalp. The exit measures 15 x 16 mm in size with a slightly torn out jagged appearance.

No projectile is recovered.

Gunshot Wound #6

This wound is located along the upper medial portion of the dorsal right forearm. The defect is centered approximately 16 cm beneath the elbow and measures 20 x 15 mm in size with a 1 to 2 mm surrounding abrasion ring. There is no evidence of powder tattooing or soot around the wound. The wound track extends upward into the muscular tissue of the right forearm where a partially deformed jacketed projectile is recovered. The projectile measures approximately 16 x 11 mm in size and the base of the projectile is pointed upward along the arm.

Path of projectile: upward along the arm.

Gunshot Wound #7

This wound is located along the dorsal portion of the left forearm. The entrance site is located along the medial portion of the forearm and measures 18 x 6 mm in size with a 2 to 3 mm abrasion ring around it and there is no evidence of powder tattooing or soot around the wound. The wound track extends through the outer muscular tissue and soft subcutaneous tissue passing out the more lateral portion of the arm through a more ovoid defect measuring 16 x 12 mm in size and located approximately 13 cm beneath the level of the elbow.

Path of projectile: nearly horizontally across the left arm.

The defect of the left axillary region (gunshot wound #4) may represent a continuation of the gunshot wound through the left forearm (gunshot wound #7) based on the position of the arm and chest area. The gunshot wound to the nose may also be continuation of gunshot wound #7.

All the projectiles recovered are transferred to the officers present from the Troy Police Department.

Note

The numbering of wounds is done for the purpose of organization and may or may not reflect their order of occurrence.

Additional Injuries

Present along the right parietal scalp is a nearly horizontal 6 cm long laceration with a sharp appearing border and no evidence of abrasion around it. The laceration does extend rearward and somewhat medially along the scalp when examined from front to rear.

Present along the medial left upper forehead is a small triangular 4 x 2 mm red abrasion.

There is a small somewhat horizontal red abrasion along the lower lateral left forehead.

Present along the lateral right wrist area is a 15 x 12 mm red abrasion and there is a 10 x 4 mm red abrasion along the medial proximal portion of the left hand.

There is no other evidence of significant antemortem injury.

Procedure and Specimens

The organs are exposed utilizing the standard Y-shaped thoracoabdominal and posterior scalp incisions. Femoral blood, vitreous fluid, bile, urine and gastric contents are taken for toxicologic evaluation and submitted to the Forensic Toxicology Laboratory at the Albany Medical Center. An additional lavender top blood sample tube is retained for further testing if needed. Representative portions of the major viscera are retained in formalin and appropriate sections processed for microscopic slides. Pertinent findings at autopsy are recorded by digital photographs by the officers present. Present at the autopsy are Evidence Technician Ralph Southworth along with Detective/Sergeant Patrick Bornt of the Troy Police Department. Also present are District Attorney Joel Abelove and Rensselaer County Medicolegal Death Investigator Mr. Michael Parrow. The autopsy is assisted by autopsy assistant Mrs. Sarah Bourdon. A buccal reference swab is also obtained by the officers present and fingerprints are obtained by the officers at the completion of the autopsy. Multiple X-rays are taken and

evaluated and show the projectiles recovered. A copy of the decedent's recent emergency room records from St. Mary's Hospital is also received and lists medical record number SM053747. No clothing is on the decedent or included with the decedent.

Internal Examination

Thoracoabdominal incision reveals 4 to 5 cm of normal appearing abdominal panniculus. The thoracic and abdominal viscera have normal anatomic relationships with evidence of injuries as described but no evidence of natural disease.

Body Cavities

There are approximately 800 mls of blood and blood clot in the left pleural cavity. There are no significant fluids in the right pleural cavity. There are no adhesions.

Musculoskeletal System

The skeletal muscles are firm and normally developed. Except for fracturing associated with the gunshot wounds, there are no additional fractures noted.

Neck Organs

The larynx and thyroid gland are unremarkable. The thyroid is homogeneously tan/brown without nodularity. The laryngeal cartilages and hyoid bone are intact. There are no laryngeal hemorrhages or hemorrhages in the soft tissues of the neck. The carotid arteries and jugular veins are intact. The cervical spine is intact.

Respiratory System

The right lung weighs 350 grams, the left 270 grams. The pleural surfaces are smooth and glistening. There is only slight anthracotic pigmentation and perforation through the two lobes of the left lung as noted. There are no natural focal lesions. The tracheobronchial and arterial trees are unremarkable. No aspirated material or thromboemboli are found.

Cardiovascular System

The pericardial sac is perforated and contains 100 to 200 mls of bloody fluid. The heart weighs 420 grams and has a normal external configuration with a glistening epicardial surface and a normal amount of epicardial fat. The myocardium is firm and red/brown and shows no focal lesions. The cardiac chambers are of normal size and contain clotted blood. The right ventricle measures 3 mm and the left ventricle 15 mm in maximum thickness. The cardiac valves are normally formed and appear in good functional condition with thin pliable valve leaflets and thin discrete tendineae chordae. The mitral valve measures 10.5 cm, the tricuspid 12 cm, the pulmonary 7 cm and the aortic 6.9 cm in circumference. The endocardium is smooth and glistening without fibrosis or petechiae. The coronary arteries arise normally through unobstructed ostia and pursue their usual anatomic course. Serial cross sections at 2 mm intervals show no significant atheromatous occlusion or anomalies. The atria and appendages are normal except for the perforation into the right atrial chamber. The aorta is of normal caliber and branching distribution and is intact with no significant atherosclerosis. The vena cavae is intact and unremarkable.

Liver and Biliary Tree

The liver weighs 1940 grams and has a smooth capsule and normal brown lobular architecture. Upon sectioning there are no focal lesions. There is no evidence of fibrosis or cirrhosis. The gallbladder is intact and contains 10 to 20 mls of green/brown bile without stones. The remainder of the extrahepatic biliary system is unremarkable.

Spleen

The spleen weighs 90 grams and has a smooth thin intact capsule. The parenchyma is firm with indistinct white pulp.

Pancreas

Firm lobulated tan parenchyma

Adrenals

Thin bright yellow/orange cortical ribbons and tan medullae

Genitourinary System

The right kidney weighs 180 grams, the left 170 grams. The capsules strip easily to reveal smooth but slightly pale purple cortical surfaces. There are no parenchymal lesions. The ureters are patent into the bladder, which contains approximately 100 mls of yellow urine and is otherwise unremarkable. The prostate gland is not enlarged. The testes are removed and show no evidence of injury or natural disease.

Gastrointestinal System

The esophagus is unremarkable. The stomach contains approximately 300 to 400 mls of light brownish colored fluid with small fragments of white unidentifiable food

type digestate. There are no recognizable fragments of tablets or capsules. The mucosa and rugae are flat and partially autolyzed but otherwise unremarkable. The small and large intestines and appendix have a normal configuration and are otherwise unremarkable.

Brain

The scalp is retracted by an intermastoidal incision. There are no subgaleal hemorrhages. The bones of the calvarium and base of the skull are intact. The fresh brain weighs 1500 grams. The cerebral hemispheres are symmetric with a normally developed gyral pattern. The meninges are clear. The cerebral vasculature is intact and shows no significant atherosclerosis or vascular anomalies. Serial coronal sections through the cerebrum, cerebellum and brainstem reveal no focal lesions. Stripping the dura reveals no fractures. The pituitary gland is not enlarged.

Microscopic Examination (slides 1-28)

Portions of the major internal organs are examined microscopically including sections of brain, heart, lungs, liver, kidneys and additional tissues and organs as required. A section of spleen reveals an anemic appearing red pulp with an otherwise normal splenic parenchyma. Sections of the myocardium of the left ventricle are unremarkable. A section of right ventricular myocardium is also unremarkable. A section of liver reveals slight macrovesicular steatosis. Sections of the kidneys reveal a normal renal architecture without significant abnormalities. No significant crystals are noted in the kidney parenchyma under polarized light examination. Sections of the

lungs reveal areas of significant intraalveolar hemorrhage and atelectasis. There are increased numbers of foreign body macrophages in scattered portions of the airspaces and airways. There is aspiration of gastric type material into scattered airways. There is no evidence of significant pneumonia. Sections of the adrenal glands are unremarkable. Sections of the tongue reveal extensive hemorrhage in the submucosal and muscular layer. Portions of the brain are unremarkable.

Anatomic Diagnoses

I. Hemorrhage and left hemothorax due to perforations of left lung and heart due to gunshot wounds of chest (2).

   a. Gunshot wound to the right upper chest and clavicular area.

      i. No evidence of contact or close range discharge.

      ii. Passage of projectile into the apical portion of the right chest.

      iii. Passage of the projectile into the pericardial sac and the right atria of the heart.

      iv. Associated hemopericardium.

      v. Jacketed projectile recovered in the chamber of the right atria.

   b. Gunshot wound to the left lateral upper chest or axillary region.

      i. No evidence of contact or close range discharge noted.

      ii. Passage of projectile downward into the left chest cavity through the 3rd rib.

iii. Passage of projectile downward through the upper and lower lobes of the left lung with associated large hemothorax.

iv. Passage outward through the posterior medial left chest wall.

v. Jacketed projectile recovered from the subcutaneous and soft tissue along the left medial back.

II. Associated findings:

a. Through and through gunshot wound involving the left portion of the nose, maxilla, mandible and exit out through the left aspect of the chin.

i. No projectile recovered from the decedent.

ii. Markings along the chest area consistent with shrapnel or impact by projectile with no evidence of penetration.

b. Large graze type wound along the posterior upper right shoulder.

c. Perforating gunshot wound to the right upper arm.

i. Exit along the posterior right lateral shoulder or axillary region.

d. Gunshot wound to the dorsal right forearm.

i. Jacketed projectile recovered from the muscular tissue of the upper right forearm below the elbow.

e. Through and through gunshot wound of the dorsal left forearm.

i. Possible continuation of the projectile into the wound track of the left upper chest region or nose.

f. Sharp laceration injury to the right portion of the scalp consistent with shrapnel effect.

g. Additional small abrasions of the face, right hand and wrist area.

III. No evidence of significant natural disease or other significant antemortem injury.

FORENSIC TOXICOLOGY REPORT

ALBANY MEDICAL CENTER, 43 NEW SCOTLAND AVENUE
ALBANY, NEW YORK 12208-3478 (518) 262-3523
N.Y.S. FORENSIC LABORATORY PERMIT #PFI 1899
ACCREDITED BY THE AMERICAN BOARD OF FORENSIC TOXICOLOGY

LABORATORY DIRECTORS
Thomas G. Rosano, PhD, DABFT
Thomas A. Swift PhD

Subject: Thevenin, Edson
Referring Number: MS-16-278
Case Number: FT16-201
DOB: 06/30/1978
DOD: 04/17/2016
Collect Date: 04/17/2016
Received Date: 04/18/2016
Report Date: 06/10/2016

Agency: Rensselaer County Coroners Office
Address: 1600 7th Avenue
Troy , New York 12180
Requestor: Dr. Michael Sikirica
Address: Forensic Medical Services
50 Broad Street
Waterford, NY 12188

Test Results

Initial Tests:	Sample	Result	Detection Limit/Unit	Method
General Unknown	Blood, Femoral	Negative	Analyte Specific	LC/MS
Cannabinoids	Blood, Femoral	See Confirmatory	Detection Limit 10 ng/mL	Immunoassay
Salicylate	Blood, Femoral	Negative	Threshold 10 mg/dL	Color Spot Test
Volatiles / Alcohols	Blood, Femoral	See Confirmatory	Detection Limit 0.01% w/v	HS-GC-FID

Test Comment:Includes Acetone, Ethanol, Isopropanol and Methanol

Confirmatory Testing:				
Ethanol	Vitreous Humor	0.17	% w/v	HS-GC-FID
Ethanol	Urine	0.25	% w/v	HS-GC-FID
Ethanol	Blood, Femoral	0.19	% w/v	HS-GC-FID
Tetrahydrocannabinol	Blood, Femoral	Negative	Detection Limit 2.5 ng/mL	GC/MS/MS

Specimens

SAMPLE #	TYPE	COLLECTION	AMOUNT
1	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.7 grams
2	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.6 grams
3	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.6 grams
4	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.5 grams
5	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.5 grams
6	Blood, Femoral	Fluoride/Oxalate (gray top vacutainer tube)	5.1 grams
7	Blood, Femoral	EDTA (lavender top vacutainer tube)	1.6 grams
8	Urine	No Preservatives	3.7 grams
9	Urine	No Preservatives	3.6 grams
10	Urine	No Preservatives	3.7 grams
11	Vitreous Humor	No Preservatives	3.6 grams
12	Bile	No Preservatives	3.4 grams
13	Gastric Contents	No Preservatives	77.2 grams

I certify that the specimen(s) identified by the name and/or referring number above have been examined upon receipt, determined to be acceptable unless otherwise noted, analyzed in accordance with New York State Health Department regulations, and that the results set forth are for those specimen(s). Documentaion of chain of custody throughout collection, transport, laboratory receipt and testing was reviewed and found to be acceptable, unless otherwise noted. Positive specimens are retained for a minimum of one year, unless otherwise requested This report has an associated forensic toxicology case file.

Thomas G. Rosano PhD, DABFT
Certifying Scientist (Print)

Certifying Scientist (Signature)

06/10/2016
Date