

FORCE ANALYSIS

Name of deceased: Michael Brown, B/M, age 18

Department involved: Ferguson Police Dept.

Shooting location: Canfield Drive, Ferguson, MO

Date of shooting: August 9, 2014

Time of shooting: Approx. 12:00 pm

Professor William Harmening
Washington University in St. Louis
April 26, 2017

STATEMENT OF QUALIFICATION

My qualifications for providing expert witness testimony in the area of police practices and use of force derives from two sources, one occupational, and the other academic. I have been a law enforcement officer for approximately 36 years, both in a patrol and investigative capacity. I am a graduate of the Illinois State Police Academy (1982), and since 2001 have served in the capacity of Chief Special Agent for the Illinois Securities Department. I am a former police academy instructor in Illinois, and was responsible for all behavioral science instruction to Illinois police cadets completing their initial basic training. This instruction included the psychology of force, especially deadly force. Additionally, I was a member of the Central Illinois Critical Debriefing Team, and became a member after my own officer-involved shooting.

Over the course of my law enforcement career I have attended many different types of training, including investigative methods and homicide investigation. Additionally I have qualified annually with my duty weapon, and have periodically attended law updates on the use of force. I have also participated in many different types of police training as an instructor or co-instructor.

In terms of academic qualifications, I am currently the program coordinator of the Forensic Psychology certificate program at Washington University in St. Louis, one of the Nation's top research universities. In this capacity I also serve as lead instructor for the following courses:

- Introduction to Forensic Psychology
- Crisis Intervention
- Criminology
- Correctional Psychology
- Investigative Psychology

Two of these courses, Introduction to Forensic Psychology and Crisis Intervention, deal extensively with the subject of police use of force. Additionally I have authored four peer-reviewed textbooks, as follows:

1. Forensic Psychology (2015, Pearson Publishing). This widely used textbook includes an extensive treatment of the subject of force using the most current research.
2. Crisis Intervention: The Criminal Justice Response to Mayhem, Chaos, and Disorder (2014, Prentice Hall). Also includes an extensive treatment of the subject of force.
3. Serial Killers: The Psychosocial Development of Humanity's Worst Offenders (2014, Charles C. Thomas).

4. The Criminal Triad: Psychosocial Development of the Criminal Personality Type (2010, Charles C. Thomas).

As a law enforcement officer, I have testified hundreds of times, including many times as an expert witness in the area of securities fraud in both state and federal courts. Because I only began providing expert witness services in the areas of police practices and use of force in early 2015, thus far, all cases worked (approx. 12 cases) have either settled prior to testimony or are currently active and progressing in that direction. Because of the complex nature of securities fraud cases, I have been certified in both state and federal court as an expert, and have routinely testified dually as both a case agent and an expert. Cases in which I have testified include the following:

United States v. Anthony D'Agostino – Federal District Court, Rockford IL

United States v. Frank Beaudette – Federal District Court, Rockford IL

United States v. James K. Jedynek – Federal District Court, Chicago IL

United States v. Nevin Gillette – Federal District Court, Rockford IL

Concurrent Admin action in the Matter of ING, Inc.

United States v. Charles H. Landwer – Federal District Court, Chicago IL

United States v. Frank T. Devine – Federal District Court, Chicago IL

Concurrent Admin action in the Matter of LaSalle Street Securities

United States v. Dennis R. Bailey – Federal District Court, E. St. Louis IL

United States v. David E. Weiskopf – Federal District Court, Springfield IL

United States v. Samuel O. Edem – Federal District Court, Peoria IL

United States v. David E. Freitag – Federal District Court, Rockford IL

United States v. Gregory D. Wilson – Federal District Court, Springfield IL

United States v. Bach Energy Corp. – Federal District Court, Springfield IL

United States v. Vernon Brock – Federal District Court, Springfield IL

United States v. Raymond J. Masten – Federal District Court, Peoria IL

United States v. Terry R. Spirk – Federal District Court, Rockford IL

People v. Kevin G. Carney – Circuit Court of Dupage County IL

Concurrent civil forfeiture action, Will County IL

People v. Craig Gutowsky – Circuit Court of Dupage County IL

People v. Michael Gale – Circuit Court of Dupage County IL

People v. Brian Falatovich – Circuit Court of Will County IL

People v. Eric Jaglicic – Circuit Court of Dupage County IL

Concurrent civil forfeiture action, Will County IL

People v. Paul Litwicki – Circuit Court of Cook County IL

People v. William H. Loftus – Circuit Court of Dupage County IL

People v. Ray W. Hager – Circuit Court of Whiteside County IL
People v. Robert Schillaci – Circuit Court of Cook County IL
People v. Michael B. Wojnowski – Circuit Court of Dupage County IL
People v. Ronald Nitz – Circuit Court of Will County IL
People v. Mark Pruss – Circuit Court of Will County IL
People v. Jeffrey Barc – Circuit Court of Cook County IL

In addition to my work and testimony in the above cases, in my capacity as Chief Special Agent, I supervise a cadre of special agents in Springfield and Chicago, including the supervision of all criminal, civil forfeiture, and administrative cases worked by the department.

The report to follow was completed using the reports and incident scene diagrams created by the St. Louis Police Department; all witness statements; reports created by the St. Louis County Medical Examiner's Office; all statements by Officer Darren Wilson; and transcripts of all testimony given to the St. Louis County Grand Jury in their investigation and review of this matter. Additionally, I used relevant academic research and legal analyses to guide my conclusions.

My fees for this work are \$150 an hour for report and exhibit preparation, and \$200 per hour for testimony. To date I have been paid \$3,675 for my services.

INTRODUCTION

On August 9, 2014, at approximately noon, Ferguson police officer Darren Wilson encountered two individuals—Michael Brown and Dorian Johnson—walking eastbound in the street on Canfield Drive in Ferguson. As Wilson drove past the two, he ordered them to use the sidewalk. The two men continued walking, and after some verbal exchange, Wilson put the vehicle in reverse and backed up just past Brown and Johnson to cut off their path of travel by angling the police vehicle diagonally in the street. A physical exchange ensued between Brown and Wilson through the window of Wilson's vehicle. At some point during the exchange, Wilson drew his duty weapon and fired one shot while Brown's hand was on or near the gun, most likely as a defensive reaction. The shot badly injured Brown's hand and embedded itself in the vehicle's door. Brown ran eastbound on Canfield Drive. As he did, Wilson fired a second shot in his direction and missed. Wilson then pursued Brown on foot. Brown ran only a short distance before stopping and turning back toward Wilson. At that point, and at close range, Wilson fired his weapon ten more times, hitting Brown multiple times, including a shot to the head that killed him instantly.

The purpose of this analysis is to recreate the events that led to Brown's death, and to offer an opinion as to whether Wilson's use of deadly force was justified. The analysis was completed using the statements of Darren Wilson, witness statements, the record of physical evidence obtained in the case, and an independent reconstruction of the incident scene.

MICHAEL BROWN'S WOUNDS

Michael Brown suffered seven (7) gunshot wounds during the encounter. The first occurred inside the vehicle when Wilson fired while Brown's right hand was in close proximity to the gun. The bullet entered the palm of the hand at the base of the thumb, travelled approximately two inches, and exited near the wrist. Brown suffered three gunshot wounds to the upper and lower right arm; one from the back, one from the front, and one with an undetermined front or back point of entry. There were then three wounds to the head, face, and chest. The shot to the head entered at the very top of Brown's head and moved downward through the brain. Another shot entered through the forehead and also proceeded downward before existing through the right lower jaw and re-entering Brown's body through the right upper chest. Finally, the third shot entered at the right upper chest and also continued downward into the rib area.

On August 10, 2014, Dr. Michael Baden conducted an independent autopsy.¹ He concluded the following about the fatal shots to the head and face:

“Given Mr. Brown’s height, his head had to be bent downward with his face near parallel to the ground and the top of his head facing the shooter when the gun was discharged to produce the head and face tracks. In that bent over position, the three bullets would had to have travelled approximately parallel to the ground to produce the head, forehead, and chest perforations only inches apart and then continue in similar trajectories downward and to the right. The exit perforation of the facial wound at the right lower jaw then lines up with the re-entrance wound through the clavicle.”

This information is important, and leads to the reasonable conclusion that when the final fatal shot was fired, Brown was already on his way to the ground. This will be discussed further and in proper context in the sections to follow.

WILSON’S INJURIES

Much has been said about Wilson’s injuries, but in reality there were no injuries. He did appear to have some slight redness around his left cheek, however pictures of Wilson both before the incident, and months later, show that his cheeks are often red. His diagnosis at the hospital was “unspecified injury to face and neck.” In other words, there were no specific injuries noted. X-rays were all “unremarkable.” There is a scratch noted on his neck, however no scratch is visible in the picture, only a small area of very faint redness. There is an area of discoloration on his right cheek, however this side of his face was never exposed to Brown. Furthermore, a picture of Wilson three months later during his ABC interview shows this same area of discoloration still present (see exhibit no. 1). It would appear to be a naturally occurring facial feature.

Truly, it seems unrealistic to suggest, as Wilson testified, that Brown was attacking Wilson in a violent manner with his closed fists and striking him multiple times in his face. Brown weighed nearly 300 lbs. A man of that size would have caused considerable physical damage with a closed-fist attack. Wilson had no hand or knuckle marks, no bleeding, no scratching, and no dark bruising in the days following the incident. In pictures taken either later that day or the next, there is already no indication whatsoever of redness or swelling (see exhibit no. 2). There

¹ This autopsy was requested by the family of Michael Brown. Autopsies were also conducted by the St. Louis County Medical Examiner and the U.S. Dept. of Justice. There were no significantly different conclusions reached by the three pathologists.

is simply no indication that Brown ever struck Wilson beyond possibly making physical contact while struggling to get free of Wilson's grasp (see analysis to follow).

SHOTS FIRED FROM INSIDE OR NEAR THE VEHICLE

After telling Brown and Johnson to get out of the roadway, both of whom continued walking, why Wilson chose to put his vehicle in reverse, and then quickly back up to cut off their path of travel, is in dispute. There were three accounts given to investigators and the grand jury:

1. *Dorian Johnson* – Johnson provided both the detectives and the grand jury a consistent account of Wilson stopping his police vehicle next to them in the street and stating “*get the fuck on the sidewalk.*” He stated that Wilson then proceeded on, but almost immediately they heard his tires screech, as he quickly backed the vehicle up and cut off their path or travel. Johnson stated that Wilson then asked “*what did you say?*” Immediately following this comment the exchange between Wilson and Brown began.²
2. *Sgt. William Mudd* – When Mudd gave his statement to detectives (Aug. 19th), he stated that Wilson never told him exactly why he backed up his vehicle. In fact, later in the interview he stated that he had no idea if or when Wilson learned about the purported theft from the Ferguson Market, confirming that Wilson had not provided that as his reason for backing up. In his grand jury testimony, Mudd provided a slightly different account. He stated that Wilson stated to him, “*They told me to fuck off. I slowed my car down and told him, hey, all you got to do is get out of the street and get on the sidewalk.*” According to Mudd, Wilson stated that Brown approached his window at that point and started hitting him.³
3. *Darren Wilson* – On August 10th Wilson provided detectives his first account of the incident. He stated the following:

“Um, they had been walking in the middle. I remember seeing two cars I believe go around then and they hadn’t moved. I pulled up to ‘em, stopped with them about at my hood as they kept walking towards me. I told ‘em, ‘hey guys, why don’t you walk on the sidewalk.’ The first one said, um, ‘we’re almost to our destination’ and pointed this direction. So, I guess that’s northeast...I said ‘Okay, but what’s wrong with the sidewalk.’ And then that was as they were passing my window the second subject said, ‘fuck what you have to say’...and then after that I put the vehicle in reverse, backed up about ten feet to ‘em, and attempted to open my door. Prior to backing up I did call out on the radio. I said ‘Frank 21 out with two, send me another car.’”

² Grand Jury transcripts, Volume IV, pages 45-50

³ Grand Jury Transcripts, Volume V, pages 31-32

In his grand jury testimony, Wilson provided a different account.⁴ He testified that as Brown and Johnson continuing walking past his vehicle after being told to get out of the street, he could see in his mirror the cigarillos in Brown's hand and the color of Johnson's clothing. He stated that it was then that it "clicked" that Brown and Johnson were the suspects in the theft case at the Ferguson Market. It was then, according to Wilson, that he put the vehicle in reverse.

It seems obvious, given the consistency between Wilson's first statement to detectives and Sgt. Mudd's testimony, that Wilson did not back up his vehicle because he suspected Brown and Johnson of being involved in the stealing case at the Ferguson Market. He appears to have made the decision to maneuver his vehicle in reverse based only on a comment made by either Brown or Johnson. It is important to note that Wilson did not advise his dispatcher that he would be out with the two suspects from the Ferguson Market, as proper protocol would have required. He advised only that he would be "*out with two,*" and to send another car for backup. After backing up his vehicle then, the exchange between Wilson and Brown began.

Wilson was very clear in describing the sequence of shots taken from inside or near the vehicle. He described how, with Brown attempting to gain control of the weapon and his hand on the barrel, he pulled the trigger only to hear a *click*. A second pull of the trigger immediately after the first produced the same result. A third attempt and the gun fired. Wilson described how Brown, having been hit by the shot, appeared to check his body for injuries, and then again began attacking him through the window of the vehicle. Wilson attempted a second shot, but once again heard only a *click*. We know that Brown's hand was not on the gun at this time because Wilson described how he next "*racked the slide,*" something that would not have been possible had Brown been holding onto the gun in any manner. Racking the barrel involves manually pulling the slide to the rear and allowing it to spring forward. This action ejects any bad or jammed rounds, and loads a new round into the chamber. Wilson stated that he could not figure out why his gun was not firing, and thus made the decision to clear the chamber and allow a new round to be loaded. After completing this maneuver, he again pulled the trigger and the gun fired. He was not sure if this shot hit Brown, although he assumed he missed since he saw dust in an area behind Brown, purportedly from the bullet hitting the ground. He clarified for the grand jury that the sequence of trigger pulls was "*click, click, fire, click, fire.*"

Given the evidence to follow, we can conclude with certainty that there was no second shot from inside the vehicle with Brown purportedly re-initiating his attack through the window. Like all semi-automatic weapons, Wilson's Sig Sauer P229 (.40 cal.) ejects its rounds to the right and

⁴ Grand Jury transcripts, Volume V, page 209

rear at a mean angle of -48.61 degrees, and a mean distance of 7 feet.⁵ The second spent casing was located on the opposite side of Canfield drive from the vehicle, approximately 15 feet away. It is simply impossible for Wilson to have shot from inside the vehicle, leaning toward the passenger side door with the gun raised to a level plane, and have the casing end up outside the vehicle and across the street. The casing would have ejected into the passenger side dashboard area. It is not ejected with enough force to rattle around inside the vehicle and then exit through the window. Making it even more impossible is Wilson's account that when the second shot was fired, Brown had returned to the window to reinitiate his attack. With Brown's very large frame in the window, it would have been nearly impossible for a spent casing to fly through to the outside, and with enough force to end up on the opposite side of the street. Furthermore, at near point blank range, it would have been just as impossible for Wilson to actually miss Brown, as this bullet did.

The bullet from the second shot was found embedded in the building at 2960 Canfield Drive. From the location of the spent casing, and the trajectory of the recovered bullet, we can say with certainty that Wilson was either outside the vehicle, or had his arm extended outside the window and pointing toward the rear of the vehicle in a southeasterly direction when he fired this shot. There is simply no possible trajectory from anywhere inside the vehicle to the spot where the bullet embedded. We can also conclude that there was distance between Brown and Wilson when the shot was fired. Had Brown returned to re-initiate his attack, Wilson would not have exposed his gun outside the window. Nor could he have exited the vehicle for the same reason he was unable to just moments before. Regardless of whether Wilson was outside the vehicle, or had just his arm extended outside the window, it is reasonable to conclude that Brown was moving, which is why the shot was missed, and that he was moving away from Wilson as he attempted to escape. This contradicts Wilson's version of events. These conclusions are supported by numerous eyewitnesses.

1. Witness no. 37

"Okay. So by then I seen him holding onto him, by then...a shot fired. Pow. Michael Brown get loose. After he get...shot, from the officer...holding on to him from inside his vehicle. He got hit. And that's when he got approximately ten-fifteen feet away...the officer let more shots go from inside the vehicle..."

2. Witness no. 43

⁵ Lewinski et al. (2010). Fired cartridge case ejection patterns from semi-automatic firearms. *Investigative Sciences Journal*, vol 2(3).

In response to the interviewer's question, "which shot do you think you saw?" The witness responded, *"The one when he got out of the car, and the one when he first started runnin'."* This witness is somewhat difficult to understand due to the disjointed nature of his/her answers, but they clearly describe a shot by Wilson outside the vehicle after Brown was already running away. The witness believed this to be the first shot because they perceived the actual first shot inside the vehicle as a Taser shot.

3. Witness no. 54

"And then after he ran, the police officer got out of his truck and shot him. And then I couldn't see Mike Brown anymore so I guess the officer got out of his truck, a which he was already out, he ran down the street and shot some more. But I couldn't see anything past the building right here."

This witness clearly describes a shot being taken outside the vehicle before Wilson and Brown disappeared from his/her sight down the street.

Finally, in a report filed by a Detective Sergeant from the St. Louis County Police Department (name redacted),⁶ the detective describes an account of the incident given to him by Sgt. William Mudd from the Ferguson Police Department. By this time, Wilson had left the scene and returned to the Ferguson Police Department. The account given by Mudd includes no mention of a second shot from either inside or outside the vehicle in close proximity. It can only be concluded that Wilson said nothing to Mudd about a second shot when he first recounted the incident while still at the scene. Furthermore, it is reasonable to conclude that he did not mention a second shot because he knew this shot was problematic, having taken the shot at a time when Brown was not a threat.

In summary, based on the evidence and eyewitness accounts, we can conclude the following about what transpired in or near Wilson's police vehicle:

1. Michael Brown did not attack Wilson through the window of the vehicle. Rather, after Wilson grabbed Brown through his window, Brown struggled to free himself. There was likely significant physical contact between the two, but given Wilson's near complete lack of injury, it can be concluded that Brown was not striking Wilson in the face with his closed fists as Wilson described and testified to.

⁶ Report no. 14-43984. There was only one detective sergeant recorded at the scene.

2. Very quickly after the struggle began, Wilson drew his weapon when circumstances did not justify the use of deadly force. When he did, Brown attempted to push the gun away. This is supported by the fact that at no time did Brown attempt to disarm Wilson, but instead, attempted only to force the muzzle of the gun away from his direction. In fact, Wilson never asserts that Brown attempted to wrestle the gun away from him.
3. After drawing his gun, Wilson made the decision to fire in Brown's direction, again, at a time when circumstances did not justify his use of deadly force.
4. After Wilson fired the first shot, Brown stood momentarily stunned, his right hand badly injured. At the same time, Wilson recognized that his gun had jammed and racked the slide to eject the jammed casing. Brown likely perceived this action as Wilson preparing to fire again and ran in an eastwardly direction on Canfield Drive. Wilson immediately either exited the vehicle or extended his arm out the window and fired the second shot at Brown as he ran. The round missed and embedded in the apartment building at 2960 Canfield Drive.
5. Wilson then pursued Brown eastward on Canfield Drive with his gun drawn.

THE FINAL MOVEMENT TOWARD WILSON

Wilson described for the grand jury the moment when Brown purportedly turned back toward him and charged. At this time, Brown was badly injured in his right hand from Wilson's first shot;

"He turns, and when he looks at me, he made like a grunting, like aggravated sound and he starts, he turns and he's coming back towards me. His first step is coming towards me, he kind of does like a stutter step to start running. When he does that, his left hand goes in a fist and goes to his side, his right one goes under his shirt in his waistband and he starts running at me."

There are a number of issues raised by Wilson's account. First, and most importantly is the question, does a man moving forward toward a police officer justify the officer's use of deadly force? The three critical factors that must be weighed are 1) is the individual moving in an aggressive manner, 2) is the individual armed with a weapon, and 3) if the individual is not armed, does the officer have a less lethal form of force available to incapacitate the individual if necessary.

To the first question, it really is not known to what extent Brown moved forward in an aggressive manner, if at all. By this time he was badly wounded, likely out of breath and significantly weakened, and was facing a police officer with his gun pointed directly at him.

Furthermore, Brown was wearing very loose pants, a circumstance that would have made charging difficult at best. Wilson has a problem reconciling his account of Brown's purported "charge" to the known time duration and distance of the final ten shots. We know from the captured audio that Wilson fired six times, followed first by a three second pause, and then by the final four shots. From beginning to end, the ten shot sequence, including the pause, took 6.57 seconds. But here we have a problem. Wilson testified as follows⁷:

"As he is coming toward me, I tell, keep telling him to get on the ground, he doesn't. I shoot a series of shots. I don't know how many I shot, I just know I shot it."

"At this point I start backpedalling and again, I tell him to get on the ground, get on the ground, he doesn't. I shoot another round of shots. Again, I don't recall how many it was or if I hit him every time. I know at least once because he flinched again. At this point it looked like he was almost bulking up to run through the shots, like it was making him mad that I'm shooting at him."

"Well, he keeps coming at me after that again. During the pause I tell him to get on the ground, get on the ground, he still keeps coming at me, gets about 8 to 10 feet away. At this point I'm backing up pretty rapidly, I'm backpedalling pretty good because I know if he reaches me, he'll kill me."

"And when he gets about that 8 to 10 feet away, I look down, I remember looking at my sites and firing, all I see is his head and that's what I shot."

The first obvious problem with Wilson's account is that he describes three separate clusters of shots with pauses between each. We know from the audio that there were only two clusters of shots, which is further confirmed by two distinct groupings of empty shell casings. It is also important to note that Wilson describes Brown as charging in one continuous action without stopping or slowing down. Wilson never deviates from this account. When he was interviewed by the Detective Sergeant from the St. Louis County Police Department, the detective recorded the following in his report⁸:

"As P.O. Wilson was running, Brown stopped and turned around. According to P.O. Darren Wilson, Brown had an "intense" and "psychotic" look on his face. Brown immediately placed his right hand into the waistband of his pants. P.O.

⁷ Grand jury transcript, Volume V, page 227-229

⁸ Pages 14-15 (of 1114) of SLCPD consolidated investigative report

Darren Wilson stopped, leaving a gap of approximately 30 feet. P.O. Darren Wilson gave Brown a command to get on the ground. Due to the recent assault on P.O. Darren Wilson and Brown's action of placing his hand near his waistband, P.O. Darren Wilson still had his firearm in his hand and had it pointed at Brown. Brown then screamed something inaudible and began to "charge" P.O. Darren Wilson. P.O. Darren Wilson stated he began to back pedal with attempts to create or keep the distance between himself and Brown. P.O. Darren Wilson explained that he knew if Brown reached him, he would "be done" as Brown had already overpowered him once during the assault inside of the patrol vehicle.⁹

P.O. Darren Wilson continued to give Brown commands to stop; however, Brown ignored them. Once Brown got within approximately 15 feet of him, P.O. Darren Wilson indicated he discharged five rounds to stop the threat. According to P.O. Darren Wilson, this did not slow Brown down and he continued to advance. P.O. Darren Wilson discharged two additional rounds; however, Brown continued to advance. P.O. Darren Wilson stated that Brown then leaned forward and appeared as if he (Brown) was attempting to "tackle" him. P.O. Darren Wilson then discharged one additional round to stop the threat. Brown then fell to the ground, ending the threat."

The idea that Brown "charged" before the first shots, and stopped only when he collapsed after the final shot, simply does not reconcile with what we know about those final ten shots. Referring to exhibit no. 4, we see that Brown's body was approximately 29' from the light pole that essentially every witness, including Wilson himself, identified as the point where Brown stopped and turned back toward Wilson. Research tells us that an adult male runs at an average speed of 12-15 mph for short distances, and jogs at an average speed of 8.3 mph.¹⁰ Using a conservative estimate that Brown moved forward at 10 mph, in 6.57 seconds he would have covered approximately 96 feet in a continuous charge, as Wilson described. We know with certainty that he covered only 29 feet, using the light pole as a starting point. So it is not possible to reconcile his location after he collapsed with Wilson's account.

A further problem with Wilson's account is his assertion that he stopped approximately 30-feet short of Brown, and that he shot the final four shots when Brown was 8-10 feet away. If we look at the location of the empty shell casing closest to the light pole, Wilson's first shot of the

⁹ There is no evidence to support the idea that Brown "overpowered" Wilson while Wilson was still in his police vehicle. Wilson was able to unholster his weapon and fire one round, badly injuring Brown, while he, Wilson, exited the vehicle unharmed and with no noticeable injuries.

¹⁰ Weyand, P. (2010). *Journal of Applied Physiology*, Jan. 2010.

final ten is approximately 24'-5" from the light pole. Given what we know about the ejection patterns of semi-automatic handguns—they essentially all eject to the right and back at a mean angle of -48.61 and a mean distance of 7 feet—we can approximate Wilson's distance from Brown at between 12 and 17 feet when the first shot was fired, and before Brown began his advance.

As for the nature of Brown's advance, there are two additional pieces of evidence that refute the idea of a "charge" by Brown. There were two clusters of Brown's blood located on the pavement (see placards 19-20, exhibit no. 4). The first (no. 20) is approximately 14'-2" from the light pole. This cluster shows a grouping of blood droppings in one location, indicating that Brown was stationary at this point. A few feet later we see the second cluster of blood evidence (no. 19). This cluster indicates movement forward, but given the closeness of the blood droplets, it does not support the idea that Brown was charging toward Wilson with any significant speed. So we can say with certainty that when Brown turned at the light pole, Wilson began shooting almost immediately. Brown moved forward slowly, likely a reaction to being shot multiple times, as Wilson moved backward slowly. Brown then stopped in the area of the first cluster of blood evidence, thus the three-second pause in the audio, and then continued forward. At this point Wilson fired the final four shots. We can reasonably conclude that what eyewitnesses observed as Brown charging, was in fact Brown falling forward. From the location of the first cluster of blood droplets to the point where Brown collapsed is slightly less than 15-feet. Given that Brown was already well into his fall when the final shot was taken, we can conclude that after stopping his forward movement following the first six shots, Brown took only a few steps more before beginning his fall to the ground.

To the question of whether Wilson believed Brown was armed, it is interesting that in front of the grand jury, Wilson described how Brown put his right hand under his shirt. This is a common strategy when police officers shoot unarmed suspects. It supports a state-of-mind narrative by the officer that the suspect, especially an African-American suspect, was possibly armed with a gun in their waistband. But Wilson has a problem using that narrative in this case for a number of reasons. First, if we are to believe his account, this means that Brown struggled violently, not once, but twice, through the vehicle's window with a gun in his waistband. We can see in the video from the Ferguson Market, as well as the images of Brown's body in the street, that it was entirely impossible to have had a gun secured in his waistband when his pants were being worn so loosely. Furthermore, by this time, Brown's right hand was severely injured by the first gunshot and bleeding.

Consider Wilson's words to Sgt. Mudd when he arrived on the scene. According to his own testimony,¹¹ Wilson advised Mudd that he had to shoot Brown because Brown grabbed his gun. He said nothing about shooting Brown because he feared Brown was armed. That concern was never even mentioned. Furthermore, when Wilson was asked in the grand jury what his justification was for using deadly force, he responded that it was the fact that Brown had grabbed his gun. Again, nothing said about a fear or suspicion that Brown was armed. And finally, when Wilson testified to what he did after he shot Brown, not surprisingly, he says nothing about searching Brown for a gun, nor does he direct the other two responding officers to search Brown for a weapon. In fact, he says nothing about even approaching Brown. Retrieving and securing a weapon would have been his first priority had he truly believed Brown was armed.

And finally, we know for certain from Wilson's own testimony that he at no time attempted to use a less lethal form of force against Brown after he stopped and turned back at the light pole, especially his pepper spray, which likely would have taken Brown to the ground almost immediately, given his physical condition and the extent of his injuries.

We can thus conclude the following regarding Brown's final movement toward Wilson and the final ten shots:

1. Wilson chased Brown until Brown stopped at the light pole and turned back toward him.
2. Wilson stopped approximately 12-17 feet from Brown with his gun raised.
3. If Brown did place his right hand under his shirt, a hand that was severely injured and bleeding, there is no evidence whatsoever that would have led a reasonable officer to conclude that Brown was armed. Given the analysis provided above, it is reasonable to conclude that this was a later fabrication by Wilson to support a favorable state-of-mind narrative.
4. Witnesses testified that Brown raised his arms. Whether he raised them high in surrender, or to his side in defiance, it is clear that Wilson fired six times before any significant movement forward by Brown, striking him multiple times. Given the location of the empty casings, it does appear that Wilson moved backwards while shooting, but only a short distance. It is reasonable to conclude that Brown may have moved forward as Wilson moved backwards, but it is not reasonable to conclude that he was charging at this time, given the short distance between them.
5. After being shot multiple times, Brown likely stood stunned and in shock. This would account for the three second pause in the shooting. Brown then began the movement forward that a number of the witnesses observed. Wilson, who was backing up, shot the

¹¹ Grand jury transcript, Volume V, page 236

final four shots as Brown approached. This would account for the second cluster of four empty shell casings. There is nothing to prove definitively that Brown was charging at this time. By now he was shot multiple times and seriously injured. It is reasonable to conclude that his forward movement was actually caused by the momentum from falling after the first volley of six shots. When Wilson fired the final fatal shot, Brown was badly wounded and already falling and close to the ground, as evidenced by the location and trajectory of the final shot. Furthermore, at least one of the exited bullets was found next to Brown's body, indicating a probable downward trajectory through Brown's body and into the street almost directly beneath him.

6. At no time did Wilson attempt to use a less lethal form of force against a severely injured Brown, neither his pepper spray nor his expandable baton.

REASONABLENESS STANDARD

There are two U.S. Supreme Court cases that restrict the use of deadly force by the police. In *Tennessee v. Garner*,¹² the Court ruled that "*deadly force...may not be used unless necessary to prevent the escape and the officer has probable cause to believe that the suspect poses a significant threat of death or serious bodily harm to the officer or others.*" Then in *Graham v. Connor*,¹³ the Court imposed a *reasonableness* standard for measuring the threat. The Court instructed that three questions be asked in determining the reasonableness of an officer's actions:

1. What was the severity of the crime the suspect committed?
2. Did the suspect present an immediate threat to the safety of the officers or the public?
3. Was the suspect actively resisting arrest or attempting to escape?

Regarding the severity of the crime, when the exchange began at Wilson's vehicle, Wilson was unaware that Brown and Johnson were involved in ANY crime. Even if the activity at the Ferguson Market were a crime, it was a misdemeanor offense, and Brown was a threat to no one, including Wilson. Further, if Wilson had no knowledge or suspicion of Brown's involvement in the incident at the Ferguson Market, then there was no probable cause for an arrest, and thus no possibility of Brown or Johnson unlawfully resisting arrest or attempting to escape. So the question is, given there was no suspicion of a crime or probable cause for an arrest by Wilson, did Brown pose a threat at any of the four points in this incident when shots were fired. Each shot cluster will be addressed separately.

¹² *Tennessee v. Garner*, 471 U.S. 1 (1985),

¹³ *Graham v. Connor*, 490 U.S. 386 (1989).

Shot cluster no. 1 (1 shot): Shot no. 1 was taken from inside the vehicle. It seems certain that Brown had his hand on Wilson's gun when the shot was fired, and it was this shot that caused the injury to Brown's right hand. There really are two questions that must be asked regarding this shot. First, was Wilson's decision to present the gun when he did justified? And second, was his decision to shoot when he did justified? To the first question, the evidence in this case, namely, certain witness accounts and Wilson's lack of visible injury, supports the conclusion that rather than attacking Wilson, Brown was trying to escape his grasp. It was entirely unreasonable for Wilson to present his gun at this point in the confrontation. There was no indication that Brown was armed with a weapon of any kind, nor did Wilson testify later that he suspected a weapon at this point. Even if we assume that Brown was attacking, Wilson still had at least three other alternatives available. He had both a wooden riot baton and his flashlight within his reach (see exhibit no. 5) and easier to access even than his gun. The other option was to simply put the vehicle in drive and pull forward a safe distance. For that matter, rolling up the power window would have accomplished the same thing had Brown been the aggressor. So to choose a deadly force option absent probable cause for an arrest and only to prevent Brown's escape, if that was Wilson's intent, was clearly unjustified. Even if Brown were the aggressor, which is not supported by the evidence, Wilson's use of deadly force falls short of the reasonableness standard when other less lethal options were available.

Regarding the second question, it is unfortunate that while the gun should not have been presented when it was, by doing so, Wilson created a deadly situation. We can conclude from Brown's actions, as described by Wilson, that rather than trying to disarm Wilson, Brown was instead trying to force the gun away from his direction at a time when Wilson was unlawfully holding him in his grasp. One can just as reasonably conclude that Brown, reacting to an unlawful detention and use of deadly force, was acting in self defense when he forced the muzzle of Wilson's weapon away from his direction.

Shot cluster no. 2 (1 shot): Based on the evidence provided above, we can conclude two things about shot no. 2; it was taken by Wilson from outside the vehicle, and at a time when Brown was running away from him. Given that Brown was unarmed—again, according to his own testimony, Wilson had no suspicion at this time that he was—and given that Brown posed no threat to anyone, including Wilson at this point, then Wilson's use of deadly force in this instance must be viewed as neither reasonable nor justified. It must also be pointed out that this shot, taken in a residential area with an apartment building in the line of fire, would have violated the policies of most police departments.

Shot cluster no. 3 (6 shots): It is not possible that Brown charged Wilson, and that Wilson only fired when Brown got within 8-10 feet away (or 15 feet...he provided both accounts at different

times). Wilson fired his first shot just 12-17 feet (approx.) from the light pole and before Brown moved toward him. He fired all six shots in rapid succession while Brown either stood in place or moved slightly forward. He could not have been charging or he would easily have overtaken Wilson during the three-second pause. For two reasons, these six shots fall short of the reasonableness standard. First, like shot no. 2, Wilson appears to have fired without a threat. At the most, Brown was walking forward while Wilson moved slightly backward. It is reasonable to conclude that Wilson began shooting before Brown moved at all. Furthermore, an officer can only use that level of force necessary to meet the threat. Wilson had two other less lethal weapons available to him, both on his duty belt. He had pepper spray and an expandable baton. Assuming Brown was walking forward, and assuming he was ignoring Wilson's commands to get on the ground, either of these weapons could have been used to gain Brown's compliance. Given that Brown was likely breathing heavy from running to the light pole, and given that he was already severely injured, pepper spray would likely have been effective in ending any forward advance and allowing Wilson to affect the arrest, notwithstanding the fact that there was no probable cause for a lawful arrest. Furthermore, an expandable baton is a dangerous and deadly weapon. Police officers are trained to use this device in a way that will incapacitate a suspect without causing severe injury. While pepper spray would have been appropriate had Brown simply been refusing to comply and submit to arrest, even if he were charging, which is refuted by the evidence, then the baton would have been an appropriate force option, as would the pepper spray. There is no evidence that leads to the conclusion that deadly force was necessary when the first six shots were fired.

Shot cluster no. 4 (4 shots): It seems clear that Brown was in fact moving forward—likely falling forward—following the three-second pause, only now he was severely wounded by multiple gunshots. Again, by this time, and long before, no reasonable officer would have suspected that Brown was armed. He was likely struggling to keep his pants up. There was simply no justification for Wilson using his gun, especially following the three-second pause when Brown was likely stumbling or falling forward rather than charging. Wilson has gone to great lengths to describe Brown's demeanor as if he were a crazed psychopath with super-human strength. But the fact is, Wilson too is a sizeable individual at 6'-4". He is also trained in defensive tactics and the use of the aforementioned weapons. Furthermore, Brown was severely injured after leaving the area of the vehicle. It is simply not enough to say that because he was a big guy, obviously angry, and making grunting sounds, Wilson's use of deadly force was somehow justified, even if Brown had charged prior to any of the ten shots being fired, a circumstance that is inarguably refuted by the evidence.

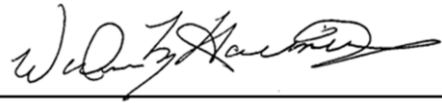
SUMMARY & CONCLUSIONS

Darren Wilson provided an account of the incident that included five major statements that are not supported by the physical evidence or his own statement to detectives, and in fact are refuted by them. They are:

1. Wilson did not back up his police vehicle because it “clicked” that Brown and Johnson were suspects in the incident at the Ferguson Market.
2. Wilson was not violently attacked by Brown and hit repeatedly with Brown’s closed fists. Wilson had absolutely no injuries to support this assertion.
3. Wilson did not “rack the slide” of his weapon and shoot a second shot from inside his vehicle. The trajectory of the bullet into 2960 Canfield Drive, as well as the location of the empty casing, makes this account impossible.
4. While a perception is difficult to disprove, there is no evidence to support Wilson’s purported fear that Brown was armed. In fact, the evidence supports the belief that this part of Wilson’s narrative is a later addition.
5. Wilson did not stop 30 feet from where Brown turned back at the light pole, nor did he wait until Brown had charged to within 15 feet to begin shooting. This account is inarguably refuted by the physical evidence, including the location of the first shell casing, the blood evidence, and the audio of the ten shots (see exhibit no. 6).

The death of Michael Brown was unnecessary and avoidable. It defies logic that a young man with no known criminal convictions or active warrants would risk his life by attacking an armed police officer through the window of his police vehicle; not just once, but twice according to Wilson, and then even a third time after already being shot multiple times. This incident began when Wilson made the decision to grab Brown through the window of his police vehicle, apparently only because of a comment that either Brown or Johnson made as they walked past Wilson’s vehicle on Canfield Drive. He then inappropriately drew his weapon and fired it at Brown, wounding him in the hand, without justification. This decision by Wilson only escalated the situation and caused it to quickly spiral out of control. Wilson then fired a second time, likely at Brown’s back as he ran. And then the final encounter at or near the light pole. The evidence is clear that Wilson fired six times almost immediately as Brown turned and stumbled toward him. Brown then stopped, as evidenced by the first grouping of blood droplets and the three-second pause in the shooting, and then likely stumbled forward toward Wilson. We can reasonably conclude, given the short distance of Brown’s final movement forward, that what some of the witnesses perceived as Brown charging, was in fact Brown being carried forward by the momentum of falling. Rather than subdue Brown at this point in a manner police officers are trained to do, Wilson instead decided to fire his weapon four more times, including a final fatal shot to the top of the head as Brown was already well on his way to the ground.

FOR THE REASONS CONTAINED HEREIN, IT IS THE CONCLUSION OF THIS EXPERT WITNESS THAT THE DEATH OF MICHAEL BROWN RESULTED FROM OFFICER DARREN WILSON'S EXCESSIVE USE OF FORCE, AND THAT THE USE OF DEADLY FORCE IN THIS SITUATION WAS NEITHER REASONABLE NOR JUSTIFIED.

A handwritten signature in black ink, appearing to read "William M. Harmening", written over a horizontal line.

William M. Harmening

04/26/2017

EXHIBITS

EXHIBIT NO. 1



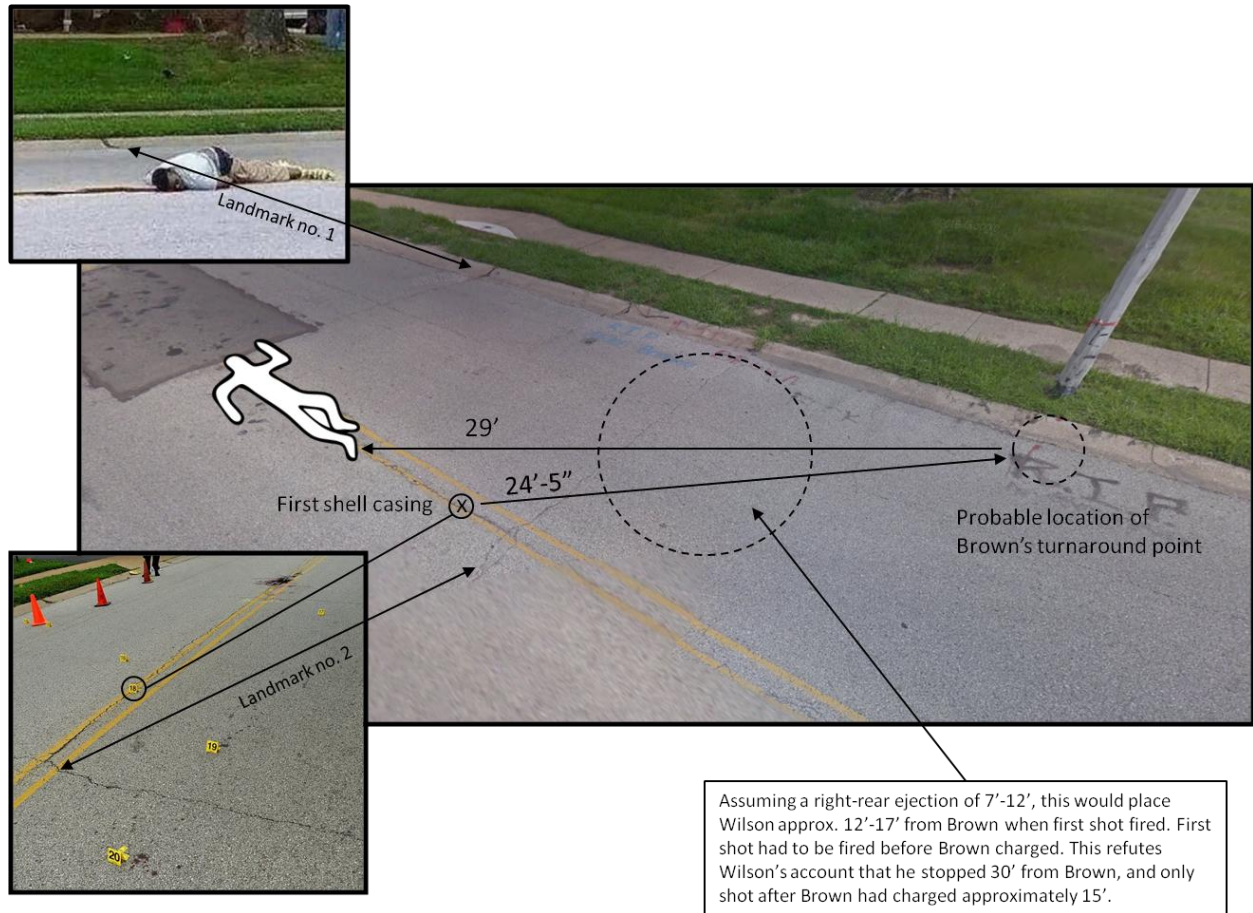
What was offered as an injury to the right side of Darren Wilson's face appears to be a naturally occurring facial feature. The picture on the right was taken the day of the incident. The picture on the left is from Wilson's ABC interview with George Stephanopoulos three months after the incident. Also, it is important to note that the right side of Wilson's face was the side positioned away from Brown.

EXHIBIT NO. 2



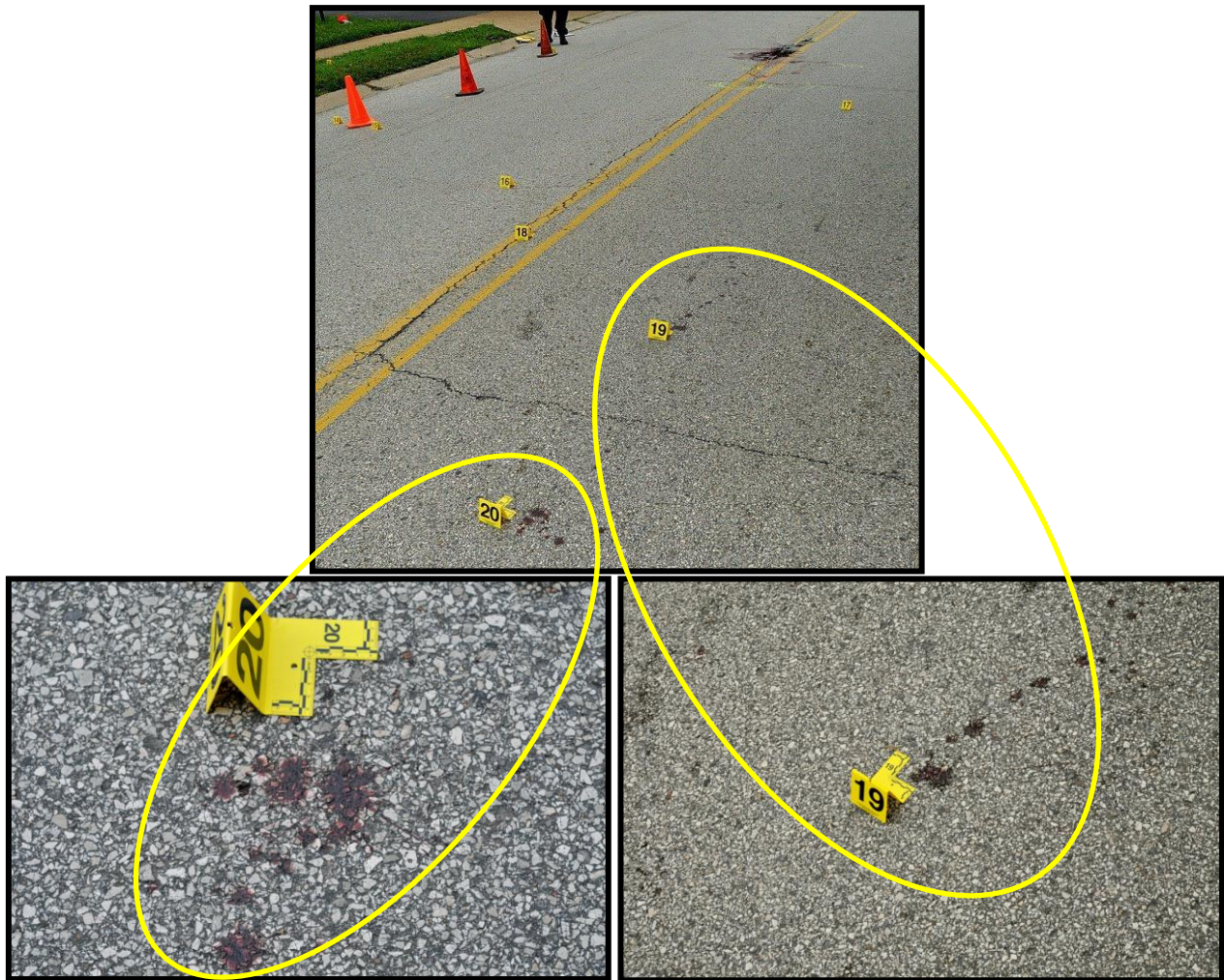
These pictures, taken either the same day as the incident or the next, shows that the slight redness that was present before is already gone. There are no scratches, no swelling, no knuckle or hand marks, and no bruising visible.

EXHIBIT NO. 3



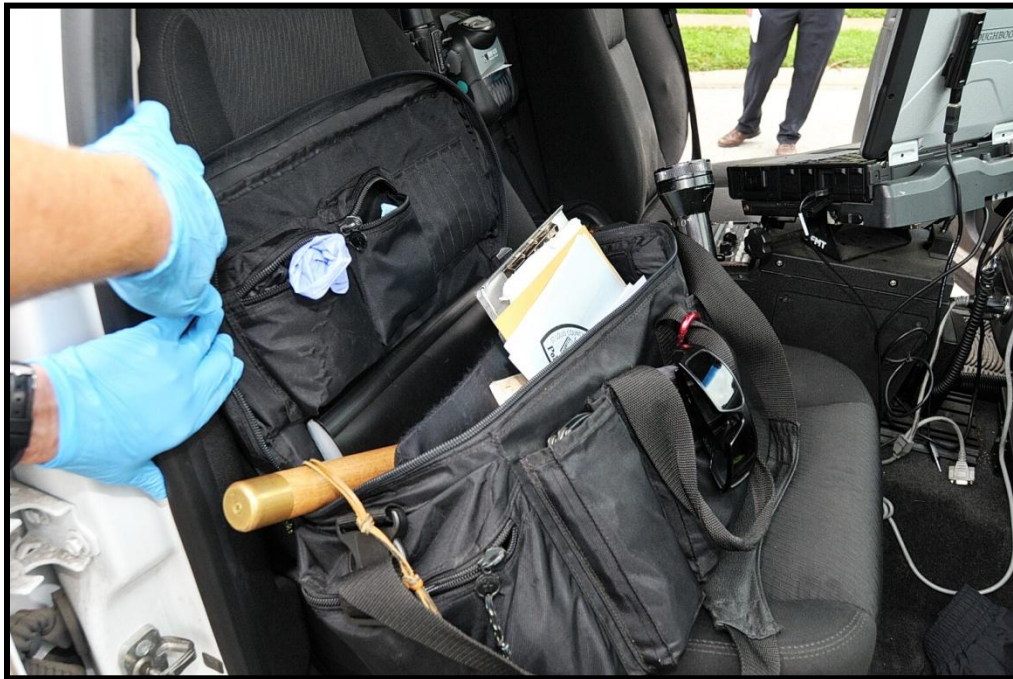
This exhibit demonstrates the probable location of Wilson when he took the first of the last ten shots. The empty casing and Brown's body have been properly placed using landmarks visible in the pictures and identified herein.

EXHIBIT NO. 4



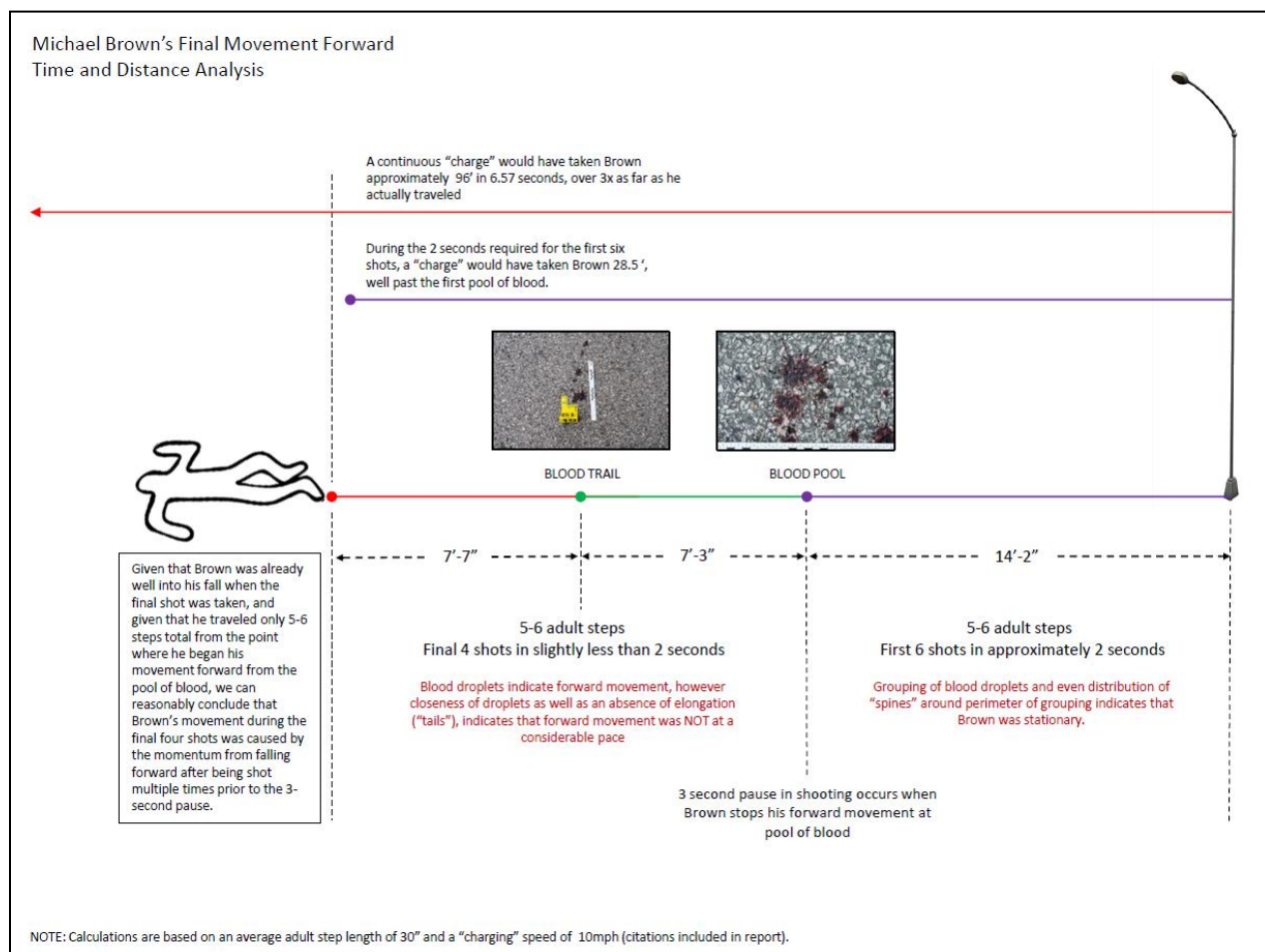
The exhibit shows two groupings of blood evidence. The first (placard 20) shows a number of blood droppings in one location, indicating that Brown was standing in place at this time and not charging. These bloodstains are approximately 14-feet from the light pole, and likely occurred during the 3-second pause in the shooting and before Brown allegedly charged at Wilson. The second grouping does show forward movement, however the closeness of the drops is not consistent with a rapid charging-type movement.

EXHIBIT NO. 5



This exhibit shows the interior of Wilson’s police vehicle. You can clearly see two weapons within reach—a wooden riot baton and a flashlight— that could easily have been accessed and used against a perceived attack by Brown.

EXHIBIT NO. 6



This exhibit provides a time and distance analysis of Brown's final movement toward Wilson based on the audio recording of the final ten shots.