IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
SAN ANTONIO DIVISION

MARITZA AMADOR, INDIVIDUALLY AND AS REPRESENTATIVE OF THE ESTATE OF GILBERT FLORES AND AS NEXT FRIEND OF MINOR R.M.F., VANESSA FLORES, MARISELA FLORES, CARMEN FLORES AND ROGELIO FLORES Plaintiffs, **V.** **BEXAR COUNTY, GREG VASQUEZ Individually and in his Official Capacity and ROBERT SANCHEZ, Individually and in his Official Capacity** Defendants.	**CIVIL ACTION NO.5:15-CV-00810RP**

AFFIDAVIT OF GRANT FREDERICKS

Before me the undersigned authority, personally appeared Grant Fredericks, who, after being by me duly swom, upon his oath deposed and testified as follows:

My name is Grant Fredericks. I am over the age of 21, of sound mind, competent to testify and have personal knowledge of the facts contained herein. All of my opinions and observations stated in this Affidavit are within my personal knowledge, and are based on my training, experience, and skills as a Certified Forensic Video Analysts, and are based on the matters I personally reviewed.

I am a Certified Forensic Video Analyst with extensive experience in the recovery, scientific examination, and evaluation of recorded video and audio information involving criminal and civil investigations in the United States (US), Canada, the United Kingdom (UK), and elsewhere. I have been continuously active in this science since 1984.

I attained an undergraduate degree in Television Broadcast Communications, with an emphasis on television engineering in 1982.

As a Forensic Video Analyst, I have processed thousands of videotapes and computer discs containing digital multimedia evidence for both criminal and civil cases. I have been providing expert testimony as a Forensic Video Analyst since the early 1990's. In the past ten (10) years, I have provided expert testimony in the field of Forensic Video Analysis more than one hundred and fifty (150) times in US and Canadian courts at all levels. I have testified as an expert in Forensic Video Analysis in Washington State, Oregon, Idaho, California, Nevada, North Dakota, Colorado, Connecticut, Arizona, Iowa, Missouri, Massachusetts, Pennsylvania, Michigan, Maine, New York, North Carolina, Ohio, South Carolina, Texas, Florida, British Columbia, Alberta, Manitoba, Ontario, New Brunswick, in the Yukon Territories, London, England, Auckland, New Zealand, in the Cayman Islands, and elsewhere.

From 1999 until December of 2012, I was the Principal Instructor for a series of Forensic Video Analysis courses offered by the Law Enforcement & Emergency Services Video Association (LEVA), a non-profit organization that has trained more than 2800 law enforcement video analysts from throughout the world.

From 2006 until December of 2012, I was the Team Leader for LEVA's Forensic Video Analysis Certification Program.

From 1998 until 2013, I was the Team Leader of LEVA's Curriculum Development Committee, and I continue as an active member of the Committee.

For the last thirteen (13) years, I have been a contract instructor of Forensic Video Analysis and Digital Multimedia Evidence Processing for the Federal Bureau of Investigation (FBI) National Academy in Quantico, VA.

From 2006 until 2014, I was the Digital Video Advisor to the International Association of Chiefs of Police (IACP) for its In-Car Video project and for its Digital Interview Room Standards project, which are funded by the US Department of Justice (DOJ). These programs are focused specifically on the development of compression standards for improved performance of digital video systems to ensure accurate presentation in court. I am a co-author of the national standards for mobile video recording systems for law enforcement.

From 2004 until 2016 I was an instructor of Forensic Video Analysis for the University of Indianapolis, IN. I have provided more than 2900 hours of classroom instruction to video analysts from throughout the world who have attended the university's Digital Multimedia Evidence Processing Lab. Students serve as video analysts, primarily from law enforcement agencies in the US, Canada, the UK, Australia, and Asia. Each of the courses focused on digital video and analog video engineering principles, and on the application of proper scientific methodologies for processing digital multimedia evidence, including scientific techniques used to determine image timing intervals in order to

accurately convert time-lapsed video into real-time video for synchronization of separately recorded video sources.

One of the courses that I taught at the University of Indianapolis is entitled Photographic/Video Comparisons, which focuses on the identification of vehicles, clothing, and weapons captured to digital and analog video recording sources. Vehicle identification examines class and unique characteristics of Questioned Vehicle, and often included headlight spread pattern analysis. I have taught this course in Canada at the British Columbia Institute of Technology, in the UK, and in Indianapolis for each of the last eighteen (18) years. This course is accredited by LEVA, which recognizes the course in its Forensic Video Analysis Certification Program. I now teach this course in various locations throughout the US and overseas.

A significant element of the Photographic/Video Comparison course material, and of the other courses that I teach, involves the science of Reverse Projection. Reverse Projection is the scientific process of obtaining accurate measurements and making accurate observations from photographic and video images. Reverse Projection has been used among imaging scientists, investigators, and in US courts regularly for more than forty (40) years as a tool to reproduce crime and accident scenes, in order to conduct measurements and to make other accurate observations.

Each of the courses that I teach focuses on reflection of light, pixel tracking, digital compression technology, macroblock analysis, motion vector analysis, color measurement/analysis, speed estimation, and on digital and analog artifact (error) identification for the sole purpose of ensuring accurate interpretation of video evidence. Since each of the signal and digital components could impact the meaning of images, the

majority of testimony that I have provided includes a narrative explanation of the events captured to the video recording system.

I am a former Police Officer with the City of Vancouver Police Department in Canada where I was assigned to the Criminal Investigation Division as the head of the department's Forensic Video Unit.

Introduction

On January 4, 2017, my office was first contacted by Mr. Wilson's office in relation to the death of Mr. Flores.

On January 12, 2017, I was retained as an expert in Forensic Video Analysis and was asked to examine video images and other documentation.

Specifically, in various communications, I have been asked to conduct an analysis of video images relating to the shooting of Gilbert Flores by Bexar County Deputies Sanchez and Vasquez, and to consider all technical variables relating to the video images in order to attempt to answer the following questions:

1. Deputy Vasquez states in his Deposition (P.93 Lines 5-9); and Deputy Sanchez states in his Deposition (P.37 Lines 5-20) that Flores was advancing towards him at the time he shot Gilbert Flores. Based upon my review of the video:
    a. Were Flores' feet moving?
    b. Were Flores' hands moving?
    c. Any signs he was advancing towards the officers?

2. Deputy Sanchez states in his Deposition (P.189 Line 19 - P.190 Line 23) that he saw Flores moving but the film did not capture Flores moving his hands.
    a. Is this a technical possibility?
    b. Any technical problems with the video that can be observed?
    c. If Flores was moving, can that be detected in the video?

3. Deputy Vasquez states in his Deposition (P. 92 Lines 5-16) that Flores was moving after he raised his hands in apparent surrender and before he was shot by Deputy Vasquez. If Flores was moving after his hands were raised and before he was shot by Deputy Vasquez, can that be detected in the video?

4. Deputy Vasquez states in his Deposition (P.93 Lines 17-23) that Flores' hand which contained the knife was moving after he raised his hands in the air and before Deputy Vasquez shot him. If Flores' hand which contained the knife was moving, can that be detected in the video?

5. Deputy Sanchez states in his deposition that the video/film did not capture everything that he was seeing at the scene. (P.190 Line 7-P.191 Line 19). Deputy Sanchez states that Flores was moving before he was shot and even though the video did not capture that, he was moving.
    a. If Flores was moving before he was shot, would that be detected in the video?
    b. Is there a technical possibility that Flores could have been moving, but not detected in the video?

6. As a follow-up to question 5 above, is there a difference between what is perceived on the video and what the perception of the officers would be?
    a. Would the angle of the video make the perception of what was seen by Deputy Sanchez and Vasquez different in any way?

b. Would the Deputies be able to see things which occurred which would not have been recorded on the video based upon their point of view and their position vs. the point of view of the video?

Since the questions posed relate to the events at the time of the shooting, this report does not detail the pre-shooting activity captured by the iPhone.

The iPhone video contains 50 minutes and 36.750 seconds of activity.

The shooting occurs at 7:37.373 into the video (7 minutes 37.373 seconds).

Summary

This Affidavit will show that Mr. Flores walked from behind a police vehicle and came to a complete stop prior to being shot.

The video shows the location where Mr. Flores was standing.

The video shows the location where both officers were standing, in relation to Mr. Flores' position.

The video images from two independent cameras, recording from two different perspectives, show that Mr. Flores remained stationary for more than four seconds before he was shot.

The two videos are completely consistent with each other and they accurately represent what they purport to show.

Mr. Flores raised his arms over his head at about the time that a siren from an approaching police vehicle could be heard.

Mr. Flores' hands remained over his head and not in motion for 1.433 seconds until he was shot.

The video shows that his hands and feet were motionless at the time he was shot.

The video shows the movement of Mr. Flores when he raised his hands. The video shows that they were raised directly upward and into the air and were not moving forward in the direction of the officers.

The videos provide two consistent and accurate perspectives of the events.

The videos provide reliable and accurate records of the events, including the movement of Mr. Flores.

Compensation

See attached ***Fee Schedule***

Primary Equipment & Software Used

- Avid Media Composer 6.5
- Photoshop CC
- VLC 2.0.1
- MediaInfo 0.7.58
- QuickTime Pro 7.7.2
- -iNPUT-ACE

Exhibits

All information, any and all of the underlying foundational or support materials, and/or any portion thereof within this document, or any of its references or attachments, are to be considered important exhibits with regard to this case and this report.

All .mov files, .mp4 files, PDF files, images, videos, recordings, testing, methods, procedures, etc. are all to be considered exhibits that are hereby fully incorporated, and are an integral part of this report, and may be used at any time during any aspect of proceedings associated with this case, including, but not limited to, deposition and/or trial as exhibits to aid in my testimony or presentation.

In order to attempt to answer the posed questions, I was provided with the following exhibits for my analysis:

Received January 6, 2017 via DropBox

Item 1. ***BC072450 IMG_1039.MOV***

Item 2. ***gilbert slomo cut.mp4***

Received January 7, 2017 via DropBox

Item 3. ***Second Video Shows San Antonio Police Shoot And Kill Gilbert Flores.mp4***

Received January 9, 2017 via YouTube

Item 4. ***Youtube Download.mp4***

Received January 19, 2017 via Email

Item 5. ***Rough Draft SANCHEZ Deposition.pdf***

Item 6. ***Rough Draft VASQUEZ Deposition.pdf***

Received March 8, 2017 via Email

Item 7. ***Letter to Mr. Grant Fredericks (Forensic Video Analysis).pdf***

Received July 10, 2017 via Email

Item 8. ***Affidavit of Defense Expert Albert Roriguez.pdf***

Item 9. ***Amador v Bexar County; Defts MSJ.pdf***

Item 10. ***Amador v. Bexar County; Affidavit of Dr. Ron Martinelli.pdf***

Item 11. ***Exhibit D-Dr. Martinelli Report.pdf***

Each of these items was reviewed in detail.

Technical Assessment

During the examination of the video in this case, careful consideration was given to technical variables that can introduce errors into the image, and that could result in the misinterpretation of the images by an untrained observer of compressed video images. Some of the variables that require accurate interpretation include:

- Artificial edge patterns that may affect the shape of objects
- Temporal shift in object positioning due to encoding
- Spatial Encoding
- Temporal Encoding
- Motion blur caused by speed of movement
- Macroblock Analysis
- Motion Vector tracking and movement analysis
- Pixel tracking
- 'X', 'Y', coordinate identification to assess location, shape and size of objects

The primary video clip provided for examination is named ***BC072450 IMG_1039.MOV***. This video was recorded to an iPhone 6 Plus, according to the metadata in the video file. The metadata also identifies the location where the images were recorded by reporting the GPS data showing: +29.6680-098.6513. This GPS information was loaded into Google Earth. Google Earth identified and validated the location of the camera as shown in the attached ***Camera Perspective.pdf*** chart. The metadata also reports that the time of the recording was on August 28, 2015 at approximately 11:50:19.

The video was recorded as an H.264 encoded video and audio recording at 1920 x 1080 pixels at an average frame rate of 30 frames per second.

The metadata in the file is consistent with an original iPhone 6 Plus video recording.

The H.264 video recorded images in the following 30-frame GOP (Group of Pictures) sequence: IPPPPPPPPPPPPPPPPPPPPPPPPPPP.

Motion vectors were used in all P-frames (predictive) as part of the encoding and data reduction method. A visualization of the motion vectors assisted in the interpretation of actual motion within the video images.

In addition, a quantization examination was conducted in order to better understand the level of compression employed in various areas of relevant images.

The secondary video, identified as the Thomas video, was downloaded from YouTube. This video is a copy of the original recording.

The Thomas video has been carefully examined alongside the primary iPhone video. The Thomas video was recorded at the same time as the iPhone video and shows the same events and the same location as the iPhone video.

The events depicted on the Thomas video are completely consistent with the events depicted on the iPhone video.

As a result of the comparison of the Thomas video with the iPhone video, the Thomas video is found to be authentic.

The Thomas video accurately represents what it purports to show.

Analysis of iPhone Video

The attached ***Camera Perspective.pdf*** document provides an overview showing the perspectives of the primary iPhone camera view and the view recorded by Thomas. The document contains slide numbers at the bottom-right corner for reference purposes.

Slides 3 and 4 identify the street names. Walnut Pass is the road directly in front of Flores' residence. Cross Mountain Trial is the east/west road to the east of Flores' home.

Slide 5 identifies Flores' home.

Slide 6 identifies the location where the iPhone recorded the primary video images.

Slide 7 shows the approximate location of Thomas when he recorded his images. Note that Thomas was in motion during a portion of the recording.

Slide 9 shows the field of view provided by the iPhone camera. The iPhone camera was handheld, allowing the operator to pan left and right along Walnut Pass.

Slide 10 provides an aligned panorama view. This image offers a perspective of what was available to the camera operator as he panned left to right and right to left during the events. The images embedded within the panorama image are extracted from the primary iPhone camera.

Slide 11 provides the perspective from Thomas' location as he recorded the events with his camera.

Slide 12 shows the perspective from Thomas' camera prior to the shots being fired.

Slide 13 shows an overlap of the camera perspectives. This image is helpful because it shows that there are two different perspectives of the events. Since the two cameras recorded the same events at the same time, the two perspectives can be used to validate the movement or lack of movement that occurs at various times during the incident.

The attached ***Shooting to EMS.mp4*** is a copy of the iPhone video starting shortly before the shooting. The video continues until Flores is attended to by an ambulance crew.

The attached ***Youtube Download.mp4*** is a copy of the original Thomas Video that was downloaded from YouTube. The video contains on-screen graphics that were added prior to being uploaded to YouTube. The graphics read "Video By: Michael Thomas" and include a watermark "KSAT abc12". The graphics do not alter the meaning of the video images.

The attached ***Stabilized Shooting Video.mp4*** is a magnified and stabilized view of the moment of the shooting from the iPhone video images.

The attached ***Shooting Event.pdf*** provides an image-by-image examination of the movements depicted in the iPhone video images during the shooting event.

Flores walks from behind the police vehicle and comes to a stop at 7:32.875. As noted earlier in this report, the first shot is fired at 7:37.373. The video shows that Flores was stopped, with no forward motion, for 4.498 seconds prior to the first shot being fired.

The video contains audio. The audio records the sounds of a siren from a police vehicle. The police vehicle comes to a stop at the location of the shooting at 7:51.205 (13.832 seconds after the first shot is fired

Slide 3 shows Flores' hands begin to rise at 7:35.342.

The knife is visible in his left hand at Slide 11.

Flores' hands are in the air and motionless starting at Slide 11 at 7:35.940, 1.433 seconds prior to the shooting.

Slide 41, (at 22/30ths of a second after Flores' hands stopped moving above his head) shows Sanchez beginning to turn his face in the direction of Vasquez. Prior to this slide, Sanchez was facing in the direction of Flores as he raised his hands and held them in the air and then remained motionless. 22/30ths of a second is over ¾ a second in time. Sanchez faced toward Flores and then turned his head to Vasquez and away from Flores after Flores hands and feet remained motionless for more than ¾ of a second.

Paragraph 111 of Defendant's expert Mr. Albert Rodriquez' report states ***"Martinelli's report corroborates that Deputies Vasquez and Sanchez' decision to shoot was made as he was moving the hands to the overhand knife slashing position and not when he was holding them above his head***.". This statement in Mr. Rodriquez' report is not an accurate

representation of what was written by Dr. Martinelli. In fact, the video shows intermediate responses and reactions by the officers after Flores' hand motion above his head stopped and before the shots were fired. Specifically, after Flores raised his hands and then stopped moving his hands, Sanchez turned away from Flores to face Vasquez. The video also shows that Sanchez then took two steps to his right. He then turned back toward Flores; he crouched, raised his weapon, and then fire at Flores. He fired the shot at Flores as Flores was falling to the ground at 1.9 seconds after Flores' hands had been motionless above his head and while his feet were stationary on the ground.

As described above, Slide 49 shows Sanchez lifting his right foot off the ground and taking one step toward the east.

Sanchez' right foot comes to a stop on the ground at Slide 59. This same activity is depicted in the Thomas video, as outlined further in this report.

At Slide 63, Flores has not moved. Sanchez begins to turn his face in the direction of Flores.

1/30th of a second (33 milliseconds) after the image at Slide 63, Slide 64 represents the moment of the first shot being fired by Vasquez. Gasses can be seen exiting the front of Vasquez' weapon.

Flores is not in motion at the time of the first shot. His feet have been stationary for 4.498 seconds. The video shows no forward momentum by Flores.

Flores' hands were in the air and not in motion at the time of the first shot.

Slide 65 shows a blurry image. This image blur is caused by an auto iris feature in the camera and is not related to the shot.

Slides 66, 67, and 68 show the first movement of Flores' arms. He is reacting to being shot. These are the first movements of his arms beginning to move downward.

The movement of Flores' arms and hands that is depicted in these three slides is subtle. However, the video camera is still able to resolve the movement. This same movement is detected by the Thomas camera at the same time, as described later in this report.

Slide 68 shows the subtle movement of the shell casing being ejected from Vasquez' gun. The shell casing is tracked through to Slide 73.

At Slide 76, Sanchez fires his weapon toward Flores. This image shows the gasses coming from the front of Sanchez' weapon. This shot was fired at 7:37.773. Sanchez fired his weapon 360ms after Vasquez fired his weapon, and 1900ms after Flores' hands had been motionless above his head.

Flores collapses to the ground. His feet remain in the same position.

The attached ***Motion Vector Tracking.mp4*** video provides a forensic analysis visualizing the motion vectors that are used by the iPhone camera to encode movement, pixel locations, and macroblock movement to construct the video images. Motion Vector Analysis is a common tool used to visualize movement and the technical factors used to represent how objects within a video image are moved from image to image. A motion vector describes pixels and blocks of pixels that are moved from one position in a video image to another position in a neighboring

image. The motion vectors are used to relocate pixels and blocks of pixels to new coordinates in subsequent images. Commonly, the motion vectors represent pixel values that are reused in subsequent images with very little movement. Often, the motion vectors represent pixel values that are reused in different areas of an image that could be some distance from their location in subsequent images.

The attached ***Motion Vector Analysis.pdf*** provides an image by image analysis of the relevant motion vectors that were used to interpret the movement within the video images from the iPhone at the time of the shooting.

Slide 2 is a Reference frame with no Motion Vectors. The Reference fame is at the beginning of each Group of Pictures (GOP). As noted above, the GOP structure is IPPPPPPPPPPPPPPPPPPPPPPPPPPP (One Reference frame 'I', followed by twenty-nine Predictive frames 'P'.) Every 30th image is a reference frame with no motion vectors. As a result, this document shows a Reference frame at Slide 2, 32, 62, 92, 122, 152, 182, 212, 242, 272, 302, 332, 362, 392, 422, 452, and 482.

A Reference frame is 'spatially encoded'. Spatial encoding describes a method whereby every pixel in the image is newly encoded and is not dependent on any other image. Spatially encoded images are helpful to evaluate whether or not movement has occurred between Reference frames and neighboring Predictive frames.

A Predictive frame contains Motion Vectors for the purpose of producing an H.264 compressed video sequence.

A Predictive frame is 'temporally encoded'. Temporal encoding describes a method whereby pixels and blocks of pixels are reused from previous images and are redrawn in the same location or are moved to new locations within subsequent images. Prediction is a method used to reduce the amount of data required to record and store compressed video images within a GOP. Spatial encoding also occurs within Predictive frames. However, temporal encoding does not occur in Reference frames.

Slide 3 contains motion vector arrows. The arrows are automatically generated when a motion vector analysis report is produced. The arrows provide information relating to the movement of objects and pixels during the temporal encoding process.

Slide 14 through 17 provides an example of when object movement occurs in areas of prediction. These images show the movement of Sanchez' legs. The motion vector analysis shows that the movement of his legs are predicted. The other areas of his body that are in motion are spatially encoded.

Slide 75 shows the location of Flores as he walks from behind the police vehicle.

Note that Slides 127 to 146 shows the camera panning to the right. As the pan occurs, the motion vectors are identified with arrows, indicating left motion of objects. The objects move to their left within the view of the camera images.

Note that Slides 188 to 207 shows the camera pans down, and the motion vectors move upward, tracking the position of moving objects.

Slide 208 shows Flores' feet have come to a stop on the ground. An analysis of both video clips, including an examination of motion vectors in Predictive images and pixel values in spatially encoded Reference frames, shows that Flores' feet do not move until after the shots are fired.

Slide 283 shows Flores' hands begin to move upward. Some of the movement is contained in spatially encoded areas of the Predictive images. Some of the movement is reported via motion vectors in temporally encoded sections of the images. Slides 290 to 293 provide an example of motion vectors in temporally encoded areas of Flores' right hand, as his hand moves upward.

Slides 314 to 343 show that Flores' arms and hands are motionless in the air. The Reference frame at Slide 302 is fully refreshed and it shows Flores' arms and hands in the same location as they were in the previous and subsequent Predictive images. Slide 332 is also a Reference frame. The location of Flores' hands at Slide 302 is the same as they are depicted at Slide 332.

Slide 343 is the moment of the first shot fired. Flores' hands and feet have not moved prior to the shot.

Flores' hands begin to move downward at Slide 345.

The second shot is fired by Sanchez at Slide 355. Flores feet did not moved between the two shots being fired.

Flores' feet move from their original position on the ground at Slide 385, after he had collapsed to the ground.

Slides 396 to 406 provides another example of how motion vectors visualize the movement of objects in temporally encoded areas of Predictive frames.

Slides 436 to 451 provide another example of motion vectors when objects, such as body parts, are visualized when they are in motion.

Analysis of Thomas Video

The attached ***Youtube Download.mp4*** is a copy of the Thomas Video. The video is handheld and is not steady. In order to improve the visual acuity of the images, the video was stabilized. Stabilization does not change any information. Stabilization is a common forensic analysis technique use to accurately evaluate the video and to improve perception. The attached ***Thomas Stabilized Video.mp4*** is a complete copy of the original video, with a cropped, magnified, and stabilized area depicted on the right side of the original. The video on the left is the original video as it was downloaded from YouTube. It is untreated.

The attached ***Thomas Video Observations.pdf*** provides an image-by-image examination of the events at the time of the shooting. The video images in this document were recorded at the same time as the video images from the iPhone, but from a different angle. Many of the same observations can be seen in both the Thomas document and the iPhone document.

Slide 2 identifies the isolated area used for magnification and stabilization.

Slides 18 through 69 track the movements of Sanchez and Vasquez as they approach Flores.

Slides 70 through 153, show Flores walking from behind the police vehicle toward the driveway.

Slide 154 shows the moment that Flores comes to a stop. This image is synchronized with the same moment in time from the iPhone video, which also shows that Flores has come to a stop.

Slide 200 shows Flores raising his hands. This moment is also represented on Slide 283 of the ***Motion Vector Analysis.pdf*** (iPhone video) document.

At Slide 236, Flores' hands have stopped moving upward and remain motionless.

At Slide 256, Sanchez moves his right leg to his right. This event is also captured to Slide 327 of the iPhone video.

Sanchez' right foot comes to a stop at Slide 264 (Slide 338 in the iPhone video).

Sanchez' left foot begins to move toward his right foot at slide 270. (Slide 342 in the iPhone video).

The first shot is fired by Vasquez at Slide 271. (Slide 343 in the iPhone video).

Slide 272 shows that Flores' hands begin to drop as he collapses to the ground.

Opinion

After giving careful consideration to the video images and to the posed questions, I have formed the following opinions:

1. Flores was standing motionless for over four seconds and was not advancing toward the officers when he was shot.
    a. Flores feet were not moving at the time he was shot.

    b. Flores hands were motionless for 1.433 seconds and were not moving at the time he was show by Office Vasquez.

    c. Flores hands had been motionless and above his head 1.9 seconds prior to being shot by Officer Sanchez.

2. The video images accurately represent what they purport to show. The two independent camera angles show that Flores was not moving. Sanchez' statement in his Deposition at P. 189 Line 19 to P.190 Line 23, is not accurate.
    a. There are no unexpected technical errors contained within the video images. The videos were produced consistent with the design of their recording systems.

b. If Flores were moving at the time of the shooting, the video systems would have recorded that movement. It is important to note that the video images recorded the movement of the shell casing from Vasquez' weapon when it was fired. The movement of a bullet casing at the distance from the event to the camera is considerable, yet the small object was detected. In addition, the recoil from Sanchez weapon was also detected, as were many other subtle movements of objects and individuals within the scene.

3. Flores did not move his hands prior to being shot by Vasquez. If Flores had moved his hands, that movement would have been detected by both camera systems. Vasquez' statement in his Deposition at Page 92, lines 5-16 are not accurate. Both camera systems recorded the same synchronized events and accurately reproduced the lack of movement by Flores at the time of the shooting.

4. Deputy Vasquez' statement in his Deposition at Page 93, Lines 17-23, stating that Flores moved his knife hand immediately prior to being shot is not accurate. The iPhone video shows Flores' knife hand was not in motion. The video would have reproduced the described movement.

5. Deputy Sanchez states in his Deposition at Page 190, Line 7 to Page 191, Line 19 that the iPhone video does not capture everything that he was seeing at the scene. Deputy Sanchez is correct that the video would not show the same perspective as he would have perceived. Deputy Sanchez would have had the ability to see more detail. However, the movement of feet and hands of Flores were fully in view of the iPhone camera and to some degree, were also in view of the Thomas camera.

a. Both cameras show that Flores did not move. The video systems were capable of showing such movement. Deputy Sanchez' statement that he perceived movement, to the degree that he described, and that the camera did not perceive that movement is not accurate.

b. If Flores were moving toward the officers at the moment prior to being shot, the iPhone camera and the Thomas camera would have detected the movement. It is not technically possible that Flores could have moved forward toward the officers in a manner that would not have been detected by the camera.

6. The iPhone camera recorded approximately 30 images per second and high resolution. The Thomas camera recorded approximately 25 images per second at medium resolution. The officer's visual acuity would be better than the cameras' ability to see small detail. However, the cameras have adequate capabilities to record and reproduce motion to the degree described by the officers. In addition, the cameras' records can be reproduced and played over and over again. Their images do not degrade over time. The images are not subject to bias when accurately reproduced. Further, the officers perceived the events from one angle. The combination of the two independent camera views provides two perspectives that can be aligned, synchronized, and stabilized.

The aforementioned opinions and observations are true and correct to a reasonable degree of professional certainty.

Further affiant saith not.

_____
Grant Fredericks,

SWORN AND SUBSCRIBED to before me the undersigned authority on this the 13th day of July, 2017.

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON

The aforementioned opinions and observations are true and correct to a reasonable degree of professional certainty.

Further affiant saith not.

Grant Fredericks,

SWORN AND SUBSCRIBED to before me the undersigned authority on this the 13th day of July, 2017.

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON

Notary Public
State of WASHINGTON
LINDSEY D BUSHNELL
MY COMMISSION EXPIRES
06/03/2020