

Security Systems in Schools

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By:
Roger Blanchard
Aaron Marshall
Joseph Brigham
Mitchell Lewis

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Professor Stephen J. Kmiotek, Ph. D
Worcester Polytechnic Institute

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Abstract:

The purpose of our groups IQP was to develop a better, safer and more technologically advanced security system for schools. The systems were designed to be used for elementary through high schools in order to maximize the safety for students in case of any threat to the school or students. Our first initial step was to research past active shooter scenarios to see if we could determine a pattern or conclude on the typical profile of an active shooter. Next, we interviewed numerous school officials of both public and private schools, grades K-12 to determine if there were patterns in their safety protocols as well as lapses in their protocols that could place students in danger. Finally, we developed a system that we thought would increase the safety for students and faculty as well as increasing response time from the Police and Fire Departments. Our team determined that if a school was to implement this system, the school would maximize its safety potential for any form of attack and authorities would receive a fast response every time in case of an incident.

Background:

Columbine High School

On the day of April 20, 1999, one of the most deadly school shootings in American history occurred at Columbine High School, a public high school of two thousand students located in Columbine, Colorado. Eric Harris and Dylan Klebold, both students of Columbine High School, would go on to kill thirteen of their fellow classmates before taking their own lives. The shooters, eighteen year old Harris and seventeen year old Klebold, carried out organized, premeditated attacks, the victims being random. ^[1]

The attacks occurred on the morning of April 20, 1999. Before school, Harris and Klebold placed two pipe bombs in an open field several blocks away from the high school, which were set to go off at 11:19 am. The two then drove to school in their cars, which were loaded with weapons and explosives. During lunch, Harris and Klebold went to their cars, retrieved two duffel bags, each filled with a twenty pound pipe bomb. They walked into the school cafeteria and placed the bags on the ground, amongst all of the other bags of the students so that they would not be noticed. The two then went back to their cars to wait, as the bombs were on a timer, set to detonate at 11:17 am. After a few minutes with no explosion, they concluded that something had gone wrong with their timers or bombs, and decided to enter the school with knives, firearms, and explosives. Harris was armed with a 12-gauge pump action sawed-off shotgun and a 9mm carbine rifle, and Klebold was wielding a 9mm semi-automatic pistol along with a 12-gauge double-barreled sawed-off shotgun. Both also carried knives and a bag filled with smaller explosives. Harris and Klebold both put on trench coats as they left their cars, in order to conceal the weapons that they had on them until the last possible moment.

At 11:19 am, the bombs that Klebold and Harris had set up in the open field detonated. This was intended to be a distraction for the local police, so that they would have more time to carry out their attack on the school before meeting police contact. At this time, the two walked towards the cafeteria and began firing at students outside. Several students were killed, and more were injured before the shooters even got inside the school. Harris and Klebold began throwing small explosives into the area outside of the cafeteria. Students inside of the cafeteria did not immediately realize the severity of the danger that they were in. Many thought that the noises they heard and the things that they saw were part of a senior prank. Faculty members realized what was happening and had all the student lay down in the cafeteria away from the windows, while some evacuated out of the cafeteria into the second floor of the school. Klebold looked into the cafeteria, but it seemed empty due to the students lying down and away from the windows. Five minutes after the first shots were fired, a police officer arrived at the scene and exchanged gunfire with Harris. Neither were hit or wounded, and the two shooters got away from the officer.

Harris and Klebold entered the school through the west entrance at 11:25 am. As they walked down the hallway, they began shooting and laughing. A student and teacher were both shot and wounded, but made it to safety. They then began shooting sporadically and throwing bombs in the hallway just outside of the library. They also threw two pipe bombs down into the cafeteria from above, where fifty-two students were hiding. Klebold and Harris entered the library just before 11:30 am. Inside of the library, fifty-six students were hiding under desks, tables, or any other shelter that they could find. Harris and Klebold made their way through the library, taunting and shooting at students as they pleased. Inside the library for less than eight minutes, Harris and Klebold injured twelve students, and killed ten. Leaving the library, the two

wandered the halls and peered into classrooms filled with hiding students, but did not try to open the locked doors. They continued walking around the school, tossing small explosives around. At noon, Harris and Klebold went back into the library, where they fired out of the windows at policemen and paramedics that had arrived on the scene. Minutes later, the massacre ended when both shooters used their own guns to commit suicide inside of the library. Eric Harris and Dylan Klebold had killed thirteen people in forty-nine minutes. Twelve were fellow students, and one was a teacher. However, the police were unable to see the shooters commit suicide because of where they were positioned in the library. Police and SWAT teams were not sure if the shooters were still armed and dangerous. Paramedics were unable to rescue some because they were being shot at from the library. Several hours later, police cleared the school, so medical personnel were able to help the wounded and hiding students were able to come out of the school. Twenty-one students suffered non-fatal injuries. Police also found bombs in the cars of both of the shooters, as well as inside of the school and on the roof. A bomb squad announced the school safe just before 10 am the next day. ^[2, 3]

Santana High School

Two years after Columbine, in Santee, California on the morning of March 5, 2001 another school shooting occurred at Santana High School. A 15-year old student Charles Andrew Williams opened fire on fellow students in a school bathroom. Williams killed two students and wounded thirteen others. He had went to school that morning with the intent to commit suicide before action could be taken by the police. ^[4]

The weekend before the shooting Williams had talked to some of his friends about shooting up the school. An adult preceded to get involved and talked to Williams, but he was convinced that Williams would not go through with the threat. Williams was a student that was

frequently bullied and was slipping in school. He was abusing drugs and alcohol and at the time was having suicidal thoughts. ^[5]

Williams went to school with a .22 caliber revolver that he had acquired from his father's gun cabinet. At approximately 9:20 a.m. in a bathroom he shot and killed a 14-year old and 15-year old student. In the process Williams also wounded a student teacher, a security supervisor, and 11 other students. Officers arrived on the scene shortly after and were able to place Williams under arrest without resistance. The 15-year old shooter, now 28, is an inmate at Ironwood State Prison in the state of California. ^[6]

Granite Hills High School

Just 17 days after the shooting at Santana High School, under 10 minutes down the road from Santee, California another shooting occurred at Granite Hills High School in El Cajon. Jason Hoffman, an 18-year old student of the school shot at and wounded five people. On March 22, 2001 Jason Hoffman entered Granite Hills High School with the intent of killing, one of his main targets being that of the vice principal of the school.

At approximately 12:54 p.m. Hoffman fired off rounds of his Mossberg pump action 12-gauge shotgun wounding three students and two teachers. Luckily at this time a police officer was giving a presentation to the school. The shooter got off only eight rounds before the officer was able to put an end to the conflict. Hoffman got shot twice, once in the jaw, and was taken to a nearby hospital, but was reported in stable condition. The shooting was over within two minutes of when the first shot rang through the halls. ^[7]

Before Hoffman's trial it was reported that he had attempted to commit suicide several times while in prison, all were unsuccessful. In September of 2001 Hoffman pleaded guilty and was sentenced to life in prison without the possibility of parole. A month after pleading guilty,

on October 29, 2001 Jason Hoffman committed suicide in his cell by creating a noose made of bed sheets. ^[8]

Ricori High School

A few years later in the state of Minnesota a horrific event occurred at a local school. At Ricori High School in Cold Spring, Minnesota another active shooter incident occurred. This time the shooter, 15-year old John Jason McLaughlin, would take the lives of two fellow students on what seemed to be a normal peaceful day. ^[9]

On September 24, 2003 McLaughlin had entered the school with a premeditated decision to kill. In his bag he was carrying a .22 caliber colt semi-automatic pistol in which he would use to murder two students. At around 11:35 a.m. McLaughlin was heading towards gym class and the locker rooms. In the locker room was a 17-year old senior and a 14-year old freshman getting ready for gym class. McLaughlin opened fire on these two students firing off two shots in the locker room. Both students were shot, one was able to escape the locker room but McLaughlin followed him out and preceded to let off another shot which again struck the student. Both students were taken to local hospitals where they were unable to survive the gunshot wounds they sustained. McLaughlin then turned his sights on one of the teachers that was present, but instead of shooting he unloaded the last of his bullets onto the ground and dropped the gun. The incident was over in a matter of minutes. ^[10]

Red Lake High School

Tragedy struck Red Lake, Minnesota on March 21, 2005 when sixteen year old Jeffrey Weise murdered his grandfather, a teacher, and several students at Red Lake High School. Weise lived with his grandfather, who was a police officer, and his grandfather's girlfriend. On the

morning of the shooting, Weise took his grandfather's police issued weapons, which included a pump-action shotgun and two semi-automatic pistols. Using these weapons, he killed his grandfather in his sleep with multiple shots to the head and chest, before shooting his girlfriend in the head two times, killing her. Weise then stole his grandfather's police cruiser and drove to Red Lake High School in the afternoon around 2:45 pm. ^[11]

Weise walked into the school through the main entrance, which was equipped with metal detectors and two security guards. He pulled out a gun and shot one of the security guards, killing him, as the other fled to safety. The security guards were not armed. Now that Weise was past the security guards and metal detectors, he was able to walk through the school corridors. Weise began opening fire on students and a teacher inside of a classroom. Inside the classroom, he shot and killed three students and one teacher. Several students suffered non-fatal injuries. One student attempted to wrestle Weise to the ground and stabbed him with a writing utensil. This distraction allowed other students to flee to safety, but did not stop Weise. Several minutes later, Weise returned to the main entrance, where he injured two more students, and killed two more. By this time, about seven minutes had passed, and police were already engaging Weise in gunfire. Weise took cover and fired back at the police officers, but failed to injure any of them. After being hit in the abdomen and right arm, Weise left the firefight and retreated to a nearby classroom, where he immediately committed suicide. ^[12, 13]

Campbell County High School

Kenneth Bartley Jr., a 14-year old student at Campbell County High School thought that he had figured out a way to trade for some drugs. On November 8, 2005 Bartley had awoken for school late. He was not feeling well so he was rummaging through his father's room for

medicine when he opened a box and found a gun. This gun Bartley decided he would bring to school that day and trade for drugs. ^[14]

Bartley arrived at school late and continued on with what would be his normal daily routine. In the middle of the day though he was taken from class and walked to the principal's office by the SRO (student resource officer). Once there Bartley was sat down by the principal and to other administrators and was asked what he was concealing in his pocket. Bartley started to panic. He whipped out the gun and cocked it into the loaded position. One of the administrators turned around in his chair and this was enough to startle Bartley. He opened fire in the room, not really taking aim, just randomly unloading the clip. All three administrators that were in the room were shot. Within ten seconds the shooting had stopped and Bartley was restrained on the floor. Kenneth Bartley Jr. ended up wounding two administrators and killing the assistant principal of the school. ^[15]

Nickel Mines Amish Schoolhouse

A very unique school shooting occurred in Pennsylvania in October of 2006. An Amish schoolhouse in Lancaster County was the site of a deadly attack when a man entered the school, took hostages, and killed five people before taking his own life. On October 2, 2006, thirty-two year old Charles Roberts IV drove to an Amish schoolhouse in Nickel Mines, Pennsylvania in a pickup truck. Roberts backed the truck up to the front door of the schoolhouse before entering. He then went inside the schoolhouse, and asked the teacher and students if they had seen a missing pin in the road. Roberts then went outside to his truck before returning inside the schoolhouse with a handgun. He made the boys carry supplies from the back of his truck into the schoolhouse. The supplies included tools, a shotgun, lumber, wires, and chains. Once Roberts

was inside the schoolhouse with his supplies, he ordered all of the boys to leave, as well as a pregnant woman, and several mothers with infants. ^[16]

Two of the escaped women, including the teacher, ran to a nearby farm, where they were able to contact 911. Meanwhile, Roberts was inside of the schoolhouse with ten young girls, and he barricaded the entrance to the schoolhouse with two-by-fours. He ordered all of the girls to line up against the chalkboard. About six or seven minutes later, the first police officer arrived on the scene. The officer, however, was unable to enter the schoolhouse immediately, as Roberts threatened to kill the children. State troopers and police officers set up a perimeter and slowly began closing in on the school, and medical personnel were already on the scene ready to help. Police asked for permission to approach the windows, but Roberts obviously denied. Police heard rapid gunshots and immediately moved in, but Roberts had committed suicide before they were able to stop him from shooting the children. Three girls died immediately, while two others died from wounds later on in the hospital. Additionally, five girls were seriously injured, but survived the horrific attack. ^[17, 18]

Millard South High School

Five years after the Amish Schoolhouse shooting, another incident occurred in Nebraska. On January 5th, 2011 Robert Butler Jr. a senior at Millard South High School in Omaha, was called out of class early that morning and brought to the principal's office. He was given a 19-day suspension for driving his car on the school's football field and track a few days earlier. Butler was then escorted out of the school and sent home. Later that day, Butler would return for what in his mind was revenge. ^[19]

At 12:45 p.m. Butler returned to the school and signed in to have a meeting with the principal. Once in the principal's office Butler took out a gun and opened fire. The gun being

used was his father's Glock .40 which he took from his home earlier that day. Butler was in the room not even four minutes and shot Assistant Principal Kaspar twice and Principal Case three times. After shooting, Butler turned and ran out of the building, got in his car and took off.

The SWAT team arrived a little before 1:15 p.m. They cleared the building and rushed the two victims to the hospital. Assistant Principal Kaspar ended up passing away due to the gunshot wounds received that day and Principal Case was able to recover. Butler was later found dead from self-inflicted gunshot wounds in his car less than a mile away from the school. Butler is now responsible for the most deadly school shooting that has occurred in the state of Nebraska. ^[20]

Chardon High School

Over a year later on February 27th, 2012, 17-year old T.J. Lane was added to the list of active shooter incidents that have occurred in schools. At approximately 7:30 a.m. at the start of the school day, Lane unloaded bullets into the cafeteria of Chardon High School in Chardon, Ohio. He was using a .20 caliber pistol in the shooting. Lane shot off ten rounds in the cafeteria connecting with multiple targets. When the shooting stopped five people had been shot, 6 total were injured. Lane was chased out of the school by a teacher and later turned himself in. ^[21]

Three of the five students that were shot were unable to recover from their injuries and passed away. One student is now paralyzed due to the shootings and the other two students recovered. Before the shooting, Lane posted a poem on Facebook that ended with the line "Die, all of you". Lane was a quiet kid who experienced some bullying while at school which seems to be the motive behind his actions. ^[22]

Perry Hall High School

Fifteen year old Robert Gladden of Perry Hall High School opened fire on a fellow student on August 27, 2012. After several morning classes, Gladden assembled a shotgun in the bathroom that he had been carrying in his backpack. Armed with the shotgun, Gladden entered the school Cafeteria and shot seventeen year old Daniel Borowy in the back. Teachers reacted immediately, and pinned Gladden against a vending machine. Another shot fired from the shotgun as teachers apprehended Gladden. Borowy was critically injured, but survived. Gladden was immediately arrested, and was sentenced to thirty-five years in prison for attempted murder.

[23,24]

Sandy Hook Elementary School

The second most deadly mass shooting in United States history occurred at Sandy Hook Elementary School in Newtown, Connecticut on December 14, 2014. Shooter Adam Lanza, age twenty, first killed his own mother in their Newtown home on the morning of the massacre. [25]

At nine thirty in the morning, Lanza arrived at the school and gained entrance by shooting his way through a glass window at the main entrance of the school, as the doors were locked. Lanza carried with him a nine millimeter handgun and a twenty-two caliber rifle. Inside the main corridors of the school, Lanza was seen by faculty members, and initial gunshots were heard throughout the school and over the intercom, as announcements were being made at the time of the first gunshots. Upon hearing gunshots, the school principal and psychologist stepped into the hallway to investigate the sounds that they had heard, but were both immediately shot and killed by Lanza. At this time, teachers immediately began hiding children inside of closets, underneath desks, and essentially anywhere that would be out of the immediate sight of the shooter. The shooter entered the main office, where several faculty members were hiding under

their desks. According to hiding faculty members, Lanza entered the room, but turned around and walked out after not seeing anybody inside. ^[26, 27]

At 9:35AM, the school nurse made the first 911 call. Lanza continued through the hallways of the school, and entered classrooms number eight and ten of the school. Inside of these two classrooms, the shooter killed four adults and twenty children. The first police officer arrived at the scene four minutes after the initial 911 call. Only one minute after police arrived at the scene, Lanza committed suicide, shooting himself in the head with his handgun. ^[27]

Taft Union High School

Less than one month after the shooting at Sandy Hook occurred, on January 10, 2013 another shooting took place at Taft Union High School in Taft, California. This was a non-fatal shooting that had the potential to be worse.

Bryan Oliver, a sixteen year old student at Taft Union High School was the subject of bullying at school from two of his former classmates. They would tease him by calling him names such as “ginger”. Bryan Oliver used this bullying as his motive to bring a gun to school and open fire. ^[28]

On the morning of January 10th, Oliver arrived at school late with a 12-gauge shotgun. He walked into his first period class and started to open fire. His targets were the students who had been bullying him. Oliver put a shotgun round into the chest of one of his classmates and then started calling out the name of the other bully in attempt to shoot him as well. The teacher of this first period class was trying to get students out of a back door of the classroom. In the process the teacher decided to try and talk Oliver down from continuing his shooting. Oliver was persuaded by his teacher to put down his shotgun and turn himself in. ^[29]

Oliver's shooting led to the injuring of three people. One student was life flown to a nearby hospital where they were in critical condition but was able to recover from the shotgun wound. Another student was taken to the hospital for hearing problems caused by the firing of the weapon. The teacher from the classroom was also treated for a minor head injury caused by a pellet from the gun. ^[29, 30]

Price Middle School

Twenty one days after the shooting at Taft Union High School another active shooter incident occurred in Atlanta, Georgia. At around 1:50 pm on January 31, 2013 a 14-year old unidentified shooter opened fire at Price Middle School. ^[31, 32]

The unidentified shooter brought a gun to school that day and managed to get it through the metal detectors that the school was equipped with. Two people were injured. A 14-year old fellow classmate of the shooter was shot in the back of the neck and taken to the hospital with non-life threatening injuries. A teacher was also hurt in the process and treated for minor cuts and bruises. Soon after the shooting began an off-duty police officer who was at the school at the time was able to subdue the shooter and remove him of his weapon. ^[31, 32]

Sparks Middle School

Months later in Sparks, Nevada, another school shooting occurred at a local middle school. Jose Reyes, a 12-year old student at Sparks Middle School brought a gun to school and caused chaos. In the few minutes it took for the incident to occur, one teacher was left dead, two students shot, and the shooter turned the gun on himself and committed suicide. ^[33]

On the morning of October 21, 2013 Jose Reyes stole a 9 mm pistol from his parents' home and brought it to school with him. At 7:15AM, 911 calls were received saying that shots

were fired at Sparks Middle School. Reyes was outside in the playground when a teacher realized he had a gun. The teacher tried to talk Reyes down unsuccessfully and was left lying on the ground shot while the student moved on to other victims. Reyes then opened fire on two other students, shooting one in the stomach and one in the shoulder. Both 12-year old victims suffered non-life threatening injuries and were later released from the hospital. After Reyes shot those three victims, he turned his semi-automatic pistol onto himself and committed suicide. [34]

Shooter Profiles:

Eric Harris and Dylan Klebold (Columbine High School):

Eighteen year old shooter Eric Harris may have seemed okay on the outside, but he had anger and depression issues prior to the attacks. Harris had been keeping a journal, as well as a website, both of which depicted his anger and hate for people and society. In his journal was a well thought-out and organized chronological plan of how the day of the attacks was to be carried out. There were also videos that Klebold and Harris had filmed in a basement, talking about their hatred for fellow students, as well as showing off their weapons and trench coats. Seventeen year old shooter Dylan Klebold also had similar issues. He had become friends with Harris in middle school. The two of them did not like anybody at their school, or really anybody in general. Depression and anger were common denominators between the two of them. Harris and Klebold were both arrested in January of 1998 for breaking and entering into a van. They were released from juvenile correction early due to good behavior, and began working at the same pizza shop. It was through a contact at the Pizza shop that they acquired and purchased the firearms. They also researched ingredients and procedures of bomb-making on the internet and made over one hundred bombs. [35, 36, 37]

Charles Andrew Williams (Santana High School):

Williams lived with his mother during his early life, as she was stationed in the Middle East on a military assignment. When his parents divorced, he lived with his father, and grew up in Maryland, moving several times within the state. His father decided to move once again to Santee, California. While in school here, Williams was a victim of physical and emotional bullying. Shortly before he turned fifteen, his best friend died in a bus accident. Williams had two skateboards stolen from him prior to the shooting. He also said that he was going to “pull a Columbine” twice prior to the shooting, but neither threats were taken seriously. After being arrested, he said that he was tired of being bullied. He also mentioned that his friends had dared him to do it.^[38]

Jason Hoffman (Granite Hills High School):

Jason Hoffman, the eighteen year old shooter at Granite Hills High School, reportedly had a history of mental illness, and was regularly taking antidepressant medication. He was also receiving anger management counseling. Hoffman, who wanted to enlist in the Navy, believed that his principal was responsible for his rejected bid. After the shooting, Hoffman was arrested, and sentenced to twenty-seven years to life in prison. A week before he was to be sentenced, Hoffman committed suicide in his cell by hanging himself with his bed sheets.^[39, 40]

John Jason McLaughlin (Ricori High School):

Fifteen year old McLaughlin was the shooter at Ricori High School who felt that he was being teased by his fellow students, particularly about his acne. On the day of the shooting, he sought out, found, and attacked classmate Seth Bartell. A stray bullet that had missed Bartell

ended up killing classmate Aaron Rollins. McLaughlin did not fire randomly at any students, but just wanted to attack Bartell personally. After killing Bartell, he was confronted by a teacher, and McLaughlin placed his weapon down and gave in. ^[41]

Jeffery James Weise (Red Lake High School):

Seventeen year old Jeffery Weise, the shooter at Red Lake High School, was a troubled young man. He suffered mental and physical abuse from his mother as a young child. Both of his parents died before he turned ten. His father committed suicide, and his mother died from brain damage due to an alcohol related car accident. This left Weise to live with his grandfather, along with his grandfather's girlfriend. Weise bounced around from school to school during this period, and seemed to be on his own, with little to no adult supervision. Weise was bullied in school for his appearance, which included towering height and dressing in a "Goth" fashion. After a suicide scare, Weise began taking Prozac, an antidepressant medication. Weise made several animated videos that he posted on the internet, both of which depicted death and were very violent in nature. On an internet profile page he referred to himself as "16 years of accumulated rage suppressed by nothing more than brief glimpses of hope, which have all but faded to black." He also admired Hitler and Nazi principles, and referred to himself as the Angel of Death. Prior to the shooting, Weise had been expelled from school. ^[42]

Kenneth Bartley Jr. (Campbell County High School):

Kenneth Bartley shot his principal and two assistant principals when he was fourteen years old. On the day of the shooting, he had taken two Xanax, and brought the gun into school to trade for Oxycontin. He did not like the administrative staff, which could be a possible motive for his violent outburst that day. ^[43]

Charles Carl Roberts IV (Amish Schoolhouse):

Roberts was a milk tank driver who often worked around Amish farms, where many of victims lived. He was a married man and a father of three. After the shooting, his suicide note was found, explaining his anguish for a lost premature child nine years prior, as well as his desire to once again do what he did twenty years ago with his family. His exact motive can only be speculated on, but depression is also believed to be involved in his crime. He had a desire to victimize young girls, and had written about how he was filled with hate; hate for himself, and for god. ^[44, 45]

Robert Butler Jr. (Millard South High School)

Seventeen year old Robert Butler Jr. was described by his peers as a normal teenager. Prior to the shooting, the student had been suspended from school. He also posted a status on Facebook that read "Everybody that used to know me I'm [sorry] but Omaha changed me and [expletive] me up. and the school I attend is even worse ur gonna here about the evil [expletive] I did but that [expletive] school drove me to this. I wont u guys to remember me for who I was b4 this ik. I greatly affected the lives of the families ruined but I'm sorry. Goodbye." Butler's father was a police officer for the town of Omaha. The gun used in the shooting belonged to his father, and is believed to have been stolen from a closet in the family apartment. Butler also consumed a drug known as K2 prior to the shooting. This is a "synthetic marijuana", which is known to cause hallucinations, agitation, anxiety, and panic attacks. After the shooting, Butler committed suicide in his car about one mile from the school. ^[46, 47]

TJ Lane (Chardon High School)

Seventeen year old shooter TJ Lane shot and killed three Chardon High School students, and injured three more, although he did not attend the school. Lane was a disturbed individual who had clearly premeditated his killings, and showed no remorse for them after pleading guilty. He gave no reason for his killings, and showed extreme disrespect for the families of the victims of his shooting rampage. He wore a shirt that read “KILLER” to his court date, flipped off the families, and expressed the pleasure that he gets from thinking about the memory of the shooting. Prior to the shooting, Lane had posted a very morbid, offensive, and death-centered post on Facebook that read “Die, all of you”.^[48, 49]

Robert Gladden (Perry Hall High School)

Fifteen year old shooter Robert Gladden was a troubled young man who was reportedly bullied, according to his father. On his Facebook page, he had Eric Harris and Dylan Klebold, the Columbine shooters, under his list of “inspirational people” along with listing his occupation as Murderer. He also posted “First day of school, last day of my life. F--- The world” on Facebook the day of the shooting. Gladden’s parents were divorced, and his step father possessed illegal firearms.^[50]

Adam Lanza (Sandy Hook Elementary School)

Twenty year old Adam Lanza had Asperger’s syndrome, though his father thought it could be considered a form a schizophrenia, which could potentially cause him to act on impulse. Lanza alienated himself from his family and friends, cutting off all relationships and keeping to himself. He posted regularly on a forum website that often commemorated mass murderers, and he expressed his disdain for society. He felt that children were doomed to live in a world that

would force them to be unhappy, so he believed that he would essentially be “saving them” from the world. He had been bullied in high school, his parents were divorced, and his mother was a gun-enthusiast, taking Adam to shooting ranges as he grew up. ^[51, 52]

Bryan Oliver (Taft Union High School)

Sixteen year old shooter Bryan Oliver was bullied in school for his bookish appearance and his red hair. He had made a hit list that named several students prior to the shooting. Students used social media to express their fear of him shooting up the school prior to the incident. Oliver did not approach his murder as a mass shooting, but rather had intended targets. ^[53, 54]

Jose Reyes (Sparks Middle School)

Jose Reyes was twelve years old, in seventh grade, when he fatally shot his teacher before committing suicide. He was known as a gentle child that showed no anger or disdain towards his peers or the school. The school claims that he was not bullied, although his parents indicated that he may have been teased for a speech problem. ^[55]

Methodology:

The manner in which we conducted research for this project was extremely dynamic. Active shooting incidents are being reported more frequently in the media even though they have been occurring for many years before the present day. With the increased frequency of reports comes more information on the profiles of the shooters, possible reasons for the incident, the security systems that each school implements to protect its children, etc. The ability to analyze every single case and all the factors that played a role in the shooting would be nearly impossible to accomplish. In this project we look to analyze this modern day problem, and find correlations within the data that will help develop a solution. This is the crux of the problem that our group faced and attempted to answer over the past several months.

Finding correlations in the most tragic and well known active shooting incidents was our first step in attempting to find a possible solution to protect our children from the danger of an active shooter. To accomplish this, we collected information on fifteen of the most well-known and deadly active shooting incidents in schools and compiled all of this information into a quantitative and qualitative data table. The categories that we thought would be most relevant for our research were the date when the shooting incident occurred, the location of the school, the age of the shooter, the number of injured citizens and fatalities as a result of the shooting, whether or not the shooter committed suicide at some point during or after the incident had occurred, the response time of police and law enforcement officers to arrive at the scene when a distress call had been placed, and the time elapsed since the shooter began their assault to the moment they were apprehended or the assault ended.

Since it would be nearly impossible to find a way to eliminate all active shooting incidents with a simple solution, increasing the response time of law enforcement to a school

location along with the time elapsed overall in the active shooting incident are extremely important to analyze closely. In our group discussions, we focused on trying to find a way to decrease response time as much as possible. In terms of these types of situations, every second is a possibility to save a life, and the more lives that can be saved, the better off our schools will be in ensuring the safety of our children.

After analyzing the data in the chart, there were certain categories that we found to have a low correlation in the occurrence with other incidences around the country while there were other categories that proved to show a relationship within the variable between other incidents nationwide. When analyzing the date of the occurrence, we could not seem to find any relationship between the dates of the incidences. Obviously, the school shootings occur when school is in session, as this is when children are in school. However, an important note to make is that many of these school shootings occur in the morning time right as classes begin or just after. This could mean that shooters typically plan out their attack on schools hours before hand, and not as a spur of the moment decision. More research would be needed to confirm this, but the likelihood that attackers planning their assaults well beforehand has been documented in many findings after incidences have occurred. If an attacker is attempting to injure or kill as many people as possible, they would find it suiting to attack when the majority of people will be in the school, which is right at the start of the day.

The location of the fifteen incidences that we measured in our analysis did not show much of a relationship as well. We analyzed cases of the deadliest school shootings since Columbine and they appear to have occurred in various locations around the country. The deadliest of these active shooting incidents within the past few years took place in Newtown, Connecticut. Since then, there have been school shootings in Nevada, Georgia and many other

states around the country. Based on this, it appears that the location of the shooting does not seem have a relationship with the number of casualties or anything of the sort. If a person is attempting to make an attack on the school, they will most likely engage in an attack on a school that has some sort of connection to their lives, especially if the shooter is mentally unstable. We witnessed this with the Sandy Hook School shooting in Newtown, CT. Adam Lanza, the shooter who ended up killing a total of 28 people including himself, was declared mentally unstable and he made an attack on the school where his mother worked.

The age of the perpetrator does seem to have some relationship in school shooting cases. In the high school and middle school cases analyzed, the shooter has been somewhere within the age range of 14-18 years old (the typical age of a high school student). Occasionally a shooter might be a few years older than this, for example Adam Lanza was 20 years old, but the majority of shooters are a very young age. The question that our society must ask is why this is the case? What makes a teenager so angry that they feel compelled to bring a loaded weapon into school and unload on defenseless peers and teachers? In some cases, the person might have a mental disability that could have played a role in determining their actions. However it is highly unlikely that the majority of these shooters had a mental disability that gave them the urge to become killers. One possible explanation for the reason for these students' actions is that they are trying to get revenge on a bully or teacher. Some of these students may have thought that they have been treated unfairly by their peers and their immediate inclination is to gain revenge through deadly measures. This case is plausible as many kids in schools around this country have experienced bullying in high school. The majority of people don't deal with their built up aggression by taking the life of their peers, but it cannot be seen as unreasonable that some kids see this as the only option in getting revenge.

The injuries and fatalities of the shooting incidents that have been analyzed in this study appear to be lower than many people might expect. Besides a few rare cases like Columbine, Sandy Hook, Red Lake and Santana, the majority of shootings result in about 2-3 deaths per shooting and 3-4 fatalities. It is important to note that by no means are the deaths of these individuals insignificant. It just goes to show that many of these shooters are not going all out in their shooting assaults. One possible explanation for this is that the majority of the time, the shooter is going after a specific individual or a group of people, attempting to get revenge for something that the shooter feels they did wrong to him. However, this is not always the case. Sometimes the reason why the number of casualties is low is because a hero stepped in and risked their lives to successfully apprehend or disarm the shooter. When there is no person around who is capable of taking over that “hero” role and attempting to disarm the shooter, tragedies such as Columbine occur.

An interesting statistic that we discovered after conducting this analysis of school shootings across the country is the percentage of shooters that attempt to commit suicide when they feel that their task of assault on a school has been completed. We discovered that just about half of the shooters will commit suicide. Many shooters who attempt these attacks on schools know that what they are planning to do will have lifelong consequences, and they are willing to kill themselves after their goal has been accomplished in an attempt to avoid the consequences of the law and the criticism of the general public. By committing suicide, a shooter knows that they will have accomplished what they set out to accomplish and will not have to live with the consequences.

The main category that we will talk about greatly within this paper is the category of response time for law enforcement officials. As mentioned earlier, every second that is wasted in

responding to a shooting incident can result in the death of an innocent person, which is clearly unacceptable under any terms. The ability for law enforcement and authorities to get to an active shooting incident should be the most important element in any preventative strategy because the ability to completely eliminate school shootings will be nearly impossible, at least in the near future. There are steps that can be taken now however that can help save lives such as finding ways to reduce the response time of authorities to distressed areas. In the shooting cases that we analyzed in this research project, there were a few cases where the authorities were able to respond in a matter of minutes, which is incredible. Lives were certainly saved as a result of their ability to arrive on the scene of the shooting that quickly and efficiently. However, cases such as the Amish Schoolhouse and Sandy Hook, where it took authorities over 5 minutes to arrive at the location of the shooting, are unacceptable, and actions must be taken to improve these response times.

After collecting and analyzing the research that was collected in the infancy of this project, the next step was to understand the situation that schools currently find themselves in when it comes to the issue of school security and the safety of students, faculty and staff. The best method to accomplish this is through direct interviews with school authority figures such as principals and other administrators, as well as police and other law enforcement officials in the vicinity of school districts. By directly contacting these people, our team was able to get inside information into the current measures that schools are taking in order to ensure the safety of its students and faculty.

One challenge that we faced when it came to collecting data through interviews with nearby schools is the ability to schedule interviews with administrators after the recent school shootings, especially with the recent occurrence of the Sandy Hook Elementary School Shooting

on December 14, 2012. This study of security systems in schools was conducted in the Northeast region of the United States, which is still feeling the sadness of the Sandy Hook incident to this day, and for many years to come. With that being said, there were some grade schools in the Northeast that we attempted to interview but were reluctant to do so on their end because of the sensitivity of the issues that we wished to discuss. Their viewpoint absolutely holds merit and we graciously thanked the unwilling administrators in at least considering the option to conduct an interview with our team.

With that being said, our team was successful in conducting interviews with other schools, specifically in Massachusetts and Rhode Island that were located in a variety of different settings. These locations ranged from rural to urban environments, private to public schools, and immensely different student population sizes and different levels of education (Elementary, Middle, and High). Interviews from multiple schools in different settings was essential for our team to develop different ideas for possible solutions to security issues that schools have faced in the past and better ways to protect students. For example, an urban school might use a metal detector system to ensure the safety of the school occupants while a rural school might simply have bolt lock doors as their only security measure.

Before our team went off to interview school administrators and law enforcement officials around the country, we developed a list of twenty questions that we would ask each of the schools. The importance of developing this list lies in the concept of consistency. Our goal from the interviews was to learn about security systems that schools are implementing today and analyze the answers to our questions for similarities and differences amongst the answers from the interviewees. If our team simply asked questions pertaining to the school that was being interviewed, it would be extremely more difficult to make a conclusion of measures that all

schools should implement because the answers we would have received would have been wildly different and in cohesive with each other.

Out of the twenty questions that we asked throughout our interview, the majority of the questions dealt with security measures that schools are currently implementing and procedures they conduct and practice in order to ensure the safety of the students and faculty. For example, questions such as “Does the school have an emergency response plan or procedure in place to be carried out in the event of an active shooter?” and “Does the school have a police officer / security guard on duty during operating hours?” were asked specifically to understand what schools are currently implementing procedures that should be standard in most schools. Questions like these allowed our team to gain insight to similarities in the schools security systems and the measures they are taking or are planning to take in the near future.

Our team also asked questions pertaining to a response to increased upward trends of active shooting incidents presented in the media. For example, questions such as “Has the school considered implementing active shooter training for faculty?”, “How has the school responded to recent upward trending in active shooter incidents around the country?” and “Has the school ever considered a gun violence awareness/prevention program?” “Deal directly with the issue of responding to the possibility of a threat on a school. We expected to find that an immense majority of the schools that were being interviewed would have already taken measures to deal with the upward trend in shooting incidents, and we hoped to gathered more information into what exactly the schools implemented by asking these questions.

Through our research towards the beginning of this project, one of our group members discovered an app that alerts authorities of a school shooting incident when activated by a teacher or administrator. The app sends out a 911 distress call, alerting authorities to the location

of the call as well as alerts surrounding active and retired law enforcement officials of the incident so multiple authorities can respond to the incident around the area. More about the app will be discussed in later portions of this paper, but our team thought it would be interesting to see if schools in the surrounding area were aware of this app and were cognizant of the fact that it is easy to implement and can potentially save thousands of lives. The question that we asked the interviewees which dealt with this question was “Has the school ever considered a smartphone application that would reduce response time in the event of an active shooter incident? (i.e. Hero911) Would this be something they would be interested in?” In asking this question, we were hoping to receive answers to two of our questions. The first of these questions is whether this specific app or an app similar to this has ever been heard of by schools in the surrounding area. The second question that we were hoping to get answered as a result of asking this question is whether schools would truly be interested in using this app as an added security measure for their schools. Our team realized that there could be a discrepancy between a school's interest in installing an app and actually going through the process of making the mobile app an added security measure to their security measures already in effect.

Data and Analysis:

In order for our group to determine the different methods and plans in case of active shooters for different schools, we interviewed six high ranking faculty members from different schools. These different schools ranged from public to private, elementary to high school, big to small and in state location.

South High:

The first school that our group interviewed was South Community High School located in Worcester, Massachusetts on January 31, 2014. This public high-school is the home to between 1000-2000 students and is run by Principal, Mrs. Binienda. When interviewing Mrs. Binienda we discovered that South High has an emergency response plan and procedure in case of an active shooter that they refer to as their Crisis Response Plan. This plan is also mandatory for all schools in the area per order of the Superintendent. This is in part due to government safety regulations that the school has to meet, and that the Superintendent must make sure the schools are following. In terms of actual procedure the school is given a manual to refer to for their procedures to follow if the scenario presented itself. Luckily, the school has not encountered any serious trouble in the area of potential threats to student and faculty safety recently. The school also has a security guard on duty during school operating hours. However, this guard is not armed and is more a preventative measure, instead of an enforcement measure. The school would feel far more comfortable with an armed police officer instead of arming a security guard or faculty member.

South High has two primary security features to discourage intruders from attempting to invade the school. The first is security cameras, which the school has 36 of spread out across the school in various hallways, lobbies, classrooms and the cafeteria. The cameras can be accessed at any time by the Principal for any reason, and camera software has the ability to pause, rewind and zoom to any date or time. This enables the Principal to know what is going on at any time or what has happened at any time. The second primary feature, that is different from most schools, is a metal bar that teachers use to lock and prevent an intruder. This bar is unique because not only does it prevent the intruder, but because there is no lock on the outside it is impossible for

the intruder to pick or break the lock to open the door. The only way for the teachers to remove the metal bar, once it has but put in place, is with a special Allen wrench key that can disengage the barrier from the inside. Both of these features are definitely very important to have and protect the students within the building. The school also has one entrance that uses a buzzer system to gain entry during the day while all other doors are locked on the outside.

Our next step in interviewing was to ask what the school does in terms of preparation and training. When asked if the school had implemented active shooter training for faculty, the Principal told us the school had no such training at this time, but would look into it. As a group we strongly advised them to as well telling them the benefits of the training in the long run. They also do not have a gun violence awareness/ prevention program for students and faculty. Still, the school practices emergency response procedures annually to make sure everyone knows what to do in case of an emergency. The school also works very effectively with both the police and fire departments. One system they have in place with the police is sending a code through a school phone to the police. As soon as the code is sent the police are alerted and respond immediately. The fire department also works closely with the school to practice evacuation drills monthly. These evacuation drills are sometimes used to test students by having firefighters block a certain exit to see how quick the students react to finding the next closest exit. This is a way of simulating a real life fire because nothing ever goes perfectly. We also mentioned the Hero 911 application to Mrs. Binienda and although she had never heard of it, she was very interested and believed it was a good idea; but stated the school would need to look at it more in depth about how to use it and the price.

South High is made up of only one building. In this building there are several “pods” that the school is broken up into. Each of these pods is divided into separate classrooms by dividers.

These dividers can be locked with the aforementioned metal bar to keep an intruder out. For the most part the school holds assemblies either in the gymnasium or the cafeteria. Both of these areas have many places to exit or evacuate from in case of an emergency.

Another problem many schools face are bomb threats. Fortunately, South High handles these situations very seriously and effectively. As soon as any faculty member is made aware of the threat, they dial a number that immediately alerts the police of the problem without actually having to verbally say it. The teachers then either take students to the neighboring elementary school or to a secondary location that is further away. The school also uses a code system over the intercom in case of an emergency. If a teacher ever has to leave the room with his/her students they are required to bring their Crisis Response Backpacks. Every teacher has one of these backpacks which each have a class list, first aid kit, markers, flash light, duct tape, clipboard, batteries, emergency blankets and lastly a bright colored vest for identification. Additionally teachers always each have a walkie-talkie for fast and easy communication in any scenario. The school does not have a centrally located Crisis Response box for the entire school due to each classroom having their own backpack. This method has its own benefits and problems in case of an emergency.

Bishop Stang High School:

On February 12, 2014 our group traveled to Dartmouth Massachusetts to interview the Principal of the school. The Principal, Mr. Shaughnessy, is in charge of this private high school which enrolls close to 1,000 students between the ages 14 and 19.

Our first question was about the schools response plan and procedures in case of an event, and if they do exist what they might be. The school has three plans for different kinds of

emergencies that the school issues over the intercom. The first method is a lockdown or shelter in place, where the best and safest place for students is to remain where they are in the building and lock themselves in their current room. The second strategy is an evacuation where students will be safest leaving the building immediately and to a safe location. The third plan is in case of a chemical spill or fire where the nearby students leave the room and depending on the size of fire or spill, leave the school entirely. All of these plans are updated every year to stay fresh and up-to-date with codes and regulations. Every teacher is given a manual with these procedures as well as an attendance book to stay on top of the situation at any time. Teachers and students are notified about the emergency over the PA system in order to directly communicate with the entire school. The school does not use a code system because they believe the best form of communication is to be direct and possibly even threaten and scare the intruder into leaving or turning himself in.

The school had no recent potential threats to student or faculty safety according to Principal Shaughnessy. However, the school offers no symbol of safety inside the school itself, because there is no police officer or security guard that roams the school. Not having an authority figure on campus armed or even unarmed in charge of altercations and more serious events like an active shooter could provide a serious problem for the school. Unfortunately, at a private school, like Bishop Stang, it is very difficult to find the funds to afford a guard or an officer to be on duty or even make random appearances throughout the school.

The school does have to meet and follow regulations set forth by the Dartmouth Police and Fire Departments for their fire system and fire drills. As of this time the school has not considered to have a gun violence awareness or prevention program. A major difference with Bishop Stang comes with their existence of a personal crisis team within the school. Due to this team of faculty

around the school, there is no active shooter training for the entire faculty. However, the crisis team practices drills and emergency procedures routinely throughout the year to maintain a high effectiveness in case of a real attack.

The school does have a security system at their disposal in terms of multiple security cameras in all of the hallways and the cafeteria. All rooms have two doors, although only one door can be used to enter the room, both can be used to exit the room in case of emergency. All doors have high pressured titanium key lock that all teachers have a key too and can be locked easily at any time. Bishop Stang also a high tech system upon entrance to the building like other schools. Teachers are identified by a lanyard they wear around their neck to gain entry while visitors must call ahead and then sign in to gain entry.

The school has responded to the recent upsurge in active shooter awareness in a positive way. This has been done through preparation by the school. The first step was to identify the weak spots in the security system that the school used to implement, and then alter them to make it safer for students to attend the institution. This led to the new procedure that is now being followed by Mr. Shaughnessy and the rest of the Bishop Stang Spartans to protect one another. One of these alterations has been to limit students from exiting the building to go outside where there is less supervision and more room for a mistake to happen. The school has also developed their crisis response box to the standards that highly ranked officials in Homeland Security are calling for. The response box includes the information of all students as well as health records, a first aid kit, blood spill kit, and other small items such as rosters and pictures of students. These systems and resources have been upgraded and improved to increase student safety at Bishop Stang. We also asked Principal Shaughnessy if there were any improvements that he would still like to make to increase the safety of students. He claimed he would always like to improve the

school to make it safer for students and as long as the school keeps improving and adapting to new technologies and better safety procedures the school will be safe for years to come.

A.T. Levy Elementary School:

The next school our group interviewed was A.T. Levy Elementary School on February 20, 2014. This elementary school from Rhode Island belongs to the Burrillville School District. There are currently around 360 students enrolled at the school between the ages of four and seven. We interviewed the Principal, Julie Mayhew, about the schools response plans and overall school security.

The school has an emergency response plan and procedure in place in case of an active shooter event. The school has not had any recent threats to student safety in any form, as well as no reported bomb threats. Local Burrillville Police roam the school daily at a random time each day for between a half-hour and an hour. The police officer is armed but is normally dressed in a shirt and tie for the young students. All state regulations are followed by the school as well as all other schools in the district. The policy is referred to as RIDE, and has regulations sent forward by the government that all public state schools must follow.

The next topic of choice we asked Mrs, Mayhew about was about security features that the school has to offer. The first feature is a vestibule entrance for gaining entry into the school. The vestibule consists of two sets of magnetic door locks that must be opened inside by the secretary. When a guest approaches the door they must talk through a speaker giving their reason for being there and if it is suspicious the magnetic locks are not opened by the secretary. If the person is there for a serious matter and belongs at the school they are let in through the first set of doors. Once they are between both sets of doors the person cannot go further into the school without talking to the secretary through a glass window where the visitor must sign in and show

identification. Once the secretary knows the person is viable and not a random intruder the secretary will buzz the guest through the next set of magnetic locks letting them into the school. Staff members are given a keycard that gives them accessibility to the building, but no outsiders are given a key besides the police and fire departments. The main front doors are the only doors in the school that work for entering the school, all other doors are fire emergency exits. There is also a system of five cameras that perform surveillance for the perimeter of the school's campus.

Next, we asked the school about the annual training and emergency drills that the school performs. The school has yet to consider to implement any kind of active shooter training for the faculty. However, the school does four drills per year, two lockdown drills and two evacuation drills for students and staff which are in coordination with the fire department and police department. Police officers also attend assemblies and any other kind of large gathering for students and faculty to be there in case of emergency. In accordance with district regulations, the school also has to complete background checks on all employees and staff. We asked Mrs. Mayhew if she had ever heard of the smart phone application hero 911, and she said she had never heard of it, but would be interested in looking into it for the future.

In terms of the schools structure, it only consists of one building. This makes it easier to keep unwanted guests out of the building and to monitor who enters and who is in the building. All school assemblies are held in the cafeteria due to fire code restrictions on the rest of the building. The school uses a code system over the intercom. Their code system uses the color scheme to identify the danger and notify the entire school population. We also asked Mrs. Mayhew if the school has a crisis response box for police and fire officials in case of an active shooter or another emergency. The school does not have an organized central box, but they do offer an alternative similar to other schools we interviewed. A.T. Levy uses the individual

backpacks for each classroom, which the teachers are responsible for and required to take with them whenever they leave the classroom. Inside the backpack is a map of school grounds, class roster, flashlight and a first aid kit. Mrs. Mayhew also made it a point to stress that she wished she was able to implement more training to the faculty and students for awareness, prevention and procedural steps in case of an active shooter. However, the goal would not only be implementation but maintaining this mindset for the future.

When we were wrapping up the interview with Mrs. Mayhew, who was incredibly helpful to our research, she gave us some insight that the group may not have come to realization with if it was not for her. She made us, as a group, understand the reality of an active shooter situation and the difficulty of keeping intruders out of the building. She heightened our awareness of how easy it could be for someone truly on a mission to gain access to the building. Who is going to stop someone from breaking a window or a door? Who is going to stop someone from shooting through those window or doors? There is only so much you can do to protect the building before it becomes a prison rather than an institution of education. What would be next for a school, barred windows and high barbed wire fences surrounding the school? When does too much, finally become too much and begin to ruin and impede the main principles and objectives that a school is striving so hard to achieve. This fine line that one must tip-toe along to find the best end result is what our group hopes to achieve with the outcome of our project.

Burrillville High School:

On February 24, 2014 we interviewed Principal Michael Whaley of Burrillville High School. This school is located in Harrisville, Rhode Island and is open to the public and currently educates 683 students.

The schools emergency response plan follows the RIDE protocol that all Rhode Island public schools must follow in case of an active shooter. The RIDE regulations formulate a model for school's to follow for all safety procedures. There have been no recent threats to student safety, however a few years ago the Principal told us that there were multiple fake calls about bomb threats in a short span. The school also has an armed Police Officer walk around the cafeteria during lunch, on top of roaming the entire school for a random hour each day.

Burrillville High school has also recently updated multiple assets to the security of the building and its students. New cameras have been installed throughout the school in the main hallways, cafeteria, assembly hall, gymnasium, and the main entrance and exterior of the entrance. A cool new innovative feature is that the police department has remote access to these cameras from police headquarters. New locks have also been installed on all doors of the classrooms. These locks maintain that a door is locked from the outside and can only be opened by a key, which returns to being locked immediately after being opened automatically. The school also purchased a new keycard entry system for employees to enter the school. Each member is given a keycard that logs when an employee has entered and exited a building and from which door in the building. The key cards allow employees to move right through the vestibule area which would normally contain someone entering the school before allowing them access. Visitors enter the building by buzzing at the front entrance, the secretary then opens the door from the interior which allows the visitor into the vestibule area. Once within the vestibule area the visitor is contained until the secretary allows the visitor access through the second set of doors. The secretaries are trained to check for suspicious behavior and only allow visitors who are parents or have another legitimate reason to be at the school. This eliminates all unwanted visitors and anyone trying to sneak onto school grounds without a valid reason. Another piece of innovative

technology used by the school are panic buttons. These buttons are strategically placed around the school, with one in each wing and in the main office. The buttons are about the size of an average cell phone and are covered by a plastic cover that can easily be removed in case of an emergency.

The school seemed very prepared for an emergency all around. The school uses a color code system to communicate with students and faculty. Different colors refer to different procedures. These procedures are routinely practiced at the school to make sure everyone knows what to do if an incident were to ever actually occur. The school, however, does not annually undergo a gun violence awareness or prevention program to educate students on the matter. Although the school does have a solidified plan for bomb threats due to past threats and has become very adept at handling these situations. This procedure is separate to their active shooter procedure entirely. The school has done well with responding to the recent upward trend in awareness and has done extremely well with managing to train their faculty to protect students. An essential component to student's safety is the crisis response box, which Burrillville High School does utilize. It contains building layouts and blueprints, student and faculty roster, master key, emergency evacuation routes and utility shutoffs. The school also offers the backpack solution for individual rooms that a teacher is supplied with that contains the essentials in case the class was to be locked down or forced to evacuate.

While we were wrapping up our interview with Principal Whaley we asked him if there would be any improvements the school could make to improve student safety in the future. A key component he claimed was to continually upgrade the school with the times. As everyday passes a new technology is created that could potentially protect students better than the previous, and it is important to stay on top of these trends.

Nashoba Regional District:

On February 28, 2014, our team went to Nashoba Regional School District in Massachusetts. Students of this school district came from the towns of Stow, Bolton and Lancaster. This school district is considered public and there are over 3500 students in the entire district. We interviewed Bill Cleary on our trip, who holds the head of facilities position for this school district.

In the event of an active shooter entering a school, Mr. Cleary informed us that there were two procedures that the school could use to deal with this issue. The two drills are fire drill or lockdown drill. The use of a drill would be determined based on the situation that arises and the best plausible drill determined at the moment. When asked about the presence of a police officer or security guard on duty during operating hours, Mr. Cleary mentioned that the only school that has an officer is the high school, and he is dressed casually in order to not alert students and cause a distraction. The school also undergoes safety and fire inspections at the beginning of every school year to ensure the maximum safety of students, and these are also state regulated inspections.

Our team was quite pleased in the response to the safety features that the school currently implements in order to protect the students. The system that this school district uses is quite extensive, including card swipe access for all faculty (two people in the entire district have hard keys to the exterior of the building). Video cameras are used to record events that are happening on the perimeter of the school. All of the interior doors have locks that are either hard key access or button locked. Faculty undergo lockdown training as typical safety protocol in this district, but no special active shooter training has been implemented as part of safety procedures at this

time. There are approximately 2-3 lockdown drills that each school in the district will run on a yearly basis.

Any faculty or guest that does not have access to a card to enter the school must be buzzed into all buildings in the district by a faculty member. To go along with this, all staff are required to have background checks to ensure they will not pose a threat to students and other faculty. We asked Mr. Cleary about the possible implementation of the Hero 911 application that would reduce the response time of law enforcement in an active shooter incident. He was interested in the concept but had some concerns when it came to the possibility of a false alarm. He mentioned that there might be a situation where a teacher could panic and set off the alarm. This would certainly be an issue and presents a problem with the application, but otherwise, he recognized the great benefits.

When asked about the number of buildings in the district, the answer was quite surprising. There seven buildings in the entire district and one of the schools does not have a cafeteria. The students that attend this school actually walk outside through the woods to a neighboring school for lunch. This was surprising because it presents possible risks to students during this time period. There are a number of possibilities for danger to students during this time frame, but the school has not yet experienced too many problems with this procedure.

Our last question dealt with the presence of a crisis response box in the school. Mr. Cleary mentioned that each teacher has a response bag in the classroom that contains class list, green/red cards, and a small amount of food. We made suggestions for certain items such as duct tape and markers, which he mentioned that he liked the idea of adding to what they currently already have.

Results and Conclusions:

Throughout our project we came across many different procedures and methods of keeping students safe. Although these procedures were different they still had to follow government and state regulations. As a group, we decided upon what we thought would be the best way to protect the school from an active shooter, as well as how to respond to an active shooter incident.

One of the first and possibly most crucial parts to having a safe school starts with having an armed police officer in the building. Our team realizes that schools might not be able to afford an officer to be on school grounds at all times, but there must be a strong presence in the building to help deter an active shooter. There must also be an established security system at the school. These security systems include a vestibule entrance, keycard entrance system, real time surveillance of all main areas of the school, alarms on all doors, durable door locks on all classrooms and lastly a reliable communication system between the school and police department. All of these systems will be explained in more detail to our personal specifications.

Another focal point is training in case of an active shooter. There must be many training exercises annually to practice the procedures a school has in place. The training must encompass active shooter prevention and procedures in case. Without practicing these procedures routinely, faculty might be more unprepared if a situation ever does occur. There should also be a lockdown, bomb threat and evacuation procedure, all three should be equally practiced throughout the year as it is just as likely that any will occur.

When it comes to the structure and physical nature of schools there are many things that can be done to help improve security. One of the main things to pay attention to are the doors and entrance ways. Each building should have only one main entrance in which all traffic

coming in and out of the school must flow through. All other doors throughout the building should remain locked at all times. When it comes to the main entrance, schools should look into implementing a vestibule system. This system would mean that there would be two sets of doors that a visitor would have to go through before they can actually step foot into the school. A visitor would get buzzed through the first set of doors, where there would be a secretary to check in with. The visitor should give their name, as well as their reason for entry to the secretary, to whose discretion it is to allow or deny the visitor entry inside the school. Once checked in, the visitor would get buzzed in through the second set of doors and would be able to enter the school. This vestibule concept is an extra line of security and a good way to keep unwanted people out of the school. Along with the main entrance, all exterior doors should have alarms. Classroom doors should all have strong durable locks. In the case of an active shooter, teachers should be able to lock classroom doors to prevent the intruder from entering the classroom.

An improvement in technology is crucial. All schools should implement the use of real-time surveillance. This would allow schools to have security cameras all throughout the inside and outside of the building. Real-time surveillance would allow the cameras to be accessed by not only the school, but also the local police department. In a case of emergency, an intruder could be pinpointed inside the building and response time could be reduced.

Schools should also look into eliminating traditional lock and key methods and move towards key card access to their buildings and rooms. This will help prevent unwanted copying of keys and allowing unknown people to have access to schools. The school would be able to control who can enter their buildings and when, being able to put time constraints on peoples access. If a swipe key was to be lost or misplaced, it can easily be shut off and it will no longer work when trying to access the school with it. With traditional lock and keys, if a key was lost

that meant that anyone could have stumbled upon it and have access to the building. Along with cameras, schools should allow all faculty to have radios for communication. In case of an active shooter, with radios there would be an easy line of communication between faculties making it easy to figure out the proper response.

Panic buttons are another simple way to help reduce the response time. Schools should look into putting several panic buttons strategically located throughout the building. These panic buttons when pressed, would immediately inform the police that there is an emergency. It would allow an administrator or teacher to contact the police quietly in case they are not able to use their phones and call.

A retired deputy sheriff in Illinois is the developer of an app that could be instrumental in reducing response time to active shooter incidents and protecting lives of students and faculty in distress. The app is called Hero 911, and the main purpose of the app is to alert local law enforcement authorities within a defined radius around the incident that an active shooter has entered a school and is a threat to the safety and well-being of students and faculty. The app also sends a 911 call to a distress center so the appropriate authorities (ambulances, firefighters) can respond to the incident if need be. This app is revolutionary as there is nothing quite like it that can reduce the response time for law enforcement to arrive on the scene of an incident.

The Hero 911 app is also quite simple to implement and use. A school that is looking to invest in this revolutionary technology would simply create an account with Hero 911. Local law enforcement officials in the area would also have an account that would be used for receiving distress calls when they are made, so that they can immediately arrive to the school where an active shooting incident is occurring. The principal and respective school faculty would be the only people who have access to the app and the ability to make the distress call if

the situation arises. In the unfortunate case that a distress call must be made by a principal or faculty member, they just have to simply press a fairly large button on their phone that would initiate the call to local law enforcement and a 911 call to a distress center. The purpose of this app is quite simple, as it simply takes the complexity out of law enforcement responding to a scene. It steps can be eliminated in informing local law enforcement of an active shooter at a nearby school, the reduced minutes and even seconds can save the lives of multiple people, which is extremely imperative in responding to school shootings.

With all of the advantages that come with the Hero 911 application, the app does present some issues that schools that are looking to implement will have to face. The first of these issues is the case of an accidental use of the Hero 911 app. The application contains security measures that would help protect against an accidental callings such as usernames and passwords, but there is still the possibility that someone can accidentally press the distress button and multiple law enforcement officials arrive on the scene. The detrimental effects of this is that it puts much unneeded stress on the law enforcement officials responding to the call as well as the community at large. Adding more security measures to the app would only complicate the issue even further, due to the fact that the purpose of the app is to reduce response time of law enforcement officials. This cannot be accomplished when multiple, complicated steps must be taken just to use the application.

Another problem that arises with this Hero 911 app is the economic challenges that come with the application. Unfortunately, the application is not free to the public and must be purchased in order to be implemented by an educational facility. However, in order to implement any plan that will be effective, there will surely be some cost in the process of implementation. What must be determined is whether you can place a dollar value on the life of

a child. Most rational people would come to the conclusion that the life of a child cannot be determined in this manner. Based on this statement, the price it takes to implement the use of the Hero 911 app should be disregarded, because even if one life is saved, the implementation would be worth the investment.

So should the Hero 911 app be considered for implementation by schools? Based on our research, it would appear that the Hero 911 app could save many lives every year through the reduction in response time of law enforcement officials. As mentioned, it is nearly impossible to prevent every active shooting attempt from occurring. To do so would only be possible in a utopian society. However, if we can reduce the response time for police officers and certified officials to arrive and take action at the scene of the active shooting. The application accomplishes this goal as any law enforcement official in the vicinity can take action and the time to relay the distress call from the school is diminished in the process.

Another option that many schools, especially in the New England area of the country have implemented is an armed security guard in schools. Not only does an armed guard add increased protection to students and faculty, the sense of protection is experienced by these students and faculty, which can decrease the amount of fear students will have that an active shooter could enter and cause havoc to their own school. After our team completed our interviews with school principals and administrators, we found that the majority of schools did have some sort of police officer present, but they were not always armed. In some cases, the police officer was not even dressed in typical law enforcement attire. Instead, these guards would wear typical street clothes. The reasoning behind this decision was that the presence of an armed security guard in the building could make some of the students and faculty feel uneasy. It appears that when it comes to having an armed guard in the school, the question is not will the

armed guard add extra security to the school. The majority of people would agree that having a guard would do wonders to increase protection for students. The real question lies in will having an armed guard cause such a distraction to students and faculty that the distraction outweighs the protection benefits? After conducting this research and understanding the importance of having an armed guard as close to an incident as possible to reduce response time, our team unanimously decided that the benefits of protection from the guard outweighed the distraction and fear that a guard might instill in the students of the school. An armed guard can arrive on the scene of an active shooter incident in a school in a matter of seconds due to their close proximity to everything within the school, while a law enforcement official might take a few minutes. As we have seen, saving lives when it comes to an active shooter comes down to seconds, and every second wasted presents another opportunity for another life to be lost. Active shooter incidents are almost unpreventable, but the presence of an armed guard can help stop a tragic incident from turning into a catastrophic incident.

The presence of law enforcement in schools is imperative, but what is just as important is the relationship and communication between schools and police and fire departments. For example, police and fire departments should have some sort of access into all buildings of a school, whether that is through regular keys, swipe cards, etc. If a situation is to arise where the police or fire department need to enter a locked building, they must have some sort of access to the inside without the presence of a faculty member or without having to take the time to break down walls or windows just to enter the building. Police and local fire departments should also have blueprints of the school along with information about faculty members, in case they need to enter the school in a lockdown status and need to know the layout of the school. Without an understanding of the school layout, law enforcement officials are at a clear disadvantage in

apprehending an active shooter, simply because they do not know the layout of the school. Chances are that the active shooter will know the layout of the school due to the fact that the majority of active shooters actually attend the schools that they attack. A lack of understanding of the school layout could prove detrimental to efforts to eradicate a school of a dangerous active shooter and cause students and faculty to lose their life. Law enforcement and fire department should be disclosed as much information about the school as possible, so that they are given the best possible chances to save as many lives as possible should a situation like an active shooting incident occur in their local schools.

Police and Fire department should have access to what has become known as a crisis response box. The crisis response box is a tool that is being implemented or has been implemented by many schools around the country. Simply put, the crisis response box is a box (or sometimes a file) with information about the school such as blueprints of the school, emergency contact information, locks, armed weapons (occasionally) among other items that a school might find useful in the case of an emergency. Often times, law enforcement officials and firefighters will use the crisis response box in the case of an emergency to gather information about the school and people within the school that they may not have known originally. Most recently, crisis response boxes have included fully functioning iPads that contain all sorts of information about the school. If a police officer needs information about specific teachers or students in the school, they simply have to open an app on the iPad and all of the information that they might need is right at their fingertips. Although there are a few schools that do not have a crisis response box, most schools have some sort of derivative of this tool. Many schools are required by government regulations to maintain school blueprints and emergency contact information somewhere within the school.

One school that we interviewed a few weeks ago mentioned a position called the “emergency coordinator” that a trustworthy faculty member or school administrator would hold. The purpose of this position was to make sure that there was always an up to date emergency procedure in place that could be utilized should the situation of an active shooter or some other dangerous incident arise. Although all of the responsibility for the emergency procedure did not fall on this individual, the majority of the work needed to maintain the operation of this procedure, should it be needed, fell under the responsibility of this individual. While we thought this was an interesting strategy, it does present some problems such as the absence of this person on the day of a real emergency in the school or the designated emergency coordinator turns out to be not as trustworthy as originally thought.

Improving safety in schools is a dynamic and multidimensional issue. An important side of this perplexing problem to analyze is the role of the procedures that are involved in emergency situations. However, when studying this issue, one must keep in mind that no two active shooter situations are the same. There are many variables that come into play, therefore each incident must be treated as a unique situation requiring its own optimal solution. Procedures to be carried out in the event of an active shooter, therefore, will be unique to the situation in order to provide the best safety for students and school faculty.

Preventative measures are vastly important in improving school safety because they decrease the likelihood of an event to occur, and may also better prepare individuals for an event if one was to occur. Through our data collection and analyses, we have identified several preventative measures that may be helpful in improving school safety. As identified above in our shooter analyses, many of the shooters felt that they were bullied prior to the shooting, causing extreme anger that led to both impulsive and premeditated attacks. Bullying prevention is

essential, especially in elementary and high schools, for this exact situation. This starts with school faculty members being more aware of bullying occurring in the school, and taking immediate and definite action to end it. Teachers should also clearly define what bullying is to students, and make them aware of the harmful effects that it can have on individuals. Threats of any nature should be taken very seriously by the school. This includes posts on social media websites, “hit lists”, or any joke that includes a threat to any student or faculty member. Several cases that we analyzed included the shooter threatening to commit acts of violence prior to the attack, as well as posts on social media that were indicative of violent behavior. A point that we also found critical, one that all of our schools agreed upon, is the requirement of background checks on all employees of the school. This is important because it could be catastrophic if a dangerous individual held a position of authority in the school, had easy access into the school, and worked very closely with children and teenagers.

Training exercises are important in order to prepare both faculty and students for an emergency situation. The more frequently training exercises are carried out, the more familiar that students and faculty will be with the response procedures, and the more likely they are to carry out these situations and remain safe in the case of an emergency. These training exercises include active shooter awareness, bomb threat procedures, fire and evacuation drills, and lockdown drills. The most applicable of these in defense of an active shooter situation is a lockdown drill. A lockdown procedure consists of several entities that work together to keep students and faculty safe from an intruder or active shooter. The first step of a successful lockdown procedure is identifying a direct threat and communicating this threat to both students and faculty. The most effective way to clearly alert the entire school is through an audible intercom system or an alarm. This way, all students and faculty are informed simultaneously,

allowing the lockdown process to occur faster and more smoothly. Several schools choose to use a code system, in which a certain word indicates a specific level of danger that corresponds to a unique response. Other schools directly announce the lockdown procedure without code in order to be as clear as possible. Both of these methods are effective, so long as the entire school is immediately alerted that a lockdown has been called into effect. During or just after the announcement of a lockdown, it is critical that the police be contacted by a faculty member. In order to ensure the most efficient response from the police, the faculty member should communicate as much known information as possible, such as the location of the shooter, the number of shooters, the type of weapon being used, the number of potential victims, and a physical description of the shooter. Teachers in contact with 911 should remain on the line in order to further assist officers.

Following the lockdown alert, faculty should lead students to the nearest designated safe area, such as a classroom, and lock all doors. The teacher should close all window shades, as well as block any windows on doors that allow view into the classroom. Along with remaining inside the locked classroom, staying out of sight in an active shooter situation is extremely important. Cell phones should be silenced and students and faculty should hide under desks, in closets, and stay out of sight by any other means possible. In many active shooter cases, lives have been saved due to individuals remaining hidden. A shooter is less likely to enter a room if he or she is unable to see any potential targets. The students and faculty should remain hidden, and as quiet as possible, until law enforcement arrives and declares the area safe.

Lockdown procedures are very effective in keeping students and faculty within the school safe, but not all individuals in the school may be able to get to a safe area. Students and faculty who are in the same room, hallway, or lobby as the shooter are faced with an imminent danger to

their life. In this situation, individuals are best to run directly away from the shooter immediately, leaving behind all belongings, in order to reach a safe area. Individuals fleeing should not attempt to move severely wounded victims. Fighting the shooter is extremely dangerous, and it an absolute last resort of self-defense. If a person is faced with a situation in which they must fight off their attacker, they should be as physically aggressive as possible, and commit to all of their actions. Another helpful tactic the person could use would be to improvise weapons from objects within the room, and to throw objects at the shooter. Several instances that we have observed in the past involved a teacher wrestling the student to the ground or disarming them. This tactic could be effective when standing behind the shooter, though it is not necessarily recommended as it is dangerous to attack an armed shooter without a weapon.

In conclusion, in order to improve security systems in schools, there are several recommendations that we believe schools should implement. These recommendations include the improvement of entrance ways and locking mechanisms, the implementation of the Hero 911 smart phone application, the use of a crisis response box, as well as the practice of a detailed and comprehensive lockdown procedure. These combined recommendations can save many lives, and make our schools safer for the children of this country, which has faced too many active shooter incidences over the past decade. Although active shooter situations are unpredictable and extremely dangerous to students and faculty, our team has found that the implementation of the recommendations as described above will vastly improve the safety of educational facilities across the country.

References:

1. Morse, Dan. "Columbine Review Commission's Chilling Report of What Happened in Colo. 15 Years Ago." *Washington Post*. The Washington Post, 12 Mar. 2014. Web. 11 Dec. 2013.
2. "Columbine High School Shooting Information." *TOC*. Jefferson County Sheriff, n.d. Web. 14 Dec. 2013. <<http://denver.rockymountainnews.com/shooting/report/columbinereport/pages/toc.htm>>.
3. "Columbine High School." *FBI The Federal Bureau of Investigation*. FBI, n.d. Web. 16 Dec. 2013. <<http://vault.fbi.gov/Columbine%20High%20School%20>>.
4. Nelson, Mike. "Santee California School Shooting." *Santee California School Shooting*. Key to Safer Schools, n.d. Web. 23 Jan. 2014. <http://www.keystosaferschools.com/Santee_High_California_Schooling03501.htm>.
5. "Suspect had talked about shooting at school." *Santana High School*. N.p., 4 Mar. 2001. Web. 20 Jan. 2014. <http://projets.rsignt.net/Supercolumbine/Santana_High.html>
6. "Often Ridiculed, the Suspect Said, 'I'll Show You One Day'" *Los Angeles Times*. Los Angeles Times, 06 Mar. 2001. Web. 22 Dec. 2014.
7. Rother, Caitlin. "Granite Hills High School Shooting." *SignOn San Diego Metro*. N.p., 26 Mar. 2001. Web. 11 Dec. 2013. <http://legacy.utsandiego.com/news/metro/granitehills/20010326-9999_1m26shoot.html>.
8. "Suspect had talked about shooting at school." *Santana High School*. N.p., 4 Mar. 2001. Web. 20 Jan. 2014. <http://www.keystosaferschools.com/Granite_Hills_California_Schooling032201.htm>.
9. Meryhew, Richard, Jill Burcum, and Sharon Schmickle. "Sept. 26, 2003: Cold Spring school shooting: Horror hit in seconds." *StarTribune.com: News, weather, sports from Minneapolis, St. Paul and Minnesota*. Star Tribune, 26 Sept. 2003. Web. 22 Dec. 2013.
10. Palmersheim, Joseph. "Cooper Teacher Shares Experience of Rocori High School Shooting." *Sun Post*. N.p., 28 Dec. 2012. Web. 15 Dec. 2013.
11. Lennard, Jeremy. "Ten Dead in US School Shooting." *Theguardian.com*. Guardian News and Media, 22 Mar. 2005. Web. 17 Jan. 2014.
12. Hancock, David. "Tales Of School Shooting Bravery." *CBSNews*. CBS Interactive, 24 Mar. 2005. Web. 23 Apr. 2014.
13. Sevcik, Kimberley. "Reservation for Death." *Saloncom RSS*. Salon RSS, 8 Aug. 2005. Web. 29 Dec. 2013. <http://www.salon.com/2005/08/08/red_lake/>.
14. Jacobs, Don, and Lola Alapo. "Sheriff: Student Shoots 3; 1 Dead." *Knoxville News Sentinel*. KnoxNews, 9 Nov. 2005. Web. 29 Dec. 2013.

15. "Relief Petition Filed for Convicted Campbell County School Shooter." *Relief Petition Filed for Convicted Campbell Co. School Shooter*. Wate News, 19 Oct. 2010. Web. 29 Dec. 2013. <http://www.wate.com/Global/story.asp?S=13348565>>.
16. "Lancaster Co. School Shooting Leaves Four Dead." *kyw.com*. CBS Broadcasting Inc., 2 Oct. 2006. Web. 5 Jan. 2014.
17. "Police: School Killer Told Wife He Molested Family Members." *CNN*. Cable News Network, 03 Oct. 2006. Web. 5 Jan. 2014.
18. "Fatal Shooting at US Amish School." *BBC News*. BBC, 10 Mar. 2006. Web. 5 Jan. 2014.
19. Welch, Chris. "Slain Assistant Principal Sent Student Home Because of Trespass Charge." *CNN*. Cable News Network, 06 Jan. 2011. Web. 5 Jan. 2014.
20. "Gun Used In School Shooting Belonged To Officer." *WOWT RSS*. WOWT NBC Omaha, 6 Jan. 2011. Web. 7 Jan. 2014. http://www.wowt.com/home/headlines/Shooting_At_Millard_South_High_School_112952214.html>.
21. "Chardon High School Shooting: Timeline of Events | Wkyc.com." *Wkyc.com*. WKYC-TV, 07 Feb. 2012. Web. 7 Jan. 2014.
22. Ng, Christina, and Barbara Lowe. "Chardon High School Shooting: Second Student Dies as Alleged Gunman Is Identified." *ABC News*. ABC News Network, 2 Feb. 2012. Web. 9 Jan. 2014.
23. McGuinness, William. "Robert Gladden Jr. Pleads Guilty In Perry Hall High School Shooting Of Disabled Classmate." *The Huffington Post*. TheHuffingtonPost.com, 19 Feb. 2013. Web. 9 Jan. 2014.
24. Anderson, Jessica. "Perry Hall High School Shooter Robert W. Gladden Jr. Gets 35 Years in Prison." *Baltimore Sun*. The Baltimore Sun, 25 Feb. 2013. Web. 9 Jan. 2014.
25. "Chilling Photos And Timeline Of Events From Sandy Hook Shooting Released." *Chilling Photos And Timeline Of Events From Sandy Hook Shooting*. World Now and KHQ, 26 Nov. 2012. Web. 9 Jan. 2014. <http://www.khq.com/story/24073207/chilling-photos-and-timeline-of-events-from-sandy-hook-shooting-released>>.
26. "Sandy Hook School Massacre Timeline." *Memory Hole*. Memory Hole, 6 Jan. 2012. Web. 10 Jan. 2014. <http://memoryholeblog.com/2013/01/06/sandy-hook-school-massacre-timeline/>>.
27. "Report of Shooting at Sandy Hook." *State of Connecticut Reports*. State of Connecticut, n.d. Web. 10 Jan. 2014. http://www.ct.gov/csao/lib/csao/Sandy_Hook_Final_Report.pdf>.

28. "High School Shooting in Taft, California Leaves One Student Injured." *Theguardian.com*. Guardian News and Media, 10 Jan. 2013. Web. 10 Jan. 2014.
29. Press, Associated. "Pictured: The bullied teen who shot 'tormenter' at his high school... as it's revealed he will be charged as an adult." *Mail Online*. Associated Newspapers, 15 Jan. 2013. Web. 15 Jan. 2014. <<http://www.dailymail.co.uk/news/article-2262579/Bryan-Oliver-Bullied-teen-tried-adult-Taft-High-School-shooting.html>>.
30. News, Dylan. "Student Opens Fire At California High School." *Yahoo! News*. Yahoo!, 10 Jan. 2013. Web. 30 Apr. 2014.
31. Kingkade, Tyler. "Price Middle School Shooting: Wounded Student Recovering After Fellow Teen Opened Fire." *The Huffington Post*. TheHuffingtonPost.com, 31 Jan. 2013. Web. 15 Feb. 2014.
32. Hoffer, Steven. "Price Middle School Shooting: Multiple Injuries In Attack At Southeast Atlanta School (UPDATE)." *The Huffington Post*. TheHuffingtonPost.com, 31 Jan. 2013. Web. 15 Feb. 2014.
33. Elam, Stephanie. "'Please don't shoot': Wounded survivor, 12, recalls Nevada school attack." *CNN*. Cable News Network, 1 Jan. 1970. Web. 28 Feb. 2014.
34. Watts, Catherine, Wolf Blitzer, Jason Hanna, and Karan Olson. "Nevada school shooting: Teacher killed, two students wounded." *CNN*. Cable News Network, 1 Jan. 1970. Web. 28 Feb. 2014.
35. "Dylan Klebold Biography." *Bio.com*. A&E Networks Television, n.d. Web. 3 Mar. 2014.
36. Toppo, Greg. "10 Years Later, the Real Story behind Columbine - USATODAY.com." *10 Years Later, the Real Story behind Columbine - USATODAY.com*. USA Today, 14 Apr. 2009. Web. 25 Mar. 2014.
37. "Eric Harris Biography." *Bio.com*. A&E Networks Television, n.d. Web. 20 Mar. 2014.
38. McCarthy/Santee, Terry. "WARNING: Andy Williams Here. Unhappy Kid. Tired of Being Picked." *Time*. Time Inc., 11 Mar. 2001. Web. 10 Feb. 2014.
39. 30, October. "Shooter in School Rampage Hangs Himself in Jail." *Los Angeles Times*. Los Angeles Times, 30 Oct. 2001. Web. 20 Feb. 2014.
40. Roth, Alex. "SignOn San Diego Metro | Granite Hills High School shooting -- School shooter used antidepressants." *SignOn San Diego Metro | Granite Hills High School shooting -- School shooter used antidepressants*. N.p., 19 Apr. 2001. Web. 20 Feb. 2014. <<http://www.antidepressantsfacts.com/Jason-Hoffman-18-Celexa-Effexor.htm>>.

41. Post, Tim. "MPR: Court Views McLaughlin Video Statement." *MPR: Court Views McLaughlin Video Statement*. Minnesota Public Radio, 12 July 2005. Web. 28 Mar. 2014.
42. "School Killer's Animated Terror." *The Smoking Gun*. N.p., 23 Mar. 2005. Web. 11 Apr. 2014.
43. Donila, Mike. "Kenneth Bartley Speaks in His Defense." *Kenneth Bartley Speaks in His Defense*. N.p., 27 Feb. 2014. Web. 26 Apr. 2014.
44. Birch, Douglas, and Josh Mitchell. "Family Man Who Killed Little Girls." *TheAge.com*. N.p., 4 Oct. 2006. Web. 17 Apr. 2014.
45. "Suicide Note from Charles Carl Roberts IV's, A Truly Disturbed & Sick Man." *ScaredMonkeys.Com*. N.p., 3 Oct. 2006. Web. 23 Apr. 2014.
46. Caulfield, Philip. "Omaha School Shooter, Robert Butler Jr., Wrote Chilling Message on Facebook before Deadly Attack." *NY Daily News*. N.p., 6 Jan. 2011. Web. 14 Mar. 2014.
47. Stoddard, Martha. "K2, Guardianship Bills OK'd." *Omaha.com*. N.p., 16 Feb. 2011. Web. 20 Apr. 2014.
48. NG, Shelley. "'F--- All of You!': Ohio Teen Psycho T.J. Lane Gives the Finger and Smirks as He Is Sentenced to Life for Shooting Rampage That Left Three Chardon High School Students Dead." *NY Daily News*. N.p., 19 Mar. 2013. Web. 22 Apr. 2014.
49. Pappas, Alex. "Facebook Message, Apparently from Suspected Ohio High School Shooter: 'Die, All of You'." *The Daily Caller*. N.p., 27 Feb. 2012. Web. 15 Apr. 2014.
50. Figueroa, Dariel. "Robert Wayne Gladden Jr: Top 10 Facts You Need to Know | HEAVY." *Robert Wayne Gladden Jr: Top 10 Facts You Need To Know*. N.p., 28 Aug. 2012. Web. 29 Apr. 2014.
51. Lysiak, Matthew. "Why Adam Lanza Did It." *NewsWeek.com*. N.p., 17 Jan. 2014. Web. 18 Mar. 2014.
52. Kleinfeld, N. R., Ray Rivera, and Serge F. Kovalski. "Newtown Killer's Obsessions, in Chilling Detail." *The New York Times*. The New York Times, 28 Mar. 2013. Web. 11 Apr. 2014.
53. Kleinfeld, N.R., Ray Rivera, and Serge Kovalski. "Suspected School Shooter Bryan Oliver: Top 10 Facts You Need to Know | HEAVY." *Bryan Oliver, School Shooter: Top 10 Facts You Need to Know*. N.p., 28 Mar. 2013. Web. 29 Apr. 2014.
54. Anghel, Raluca. "Taft High School Shooting: Students Knew Gunman's Motive, He Made Threats." *Softpedia.com*. N.p., 12 Jan. 2013. Web. 11 Mar. 2014.

55. Allison, Cathleen. "Nevada Seventh-grade Shooter Not Bullied at School: Officials." *NY Daily News*. N.p., 9 Nov. 2013. Web. 03 May 2014.