

Fire Investigation Report

Incident Date:	April 21, 2023
Incident Time:	03:57:44
Incident Address:	1800 Bench Rd
Incident Number:	2023-2713
Date of Examination:	April 21-22
Location of Examination:	Highland High School, D-Building
Name of Investigator:	Dean Bullock, James Perry, Marcus Andrews, Jake Sellman, Austin White, Tony Catt
Nature of Report:	Commercial Structure Fire

SUMMARY:	On 4/21/2023 at 3:57, a commercial fire was reported at the Highland High School. The fire occurred in the D-wing of the building. The fire was called in by a School District key holder and a Pocatello Police Officer with flames showing through the roof. Both parties were responding to the high school for a report of a burglary alarm activation. E3 arrived on scene first and reported a working fire and active flames coming through the roof in the D-wing. Multiple agencies were called to assist with the fire. Investigators were called in to determine the origin and cause of the fire. A fire investigation task force consisting of the Pocatello Fire Department, the Idaho Fire Marshall's office, the Bureau of Alcohol, Tobacco, and Firearms and Explosives (ATF), and the Pocatello Police Department was formed for the investigation. All agencies involved in the investigation collaborated together in performing different tasks to determine origin, cause, and conducting interviews. The fire investigation task force determined the fire was accidental and electrical in nature with origin located in the area of the stage.
NEED:	To determine the origin and cause of a fire in a commercial building.
PROBLEM:	Fire in a commercial structure.
COLLECTION OF DATA:	<p>Photographs were taken of the scene and structure, with an emphasis on the area of origin. The pictures and photo log are included in the report. Other pictures will be included in the report from other agencies. Interviews were conducted by the ATF personnel. The Pocatello Police Departments assisted with interviews. Their interview documentation will added later as an addendum as they become available.</p> <p>Written narratives for responding fire crews are included below.</p> <p>BC Adam Davis-WORKING COMMERCIAL FIRE DECLARED EN ROUTE BY E3. E3 BEGAN FIRE ATTACK EXTERIOR SOUTH SIDE. BUILDING WAS SEGMENTED AND THE SOUTH EAST PORTION OF THE D SECTION OF THE BUILDING WAS INITIALLY INVOLVED. I ARRIVED SHORTLY AFTER E3 AND ASSUMED COMMAND. E3 SAID THEY WERE OUT OF WATER AND BEGAN SOFTENING THE DOORS ON THE DELTA SIDE. I ATTEMPTED TO LOCATE HYDRANTS ON MDT TO DIRECT INCOMING UNITS. I</p>

Fire Investigation Report

ASSIGNED L1 AND E2 TO GRAB A HYDRANT AND COME TO THE SOUTH (DELTA) SIDE. ROOF COLLAPSE NEAR DELTA WALL AND WALL COLLAPSE. DECLARATION OF DEFENSIVE FIRE. CREWS ASSIGNED TO FIRE ATTACK REPORTED OF VERY LOW PRESSURE. I CALLED FOR WATER DEPT TO RESPOND TO BOOST PRESSURE. THEY RESPONDED AND WE HAD REMARKABLE PRESSURE INCREASE. CHUBBUCK MUTUAL AID WAS REQUESTED. AN AERIAL WITH A PIPE WAS DEPLOYED ON THE BRAVO SIDE. THE FIRE WAS WIND DRIVEN BY WINDS OUT OF THE SOUTH AND THE FIRE WAS MOVING ALONG THE MEMBRANE ROOF QUICKLY. CREWS WERE ESTABLISHED TO SLOW MOVEMENT OF FIRE AND ATTACK AND COOL FROM SAFE LOCATION. TACTIC WAS DETERMINED AND RELAYED TO ALL CREWS THAT WE WERE TAKING STRONGER MEASURES TO KEEP THE FIRE FROM GOING INTO THE HALLWAY AND ATTACHED ADJACENT BUILDING TO THE WEST, AND STOP IT FROM GETTING TO THE WELDING AREA ON THE B/C CORNER. CREWS FOCUSED EFFORTS TO ACCOMPLISH THIS BY TRANSITIONING TO OFFENSIVE MEASURES INTERIOR AND DIRECT FROM SAFE LOCATION ON ROOF. TRENCH CUT WAS ESTABLISHED BY ROOF DIVISION WHERE HEAT WAS RELEASED AND WATER WAS APPLIED. INTERIOR CREWS ATTACKED FIRE IN GYMNASIUM FROM FIRE DOORS TO COOL BURNING BLEACHERS, FLOOR, WALLS, AND HEATED GASES. AT THIS POINT, THE FIRE WAS IN DECAY PHASE YET THERE WERE EXTENTIONS INTO SPACES THAT TOOK A CONSIDERABLE AMOUNT TO TIME AND EFFORT TO FULLY OVERHAUL. MANY CREWS WERE INTO SEVERAL REHAB CYCLES AND BOTTLES. SEE CAD DETAILS FOR CONTAINMENT AND EXTINGUISHMENT TIME MARKS. CREWS WERE GRADUALLY DEMOBILIZED AND ONE FIRE CREW WAS ON SCENE THROUGHOUT THE NIGHT TO WATCH FOR HOT SPOTS OR FLARE UPS AND MITIGATE EXTENSION. CREWS RETURNED TO HOME STATIONS FOR CLEAN UP, REHAB, AND BACK ON DUTY.

E3-Austin White-E3 was dispatched for fire at highland high school. Prior to arrival flames were seen coming from the roof. Working fire was called and announced flames coming from the roof. On arrival E3 parked in the south parking lot. Active flames were seen coming from the roof of the school. A 2.5 inch line was pulled and water sprayed on the roof of the building. After putting water on the roof crew members from E3 and A3 opened a door to the building but were unable to make entry due to lack of water and amount of smoke in the room. E3 crew made entry to the building through the double doors in the courtyard area that lead to a hallway. The fire doors in the hall way had not closed and were manually closed then E3 crew exited the building. E3 crew made our way around the building towards the north side and made entry through the north doors to the hallway that was connected to the large gym. The north fire doors had not activated and were closed manually by E3 crew. After exiting the north doors E3 crew assisted Chubuck crews and E5. A line was pulled from E5 and stretched to the east side of the building. E5 crew and E3 crew put water on the building from the north east side and used a ground ladder to get access to the roof. E3 crew split from E5 crew and made access to the roof from the courtyard area on the south side of the building. Access was made to the top rood level and checked for heat and smoke. E3 crew joined with E2 crew and extended lines off of E3 to the double doors in the courtyard. Both crews made entry into the building and went into the main hallway to the gym. Entry was made into the gym. The gym had large amounts of smoke and fire with limited

Fire Investigation Report

visibility. The bleachers in the gym were fully engulfed and were extinguished. The building was exited and E3 crew went to rehab. After rehab E3 crew went back into the main gym hallway from the south double doors in the courtyard and made entry into the attic space from a small attic access in a storage room. A line was brought to the attic space however E3 crew had to exit the attic due to lack of hose. E3 crew exited the space and the building to get more hose. When reentering the building the attic space had become filled with smoke and fire and crew was unable to reenter the space. E3 crew again exited the structure. After other crews were able to cut on the roof and put water into the attic space E3 crew was again able to enter the building and make access to the attic space to extend the hose and put out hot spots in the attic. E3 crew eventually gave a turn over to RE3 crew and exited the fire scene returning to station 3.

L1-Mike Mason-L1 responded to a reported commercial structure fire with flames showing. Arrived third behind E3 and E2. L1 observed heavy fire through the roof of D wing of Highland High School. The entire portion of the building south of the gymnasium was involved. L1 was directed by BC1 to spot at C/D corner of the building for defensive attack with an elevated master stream.

Water supply issues initially prevented development of an effective master stream. Assistance requested from water department to bump main line pressure which had a positive effect on stream production. L1 assisted in placing E2 as a relay pump at the hydrant supplying L1 and repositioned the aerial near the A/D corner of building D to better reach the gymnasium windows and as the fire had spread to there by this time.

L1 crew assisted in operating 2 1/2" hand lines in the courtyard along the A wall outside the cafeteria until that part of the building collapsed. At that point L1 mopped up hot spots in the collapsed area with the aerial master stream while other engine companies worked from the front hallway to control fire in the gym.

L1 entered building to replace engine crews that had been attacking the gymnasium fire from the front hallway. At this time the gymnasium fire had been knocked down. L1 observed flames pushing into the gym horizontally through the A wall near the ceiling uniformly along the length of the wall. There was also brown smoke issuing from louvered vents in a concealed space above the front hallway. Spoke to a school district maintenance person at command post and learned of a scuttle in an equipment room across from the main gym entrance in the front hallway through which crews could gain access to this space. The decision was made to conduct a coordinated attack of this mezzanine in conjunction with vertical ventilation.

L1 assigned to roof division and put in a defensive strip cut above the mezzanine along the full length of the party wall with the main gym with help from E2 crew. Other engine crews went interior and through the scuttle into the mezzanine to extinguish fire in this area while roof teams monitored fire conditions from above. Conditions on the roof continuously improved throughout this effort and the fire

Fire Investigation Report

was declared controlled. Crews continued to rotate through interior and roof positions to ensure thorough extinguishment of hot spots. L1 released from scene at about 18:00

E2- Gary Kmetz-E2 was dispatched to a commercial fire in Highland High School with reports of flames showing. E2 upgraded to a code response and directed to supply engine 3 with a hydrant which was spotted on the south side of the building. E5 had simultaneously taken a hydrant and supplied E3 while we located a hydrant on the south end of the parking lot and had to cut through a chain link fence for access. E2 then supplied L1 for an elevated master stream on the CD corner of the D wing of the school. All hydrants had very low flow at that time. E2 was then directed to flow water into the cafeteria on the west side through windows that had already self-vented due to heavy fire. Water supply and pressure was still problematic at this time.

E2 was then directed to gain access to the interior of the building to assess fire spread down hallways and adjacent rooms. E2 removed the lock from exterior door near hallway on the south side. E2 observed hallway sprinklers were flowing and smoke but no flames visible down corridors and that there was heavy fire burning in the gym. E2 was then assigned with E3 to force doors and get fire knocked down inside gym with hand lines. E2 was only able to accomplish quick knockdown and cooling due to falling debris and light fixtures inside.

E2 was shortly thereafter assigned to place one hand line in the mezzanine above hallway and another hand line to the roof while assisting L1 with a trench cut along the length of gym to stop lateral spread of smoke and fire to unaffected wings of the school. E2 remained on roof to monitor conditions until released for rehab. E2 was released from fire and replaced by oncoming crews at around 2pm.

E5- Kelly Lance- Respond to commercial fire Highland Senior high school flame showing. On arrival vented fire from roof with SE wind. Take the hydrant on south west corner of parking lot and lay supply line to engine 3. Face to face with command. Lay second line from engine three to hall doors by cafeteria. Meet with driver. Command told D/O Parks we were to relocate on north side of the building. On the way out of parking lot we shut down supply line and re-later it to get kinks out. Relocate on North side of the building after taking our own hydrant by the tennis courts. Establish water supply to Chubbuck Arial 304. Lay attack line on C side of building. Meet with engine three. Attacked flames through transom above south hall door of d building. Roof already visibly gone. Ladder the roof to the north of the door to avoid the steel drip edge that was falling off the roof. Send hose line up to fire fighter on E3. After short time he gets tired and comes down. We continue fire attack from ladder. Good knockdown on what we could reach. Gained roof access to check for extension and extinguish fire on membrane all along the east side along with overhaul. Good roof integrity over the locker area and shop areas. Overhaul on top 2 to 3 layers of brick to gain access to fire under the roof membrane and into the decking. Some of the support purlins for the steel trusses were compromised and damaged the wall. Continued suppressing efforts under the drip edge with brick overhaul on East and North sides. Removed roof drains to allow 3 to 6 inches of water (depending which roof you were on) to drain through the scuppers. Gained

Fire Investigation Report

	<p>access to south hallway of the building. Engine three had unlocked the door. Light smoke in hallway. Did some recon. Gained access to the gymnasium with active fire burning in the gymnasium. No fire in hallway. No fire in weight room below grade level. Relate to command would like to gain access with the hose line and to attack the fire. Granted permission. As line was moved into position by exterior hallway door, we could hear a rumbling noise coming from the interior of the building and it sounded like there was a major collapse. Brown smoke was pushed out of north hallway to the exterior. After a minute the smoke receded and went back into the building with a clean track of air. Air track was going down the hallway and back into the vents connecting the gymnasium in the hallway. Advanced hose line to the gymnasium and upon opening the doors found that the gymnasium had flashed with the collapse and was in fully involved flashover state. Ongoing attack for several minutes from the doorway. Made entry for a couple seconds past the doorway to get around the corner for fire attack. Upon receding back to the doorway debris was falling in our vicinity. After initial knock down face-to-face with command and continued overhaul on the roof with ambulance 2. Advanced blue blitz fire ground nozzle back into the gymnasium with stack tips to reach smoldering portions on side A of Gym in building D. Ambulance 2 was assigned to that nozzle. Upon extinguishment at our location we were released from The scene after we put our truck in service.</p>
ANALYSIS OF DATA:	<p>Fire Suppression Activities See narratives above for unit suppression activities. Chubbuck Fire was asked to assist as mutual aid. Ladder truck 304 responded and assisted with fire suppression on the north side of the gymnasium.</p> <p>Water Pressure Upon connecting to hydrants on Surprise Valley Rd (1723) and the hydrant on the south end of the parking lot (855), it was noted by fire crews that water pressure was insufficient for the amount of water needed in hand lines and elevated master streams. A third hydrant was accessed on Fairway Dr. (435) north of the tennis courts by Chubbuck 304. Access and distance to hydrants was a delay for suppression activities. Relay pumping was attempted to overcome lack of pressure but was inefficient due to volume. The lack of pressure and volume further delayed fire suppression activities. The water department was notified and was able to boost water pressure so that suppression could resume.</p>

Fire Investigation Report



Fire Alarm Systems

The area affected by the fire did not contain a fire alarm system. A fire alarm system is present in other areas of the building but failed to activate at the time of the fire. During suppression efforts, Pocatello firefighters closed the fire doors manually in the affected parts of the building. It is unsure whether the doors were propped open, or if they were not activated by the fire alarm system.

The main fire panel as shown in photos 178 & 179, is located in the entry to the school along with a secondary panel in the hall outside the main gym. Both panels were investigated after the fire and both were found in trouble mode. I contacted Megan with Mountain Alarm the day of the fire to investigate whether they had received notification that a fire had occurred. She stated that they did not receive any alarms that day for Highland High School. The monitoring report for the last 6 months is included in the investigation report. At the time of the fire, the alarm system monitoring report shows normal operation, however, the alarm system failed to activate at the time of the fire. The alarm monitoring report is attached to the investigation report.

Upon activation of the fire sprinkler system, the water flow alarm did not activate the system. According to Mountain Alarm's reports, they do not show water flow through the system. However, it does show a tamper valve alarm at 05:15:17.

Highland High School was inspected by the Pocatello Fire Inspector November 28, 2022. At the time of the fire inspection in November, the main panel in the front lobby was in trouble mode. The school representatives were made aware of the alarm system issues and told to have the system inspected ASAP. According to Mountain Alarm's report, the system was put in test the next day, November 29, 2022. The report is not clear whether a tech from an alarm company put it in test for maintenance, or if it was a school employee. The system had been serviced in June of 2022 by Fire Services of Idaho.

Fire Sprinkler Systems

Fire sprinklers are not located throughout the building. The fire sprinklers that are present and were affected by the fire in the D-wing hallways did activate. The water flow alarms located on the riser did not activate the fire alarm system.

Fire Growth/Spread

Fire Investigation Report

The layout of the D-Building, locations of the origin and security cameras are included in a PDF file attached to this report. Security camera footage obtained narrowed the area of origin to the cafeteria/stage which is highlighted in the PDF file. Footage indicated first area of initial fire growth in the band/choir hallway (camera location A) although smoke is noted in all camera locations (camera locations B and C) prior to this timeframe. Fire activity and smoke is noted in footage from camera B in the area of the stage in the cafeteria. As seen in the footage from camera A at 0314 hrs significant fire activity in the band/choir hallway was moving into the east/west hallway that divides the gymnasium and cafeteria. Fire growth remained unchecked, except by sprinkler locations, and continued to spread throughout the D-wing and gym until fire crews arrived. Venting of the fire through the roof in the location of the band/choir hallway was noted by a private security camera located on Surprise Valley Rd to the south. The private security camera footage was obtained from Craig Snelders at 1675 Surprise Valley Rd (208-251-4053). The files are included in the report. A PPD officer on scene at 0358 hrs noted flames showing through the roof on the east end of the D-wing. As noted by narratives from Pocatello Fire Department Captains, fire was able to run in the attic areas under the membrane roof. As fire progressed along the roof, it breached the gym through the windows. Fire behavior was extreme in the gym due to large amounts of wood and combustibles.

Fire Origin

Camera footage in the D-wing allowed for a focused investigation into the cafeteria and stage. Camera footage seen from camera A shows active flame projecting from the band/choir hallway. Camera B shows smoke and fire activity in the area of the origin. Camera C shows smoke in the hallway on the west side of the cafeteria. The janitor that had been cleaning the night of the fire stated that he had been riding a floor buffer that is battery powered. The name of the janitor is included with the ATF report. According to the ATF agent that interviewed the night janitor, the janitor needed to recharge the batteries multiple times that night in order to complete his job. He stated that at the end of his cleaning that night, he parked the machine in its usual spot, which was on the north end of the stage in a small framed in room that isolated it from the rest of the stage. The floor buffer was found, but we were unable to find any plug remnants in the outlet near where it was parked. The floor buffer batteries could be a competent source of fire, and cannot entirely be ruled out until testing of the machine is done.

All week prior to the fire, Highland High School's Show choir, the Trouveres, had been performing on the stage and had been using sound and lighting equipment for their shows. The use of this equipment produced a buildup of heat in the cabinet on the NW corner of the stage. Untreated stage curtains were surrounding the cabinet. The cabinet was found to contain AV equipment inside. There was a hole that had been cut into the back of the metal cabinet and the remnants of a cord was found in the outlet that the cabinet had been sitting in front of. The cabinet sustained significant damage with significant "V-patterns" on its front door. There were also holes in the bottom of the cabinet as seen in photos 251 & 252 that appeared to have come from arcing of the sound equipment that was stored inside.

Fire Investigation Report

	<p>The A/V equipment inside of the cabinet is a competent cause of the fire, but testing was not done on the equipment by our agency. Until testing is done, this cannot be ruled out as the cause of the fire.</p> <p>Electrical panels were inspected and noted that there were two breakers that had tripped in the E/W hallway that runs perpendicular to the band and choir hallway. These breakers (#5 and #9) were labeled “Fans, Practice Room” and “Receptacle on Stage Lights” as seen in photos 191 & 192. There was one breaker (#23) that was tripped in the main electrical room labeled “Makeup Air Plug” as seen in photos 184 & 185.</p> <p>Fire patterns in the hallway between the choir room, band room, and stage area indicated that there was extreme amounts of damage on the stage side, and much less damage on the choir and band room wall as seen in photos 162-164. Choir and band room doors were all closed at the time of the fire. Unburned paint was still visible just outside of the band room doors in the hallway. Fire patterns show that the door at the back of the stage was open during the fire. There were remnants of a skylight that had been in the hallway. Initial reports of the fire venting through the roof in this area.</p>
<p>HYPOTHESES:</p>	<ol style="list-style-type: none"> 1. Fire caused by Arson 2. Fire caused by weather 3. Fire cause by electrical equipment malfunction
<p>TESTING OF HYPOTHESES:</p>	<ol style="list-style-type: none"> 1. Fire caused by Arson- Video surveillance of the school showed that last person in the school at 3:09 in the morning. The last person in the school was a janitor. None of the video surveillance shows the person in the area of the origin lighting the fire. Another bystander was found on scene at the time of the fire. The ATF interviewed the person and was cleared of any wrong doing. 2. Fire caused by weather- At the time of the fire no electrical weather events were shown. I have included the weather report for 4/21/2023 as shown by the website wunderground.com 3. Fire caused by electrical equipment malfunction- The video surveillance of the school shows the first flame in the area of the stage and the back hallway behind the stage. The area of origin in the north side of the stage contained a floor cleaner and sound equipment for productions on the stage. The outlet for the floor cleaner did not show any arc damage and we did not find any evidence of it being plugged in. The unit does contain an internal battery charger. The custodian that used the unit did say he had to charge the unit 2-3 times that day, which was unusual. <p>The sound equipment used on the stage was located inside a metal cabinet. Holes found in the bottom of the cabinet below the sound equipment suggest arcing. These holes are shown in photos 268 & 269 show the damage from the arcing. A V-pattern on the doors as shown in photos 256 & 261 suggests the origin of the fire. Photo 245 shows evidence that the sound equipment was still plugged in at the time of the fire.</p>

Fire Investigation Report

CONCLUSION:	<p>The hypothesis of the fire being caused by arson and a weather event is not supported by the evidence or witness statements obtained by the ATF. The hypothesis of the fire being caused by electrical equipment found on the stage is supported by the evidence. The arcing found in the cabinet produced by the electrical equipment supports continued combustion and an ignition source for the fire. The video surveillance also supports evidence of combustion as first seen on the cameras.</p> <p>The cause of the fire was electrical equipment found on the north side of the stage.</p> <p>The fire investigation was a joint effort by the State Fire Marshall's office, the ATF, the Pocatello Fire Department, and the Pocatello Police Department. Each department will be providing their own report based on their own department policies and procedures. The State Fire Marshall's Office is providing the official fire investigation report. Witness interviews were performed by the Bureau of Alcohol, Tobacco, and Firearms in conjunction with the Pocatello Police Department.</p> <p>We have not obtained the official report from the State Fire Marshall. That will be added to the report when available. We will add the ATF report when available. If any new information is obtained, an addendum will be added to the report.</p>
--------------------	---