



INVESTIGATION REPORT

UNIFIED FIRE AUTHORITY

SPECIAL ENFORCEMENT DIVISION

Case# UF26-19233

ORIGIN AND CAUSE REPORT

Incident Address:	942 E North Union Avenue Midvale, Utah		
Incident Date:	Friday, July 31, 2026	Time of Incident:	Hrs07:47
Location Type:	Apartment Building	Incident Type:	Fire-Commercial
Classification:	Non-Criminal	Case Status:	Closed
Occupancy:	Occupied	Related Case:	N/A
Weather:	Conditions: Dawn / Dry	Temp: 77 °f	Humidity: 37 %
Primary Investigator:	Investigator Steve Bowen, Unified Fire Authority		
Assisting Investigator:	Investigator Paul Larsen, Unified Fire Authority		
	Investigator Ben Brewer, Salt Lake Fire		
	Investigator Brain Leftwich, Salt Lake Fire		
	Investigator Jose Castro, Unified Fire Authority		
	Investigator Andres Gorman, Unified Fire Authority		
	N/A		
	Investigator Tylor Olsen, ATF SA Investigator		
	Investigator Adrianna Davis, Assistant DA, Salt Lake County District Attorney's Office		

Entities:

Property Owner:	Keller Investment Properties / Matt Bowen Executive Vice President	Contact: 801-673-8985
Property Owner:	Keller Investment Properties / Jeremy Hanks Asset Manager	Contact: 801-916-9752

Building Maintenance: Joe Sandoval 63G-2-302(2)(d)
Juve Luna 63G-2-302(2)(d)
Property Manager: Teresa Chavez 63G-2-302(2)(d)

OWNER/INSURANCE INFORMATION:

The property is owned by North Union DE Partners, LLC / Insured by: Vue 5325 NV Partners LLC Claim: 4225561
Unknown Insurance company at the time of this incident.

Synopsis:

On July 31, 2026, at approximately 0847 hours, Unified Fire Authority (UFA) was dispatched to a reported odor of smoke on the fourth floor of the apartment complex located at 942 E. North Union Avenue, Midvale, Utah.

The structure is a five-story, 223-unit apartment complex that was open and occupied at the time of the incident. Approximately 220 units were leased and occupied by residents. Upon entering the structure, the initial fire crew reported a slight haze but no visible flames. Heavy smoke was subsequently reported within the trash chute.

Fire crews conducted a further investigation of the trash chute and confirmed the presence of smoke; however, no significant heat was detected at that time. Crews began making inspection cuts to determine the location and extent of the fire. Following the inspection cuts, an increase in smoke was observed coming from the roof area.

Due to the worsening smoke conditions and the potential for fire extension throughout the structure, additional fire personnel initiated an evacuation of the entire building. Fire suppression and overhaul operations continued throughout the night and into the following day.

Fire investigators responded to the scene and began the initial investigation. Due to the size and complexity of the fire, as well as ongoing suppression and overhaul operations, investigators determined that a complete examination of the scene would be conducted on August 1, 2026.

The fire resulted in extensive and catastrophic damage to the apartment complex, affecting numerous residents and businesses. Significant portions of the structure were damaged, along with substantial personal property belonging to the tenants.

The estimated total damage associated with the incident is approximately \$65,000,000. This estimate includes damage to the apartment complex and the personal belongings of the affected tenants.

Narrative:

Incident Information:

The fire was first reported to 911 on July 31, 2026, at approximately 0747 hours. The incident occurred at 942 E. North Union Avenue, Midvale, Utah, a commercial structure containing the North Union Apartment complex. At the time of the incident, the apartment complex was fully operational, open, and occupied by residents.

Fire Suppression and Rescue Operations

On July 31, 2026, at approximately 0748 hours, Valley Emergency Communications Center began receiving 911 calls reporting a structure fire at 942 E. North Union Avenue, Midvale, Utah.

Unified Fire Authority, Sandy Fire Department, and Murray Fire Department units were dispatched to the scene. Upon arrival, initial responding units reported smoke visible from the roof and the fourth floor. Resident evacuations were already underway, and fire crews assisted with evacuating the remaining occupants while simultaneously evaluating the fire conditions and locating the area of origin in an effort to gain control of the fire.

The incident escalated to a five-alarm fire, resulting in the response of fire crews from agencies throughout the Salt Lake Valley. Approximately 95 firefighters were involved in the suppression and rescue operations. Participating agencies included Unified Fire Authority, South Salt Lake Fire Department, South Davis Fire Department, Lehi Fire Department, Summit Fire Department, West Valley Fire Department, Sandy Fire Department, Salt Lake City Fire Department, Murray Fire Department, Draper Fire Department, and West Jordan Fire Department.

Fire crews remained on scene through August 4, 2026, conducting continued overhaul and monitoring operations for remaining hotspots and potential rekindle.

Due to the size and complexity of the incident, fire investigators from Unified Fire Authority, Salt Lake City Fire Department, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) Salt Lake City Field Office, and the Salt Lake County District Attorney's Office were requested to respond to the scene and assist with the investigation.

WITNESS INTERVIEWS:

Several residents were contacted and interviewed during the early stages of the investigation. The residents reported observing smoke on the fourth floor and within the elevator area before beginning to evacuate the building.

During the evacuation, residents gathered at a designated area and were subsequently relocated to Hillcrest High School, which was used as a temporary gathering location.

The residents interviewed did not report observing any suspicious activity or concerns involving the building complex prior to the fire. No witnesses interviewed indicated that they suspected malicious intent or reported any unusual circumstances leading to the fire.

The building was described as a secure residential complex with controlled access through the use of key cards.

Legal Presence and Scene Security:

On July 31, 2026, fire investigators arrived at the scene and observed fire suppression crews actively engaged in firefighting operations. Suppression efforts continued throughout the night and into the following day. The scene remained secured through the continued presence of fire department personnel.

The scene examination began on August 1, 2026, while fire suppression and overhaul operations were still ongoing in areas outside the suspected area of origin. Under exigent circumstances, and for the purpose of determining how and why the fire started, pursuant to Utah Code § 53-7-210, investigators received verbal consent from the property owner to enter the premises and conduct an examination to determine the origin and cause of the fire.

Investigators examined and documented the scene, including fire damage, fire patterns, and existing conditions. Evidence relevant to determining the origin and cause of the fire was identified, documented, and collected for further examination and analysis.

WEATHER:

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
7:54 PM	97 °F	36 °F	12%	N	10 mph	-	25.74 in	0 in	Fair
6:54 PM	100 °F	29 °F	8%	NNW	15 mph	-	25.74 in	0 in	Fair
5:54 PM	101 °F	32 °F	9%	NNW	14 mph	24 mph	25.75 in	0 in	Fair
4:54 PM	102 °F	36 °F	10%	NNW	6 mph	17 mph	25.76 in	0 in	Fair
3:54 PM	102 °F	37 °F	11%	NNW	12 mph	-	25.77 in	0 in	Fair
2:54 PM	101 °F	40 °F	12%	NW	10 mph	21 mph	25.78 in	0 in	Fair
1:54 PM	99 °F	41 °F	14%	NW	6 mph	-	25.8 in	0 in	Fair
12:54 PM	96 °F	43 °F	16%	S	6 mph	-	25.82 in	0 in	Fair
11:54 AM	93 °F	44 °F	18%	CALM	0 mph	-	25.82 in	0 in	Fair
10:54 AM	89 °F	46 °F	22%	ENE	5 mph	-	25.84 in	0 in	Fair
9:54 AM	85 °F	47 °F	27%	N	3 mph	-	25.84 in	0 in	Fair
8:54 AM	83 °F	47 °F	28%	CALM	0 mph	-	25.83 in	0 in	Fair
7:54 AM	77 °F	49 °F	37%	ESE	6 mph	-	25.82 in	0 in	Haze
6:54 AM	73 °F	52 °F	48%	E	3 mph	-	25.81 in	0 in	Fair
5:54 AM	74 °F	50 °F	43%	NE	3 mph	-	25.79 in	0 in	Fair

- Weather Underground (Wunderground.com) listed the weather for Salt Lake City INTL Airport on July 31,2026 at the time of the fire as follows:

TIMELINE ANALYSIS

Investigators utilized electronic surveillance data, witness statements, dispatch records, and other available sources to develop a timeline of significant events leading up to and following the discovery of the fire. The timeline was developed by comparing and correlating information from multiple sources to establish the sequence of relevant events.

The following timeline represents only significant events relevant to the investigation and is not intended to include every activity or event that occurred during the incident.

Date	Time	Event	Source
7/31	7:48:03	911 Call received by VECC / Smoke Visible	911 Call
	7:49	Call Queue at VECC	VECC
	7:50	911 Smoke Visible on 4th floor	911
	7:50:00	First Dispatch	VECC
	7:51:04	First Unit Enroute	UFA
	7:54:04	First At Scene Command Established	UFA
	7:55	Alarm Company Called /Smoke in Zone 33 Elevator shaft & zone 36	Powered Control
	7:58:48	Elevator Lobby	Alarm Co.
		Working Fire	UFA / VECC
		Evacuations under way	Fire Crews
		Several Calls to 911 Reporting the Fire	911
	8:14:00	Report of Heave Smoke from Trash Shoot on 4th floor	Fire Crews
	8:24:00	Increase Smoke from Roof	Fire Crews
	8:25:00	Fire in Void space between top floor apartment & roof line	Fire Crews
	8:26:14	2nd Alarm	UFA / VECC
	8:36:00	Still working on Evacuations	Fire Crews
	8:42:40	3rd Alarm	UFA / VECC
	8:44:19	4th Alarm	UFA / VECC
	9:47:13	5th Alarm	UFA / VECC
	10:01	Roof Collapse / Mayday Called on Fire Ground	Fire Crews
	10:04	Mayday Resolved All from Building no Injuries	Fire Crews
	13:54	Explosion on Charlie Side of Structure / Damage to SLC BC truck	Fire Crews
	13:55	PAR Check of all units complete	Fire Crews
	16:26	Still Defensive	Fire Crews
		Crews Rotating thorough the night working on fire control	Fire Crews
			Fire Investigators
8/1	8:00	Investigators Make Access to 4th Floor area of collapse	/ HV121
8/4		Scene Released Back to Owners	
		Fire Units Involved	
		South Davis FD, Lehi FD, Summit FD, West Valley FD, Sandy FD, Salt Lake City FD, Murray FD, West Jordan FD, Unified Fire Authority, South Salt Lake FD,	

Scope and Methodology

Fire investigators were present at the scene to conduct an origin and cause examination. The examination was conducted systematically, with investigators progressing from areas exhibiting lesser fire damage toward areas exhibiting greater damage. Particular emphasis was placed on the recognition, identification, and analysis of fire and heat patterns, while considering the effects of ventilation and fire dynamics on fire development and damage patterns.

The scientific method, as described in the **National Fire Protection Association (NFPA) 921, Guide for Fire and Explosion Investigations, 2024 edition**, was utilized during the investigation.

Data collected and evaluated during the investigation included witness statements, available electronic data, fire and heat patterns, physical evidence, scene conditions, and the application of fire dynamics principles. The information gathered was analyzed collectively to determine the area of origin and, subsequently, the most probable cause of the fire.

Building Construction:

The apartment complex was a multifamily residential structure with commercial areas located on the lower level. At the time of the fire, the residential portion of the building was near full occupancy.



Figure #1 Google Maps overview



Figure #2 Building Diagram

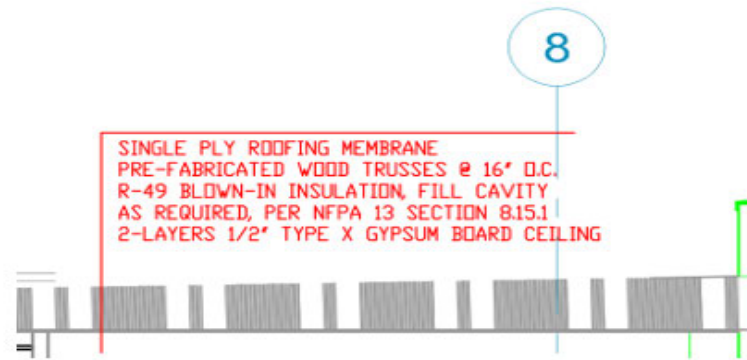
Building Construction Description

1. The following construction description pertains to the affected structure within the apartment complex known as **North Union Apartments**. The apartment complex contained a total of 223 apartment units, with approximately 220 units occupied at the time of the fire.
2. The building construction information is based on an examination of the fire scene, pre- and post-fire photographs and videos, a review of the building plans, and witness interviews.
3. The affected structure was located at **942 E. North Union Avenue, Midvale, Utah**. The building was designed as a **Type IIIA, wood-frame, platform-constructed structure**. The mid-rise structure consisted of a four-story residential occupancy and contained approximately **234,112 total square feet**, with a building footprint of approximately **58,528 square feet**. The property consisted of approximately **3.30 acres**.
4. The exterior walls were constructed using **2-inch by 8-inch wood framing and oriented strand board (OSB) sheathing**. Interior walls were constructed using **2-inch by 6-inch and/or 2-inch by 4-inch wood framing**. At the time of the fire, the interior construction had been completed and included electrical, HVAC, plumbing, and fire suppression systems.
5. The building was not designed for a sprinkler system within the Concealed space

8.15.1.2.8

Concealed spaces within wood joist construction and composite wood joist construction having noncombustible insulation filling the space from the ceiling up to the bottom edge of the joist of the roof or floor deck, provided that in composite wood joist construction the joist channels separated into volumes each not exceeding 160 ft³ (4.5 m³) to the full depth of the composite wood joist with material equivalent to the web construction, shall not require sprinkler protection.

This note is on the elevation view of the fire sprinkler plans:



And this note on all of the level 4 sprinkler drawings:

NO FIRE SPRINKLER PIPING
IN ATTIC SPACE PER
RIMROCK CONSTRUCTION

- The structure also included concrete lower-level containing the business offices and a secure parking garage. At the time of the fire, the structure was open for occupancy and was substantially rented, with most of the apartment units occupied.

Utilities:

Natural gas, sewer, and water services were operational within the structure at the time of the fire.

ELECTRICAL:

Electrical service to the structure was supplied through a large electrical distribution panel and individual unit meters located within a secured service and maintenance area on the northwest side of the property. The electrical equipment was located behind a locked chain-link fence, restricting access to authorized personnel.



Figure #3 Building Electrical System

No natural gas lines or gas meters were observed in the immediate area of the electrical service equipment.

BUILDING FIRE PROTECTION SYSTEMS:

An operating fire protection system was installed and operational within the structure at the time of the fire. However, no fire protection system was installed above the ceilings or within the concealed spaces / areas of the building.

Evidence Collection: Yes

PHOTOGRAPHS AND VIDEO DOCUMENTATION:

Photographs of the fire scene were taken by Investigator Leftwich, Investigator Brewer, and Investigator Bowen.

Drone footage of the fire scene was obtained by the Unified Fire Authority/Salt Lake County Emergency Management Team, Unified Police Department, and the Salt Lake County Sheriff's Department.



Figure #4 Drone Photo of building

SCENE EXAMINATION:

- The fire scene examination began on August 1, 2026. It should be noted that the scene was secured by firefighters and/or law enforcement personnel, without interruption, from the time of the fire on July 31, 2026, through August 4, 2026, when the fire scene investigation was concluded. Various utility company personnel were also working in and around the area to repair damaged infrastructure and restore utility services.
- The scene and exposures were documented through photographs and video recordings. An Unmanned Aerial System (UAS) was utilized for video and photographs prior to entering the scene. Pre-fire photographs and architectural drawings were obtained and reviewed during the investigation.
- Investigator Ben Brewer and Investigator Brian Leftwich documented the scene with photographs before and during the scene examination. An Unmanned Aircraft System (UAS) was also utilized by the Unified Police Department, Unified Fire Authority, and Salt Lake County Sheriff's Office to examine and document the scene prior to the commencement of the fire scene examination. Pre-fire photographs and videos were obtained and reviewed as part of the investigation.
- Fire investigators were divided into groups and worked in conjunction with Unified Fire Authority Heavy Rescue Technicians to conduct the scene examination on the fourth floor. This area was of particular concern due to a previous MAYDAY incident in which a portion of the ceiling collapsed onto firefighters as they were evacuating the fourth floor. Heavy Rescue Technicians were utilized to assist in protecting investigators from additional structural collapse and falling debris. Access to the

area was limited, with only a small number of investigators permitted inside at one time. Investigators focused their examination on the fire debris and materials located near the identified area of origin.



Figure #5 Looking into the 4-floor lobby elevator access area / area of collapse.

EXTERIOR EXAMINATION:

- Investigators conducted a systematic walkaround examination of the exterior of the structure. The structure displayed extensive and catastrophic fire damage, with significant damage and consumption of the roof materials and the interstitial space above the fourth floor. Due to the extensive fire damage and potential for structural instability, investigators requested Unified Fire Authority Heavy Rescue Technicians be present during the examination to monitor hazards and assist in mitigating potential overhead collapse and falling debris hazards.



Figure #6 Looking North from the street South Union Ave.

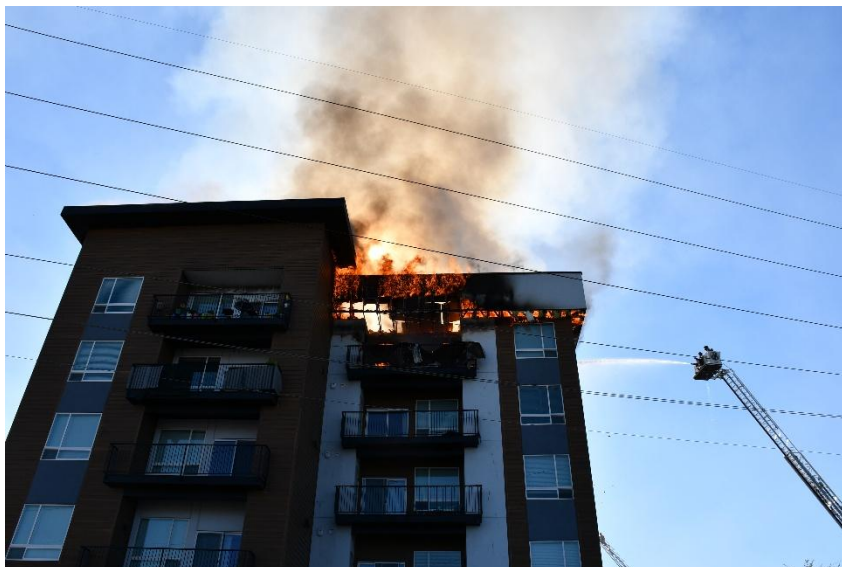


Figure #7 Looking to the East from 900 E



Figure #8 Looking South from the corner of Northen union Ave & 900 E



Figure #9 Looking South form parking lot by loading dock / Utility rooms



Figure #10 Looking at the lower half North side



Figure #11 Looking at the upper section of Southeast side of building



Figure #12 Looking at the lower section of the East side of the building



Figure #13 Looking at the upper section of Northeast side of building

INTERIOR EXAMINATION:

- Typically, investigators would examine the scene from the area of least damage to area of greater damage. Due to the size of the structure, approximately 234,112 square feet with a footprint of 58,528 square feet, investigators used video surveillance to narrow to area of origin.
- Investigators began the examination by walking the debris field to look for possible items of evidence; nothing was observed. Using the video evidence, investigators narrowed the area of origin to the southwest side, specifically above the fourth floor from the south stairwell into the area by the elevator and beyond.
- The structure displayed extensive and catastrophic fire damage, with significant damage and consumption of the roof materials and the interstitial space above the fourth floor. (As seen in Figures 5 – 13 above) Due to the extensive fire damage and potential for structural instability, investigators requested Unified Fire Authority Heavy Rescue Technicians be present during the examination to monitor hazards and assist in mitigating potential overhead collapse and falling debris hazards.

The interior examination progressed by physically going into the area of greatest damage (4th Floor by and around the elevator shaft and trash shoot and beyond examining and photographing as we processed through the area looking through the fire debris for any evidence. Investigators noted the sprinklers for the fire protection system in the area had not functioned because the heat and flame were above within the interstitial space (See photos Figure 18-22 below)

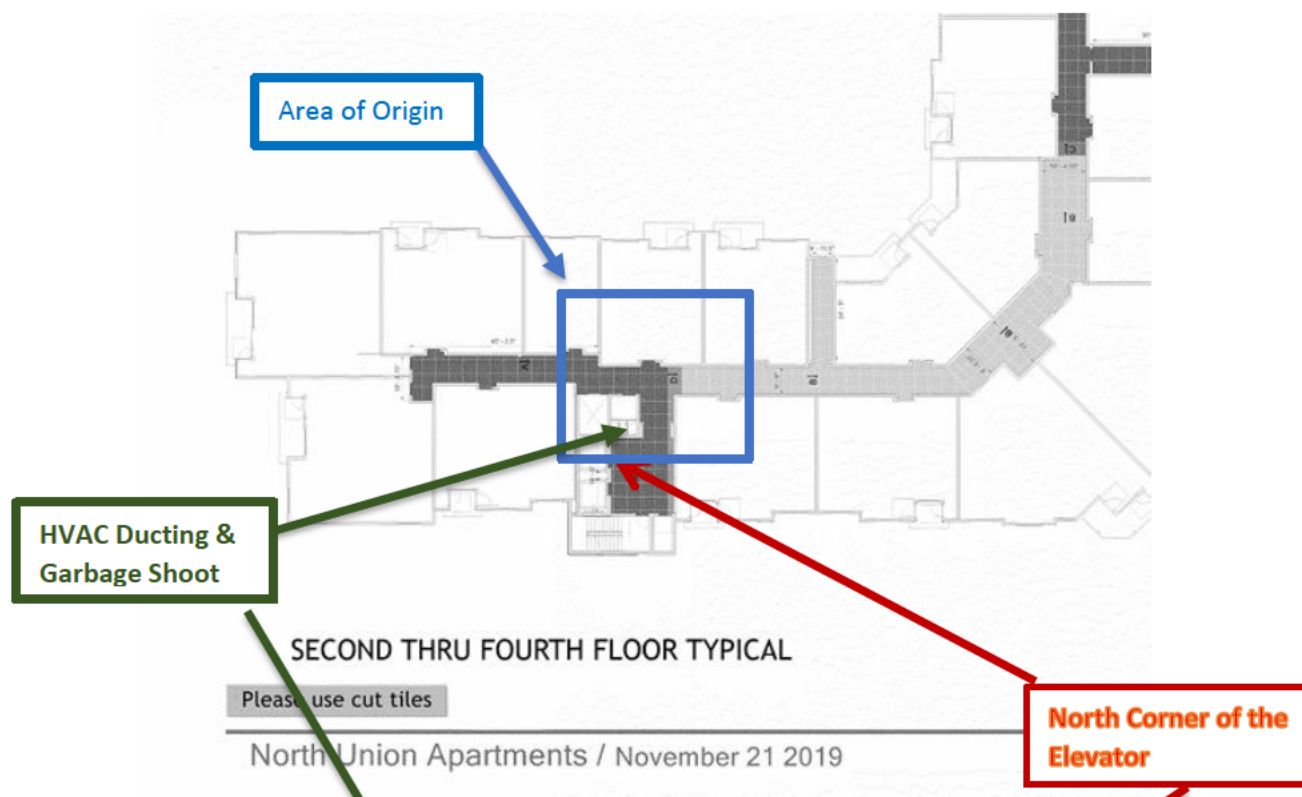


Figure #14 or plans for ceiling tiles in common areas with scene description

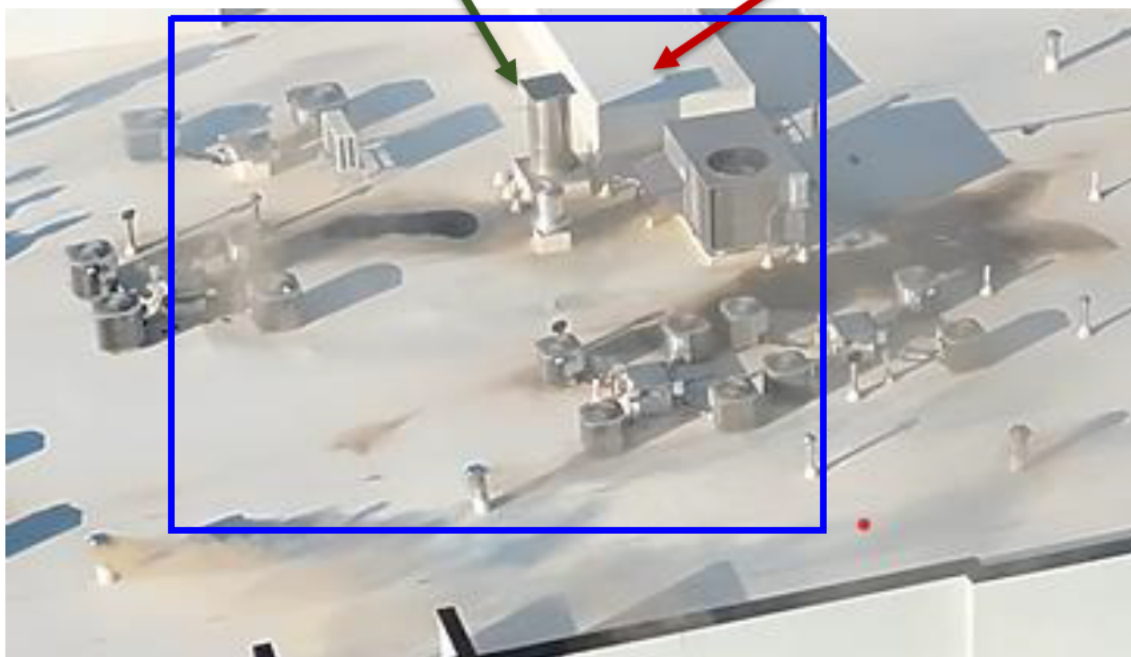


Figure #15 Rooftop screen shot from Drone video of area of origin

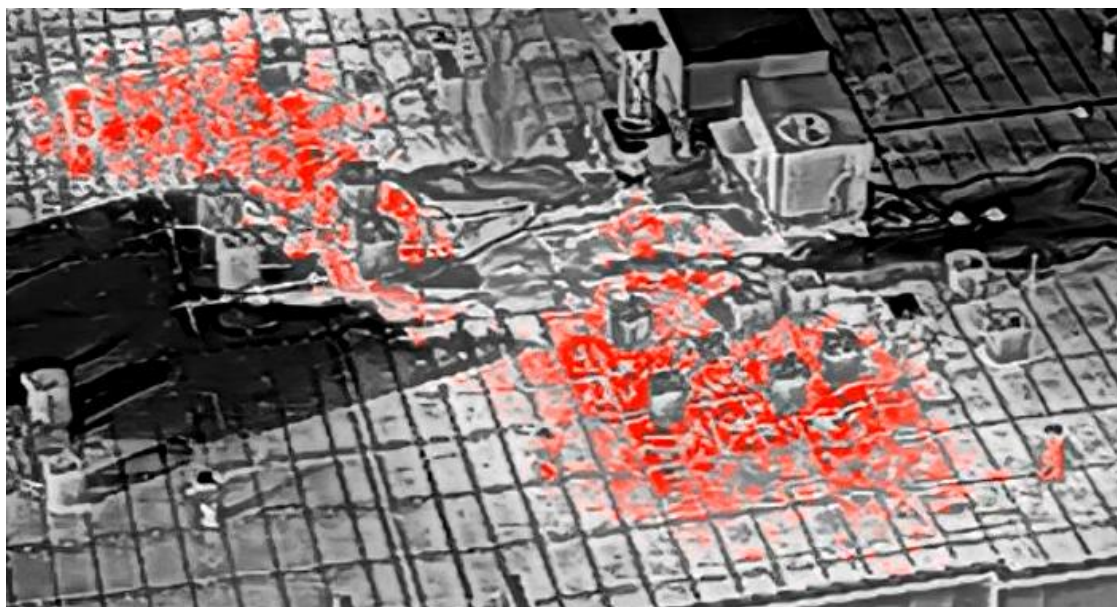


Figure #16 Rooftop inferred screen shot from Drone video of area of origin



Figure #17 Rooftop screen shot from Drone video of area of origin

- Investigators arrived on scene at approximately 8:00 AM. A safety briefing was conducted. Due to the size of the structure, investigators used witness statements, photographs, video surveillance and scene observations, to narrow to area of origin to the east side of Building. Investigators planned to work from the south side of Building to the north.
- The interior examination progressed by physically going into the area of greatest damage (4th Floor by and around the elevator shaft and trash shoot examining and photographing as we processed through the area looking through the fire debris for any evidence. Investigators noted the sprinklers for the fire protection system in the area had not functioned because the heat and flame were above within the interstitial space. See Figures # 18-22



Figure #18 Looking at the Fire Sprinkler system



Figure #19-20 Looking at the Fire Sprinkler system

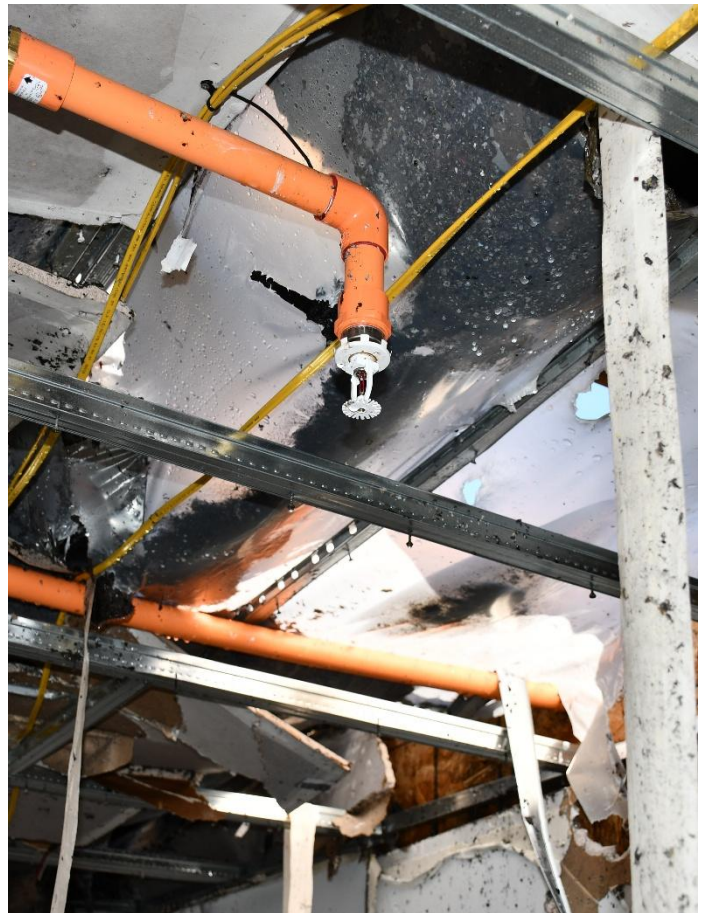
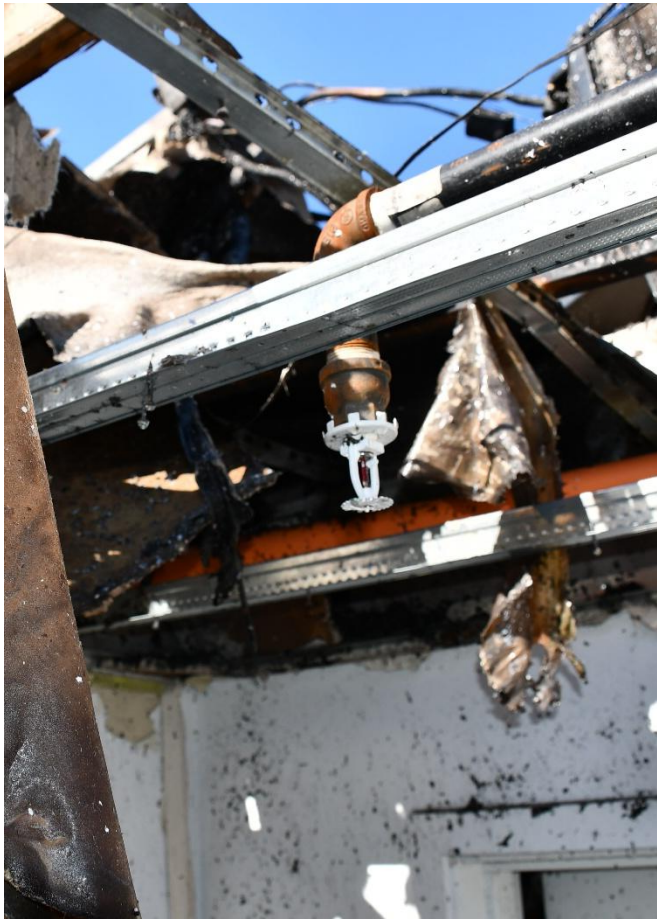


Figure #21-22 Looking at the Fire Sprinkler system

Fourth-Floor Lobby / Elevator Access Corridor:

Investigators were able to enter the fourth-floor lobby and elevator access corridor. This area was also identified as the location of a roof collapse that resulted in a MAYDAY call after firefighters became trapped beneath debris that had fallen from above.

Investigators proceeded around and into the corridor and hallway, documenting the conditions within the area. Examination of the corridor indicated that most of the fire activity and damage was concentrated in the interstitial space above the fourth floor. The hallway and accessible areas below the interstitial space did not exhibit the same level of fire damage observed above.

Garbage Chute Examination:

Investigators examined the garbage chute due to reports that smoke had been observed coming from the chute during the early stages of fire suppression operations. The interior of the garbage chute was examined for evidence of direct flame impingement, burning, or heat damage.

No noticeable evidence of open-flame burning or significant heat damage was identified within the garbage chute. Investigators also examined the lower portion of the chute, including the collection bin and compactor. Neither the collection bin nor the compactor exhibited damage consistent with direct fire involvement.

The lack of observable fire damage within the garbage chute, collection bin, and compactor does not support the garbage chute as an area of sustained open-flame fire involvement.



Figure 23 4th floor outer wall of garbage shoot



Figure 24 4th floor Opening the garbage shoot



Figure 25 looking down the garbage shoot



Figure 26 looking down the garbage shoot



Figure 26 Looking up at the fire suppression system within



Figure 27 garbage collector/ compactor



Figure 28 Collection basin of garbage collector



Figure 29 Looking up the garbage shoot

Elevator Examination:

Investigators examined the debris within the elevator shaft by prying open the elevator doors and examining both the upper and lower sections of the shaft. Fire debris and smoke damage were observed throughout the shaft. Investigators did not identify any other fire or ignition sources within the debris.

This area was closely examined due to a reported elevator malfunction the day before the fire, as well as a report that an individual used the elevator at approximately 6:00 AM on the morning of the fire to travel to a lower floor to play pickleball. The individual reported smelling smoke while inside the elevator but did not report the odor at that time.

The elevator technician's service report from the previous day documented the following:

“Released passengers from elevator, car was approx. 1 ft above bottom floor. Car had a gate lock fault and a high current fault. He adjusted and cleaned gate lock contacts on 7/30/26 @ 4:43 PM” *See Figure #30.*

The elevator was in full operation at the time of the fire. No damage was observed to the elevator wiring or electrical connections. All cables and pipes examined appeared to be in good working condition. Damage was observed above the elevator shaft in the area where the elevator mechanical equipment and controls may be located.

No noticeable evidence of open-flame burning or significant heat damage was identified within the elevator shaft. The shaft did not exhibit damage patterns consistent with direct fire involvement.

The lack of observable fire damage within the elevator shaft does not support the elevator car or shaft as an area of sustained open-flame fire involvement.

Note 00642113	
Related	
Name	DNN-00642113
	WO-5531172
Assignment	SA-4538858
System	
Location	Released passengers from elevator, car was approx. 1 ft. above bottom floor. Car had gate lock fault as well as over current faults adjusted and cleaned gate lock contacts. Also adjusted interlock on 2nd. floor. Ran car and observed operation okay RTS.
	 Craig Fischer , 7/30/2026, 4:43 PM
	Last Modified By  Craig Fischer , 7/30/2026, 4:43 PM

Figure 30 Text message on serves call for elevator repair



Figure #31



Figure #32

*Figure #31 Looking at the elevator section from the roof level
Figure #32 looking down at the elevator shaft from above*



Figure #33

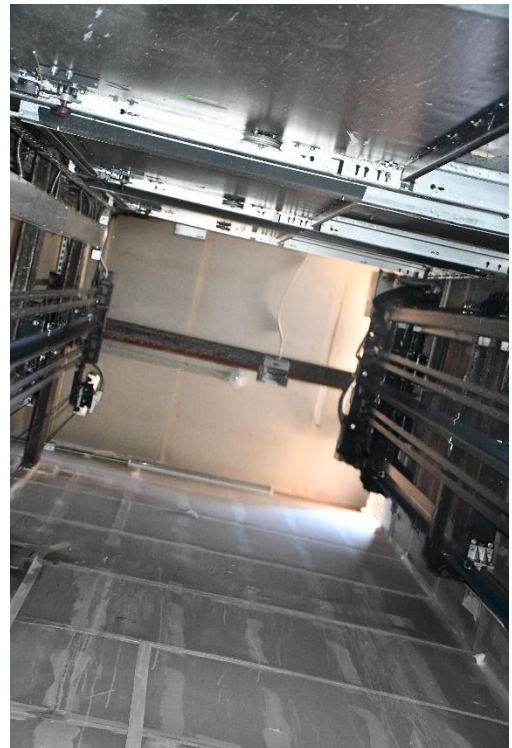


Figure #34

*Figure #33 Looking up the elevator shaft towards the roof level
Figure #34 Looking up the elevator shaft towards the roof level*

4th Floor Lobby & Hallway Examination:

Investigators examined the available debris within the upper interstitial space above the fourth-floor residential area, progressing from the south end toward the north end and examining the areas surrounding the fourth-floor hallway. Due to the unstable and hazardous conditions within the interstitial and roof spaces, direct access to portions of the area was limited. To document and evaluate areas that could not be safely accessed, investigators utilized drone imagery and photographs obtained during the fire suppression and scene examination.

Review of the available drone imagery identified significant fire involvement within the upper interstitial and roof areas. The greatest observed fire involvement was concentrated in the vicinity of the two separate rooftop air-conditioning unit installations serving Units 406 and 407, including the area between the units. Comparatively, the imagery showed limited fire involvement in the vicinity of the elevator and trash chute.

The observed fire effects and damage patterns were evaluated to determine the direction and progression of fire spread. The available evidence indicated that fire involvement was concentrated within the upper portion of the structure near the roofline, with significant consumption and damage to combustible structural components in this area. Severe damage to the roof trusses was observed immediately east of the elevator and trash chute. This area was also associated with the subsequent roof collapse that occurred while firefighters were evacuating the structure, resulting in firefighters becoming trapped beneath the collapsed structural debris.

Based on the available physical evidence, fire patterns, observed fire damage, and documented fire involvement, the area of greatest fire damage and fire involvement was identified within the upper interstitial/roof space in the vicinity of the rooftop air-conditioning units above Units 406 and 407. The available evidence was evaluated in conjunction with witness statements, fire suppression information, and other scene documentation to establish the area of origin and determine the fire's cause.



Figure#35 Looking at the burn patterns from Hallway towards the elevator

Elevator
Location

Trash Shoot
Location



Figure #36 another angle from Hallway towards the elevator



Figure #37 Same area from above



Figure #38 Close up of Elevator area



Figure #39 Looking East from hallway opening



Figure #40 Looking Northeast from Hallway opening



Figure #40 Looking West from Hallway opening



Figure #41 Looking North from Hallway opening



Figure #42 Looking north From Hallway opening



Figure #43 Looking up from the front of Elevators



Figure #44 Looking up from floor level

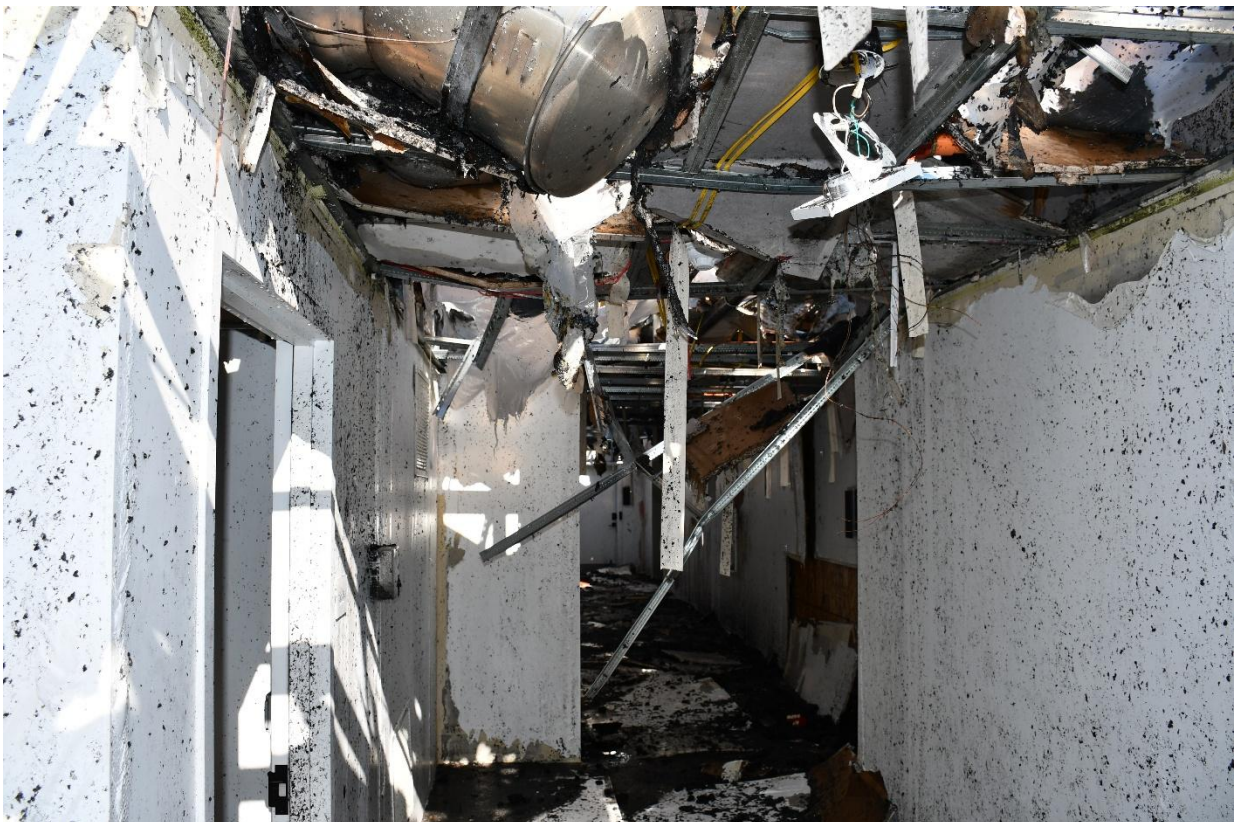


Figure #45 Looking down Hallway to the west 4 floor



Figure #46 Trash Shoot door opening



Figure #47 Looking down Hallway on 4th floor



Figure #48 Looking down Hallway on 4th floor



Figure #49 air-conditioning units & Debris in collapse zone



Figure # 50 Looking at a burn damage from below in 4th floor

EXPOSURES:

No exposure damage was identified to personal property or adjacent areas outside the North Union Apartments structure. The fire damage and fire effects examined were confined to the North Union Apartments structure. No evidence was identified indicating that the fire extended to or caused damage to nearby personal property.

The Salt Lake City Battalion Chief's vehicle sustained damage from falling debris from a smoke explosion that occurred while suppression operations were being conducted. The vehicle damage was attributed to falling debris associated with the suppression activities and was not identified as fire damage to an exposure.



Figure #51 SLC BC1 Vehicle Damage



Figure #52 SLC BC1 Vehicle Damage

FATALITIES AND/OR INJURIES:

One firefighter injury was reported during the incident. Additionally, four firefighters were involved in a roof-collapse event that resulted in a MAYDAY call. No injuries were reported as a result of the roof collapse. No civilian or firefighter fatalities were associated with this fire.

SUPPORTING EVIDENCE:

Investigators considered and evaluated several hypotheses regarding the area of origin. The hypotheses were evaluated using witness statements and available electronic data, fire patterns, fire effects, fire dynamics, photographs, and early video documentation. Based on the analysis of the available evidence, investigators determined that the area of origin was within the interstitial space above the fourth-floor residential area.

Witness statements, photographs, and early video documentation indicated that the initial smoke was observed emanating from multiple locations associated with this area, including the roof ventilation system, elevator shaft, and trash chute system. The earliest known photographs documented a plume of black smoke emanating from the roof in the area corresponding to the identified interstitial space.

Post-fire scene photographs documented extensive fire damage and consumption of the roof and interstitial construction. The photographs show substantial consumption of combustible structural components, areas of significant roof-deck loss and collapse, and extensive damage to materials located within the interstitial space. These observations were considered as fire effects within the overall analysis and were not relied upon independently to establish the area of origin.

Investigators also evaluated the differential fire damage throughout the building footprint, including the degree of mass consumption, the distribution and size of remaining debris, and the extent of damage to combustible materials. Examination and comparison of the remaining debris indicated greater consumption and destruction of combustible materials within the central portions of the affected area, with larger charred debris pieces remaining in areas exhibiting comparatively less consumption.

Investigators considered alternative hypotheses, including the possibility that the fire originated within the fourth-floor residential area, within the roof assembly, or in another portion of the building and subsequently extended into the interstitial space. The available evidence did not identify a separate area that provided a more consistent explanation for the documented early fire development and subsequent fire effects.

There were significant limitations to the scene examination. Extensive fire involvement, structural collapse, suppression activities, overhaul operations, and consumption of combustible materials altered or destroyed portions of the original fire patterns and potential ignition-source evidence. Consequently, some areas could not be examined in their original condition, and individual fire patterns or areas of greatest damage were not considered independently determinative of the area of origin.

The observed fire effects, witness information, photographic and video evidence, and fire dynamics were considered collectively. The available evidence is consistent with early fire development within the interstitial space between the roof assembly and the fourth-floor residential area. Based on the totality of the evidence examined, and after consideration of the reasonable alternative hypotheses and limitations of the scene, investigators determined the area of origin to be within the interstitial space above the fourth-floor residential area.

- **Early observations:** smoke first observed from locations associated with the interstitial/roof area.
- **Early photographs/video:** documented smoke conditions before the scene was significantly altered.
- **Physical examination:** extensive fire effects within the interstitial space.
- **Fire dynamics:** observed damage and fire development are consistent with that location.
- **Alternative hypotheses:** evaluated against the available evidence.
- **Limitations:** acknowledged rather than ignored.

Fire Cause Analysis:

Potential Ignition Sources Considered:

During the excavation and processing of the fire scene, numerous potential ignition sources were hypothesized and considered. The following reasonable and competent ignition sources were evaluated within the identified area of origin:

Electrical: For a fire to be caused by an electrical source, the wiring or electrical component must have been energized and capable of producing sufficient heat, for a sufficient duration, to ignite nearby combustible materials.

The structure was supplied with electrical service originating from the main power distribution center located in the lower level of the building. Electrical conductors and several mechanical components were present within or near the area of origin. Based on the fire damage and scene conditions, it is possible that an energized electrical conductor, electrical component, or malfunctioning mechanical item could have served as an ignition source. Therefore, the electrical system cannot be eliminated as a potential cause of this fire.

Lithium-Ion/Nickel-Cadmium Batteries: Lithium-ion and nickel-Cadmium batteries are common and are often left unattended while charging. However, the fire was first reported above the living area and beneath the rooftop within the interstitial space. Based on the location of the reported fire and the absence of evidence indicating the presence of battery-powered devices within the area of origin, batteries can be eliminated as a potential ignition source in this fire event.

Spontaneous Combustion: Spontaneous combustion can be eliminated as a potential ignition source in this fire event. The structure was not in a phase of construction that required staining or other activities commonly associated with materials capable of spontaneous heating. No staining of any portion of the building at the time of the fire. Additionally, no materials commonly associated with spontaneous combustion were identified within the area of origin during the fire scene examination.

Hot Work: Hot work includes any activity involving an open flame, torch, welding, cutting, or other equipment capable of producing sufficient heat to ignite combustible materials, such as work involving copper piping or torch-applied roofing materials. Investigators determined that no such work was being conducted within the area of origin at the time of the fire. Based on the construction schedule and the amount of time that has elapsed since any potential hot work activities, hot work can be eliminated as a potential ignition source.

Smoking Materials: The careless or inappropriate disposal of smoking materials can be eliminated as a potential ignition source. Investigators found no evidence of smoking materials within or near the area of origin. No smoking materials were located inside the structure during the fire scene examination, and investigators received no information indicating that anyone had been within the interstitial space smoking prior to the discovery of the fire.

Natural/Lightning: Natural causes, including lightning, can be eliminated as a potential cause of the fire. Pursuant to weather data obtained from Weather Underground, as well as witness statements, video evidence, and observations made by firefighters, there were no reports or indications of lightning occurring in the area near the time the fire was discovered. No evidence of any other natural phenomenon capable of causing the fire was identified.

Incendiary Fire: No video surveillance was identified showing an individual unlawfully entering or exiting the structure while carrying an ignitable liquid container or other material capable of intentionally starting a fire. Due to the fire originating within the interstitial space and the absence of evidence indicating the use of an open flame, ignitable liquid, or other intentional ignition source, an incendiary cause can be eliminated based on the available evidence.

Note: Due to the fire being located within the interstitial space of the building and the unsafe conditions within the structure, an Ignitable Liquid Detection K-9 was not utilized during the scene examination.

Estimated Property Loss:
Damaged property: 60,000,000 - Total estimated damages: \$65,000,000 -
Point of Origin:
AREA OF ORIGIN: DETERMINED Based on the information available at the time of this investigation, and following a systematic examination of the fire scene, investigators evaluated the physical evidence, fire patterns, fire dynamics, witness observations, photographs, and video recordings. Based on the totality of the available evidence, it is the combined opinion of the investigators that the area of origin was located within the interstitial space between the roof assembly and the living area of the fourth floor. The available fire patterns and damage were consistent with fire involvement originating within this interstitial space. Due to the location of the fire, the extent of fire damage, and limitations encountered during the scene examination, investigators were unable to further refine the area of origin to a specific location within the interstitial space. CAUSE / IGNITION SOURCE: UNDETERMINED The specific cause of the fire remains undetermined. The available evidence was insufficient to identify a competent ignition source or establish the ignition sequence to a reasonable degree of certainty. Investigators did not identify sufficient physical evidence to support a more specific classification of the fire cause. OPINION Upon completion of this origin-and-cause investigation, it is my opinion that the fire originated within the interstitial space between the roof assembly and the living area of the fourth floor. The specific ignition source and ignition sequence could not be established based on the evidence available to investigators. The opinions expressed in this report are based upon my knowledge, skill, experience, training, education, and personal observations made during the investigation. The opinions are also based upon information, facts, data, documentation, and evidence made available to me and considered in forming these opinions, including information of the type reasonably relied upon by fire investigators in the field. These opinions are based upon the information and evidence available at the time of this report. I reserve the right to supplement, revise, or amend these opinions should additional information, documentation, physical evidence, or other relevant facts become available.
Disposition: Non-Criminal Incident
End of Report SB.