

Pine Knoll Townes Fire

Created by Mike Legeros

This is version 1.1 of this document, created November 25, 2013.

Contents

- Retrospective
- Run Card and Resources

Retrospective

Introduction

This two-page retrospective was published in the Spring 2010 issue of *Fire-Rescue Journal*, published by the North Carolina Office of the State Fire Marshal. It was written by Mike Legeros, and edited by the *Fire-Rescue Journal* staff. The incident is incorrectly identified as a five-alarm fire. The conflagration saw six alarms struck between 3:08 p.m. and 3:28 p.m.

Looking Back:

Pine Knoll Townes; Raleigh, N.C.

North Carolina's Capitol City was created in 1792. A planned city of one square mile, early Raleigh was shaped by fires that burned entire blocks in the first decades.

The last great fire in 1851 destroyed over 17 buildings. Resulting public safety improvements created the first incarnation of the Raleigh Fire Department.

Over 150 years later, the city was challenged by fire again. Weather conditions, building construction, and another major fire four miles away contributed to a "perfect storm" on February 22, 2007.

The Buildings

Pine Knoll Townes was a developing subdivision located six miles north of downtown Raleigh. Fourteen two-story, wood-frame townhomes had been built so far. They averaged 5,715 square-feet

with four units each. Most were completed and occupied.

The main street, Oneonta Avenue, ran north-south, with five buildings on each side. Their vinyl siding extended to the ground; their lawns were covered with pine straw. The buildings were 16 to 19 feet apart.

The weather that Thursday afternoon was 73 degrees, with 8 percent humidity and winds gusting at 30 - 37 mph.

Brush Fire

At 3:03 p.m., a brush fire was reported at 3535 Oneonta Avenue, the middle building on the west side. Second-due Engine 27 was dispatched.

Nine minutes earlier, closer units were sent to a structure fire four miles south. Eleven companies were committed on that call. Five more were out of service for training.

Pine straw was burning on Oneonta, and flames spread to the building. Embers also started fires at two other buildings, which callers reported at 3:05 p.m.

The incident was upgraded. Engine 27 was still en route, but two more engines, a ladder, a rescue, and a Battalion Chief were dispatched.

The First Unit Arrives

A second Battalion Chief had seen the smoke and was first on scene at 3:11 p.m. Battalion 4 parked at the north end of Oneonta and established command.

Looking south down the street, the BC saw a huge volume of smoke moving east to west, vertically and horizontally. It obscured the area, but he saw multiple grass fires on its perimeter. Unable to determine exactly what was burning, he walked into the smoke. Seeing a burning structure on the west side of Oneonta, he declared a working fire.

Continuing south, he saw multiple buildings burning on Oneonta. Most of the fire was on the west side of the street, but roof lines were also catching on the east side. Grass fires were also burning up to the east-side buildings.

Second Alarm

Battalion 4 requested a second alarm. Five more companies and another chief were added to the call. Half of the city's 28 engines and most of eight ladders were now involved.

First-arriving Engine 27 advanced a line into a west-side building, trying to stop the fire spreading north. Second-arriving Engine 19 laid the supply line, and advanced another line. Third-arriving Engine 7 was assigned RIT.

The interior attacks proved futile. The fire was spreading extremely fast. Attic spaces were soon involved, as fire spread through plastic soffits. Within about five minutes, Battalion 4 saw roofs burning through.

More Alarms

A second Battalion Chief arrived and met face-to-face with Battalion 4. They split operations on either side of Oneonta, each with a radio channel.

The first arriving ladder was deployed on Pine Knoll Drive, between the buildings facing east on Oneonta and the rear of a shopping center facing Capital Boulevard.

As second-alarm companies arrived, they were assigned attack and exposure control on the east side of Oneonta. The volume of fire seemed to grow exponentially, and Battalion 4 requested third and fourth alarms.

On the west side and now in defensive mode, crews attacked the fire on its north and south leading edges. At least six buildings were burning, and flames were still spreading.

Incident Commanders

Fire Chief John McGrath was approaching on Capital Boulevard. He saw the smoke and knew that more than one building was burning. Arriving from the other fire was Division Chief Frank Warner. He'd been monitoring the radio, but didn't know exactly what was burning. Together they walked to the command post where McGrath assumed Incident Command, and Warner was assigned Operations Command.

Radio traffic was halted, so crews and assignments could be mapped out. Four alarms had been dispatched, with two-dozen companies involved. A fifth [and sixth] alarm was later requested.

Command divided the fireground into four divisions, and directed units onto a single radio channel. The divisions were each assigned a Battalion Chief.

Fireground

On the north end of Oneonta, Engine 27 and Engine 19 were pumping. Each had their own hydrant, and supplied a deck gun and numerous hand lines.

Crews were aided by incoming companies, as well as recruits from the fire academy.

On the south end of Oneonta, crews concentrated on protecting the last building on the east side. Engine 22 pumped to Ladder 22, operating a reserve platform.

On the south end of Londonville Lane, one block west, two buildings had caught fire. Ladder 26 was already there, directing its stream onto Oneonta. Aerial operations were stopped, and lines were brought into both buildings. Most of the units were saved.

Command Concerns

At the command post, Chief McGrath had three concerns. First was life safety. Primary and secondary searches were initiated as soon as resources and conditions allowed.

Second was protecting the rest of the city. Extensive move-ups were needed, and he was reassured to learn that an off-duty Battalion Chief was already coordinating coverage.

Third was water supply. The subdivision was a cul-de-sac. Was the system on a closed loop? Were all mains and hydrants active?

Chief Warner, meanwhile, was functioning more as a resource manager. His eyes and ears were the Battalion Chiefs. "Companies kept requesting help," he remembers of that first hour, "but we didn't have help to send. They hadn't arrived yet."

Everybody Helps

Members from all divisions responded, along with off-duty "B" and "C" shift personnel. The Accountability Officer came from Fire Prevention. The PIO was the Asst. Chief of Training. The Field Communications Unit was brought by the IT team. Suppression personnel alone numbered 150. "Our 'esprit de corps' really showed that day," McGrath recounts.

The Wake New Hope Fire Department handled the grass fires started by blowing brands, and contributed personnel for structural work.

Other departments answered calls inside the city, and provided units for coverage. Twelve Wake and Durham county departments supplied eight engines, four ladders, and a Telesquirt at city stations.

Fire is Corralled

By about 4:00 p.m. the fire was corralled.

Three of twelve threatened buildings had been protected, and suffered only partial damage. Fires continued to burn in the other nine, and even in driveways. At least six vehicles were destroyed.

No other exposures were threatened, but crews faced a long road ahead. Relieved crews reported to rehab. Wake County EMS operated medical monitoring and rehabilitation. Their assets included six paramedic ambulances, and three district chiefs.

Evening And After

By sunset at 6:02 p.m., the fire was largely under control. Salvage and overhaul operations were in progress. Fuel was being delivered to apparatus. Reporters had toured the scene. Food service had even arrived – Barry's Café served 90 hamburgers and 90 chicken sandwiches to personnel.

Command was transferred to Operations Chief Warner, who was soon relieved by Battalion 4. Company officers took command about 11:00 p.m. Companies were rotated overnight, and the last engine cleared two days later.

Aftermath

No injuries were recorded, but the property loss was staggering: 32 homes seriously damaged or destroyed; 29 families and 72 people displaced. Damage costs exceeded \$4 million. Investigators determined that a carelessly discarded cigarette was the likely cause of the fire.

The city would commission an engineering study of the incident. Changes recommended in the 189-page report included prohibiting combustible soffits for townhomes, and adopting a wild land-urban interface code.

North Carolina Building Code has since been changed to prohibit combustible soffit materials in new townhomes, and the city continues to evaluate the use of combustible landscape material.

Lessons Learned

The sheer scope of Pine Knoll Townes was an important lesson to the Raleigh Fire Department. “We don’t have a lot of big fires,” says Chief McGrath, “and that’s a good thing.”

It reinforced the importance of training for larger fires, including early use of master streams and other “big water,” and incident command strategy and tactics at the company officer level.

Chief Warner cites his own lesson learned. “If I am going to an incident that is or may escalate to a major fire, I’ll request additional radio channels for staging and EMS ahead of time.”

The department drills more frequently on major fire operations, with live scenarios at the training center. Full assignments are used, to practice with several arriving companies.

One year later, on another dry and windy February afternoon, incident commanders drew upon their experience of Pine Knoll Townes. Their strategic planning and use of resources helped mitigate three major brush fires that threatened structures in different parts of the city.

Mike Legeros is the historian of the Raleigh Fire Department.

Site Diagram



Run Card and Resources

Compiled by Battalion Chief Peter Brock

February 22, 2007 - 3525 Oneonta Place

Time	Alarm Level	Assignment	Notes	Resource Commitment
15:04	still	E27		1 engine
15:04	still	E19, BC4		2 engines
15:08	1st	E9, E7, E22, L16, R19, BC1		5 engines, 1 ladder
15:12	2nd	E6, E16, E4, E18, L23, L26		9 engines, 3 ladders
15:18	3rd	E2, 14, E25, L22, BC3		12 engines, 4 ladders
15:19	special called	E15, E21, Haz-Mat 15		14 engines, 4 ladders
15:22	4th	E26, E8, L20, R14	brand patrol	16 engines, 5 ladders
15:25	5th	New Hope E1, E2, Tanker 10, Brush 7, Falls Brush 219	brand patrol	
15:28	6th	E5, E10, E20, L1		19 engines, 6 ladders
16:00	special called	Two chiefs, 5 instructors, 32 recruits	recruit academy	
17:52	relief	E26, L20, R14		
21:06	relief	E25		
21:21	relief	E13, E20		
00:32	relief	E23, E5		
03:31	relief	E1, E11		
03:42	relief	L22		

Other Raleigh Fire Department resources on scene:

- Car 1 (Command)
- Car 4
- Car 5 (Operations)
- Car 10 (PIO)
- Car 12
- Car 72
- Car 198 (Investigator)
- Air 8
- Field Command 1
- Other staff members

Raleigh Fire Department coverage provided by outside departments included:

- Bay Leaf engine at Station 9
- Bay Leaf L25 at Station 16
- Bethesda E421 at Station 24
- Cary E10 at Station 8
- Cary L1 at Station 8
- Durham Highway engine at Station 4
- Falls engine Station 4
- Garner E11 at Station 1

- Garner L1 at Station 1
- Knightdale squirt at Station 12
- New Hope at their station, covering Station 19 and Station 27
- Rolesville engine at Station 15
- Swift Creek engine at Station 20
- Wake Forest engine at Station 19
- Wake Forest ladder at Station 25