

# CASE STUDY: CITY OF NEW ROCHELLE POLICE DEPARTMENT

## A Model City-Wide Wireless Surveillance Network

### SUMMARY

- LTW and the New Rochelle Police Department (NRPD) designed, configured and deployed a scalable, reliable and secure, high-capacity wireless video-surveillance network based on a linear mesh network design.
- The multi-phase initiative started in 2013 with 35 surveillance cameras monitoring 18 locations throughout the city. By 2015, the NRPD had 45 cameras at 21 locations.
- The network operation has been recognized by the news media for its ability to assist in solving and deterring crime in New Rochelle.
- This system earned the support of the NRPD Police Commissioner and serves as a model for other municipal police departments.

### Challenge: Successfully Operationalize a Force Multiplier

The City of New Rochelle sits on the southeast region of Westchester County in New York State, along the Long Island Sound and two miles north of New York City. At just under 11 square miles, the city boasts a population of approximately 78,000 residents and is frequently recognized as one of the safest cities in the nation.

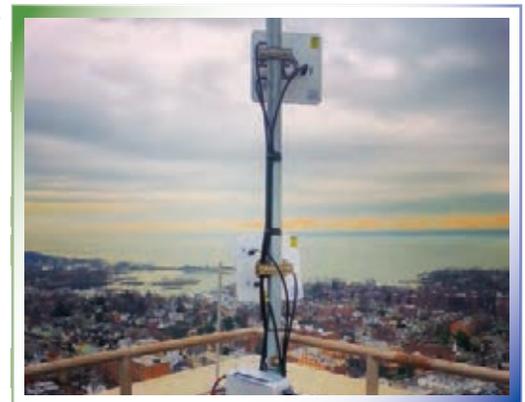
In an effort to increase the situational awareness of the police force, the NRPD decided the time was right for the city to purchase a surveillance camera system that would provide additional eyes on the street for central command and assist in criminal investigations.

### Background: Implementing a Long Term Vision

The NRPD received strong support from the New Rochelle Police Commissioner Patrick Carroll to implement technology solutions that would benefit the department and improve public safety. NRPD Senior Systems Engineer, Technical Services Unit, Nick Massaregli began searching for an integrator with both expertise in surveillance networking and experience working with government entities.

The NRPD identified the technologies, vendors and systems integrator that could implement the proposed solution. They chose a reliable, high-capacity linear mesh product portfolio as the foundation for the wireless network and the highly recommended system integrator NJ-based LTW to design, configure and deploy the solution.

While Massaregli had a long-term vision to give NRPD officers in the field more access to information, he understood the importance of a phased implementation.



- The NRPD wanted to introduce an easy-to-use, powerful tool to assist officers in criminal investigations.
- Given fiscal constraints due to budget shortfalls and shrinking annual grants, the NRPD created a strategic phased approach to their deployment.

### Solution: A Scalable Wireless Surveillance Network

Based on Massaregli's vision, LTW built an integrated, high-capacity wireless network using:

- A linear mesh, point-to-point, network design with redundancy.
- Wireless radio access points running over a reliable, high-capacity gigabit backhaul link and network switches.
- High-definition megapixel fixed-point and pan/tilt/zoom (PTZ) cameras.
- New IP hardware integrated with a Network Video Management System (NVMS) to update the NRPD's access control system.



The plan included cameras around the city's schools and major arteries to facilitate during-incident and post-incident management. The initial configuration featured wireless base stations installed on three tall buildings within the city supporting 35 fixed-point and PTZ cameras that provided full-time coverage of 18 intersections throughout New Rochelle.

The system's scalability enabled the NRPD to transition one of the Harbor Unit buildings onto the high-speed wireless video network shortly after the initial deployment for management of its day-to-day operations. The network's durability has been proven through inclement weather, operating without interruption.

The speed with which NRPD officers and senior command staff adapted to using the system was a driving force to begin expanding the network as planned.



The next phases from LTW included:

- **An expanded mobility network:** Installed mobility nodes at every intersection with a camera so that when a police car approaches, it can connect to the network and review video footage.
- **A monitoring software upgrade:** Increased licenses for viewing cameras both in the field and in their monitoring center.
  - **An expanded video surveillance system:** Installed four additional cameras in a municipal parking lot that needed coverage and security.

With each new phase, LTW continued to build out NRPD's current network, increasing the server requirements and storage capabilities to support the new additions and provide scalability for future implementations.

*"The New Rochelle Police Department is one of our first customers to successfully roll out such a large footprint of wireless mobility. Through a series of links to the Network Video Management server in the head end, patrol vehicles can access video and data from the network, capabilities which most police cars on the street simply do not have."*

--Peter J. Lutz, Vice President  
Government & Public Safety, LTW

## Results: Effective Use of Security Cameras in Deterring Crime

On the very first day the NRPD witnessed an accident where an 81 year-old resident was struck by a vehicle. Since then, the network has caught a number of crimes, with video so clear the department has been able to identify suspects, capture license plate numbers, determine a suspect's escape route when leaving the scene of a crime, and most importantly, close cases.

### Retailers Want to Fund Additional Cameras

A national drug retailer approached the NRPD to put cameras around the property in response to a rash of robberies and drug activity. LTW installed two cameras on the retailer's roof that provide around-the-clock coverage. The cameras are connected to the NRPD network for continuous monitoring. Since then, the NRPD has been approached by retailers in downtown districts who are boldly receptive to what the NRPD is doing and want to fund additional networked cameras on its properties.



### New Rochelle PD: Improving Response Time Using Video Surveillance

The scalable mesh network infrastructure satisfies Commissioner Carroll's promise to provide New Rochelle police officers access to live video streams from street cameras from inside their patrol cars. Carroll's pledge and Massaregli's vision will increase the public benefit of the cameras by providing a force multiplier allowing officers to more quickly identify and respond to suspicious and criminal activity.

*"Knowing that you have good system and a good integrator makes it so much easier to move forward with a trailblazing system like ours. That's where working with LTW comes into play, they have the experience and the ability to overcome any challenges in order to meet our goals. All of our communications came up at the same time. Broadcasting 50 concurrent video streams through a wireless system is no easy task and I was extremely pleased with the video quality and network's smooth operation."*

--Nick Massaregli, Senior Systems Engineer, Technical Services Unit  
New Rochelle Police Department

### The LTW advantage: Getting it Done Right, Every Time

The LTW partnership with the New Rochelle Police Department began in 2012 and has grown into a trusted relationship for both sides as LTW helped move the NRPD's master plan forward. LTW was up to the task every step of the way, could address the challenges that came with each phase of the integration and could deliver the solution on even the most aggressive schedules.