

# OPENING UP COMMUNICATIONS FOR FIRST RESPONDERS

Designing the perfect ERCES Solution  
for IKEA's 50th Store Grand Opening

Case Study

**JEFF HOOKER,  
DIRECTOR OF FIRE  
AND SAFETY, SECURED  
NETWORK SOLUTIONS:**

"We were able to help city officials better understand new code requirements. We are actively continuing to educate and bring awareness to latest developments in fire and life safety to all involved stakeholders."

Honeywell



# OVERVIEW

In April 2019, a brand new IKEA retail store opened its doors in Norfolk, Virginia. At 280,000 SQFT, the cavernous building consists of two merchandising floors plus a self-pick warehouse with 40 ft ceilings. The store features 42 rooms, four model home interiors, a 350-seat restaurant and a children's play area. The retail giant anticipates catering to 2,500-3,000 customers plus 250 employees per day.



## THE CHALLENGE

Secured Network Solutions Inc. (SNS), an authorized Honeywell® Engineered Systems Distributor (ESD) was on-boarded to install a comprehensive Gamewell-FCI® fire safety system. Secured Network Solutions chose the sophisticated yet cost-effective E3 Series® fire alarm control panel, networked with four nodes, 420 smoke detectors, OSID® beam detectors and VESDA® air sampling devices.

During final inspection, the fire marshal noticed he had no radio signal.

National fire code now requires that “two-way radio communication enhancement public safety signal booster systems” must be installed to achieve 99% floor radio coverage in critical areas. However, since Norfolk had not yet adopted the new

code, public safety radio coverage survey of the facility was not enforced, thereby not shining a light on the significant signal interference. Reliable two-way radio coverage is vital for first responders to help protect lives and property. With the grand opening advertised and only two weeks away, this posed a significant problem.

Overhearing the fire marshal, Rob Stallard, Fire and Life safety integrator for Secured Network Solutions Inc. proposed overlaying a comprehensive life safety system featuring Gamewell-FCI's Bi-Directional Amplifiers (BDA) radio signal boosters. It was an ambitious undertaking, as they would have less than two weeks to get trained, receive equipment, install, test, inspect and launch. In addition, the IKEA store was already fully merchandised,

and the warehouse stocked with over 10,000 inventory items. Any additional construction or installations at this point would be difficult.

## THE SOLUTION

Secured Network Solutions chose the UL2524 listed Gamewell-FCI Bi-Directional Amplifier life safety system for its code compliancy, ease of installation and guaranteed radio signal coverage. Gamewell-FCI Class B BDAs are high gain, high power band-selective signal boosters that can be customized to meet all public safety frequency band ranges. The band selective design delivers reliable performance in even the most challenging environments, such as IKEA's highly shelved and stocked warehouse. They are the only NFPA 72/1221 and UL 2524

## QUICK FACTS

### Needs

- Achieve 99% radio wave coverage with code compliant technology
- Fast and efficient installation to meet tight deadlines
- Must integrate seamlessly with fire safety system
- Minimal disruption of merchandise and inventory

### Benefits

- Life-saving, reliable two-way radio coverage for first responder
- Expertly placed signal booster for 99% coverage
- Easy to use and overall low cost of ownership
- Expert installation and maintenance by a local life safety focused company

compliant In-building 2-Way Emergency Radio Communication Enhancement System (ERCES) on the market to date, and provide 99%+ reliable two-way radio signal coverage inside buildings, tunnels and other structures.

SNS and the Honeywell Gamewell-FCI design team determined areas of radio signal interference, and placed 24 Distributed Antenna System (DAS) antennae throughout dead spot zones based on iBwave design. The donor antenna was placed on the roof, in clear line to the closest radio tower. After installation, iBwave heat map and radio coverage survey tests determined they had achieved 100% radio signal coverage throughout the entire structure.

“The biggest challenge was that we had less than two weeks to get BDA trained, have the product delivered and installed. With four technicians and myself working 12 hour shifts, we were able to get it done in just six days,” remarks Rob Stallard, Fire and Security Division Representative for SNS.

“We were under a very strict timeline. The SNS team moved mountains, came through for us and completed the project to allow for an on time opening of the store,” remarks Mark Robinson, Project Operations Manager for IKEA.”

The combined Gamewell-FCI fire and life system represented the first installation of its kind for Norfolk, VA. When the fire marshal and IKEA building officials tested out the new BDA system, they were notably impressed.

“I know the construction managers were originally considering using their existing cell phone integrator, but ultimately decided on our code and UL compliant recommendation,” states Jeff Hooker, Director of Fire and Safety, Secured Network Solutions. “We were able to help city officials better understand new code requirements. We are actively continuing to educate and bring awareness to latest developments in fire and life safety to all involved stakeholders.”

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