National Association of State Fire Marshals
June 15, 2023

Introduction to NFPA 915,
Standard for Remote Inspections and Tests

Presented by
Terry Victor
Senior Manager of Industry Relations, Johnson Controls
Introduction and history of NFPA 915 Standard for Remote Inspections and Tests
NFPA hears from the industry

- NFPA starts to hear the need for remote inspections
- Requirements of how they could be conducted
- What is acceptable
- Establish protocols and practices for the use of remote inspections of existing buildings, buildings under construction and building systems for code compliance
- Could video recording be acceptable, and if so, how
NFPA History on Remote Inspections & Resources

- NFPA Building Code Development Committee (BCDC)
- NFPA white paper on remote inspections

NFPA 915 – real-world examples

“Sherlook” virtual video inspections

Handout created by Clark County, WA

- What it’s about
- How it works
- The benefits
- Qualifying inspections
- Limitations
- Scheduling
Committee Scope (NFPA Document Information Page)

- This Committee shall be responsible for establishing requirements for the performance and use of remote methodologies, systems and components (including digital video, digital images, digital audio, among others) whether live or submitted as an electronic file for subsequent review to conduct remote inspections of buildings, structures, systems (e.g., electrical, HVAC, fire protection, etc.) and premises, including underground spaces and aerial areas. Requirements for collection, custody and maintenance of the data available from remote inspections shall also be the responsibility of this Technical Committee.

Electrical and fire protection systems are included
The scope and purpose of NFPA 915 and a review of the chapters
NFPA 915 – Standard for Remote Inspections

Scope
- Minimum requirements
- Covers procedures, methods and documentation associated with remote inspections

Purpose
- Deliver an equivalent or improved result
- To other inspection methods

...deliver equivalent or improved result ...
Important definitions

Inspection

- The examination or witnessing of a product, process installation or test
- Determine conformity with:
  - construction documents
  - applicable codes
  - installation standards
  - manufacturer's specifications

This definition is unique to NFPA 915
Important definitions

Remote Inspection

- Use of audio/visual devices and/or other technologies for the purpose of remote verification.

This definition is also unique to NFPA 915
Application

- (Annex) ... compatible with the requirements of any jurisdiction
- ... can be modified by any jurisdiction ...
- ... inspections as allowed by the authority having jurisdiction
- (Annex) ... types of inspections allowed should be at the discretion of the authority having jurisdiction
- The authority having jurisdiction shall determine applicability ...
- (Annex) The AHJ should take into consideration ...

The AHJ determines how NFPA 915 applies
NFPA 915 – technical committee

Chairman – Jim Muir, Enforcing Authority, Clark County, WA

Committee members:

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<th>Alternates</th>
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As of December 18, 2019
As of December 14, 2022

A document for AHJs, with AHJ input
NFPA 915 – types of inspections

Difficult locations
- Towers
- Rooftops
- Water tanks
- Lake bottoms
- Service tunnels

Routine, periodic and re-inspection
- Distance/time
- Limited staff
- Weather
- COVID-19

COVID-19 has brought to light other applications for remote inspections not previously realized.
NFPA 915 – data devices

Cellular telephones
- FaceTime
- Wi-Fi programs

Handheld devices
- Tablet
- iPad
- Chromebook

Live or recorded video camera
- Handheld
- Body
- Drone
- Robot
- Underwater drone
- Fixed (i.e., security)

Who knows the devices being developed that could be used?
NFPA 915 – live programs

Cellular telephones/tablet/iPad/Chromebook/other

Best video conferencing software in 2021*
1. GoToMeeting
2. RingCentral Video
3. Microsoft Teams
4. Google Meet
5. Zoom Meetings
6. ClickMeeting
7. U Meeting
8. BigBlueButton
9. Bluejeans Meetings
10. Lifesize

* Per techradar.com

Again, COVID-19 has brought to light other uses for programs to perform live remote inspections not previously realized.

Who knows what programs are being developed that could be used in the future?
NFPA 915 – chapters

1. Administration
2. Referenced Publications
3. Definitions
4. General Requirements
5. Location And Time Stamp Requirements
6. Data Collection / Transmission Devices
7. Data Collection Formats
8. Data And Content Protection, Retention, And Ownership
10. Annex B: Informational References
11. Index
Chapter 4 - General Requirements

4.1 Responsibility of The Property Owner or Designated Representative
4.2 Responsibility of The Contractor of Work
4.3 Responsibility of The Entity Performing Remote Inspections
4.4 Responsibility of The Authority Having Jurisdiction (AHJ)
4.5 Safety
4.6 Permits or Approvals
4.7 Supporting Documents
Chapter 5 - Location And Timestamp Requirements

5.1 General
5.2 Structures
5.3 Nonstructures and site work
5.4 Time Stamp requirements
Chapter 6 - Data Collection / Transmission Devices

6.1 General
6.2 Wireless devices
6.3 Digital devices
6.4 Nondigital devices
6.5 Vehicles
6.6 Other data collection / transmission devices
Chapter 7 - Data Collection Formats

7.1 General
7.2 Video Formats
7.3 Audio Formats
7.4 Photography Formats
7.5 Written Formats
7.6 Other Data Collection Formats
Chapter 8 - Data and Content Protection, Retention, and Ownership

8.1 General
8.2 Submission of Data and Content
8.3 Transmission of Content
8.4 Custody of Content
8.5 Retention of Content
Conclusions

- All affected parties should become familiar with this new standard on remote inspections and tests

- Usage of the remote inspection concepts will increase as more AHJs embrace the technology and the ability to use personnel in a more efficient manner

- Remote inspections and tests are the wave of the future as IoT becomes commonplace

- NFPA 915 has been expanded to include other uses for remote inspection technologies, such as for automated inspections and tests, and distance monitoring of building systems, including fire protection systems
Q&A

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