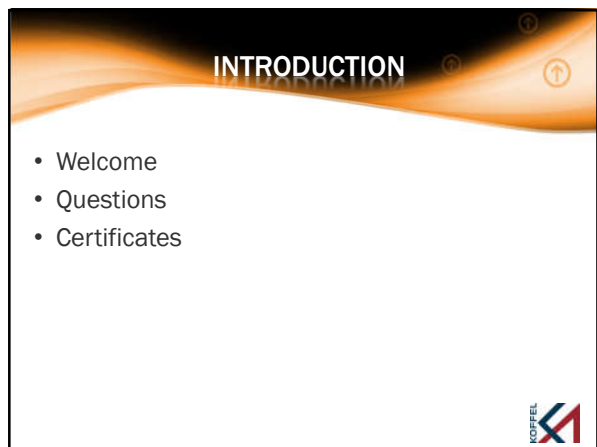
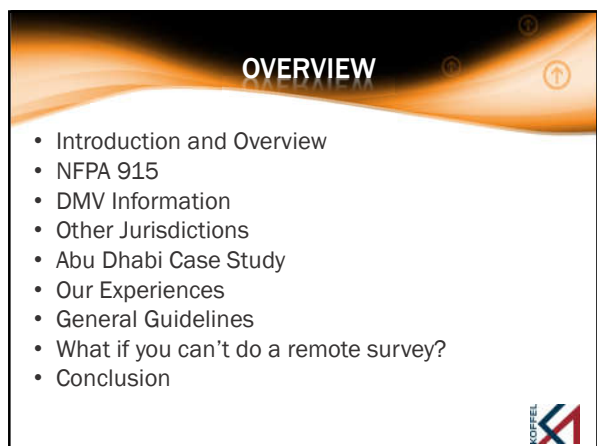




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2



3

PRESENTERS



William E. Koffel, P.E., FSFPE, SASHE

- President
- Serves on numerous NFPA Technical Committees
- 41+ years of industry experience



Kina R. Campbell, P.E.

- Project Manager
- 20+ years of industry experience



M. Lee Draper, P.E.



- Senior Fire Protection Engineer
- 8+ years of industry experience



4

WHY REMOTE INSPECTIONS?

- The sudden onset of the COVID-19 crisis is changing the way business is conducted
- In many states, construction activities were deemed “essential” by State governments and are allowed to continue
- In the DMV, construction is deemed “essential” in all 3 jurisdictions



5

WHY REMOTE INSPECTIONS?

- At least 7 construction sites here in Maryland have been shut down due to COVID-19 concerns
 - Montgomery College – Germantown Campus
 - Pike & Rose Office Tower



6

NFPA 915 (PROPOSED)


- Standard for Remote Inspections (proposed)
- Two draft development meetings held
 - www.nfpa.org/915
 - Third meeting (last week) – postponed
- Revisions cycle - TBD



7

NFPA 915 (PROPOSED)

- Scope and Purpose
 - Procedures, methods, and documentation associated with remote inspections
 - Deliver an equivalent or improved result as that which would be obtained with other inspection methods
 - Use must be approved
 - Does not apply to periodic inspections and tests



8

NFPA 915 (PROPOSED)

<ul style="list-style-type: none">• Devices<ul style="list-style-type: none">▪ Wireless▪ Digital▪ Non-digital▪ Vehicles	<ul style="list-style-type: none">• Data Collection<ul style="list-style-type: none">▪ Written▪ Photograph▪ Video▪ Audio
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9


FOCUS AREAS

- Washington DC
- Maryland
 - Montgomery
 - Prince George's
 - Anne Arundel
 - Howard –
 - Baltimore – No remote
 - Baltimore City – No remote
- Virginia
 - Fairfax
 - City of Fairfax
 - Arlington
 - City of Falls Church
 - Prince William
 - Loudoun
 - City of Alexandria – No remote




10

DISTRICT OF COLUMBIA



WASHINGTON DC

- As of today, the District of Columbia does not have a program for conducting remote inspections.



11

MONTGOMERY COUNTY - BUILDING

- As of today, no formal process for remote building construction inspections.
- No inspections at this time for existing construction where people are living.



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MONTGOMERY COUNTY FIRE CODE COMPLIANCE



- Remote Inspections on a case by case basis
- Facetime
- WhatsApp
- Skype
- Zoom
- Microsoft Teams
- GoToMeeting



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HOWARD COUNTY



- No formal process
- Contact the Inspections group to coordinate
- Schedule online or by phone



14

ANNE ARUNDEL COUNTY

- No formal process
- In-person inspections are continuing for unoccupied structures
- Schedule online or by phone



15

PRINCE GEORGE'S COUNTY

- No formal process
- Not performing inspections of occupied structures, including tenant fit-outs
- 3rd party inspection is an option



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FAIRFAX COUNTY – BUILDING DEPT. (MEANS OF EGRESS, FIRE RESISTANCE RATINGS, ARCHITECTURAL ELEMENTS)

- Remote Inspections ONLY at this time
- Requests must be made using FIDO
 - Facetime
 - Skype for Business
 - Microsoft Teams
 - Working Camera
 - WIFI



17

FAIRFAX COUNTY FIRE MARSHAL (SPRINKLER AND FIRE ALARM SYSTEMS)


- Remote Inspections are preferred
- All types of inspections are permitted except complex projects
- If the scope is too complex – 3rd party
- Call or email the Fire Marshal to schedule
- Smart Phone or Tablet
- WIFI or 4G Internet Service
- Facetime
- Zoom



18

ARLINGTON COUNTY - BUILDING



- Remote inspections only
- Complexity determined by inspector - 3rd party option
- Smart Phone or Tablet
- WIFI or 4G Internet Service
- Google Duo
- Facetime
- Microsoft Teams



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CITY OF FALLS CHURCH

- Performing in-person inspections on Monday's, Wednesday's and Friday's



20

PRINCE WILLIAM COUNTY FIRE MARSHAL

- No remote inspections allowed for:
 - Sprinkler Systems
 - Fire Alarm Systems
 - Hood Suppression Systems
- In-person inspections



21

PRINCE WILLIAM COUNTY BUILDING

- All building construction inspections are remote
- Facetime
- Google Duo
- Skype for Business



22

LOUDOUN COUNTY


- Temporarily allowing remote inspections for some activities
- Some fire protection systems are allowed
- No fire protection building related activities allowed
- 3rd party option



23

PENNSYLVANIA, DELAWARE, NEW JERSEY

- PA
 - Construction projects are shut down
 - Waivers can be requested
 - Legislative action pending
- Delaware
 - Construction projects are essential
- New Jersey
 - Construction designated as affordable housing



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2018 NFPA CONFERENCE & EXPO

Remote Inspection: Experience from The United Arab Emirates (UAE)

Presented by:

Brigadier Mohamed Abdullah Al Nuaimi

Director of Fire & Protection & Safety

Ministry of Interior, UAE

William E. Koffel, P.E., FSFPE

Managing Partner

Koffel International Fire Safety Consultancy

Dubai, UAE

KOFFEL

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وزارة الداخلية

MINISTRY OF INTERIOR

Distant Inspection Program (D.I.P)

General Headquarters of Civil Defense

General Directorate of Civil Defense / Abu Dhabi

KOFFEL

26

Cleveland Clinic | Abu Dhabi

KOFFEL

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Objectives

- Reduce cost
- Save time
- Provide quality services for end users
- Develop new learning tools
- Achieve highest levels of safety
- Insure knowledge transfer

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Sample fire alarm DIP filming script

	Overview of Content	Remarks
Start of each film	A title page will include the system that has been filmed and the relevant NFPA code/standards applicable to the system as well as a short description of the purpose of the system.	Fire detection and alarm system, UAE Fire Code (2011) and NFPA 72 will be used to alert occupants of the affected zone to evacuate.
Check as built condition	The project team members will check that the as-built condition matches the approved drawings, taking through the building or space protected.	Check detectors, manual call points and voice alarm notification equipment to ensure they are installed as per the as-built drawings. Ensure that devices have labels that match the built drawings. If as-built drawings differ from approved shop drawings, this should be documented.
Performance Test	Activate a device to check whether it performs as required by NFPA.	Activate a series of devices, one at a time, to check whether the address on the fire alarm panel matches label and drawings.
Functional Test	Activate a device to check whether a function as prescribed by the relevant NFPA standard and approved fire strategy.	Activate a series of devices, one at a time, to check whether fire alarm sounds and alarms are active in the evacuation zone. Manual device test and check whether the voice message can be understood. Ensure that strobes are synchronized.
End of film	Each film shall end with the names of the project team members/companies involved and their responsibilities. Any deviations to be noted can also be added to the end of the film.	

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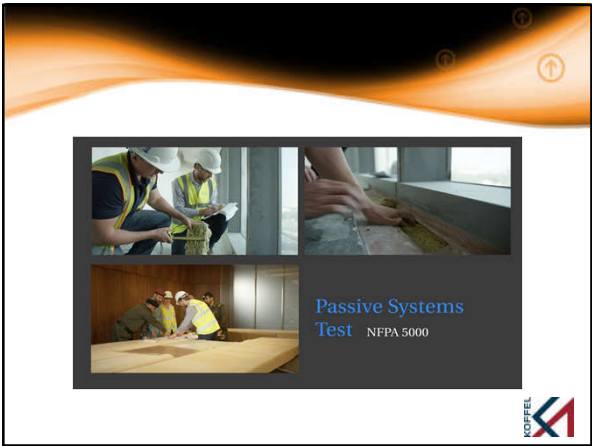
Deliverables

1) To produce the first series of films that document 'Fire safety systems inspections'

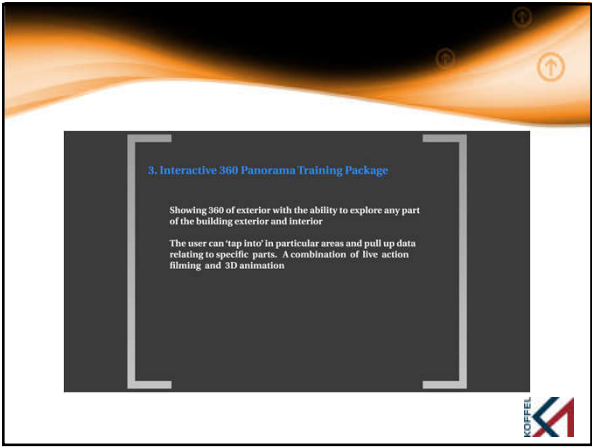
30

Proprietary Presentation by Koffel Associates, Inc.

10



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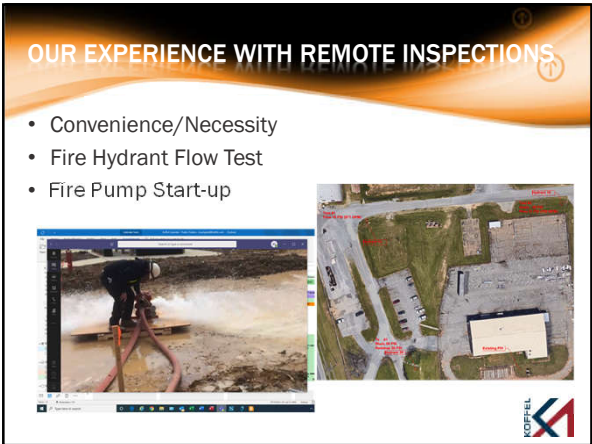
33



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REMOTE FIRE HYDRANT FLOW TEST

- Design-Build Project
- Approved by AHJ
- Used WhatsApp
- Lessons Learned
 - Plenty of help
 - Screenshots
 - Communication



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REMOTE FIRE PUMP START-UP






- Microsoft Teams
- GC Handled Camera
- Live Video & Photos
- Signal Quality Variability
- Lessons Learned
 - Dedicated Camera Person
 - Environmental Factors



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GENERAL GUIDELINES FOR REMOTE INSPECTIONS

- Scheduling / Coordination
- Planning
- Implementation
- Documentation / Close-Out




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GENERAL GUIDELINES: SCHEDULING / COORDINATION



- Jurisdictional requirements
- Schedule as Necessary
- Fees
- Document in Writing



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GENERAL GUIDELINES: PLANNING

- Technology
- Internet Access
- Personnel
- Equipment


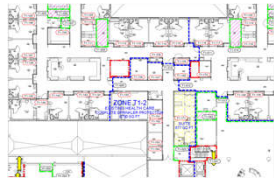





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GENERAL GUIDELINES: PLANNING


- Plans & Specs
- Inspection Documents
- Special Considerations






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GENERAL GUIDELINES:
IMPLEMENTATION




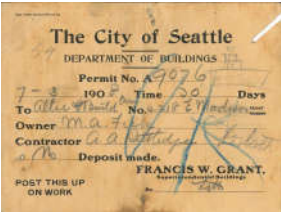
- Same As In-Person
- Verify Location
- AHJ Provides Direction
- Allot Extra Time




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GENERAL GUIDELINES:
DOCUMENTATION / CLOSE-OUT

- Digital Inspection Documentation
- Field Reports
- Jurisdictional Requirements
- Digital Records







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UNAVOIDABLE SITE VISITS:
BEFORE YOU GET THERE

- Make an SOP
- Set Expectations
- Only Take What You Need
- Extra Change of Clothes
- Disinfecting Wipes
- Avoid Public Transport








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UNAVOIDABLE SITE VISITS: ON SITE




- Proper PPE
- Social Distancing
- Personal Hygiene
- Be Self-Aware



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UNAVOIDABLE SITE VISITS: OUR EXPERIENCE


- Access Difficulties
- Distractions
- Coordination & Communication
- Jobsite Differences
- Shift in Mentality



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SUGGESTED READING



- NFPA 915 White Paper
<https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=915&tab=research>
- "NFPA Today" Blog
<https://community.nfpa.org/community/nfpa-today/blog>
- Other Resources
<https://community.nfpa.org/community/nfpa-today/blog/2020/04/09/implementing-remote-video-inspections-12-key-lessons>
<https://www.nfpa.org/-/media/Files/Code-or-topic-fact-sheets/RVIFactSheet.ashx>



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CONCLUSION

- Remote Inspections are Here to Stay
- NFPA and Other Agencies at Forefront
- Confirm Process with Your Jurisdiction
- Communication, Communication, Communication



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QUESTIONS?

wkoffel@Koffel.com
kcampbell@Koffel.com
ldraper@Koffel.com

Follow us on LinkedIn

Koffel Associates, Inc.
8815 Centre Park Drive,
Suite 200
Columbia, MD 21045-2107
410-750-2246
www.koffel.com



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