

# HOW TO MAKE EFFECTIVE CONSTRUCTION TRAINING VIDEOS





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As a building project enters its final phases, general contractors will begin the process of “handing off” the building to the owner, facilities manager, and building operations staff. This has been compared to a center snapping a football to his quarterback, but in reality, it’s more similar to a parent leaving their child with a babysitter for the first time.

A parent leaves a list behind for the sitter — where they’ll be, who they can contact in case of emergency, what their child likes to eat, health issues to be aware of, and when they should be put to bed. Similarly, a contractor has to leave behind documentation for the building operations team — drawings, records, licenses, safety documents, an operations and maintenance manual, and more.

With all the technology available to contractors and facilities staff, recording the critical instructions for operating a building in an old-fashioned manual is no longer viable or cost-effective. For this reason, many building companies have begun recording construction training videos (CTVs), also called owner training videos, in order to pass knowledge along more efficiently and effectively.

These videos constitute a kind of living operations and maintenance manual, and have become an indispensable complement to more traditional handover materials.

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## THE BENEFITS OF TRAINING VIDEOS

Why should general contractors bother creating construction training videos? In many cases, they're required to do so by the building owner on the original project specifications.

**Owners might choose to require their contractor to provide CTVs for a multitude of reasons, including:**

- ▶ **Reduced Liability:** In the case of a lawsuit, owners can clearly demonstrate that their staff was trained in the proper usage of building systems.
- ▶ **Reduced Long-Term Cost:** Knowledge is preserved in an accessible format, so owners don't need to hire personnel to retrain their staff.
- ▶ **Improved Safety:** Operations staff will understand how to stay out of danger while maintaining or operating building systems.

### WHAT SYSTEMS NEED TRAINING VIDEOS?

Any complex mechanical or electronic building system should be accompanied by a CTV. Examples include:

- Elevators
- Escalators
- Fire Suppression
- Electrical
- Security
- Irrigation
- Alarms
- Intercoms and Paging
- Plumbing
- Generators
- Parking Garage Automation

There are also reasons a general contractor might choose to create construction training videos, even if it hasn't been required by the building owner. For example, **OTVs can help reduce liability for contractors and subcontractors by providing visual evidence that systems were installed correctly.**

In addition, contractors have an interest in ensuring that a building stands the test of time. If word gets out that a building's mechanical systems have failed a few years after construction, that reflects poorly on the contractor. However, general contractors don't typically have a role in maintaining or operating a building, so how can they ensure it is properly kept up? The only way is to provide excellent training for building staff, and CTVs are the most effective way to do just that.



*“The benefits of training videos are clear for owners, facilities managers, and contractors, but those benefits only exist if the videos themselves are high-quality, comprehensive, and easily accessible.”*

## MISTAKES TO AVOID

Because construction training videos are one of the final line items on a spec sheet, and therefore one of the final responsibilities of a general contractor on a job site, they are often left to the last minute.

The benefits of training videos are clear for owners, facilities managers, and contractors, but those benefits only exist if the videos themselves are high-quality, comprehensive,

and easily accessible. By putting off their creation and scrambling to get them done under a deadline, general contractors risk making mistakes that can result in poor OTVs, and by extension, a more challenging building handover.

Without taking the time to research construction training video companies and coordinate a well-planned shoot, contractors are stuck choosing one of three options: DIY, hiring a film crew, or hiring an untrained videographer.

## DOING IT YOURSELF

No matter how impressive the camera on the new iPhone may be, it is no replacement for professional video equipment. While a cell phone might be perfectly suitable for filming a kid’s baseball game, it is no match for the sensory overload of an active construction site.

Without the proper equipment, contractors and their staff who attempt to record their own construction training videos are likely to end up with shaky and inaudible content — and those are just the technical problems.

From a content perspective, a rushed and underprepared worker might not be able to effectively communicate everything a future user would need to know. In other words, even if the video looks clear and sounds good, it might not contain much useful information.

In addition, construction training videos should be edited and organized in order to remain useful. It is unlikely that anyone on the general contractor’s payroll has the video experience or bandwidth required for this level of file management. This level of organization might not be required by the owner, but without it, DIY productions will most likely end up stored away on a USB drive or DVD, where they won’t be of any use to future operations staff.



## HIRING A FILM CREW

A contractor who understands that they need a professional to help them create their CTVs might hire the wrong kind of professionals. A quick Google search for local commercial film crews will certainly turn up many eager candidates, but few will have the experience required to record great training videos.

A film crew that would normally shoot a commercial or narrative film contains many more resources than are necessary to shoot an owner training video. In addition to a cameraperson, they'll often include a sound engineer, a director, and one or more production assistants. All of these people add to the cost of a shoot, but without extensive construction experience, none of them will be able to effectively direct your presenter in what subject areas to cover.

## HIRING AN INDEPENDENT VIDEOGRAPHER

Understanding that recording CTVs requires professional equipment and skills, and understanding that an entire film crew is overkill, a general contractor might pursue a third option: hiring a solo videographer. The majority of independent videographers make their living shooting weddings, corporate parties, and other events. While they will be able to record your construction training videos and do some editing, they certainly won't have the necessary expertise to direct your presenter.

In addition, it's important to remember that job site safety is a concern even during the final stages of construction. Bringing an untrained person onto a construction site can have its own set of risks and liabilities.

A separate liability can occur when a contractor fails to properly follow the instructions on their spec sheet. It's common for owners who require construction training videos to also require that they be produced by a "qualified third party." Obviously this would exclude the DIY option, but depending on the owner's definition of "qualified," it could also exclude any videographer or film crew who does not specialize in construction.

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## BEST PRACTICES

Planning ahead and prioritizing the creation of construction training videos will enable general contractors to hire the right resources and achieve great results. Here are some best practices to follow in order to produce high-quality CTVs and reap their many benefits:

### CAMERA

Make sure the camera being used records high-definition video, is durable enough to withstand the rigors of a construction site, and has enough extra power supplies to last through the duration of the shoot.

### MICROPHONES AND RECORDERS

Construction sites are extremely loud. In order to ensure that the final video has clear, intelligible sound, a combination of recording equipment should be used. Poor sound quality can ruin a CTV, and there's very little you can do to repair bad sound during editing. By recording audio simultaneously through a lavalier mic (which clips to the shirt of the presenter), a handheld microphone, and the camera's built-in microphone, the editor will always have alternate choices if one audio source becomes distorted.

### WHAT DO WE MEAN BY "PROFESSIONAL EQUIPMENT"?

Multivista's videographers typically arrive on site with:

- Sony HXR-NX100 camera
- Two 64GB high speed SD cards
- Two lithium ion batteries
- Battery charger
- Two 3.5mm audio cables
- Wireless handheld microphone
- Wireless lavalier microphone
- Audio headset
- Clear lens filter
- Vello V-Rig shoe bracket
- Libec ZC-LP LANC zoom controller
- Microphone Wind Filters
- Libec TH-X head and tripod system
- Saramonic SR-AX100 audio adapter
- Manfrotto 193N Pro Camera Case



## LIGHTING

Without proper lighting, the best camera in the world can't take a clear picture of your presenter and the system they are presenting. Lighting conditions on a construction site are extremely dynamic, and change depending on time of day, location, viewing angle, and other factors. Measurements must be taken of the light in the environment, and the camera's white balance needs to be adjusted based on those readings. If the environmental light is not good enough to get a clear shot, additional lights may be required.

## EQUIPMENT OPERATOR

Professional video and audio equipment require constant adjustment based on many factors, including ambient light, ambient sound, time of day, distance to the subject, etc. A professional operator is required to use the equipment properly and make these adjustments as needed. The operator should also be trained in job site safety, and be comfortable navigating a construction site unsupervised.

## DIRECTOR

The videographer, or another individual, should direct the shoot by instructing the presenter on where to stand, how loudly to speak, and what subject areas to cover in order to maximize the effectiveness of the CTV. Ideally, the director should have significant prior knowledge of the types of systems being presented. In addition, they should identify any angles that would help a building's operations staff get a clearer sense of the system in question, including close-ups of equipment and control panels.

## PRESENTER

A member of the building crew should narrate the training video and perform the processes they are discussing in order to demonstrate proper usage. The presenter needs to be knowledgeable about the system they are demonstrating. They also need to be able to speak clearly.



## EDITOR

After video has been recorded, it will need to be edited using video editing software. The editor will need to synchronize audio and video and enhance image and sound quality. In addition, they'll need to select the best takes, remove unimportant footage, and splice together different angles to create one coherent piece. The video should then be cut into segments, or “chapterized”, with titles and labels to allow future users to quickly locate the information they need.



## ACCESS

After a video has been edited, it needs to be made available in some format for a building's operations staff to be able to use it. This could be a physical medium, such as a thumb drive, memory card, or DVD. However, it is highly recommended that the videos be uploaded to a mutually accessible cloud-based platform, such as a visual documentation platform, project management portal, or secure cloud storage site. This will allow parties with the right credentials to access the videos from any internet-connected device, and will prevent the possibility of them being lost.



## THE MULTIVISTA METHOD

At Multivista, we take great care to follow each of these best practices, and have refined a process for helping contractors create effective owner training videos quickly and at an affordable cost.

1. When a general contractor hires Multivista for our construction training video services, a **videographer from their local field office will contact them** and set up a time for the shoot.
2. Our trained and **certified videographer will arrive on site at the scheduled time and meet with the site supervisor to review the shoot schedule** and make any adjustments as needed.
3. The **videographer meets with the presenter the contractor has chosen** to demonstrate a particular system.
4. The videographer uses **high-end professional equipment to record the presentation, and simultaneously directs the presenter** in order to produce the best possible footage.
5. The videographer **records additional footage, like close-ups, pans, and zooms**, which could complement the training video.
6. The **footage is submitted electronically** to Multivista's corporate headquarters.
7. A professional editor **optimizes, edits, and chapterizes the footage**. The editor also associates **important data with the videos, including subject matter, date, and contact information**.
8. The finished **CTVs are uploaded to Multivista's secure cloud-based documentation platform**, where they can be **accessed by anyone with proper credentials from any internet-connected device**. That includes smartphones and tablets, making it easy for operations staff to take the CTV with them while they maintain or operate a system.
9. **Videos, or specific chapters of videos, can be downloaded from the platform and sent via email or other method to any necessary contact**. This facilitates the transmission of specific instructions without the end user needing to sort through large amounts of content.



## CONCLUSION

The building handover is, in many ways, the most sensitive part of a construction process. If it's not handled with care and attention, contractors, owners, and operations staff will find themselves suffering from a handover hangover. As building staff come and go and knowledge is lost, retraining will be required to help new employees maintain and operate systems. In extreme cases, knowledge loss can result in system failure, and a tarnished reputation for the general contractor.

The best cure for a handover hangover is a thoughtful use of construction training videos. These living instruction manuals preserve knowledge in perpetuity, ensuring a building operates as intended for as long as possible.

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Learn More About  
Multivista's Video Services

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