ARC® Facilities

A Practical Guide for Managing Construction Closeout Documentation

Organizing and Accessing Building Information During and After Project Close

Introduction

Whether you're the facility manager for a university campus founded in the 1700s or a mid-century community hospital, you are probably painfully aware of the historical and current building documentation that's in your plan room. With every renovation and retrofit there is further accumulation of building documentation making the situation even more untenable.
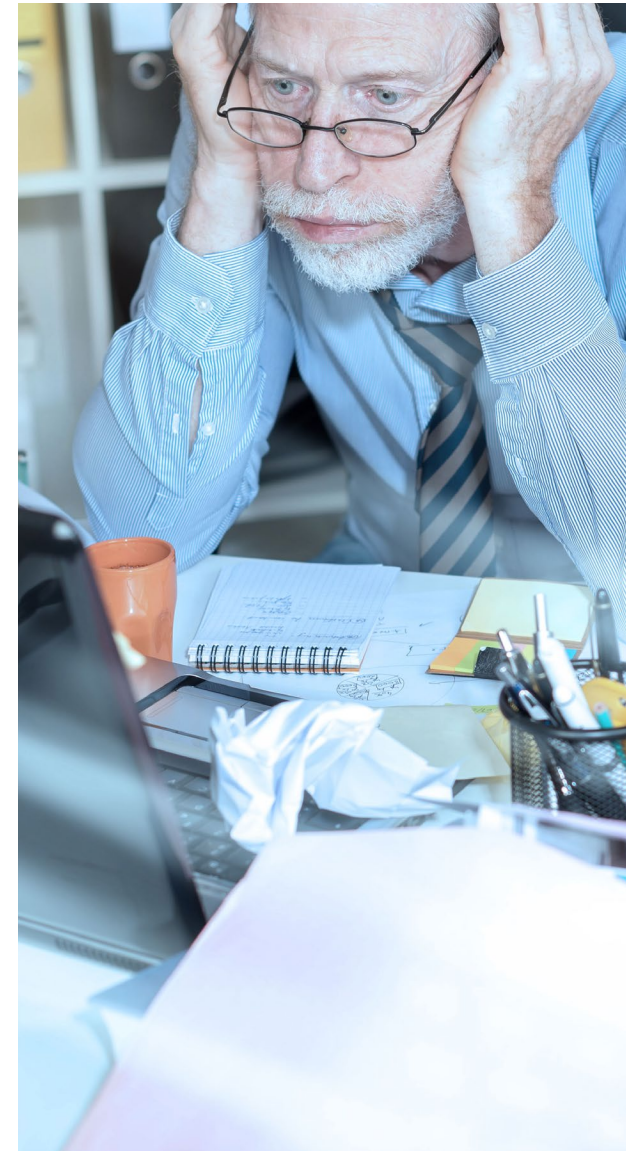
Facilities teams have been at the mercy of general contractors (GCs) and sub-contractors to provide them with complete and accurate closeout documents at the end of projects. This dilemma can be prevented by having a system to track all project documents from the time the construction documents are issued and during every stage of the project.

The goal? To incorporate the closeouts into the main facility drawings when the project is completed and provide **a single source of truth for all construction information** during the life of a renovation project.

Unfortunately, construction closeouts are delivered to facility managers in a confusing array of paper and electronic formats, including 3-ring binders, BIM models and USB drives. Incorporating all this additional information into the main body of building information is a constant challenge. The lack of a standard format is a headache which creates barriers to efficient facilities management when technicians must search through multiple formats of building information.

What makes the situation potentially dangerous is not knowing the locations of gas or water shut-off valves for emergencies – especially when you're constantly on the go.

Building Documentation:
What's in Your Bucket?

There's Never Been a System... Until Now

Facilities have an urgent need for law and order in their document storage rooms which are bursting with current building information, historical building information and ongoing construction information along with maintenance and equipment info. Organizing building information in a way they can be accessed easily for specific needs improves the efficiency of everyone connected to the facilities space.

> ❝ If we're going to knock down a wall, it's critical to know ahead of time if there is a water pipe running through the wall," said David Trask, ARC Facilities. "If a leak is found, it could cause severe damage, change orders and construction delays. ❞

> ❝ I see technology as a very important part of what we do," said Rich Steiger, Facilities Manager, Orange County Government. "It helps us to do things better and faster. We use technology to show all the things we maintain. Just click on a set of files and go to the drawing you need. ❞
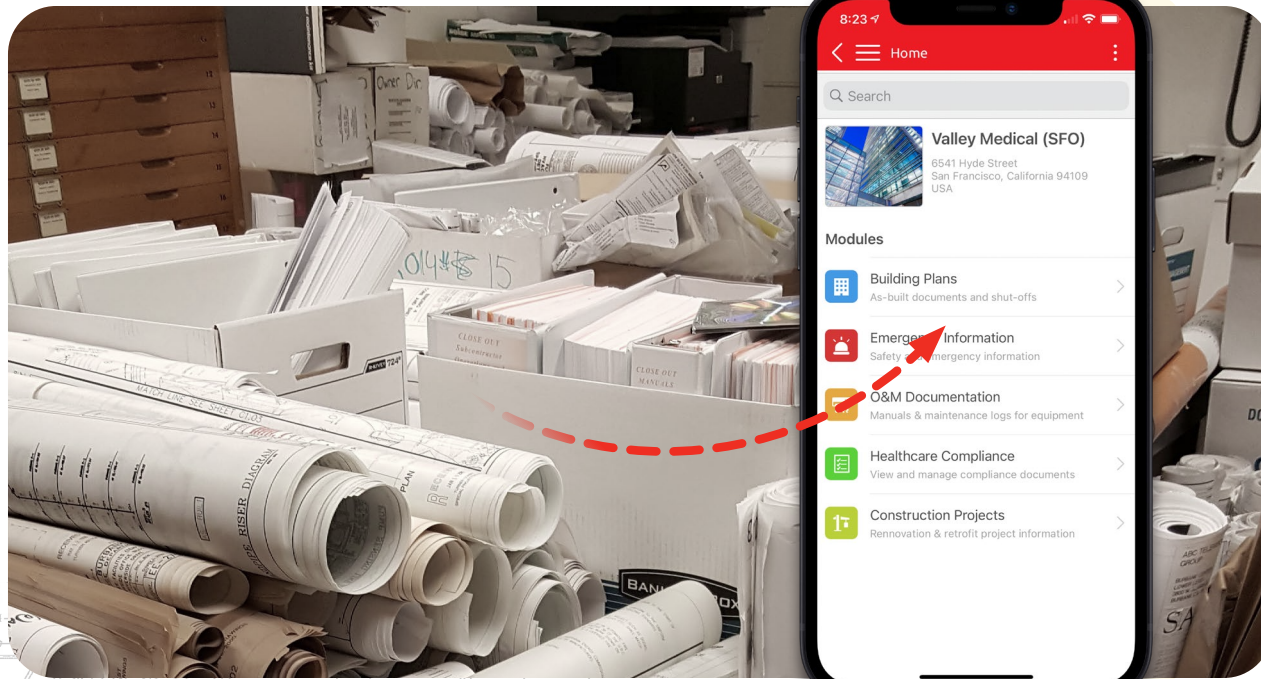
In the world of construction, there is no standardized system for delivering building information from architects to contractors to facility managers. Everyone seems to do their own thing, but because facility managers are ultimately responsible for the safety of their buildings, having inaccurate information could prove to be deadly and costly. Ensuring the successful handoff of a construction project closeout package is extremely important to facilities teams.

There's no excuse for it to take 7 months or longer to receive closeout packages which might be a mix of paper, CDs and thumb drives all dumped into a box, but this is reality for facility managers who oversee aging buildings.

It's Time to Get Out of the Depths of the Document Storage Room

Imagine if you had to spend about a third of your working hours doing necessary, but unproductive work. Well, that's what many facility teams face on a regular basis, when they spend hours searching for documents that must be carefully read. Meanwhile, their work out in the field still needs to be done. It's a frustrating scenario.

Finding precise, pristine paperwork is practically impossible. Paper fades and disintegrates. So even if you find the closeouts from 1975, they may be dog-eared, coffee-stained, illegible, torn or damaged. Digital documents, when found on hard drives or servers are equally difficult to locate and decipher.

In some cases, several different groups of people are looking for different types of documents, too. The difficulty of managing social distancing in chaotic and potentially crowded storage rooms, coupled with excessive paper handling does not make sense in the post-pandemic workplace.

Tools to Simplify Your Life with a Single Source of Truth

Essentially, facility teams operate in the dark until they receive these documents. If they make any modifications to equipment or the building itself, it's impossible to record those updates without the closeout drawings in hand.

Traditionally, in every facility, building plans and information of all types are stored together causing it to be disorganized and sometimes in complete disarray. Often drawings get misplaced or misfiled causing more chaos when drawings are required for an emergency or routine maintenance. This is further exacerbated when new documents from expansions or upgrades are added.

What is needed is an intuitive, easy to navigate resource for instantly finding information across the entire enterprise.

How Maintaining Current Building Plans Can Go Off the Rails

Here are the challenges that arise with building documentation during different stages and types of construction projects, and once the building is in operation:

Design – Before construction begins it's not uncommon for there to be several requests for design changes among the construction documents.

Build – When construction is in process, revisions may be made in the form of change orders which cause delays. All these changes need to be documented.

New Buildings – Building operations can't wait for delivery of the closeout package. Building operations start immediately, and sometimes the next renovation project begins before the closeout package from the last one has been received. Given that 90 percent of project closeouts are still paper-based and contractors often don't start compiling them until the project is at its end, it often takes 6 – 12 months from the time a project is completed for a general contractor to complete the closeout package.

Existing Older Buildings – Current building plans are essential when renovations or building improvements are being planned. Often, team members with the longest tenure know which drawings are the most current. What if they are on vacation or worse yet, retired?

Missing Building Plans Lead to Other Facilities Management Misses

There are several ways missing building plans can impact facilities teams:

- Productivity and customer service suffer when facilities technicians can't find the building plans they need to complete work orders.

- Retiring workers often leave before their institutional knowledge can be captured and documented for future reference. Onboarding becomes costly when new hires must shadow other workers to learn building information.

- Preventive maintenance tasks get missed which results in expensive repairs and overtime – up to 50 hours per month per team.

- Accidents can become catastrophes when critical information about shut-offs or equipment operation isn't available quickly, or worse isn't documented at all.
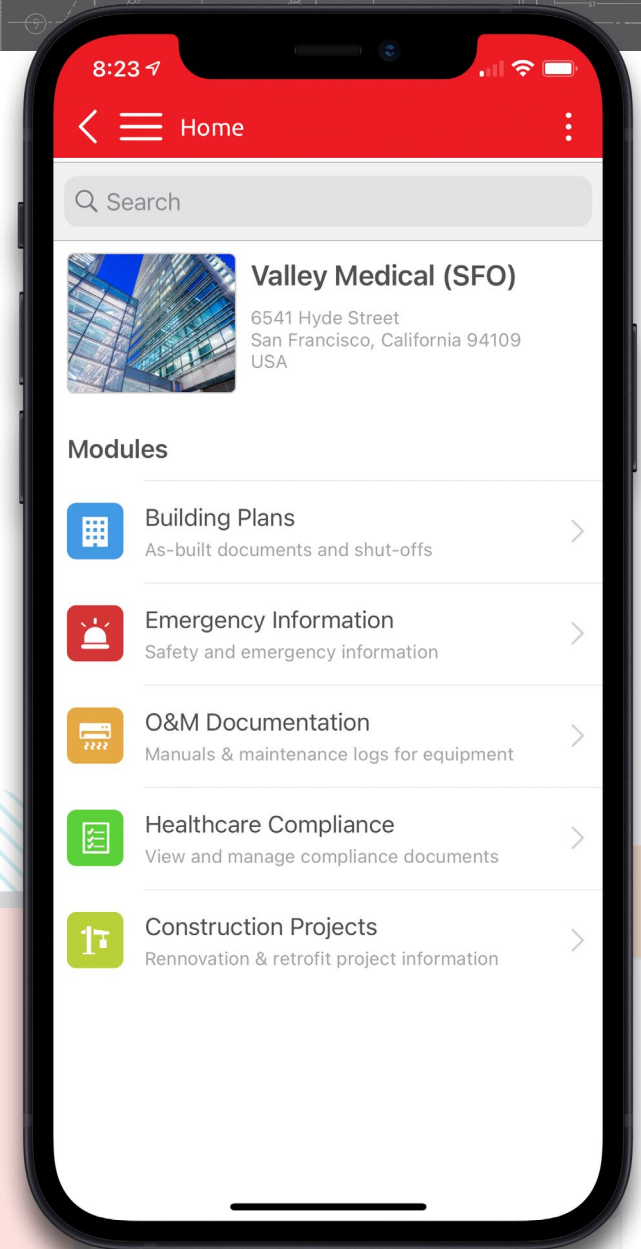
Instant Access to Current Building Information is Essential for Making Better Business Decisions

Whether the current state of a building is brand new or 20 years old with multiple renovations, having instant access to the most current building information is essential.

Up to now, no one has figured out a way to extract building intelligence from decades-old architectural, engineering and construction plans and drawings. With advances in artificial intelligence, machine learning and optical character recognition (OCR), ARC Facilities is helping facilities teams gain command of documentation accumulated throughout a building's lifecycle.

It is now possible to scan, digitize and organize thousands of pages of documentation and various electronic data formats, including thumb drives and CDs.

8:23

Home

Search

Valley Medical (SFO)
6541 Hyde Street
San Francisco, California 94109
USA

Modules

Building Plans
As-built documents and shut-offs

Emergency Information
Safety and emergency information

O&M Documentation
Manuals & maintenance logs for equipment

Healthcare Compliance
View and manage compliance documents

Construction Projects
Rennovation & retrofit project information

The Last Word in Active Construction Document Management

We live in a world where the accumulation of both electronic information and paper is overwhelming.

The key is to extract building intelligence from any file format whether it is in paper or as a digital file and then deliver that information to facilities professionals on the front lines.

ARC Facilities will gather and organize active construction information used for renovations and retrofits and seamlessly incorporate closeouts into your building information. So, when you're ready to master massive building plan details via your mobile device, we're ready to help.

ARC Facilities

ARC Facilities | 855-500-0660 | arcfacilities.com | solutions@arcfacilities.com