

Glossary of Construction Terms

Develop deep knowledge about some of the industry's most complex terms.



What's Inside

- 3 Introduction
- 6 As Builts Drawings
- 9 Change Orders
- 12 Personal Protective Equipment (PPE)
- 15 Punch Lists
- 18 Request for Information (RFI)
- 21 Specifications
- 24 Submittals



Introduction – Why We Need a Glossary of Construction Terms

Every industry has its own jargon; construction is no exception. However, in most industries, jargon is limited and most communication is based upon common language. In other words, people in the industry generally know what other people are saying without needing to spend time learning specialized words or terms that are largely exclusive to their particular industry.

The
construction
industry is an
exception to
this rule.

The nature of building and the precision required for proper execution of construction projects demands a highly particular lexicon. Because there are unique actions that construction workers must perform in tandem with each other, which includes trusting each other with their physical safety, a unique vocabulary that everyone understands grew quickly out of necessity. The act of building requires tasks and actions that are not used anywhere else in society.

Think about it. If construction workers are completing tasks that aren't routinely performed in any other industry, then isn't it important to define these actions with new terms so no one is confused? Matching specific actions to terms that accurately describe them is especially important as construction changes with technology. New technology that has never been seen before cannot be defined by old terms—new ways of building require new ways of speaking. That way, everyone stays on the same page and no one gets hurt on the job!

Over time construction's unique vocabulary has developed into one of the most complex of any industry, with many terms still evolving rapidly. For these reasons, it's critical not only to understand how construction words and terms have changed, but also to keep up with the latest additions to the rapidly expanding list of construction industry jargon.

Accordingly, this glossary of construction terms has been created not only to introduce you to the common terms that are being used in construction projects around the world, but also to help you stay abreast of changes to these terms—allowing you to communicate clearly and work and collaborate easily with teams from anywhere. Regardless of your previous experience, you'll know how to communicate with other members of your project teams and execute precise and even dangerous techniques while minimizing risk to yourself and your colleagues.



Glossary of Construction Terms

Who Is This Glossary Best Suited For?

This glossary is well suited for everyone in the construction industry. This includes the greenest rookie to the most grizzled veteran. As a matter of fact, veterans may actually get more from this glossary than new jacks who have just started to do groundwork on projects. Why? The industry of construction is moving faster than any one person. Vets understand better than anyone how new technology, machinery and innovations change processes. These new processes must be defined differently from the old processes. In this way, a distinction can be made between the new, the old, the stuff that works and the stuff that doesn't.

The more precise that the construction industry becomes, the more precise its vocabulary becomes as well. New methods of building, new processes and new technologies are segmenting the industry more than ever. Specialization is the key to success in the modern world of construction—there is very little room for a generalist who does not understand the nuances of a subdiscipline.

A Brief History of Construction Terms

Construction terms have changed over time drastically. The reason for this is simple—the way building is done has changed drastically. Just 10 years ago, we did not have advanced geopositioning technology that allowed teams to scout a landscape for inclement weather or topographical challenges before beginning a project. Unmanned drones that allowed for the remote viewing of a project from multiple angles to employ real time changes was unheard of just five years ago.

As technology enters the construction industry, it's industry language must become more precise. The digital world, as impressive as it may be, is only as good as the input it receives. If the humans on a team are confused about a process, they will only cause the software packages they use to be confused. The modern world of construction is evolving at a pace never before seen, and the right vocabulary helps everyone make sense of it and keep up with changes.

The need to define terms by processes as well as connotation is also incredibly important, and it is another reason why construction terminology changes. The basic definition of a word may stay the same, but the process by which that term is implemented on the field could change drastically as new technologies are introduced or people just find better ways to employ a certain technique. We can expect even faster changes in the near future, because the industry of construction is not slowing down for anyone.



Glossary of Construction Terms

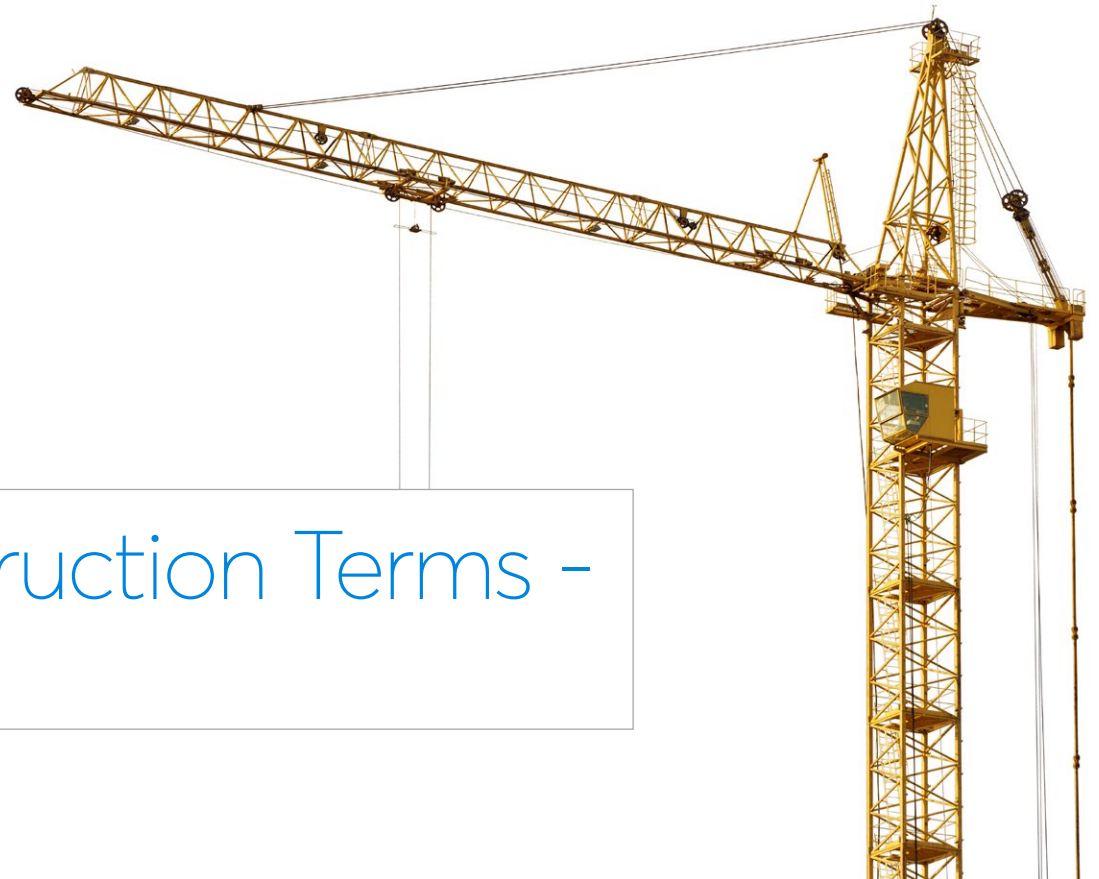
How to Use This Glossary

This glossary is organized alphabetically for easy access to terms that you need to find. Under each term, you'll find not only a brief description of the basic definition, but also context so that you can fully understand how the term is being used in modern construction projects. If the term is used differently in different contexts, this will be explained as well and the context given.

You will also find examples given as to any processes that are associated with a particular term. Many definitions in construction cannot be fully rendered except through a description of how it is actually used on the field. For instance, the term "submittals" comes complete with a definition, an explanation of why it is so important, and a short description of the processes that you would need to employ in order to make full use of the term.

You can find the terms quickly through your search feature (simply start spelling the term that you are looking for after pressing Ctrl-F on your PC), or you may search for a process that you are trying to accomplish. Because the sections for each term are quite detailed, you may be able to employ a reverse lookup strategy based on the action you are trying to accomplish. In this way, you can learn the term that is currently associated with this process or action for easier deployment in the future.

Glossary of Construction Terms - In Alphabetical Order



As Built Drawings

If a picture can speak a thousand words, in a project, as built drawings can speak a thousand construction processes. But in all seriousness, with the hundreds and thousands of steps and documents needed to complete just one project, as built drawings might be overlooked for their importance. Nonetheless, as built drawings remain an essential process in a project, especially to maintain a project's lifecycle after construction has ended.

Despite this, as built drawings are often not included, or are only addressed right at the end when an accurate product is far less achievable because of a failure to record changes to the project along the way. The good news is that new technology—for instance, [hyperlinked as built](#)—is enabling an easier as built process.

More good news: Probably the biggest problem with as built drawings is not that they are insurmountably meticulous to create, but that too few contractors truly understand their importance or how to properly execute. Below, we're here to remedy that with a thorough look at what

as built drawings are, who creates them and why they're important. We'll also offer a roundup of the most critical items to include in each as built drawing.

While creating as built drawings might still present a less-than-appealing step in any construction project, at least now you'll know how to do them correctly. Or, rather, how to offload them on a capable, but junior member of the design department (happy now?).

What Is an "As Built"?

Also known as record drawings and red-line drawings, as built drawings are documents that allow a compare and contrast between the designed versus final specifications, and provide a detailed blueprint of the building and the land around it as actually constructed in the end. According to [Business Dictionary](#), as built drawings are a "revised set of drawings submitted by a contractor upon completion of a project or a particular job. They reflect all changes made in the specifications and working drawings during the construction process, and show the

exact dimensions, geometry and location of all elements of the work completed under the contract."

The final as built drawings include any and all of the following, as well as every other change made during the construction phase of a project:

- Modifications
- Field changes
- Shop drawing changes
- Design changes
- Extra works

As built drawings go hand-in-hand with as built surveys, also called as built maps. These are used during the construction phase to continually track how the land and building is changing as work progresses. Dedicated as built surveys make as built drawings much easier to construct in the end, because of the greater level of detail recorded from every stage of the project.



Glossary of Construction Terms

Who Creates As Built Drawings?

Typically, the architects or designers who originally designed the project will also create the as builts. They are familiar with the original specifications and are therefore the most qualified to reflect recorded changes. According to **Cornell University Facilities Services**, the people in charge of as built drawings differ depending on whether the design job is in-house or from an external party, like the contractor:

"For in-house design jobs ... these could be put together by anyone on the design team or the shops," whereas for "out of house design jobs ... the drawings are put together by the contractor, typically with the assistance of sub-contractors for submittal to the architect for inclusion in the record drawings."

As mentioned, as builts on a whole are much easier to accomplish with detailed notes from every phase of construction. Because truly useful as builts require so many nitty gritty details, it's simpler to use technology to record changes along the way than it is to try to recover the details of those changes afterward. One helpful tool to detail changes is **mobile technology** powered by construction software to enable you to track adjustments immediately, avoiding loss of changes and errors in recording them.

Why Are As Builts Important?

While submitting as built drawings is not necessarily a must on every job, it's a helpful component to any completed project, and if completed correctly, reflects well on your company's professional image. As the **Construction Management Association of America** explains:

"They are important for those who use the finished product, as they provide a legacy of what was actually built. This legacy becomes more important, as we continue to build on top of old work, land ownership changes or for public works, as employees familiar with what was built are replaced over time by attrition."

As builts, in other words, ensure that as designers, architects and contracts move on from the project and, a resource still exists beyond the original blueprints.



What Should Be Included in As Builts?

In order to make your as builts as clear and useful as possible, you must include a wide variety of details and documents. This information includes, but is not limited to:

- Recording changes in scale, or ideally using the same scale as the original drawings
- Using clear labels and descriptions rather than vague phrases such as "similar" or "equal to"
- Including changes in sizing, materials, dimensions, location, installation, fabrication and so on
- Noting unexpected obstructions encountered, and the solutions decided upon
- Noting dates when changes were made
- Recording any changes made as a result of final inspection
- Attaching all related shop drawings and appendices

Obviously, this is a significant amount of information to include and needs a great deal of detail to be recorded along the way. Although this can seem like a daunting and time consuming prospect, it's presumably less intimidating than telling a client no as builts are available, or turning in shoddy work that does not serve them (or your chances of getting rehired) in the long run. Nonetheless, **mobile technology** can assist in putting this record process in practically auto-drive.

Use Technology to Produce Better As Builts

If you'd like to create the highest quality as builts, then utilizing mobile technology is your best option. The right construction technology will enable you to record all **field changes in real time**, helping you to quickly review and apply that information to your resulting as built. So, don't spend any more time fearing as builts—with the right knowledge and tools, you can successfully (and painlessly) capture an accurate snapshot of your entire construction project.



Change Orders

Construction change orders—you know it happens. We know it happens. And chances are you're not alone in your frustration. In fact, change orders are one of the **most common types of construction delays**, driving scope creep, budget overruns and sometimes even costly litigation.

As a contractor, change orders can leave you feeling like you're trapped between a rock and a hard place. When a change order is requested, you can't tell a project owner no and you can't simply ignore the change; you have to find a solution (and fast) or you won't last long in this business. According to some estimates, an average of **35 percent of projects experience at least one major change** throughout the life of the project. With odds like that, you can't very well shut your eyes and hope for the best.

So, what can you do instead? To start, you can minimize the amount of time, energy and money changes cost by putting a solid system in place for managing all

construction change orders that come through your door. A reliable system for change orders that spans the breadth of the company and project will ensure that costs associated with change orders remain low and work moves ahead as quickly as possible.

To begin to refine your change order process, you need a full understanding of exactly what a change order is, when and how often they occur, the best way to respond to a change order and what they typically include. Once you nail down the basics, you'll be able to develop a specific approach that works best for your company to minimize costs and keep your project moving forward.

What Is a Construction Change Order?

Although usually more complicated than it sounds, basically a change order is work that is added or removed from the original scope of work, as agreed upon in the contract signed by client and contractor before work began. As

the work proceeds, however, somebody (either the owner or the contractor) decides a change is needed to be made to accommodate unforeseen factors.

While a change order might sound like a unilateral request or decision, it's not. In fact, a change order is a contract amendment. As Construction Law Today explains, "a Change Order is a bilateral agreement between parties to the contract—an owner and prime contractor, prime contractor and subcontractor, two or more subcontractors—to change the contract. A Change Order represents the mutual consensus between the parties on a change to the work, the price, the schedule, or some other term of the contract."

As such, a change order must be written out and approved by all parties, which can take time, money and patience to complete.



What Do Change Orders Typically Include?

Change orders vary depending on the project, stakeholders and specific change needed by one or both parties. However, all change orders need to include detailed information, including:

- A description of the requested change compared to the original contract or bid
- Itemized documentation of any subcontractor costs
- A summary by the contractor of the total costs of the proposed change
- A statement of contractual basis for the requested change and its impact on project completion date

When Do Construction Change Orders Typically Occur?

In actuality, change orders are so common that they affect more than a third of projects. Therefore, you can reasonably expect to encounter many change orders throughout the course of your construction career. Despite this, a surprising number of contractors fail to plan for them, which is one of the **most common causes of cost overruns**.

As the **Journal of Construction Engineering** explains, "Various reasons for construction cost and schedule overruns in any project include design error, inadequate scope, weather, project changes and underestimating the time needed to complete the project. Items omitted from the engineer's estimate of the projects due to design errors or inadequate scope frequently result in change orders, which increase cost as well as the time of delivery."

Some of the most common reasons for change orders include:

- Inaccurate specifications in the original designs or contract
- Ambiguous or inaccurate drawings
- Unforeseen conditions at the jobsite, such as obstructions that could not be planned for
- Workers or materials that do not arrive or come late to the site
- Faulty budgets and schedules

While you will not need to deal with a change order on some projects, being prepared with a streamlined and standardized approach ensures you're at least ready should they arise.



How Do You Prepare for Change Orders?

No matter what prompts a change order, if you want to make sure it doesn't lead to **even more costly delays** or even the failure of your project, you need a reliable process in place to anticipate the worst. Ideally, you and your client **specify in the original contract** how you're going to handle a change order. When you formalize the process, there's a reduced chance of anyone being surprised or upset by what comes later.

On the other hand, if you choose not to specify what happens until the very moment change is needed, the resulting disagreements can lead to bad blood and even a breach of contract. No one needs (or wants) that, so instead make the effort to include the necessary verbiage in your contract from here on out. Then, when you do need to amend the contract, you'll know exactly how to do so with respect to all parties' needs.

Anticipate Construction Change Orders

As you know by now, change orders will happen at some point on your projects, and the worst thing you could do is be ill-prepared. Instead of taking a defensive approach, or worse, ignoring them completely, get out in front of potential changes before they become an issue and always anticipate for the potential for a change. With a streamlined process adapted for your company, you'll reduce the frustration of the dreaded change order and be able to work more efficiently in the event of the unexpected, keeping your project moving forward as a result.



Personal Protective Equipment (PPE)

Personal protective equipment has a long and storied history. Today it's the brightly colored hard hat, the hues differentiating companies, brands and roles on the construction site.

In the 1700s it was the doctor's bird mask, both to protect physicians from foul air and, no doubt, to comfort the patient. Because how doesn't a terrifying mask add to bedside manner?

In the Middle Ages, it was the blacksmith's apron, made of thick leather to protect against flying sparks and the other dangers molten metal brings.

Of course, these are just a few examples of the many ways people throughout the ages have sought to protect themselves against the hazards of work with the help of equipment. For most of that time, these tools of the trade were simply referred to as "that thing I wear so I don't hurt myself."

Now, it has a fancier and official name: personal protective equipment (PPE).

The Unfortunate Dangers of a Construction Jobsite

It doesn't take a panel of experts to know why protective equipment is important. Ideally, no one would ever get hurt on a jobsite, and safety gear helps make that happen. While there are **many risks present on a construction site**, and methods to help mitigate them, **worker safety** has always been and remains a top issue.

For instance, did you know that construction accounts for **only 4 percent of American workers but for 21 percent of on the job fatalities**? Moreover, 64 percent of these deaths are from only four sources: falls, shocks, blunt trauma or being caught in between objects.

On the other hand, nonfatal injuries, accounted for a whopping 71,730 of worksite disasters, with back and hand injuries leading the pack, many of them irreversible.

Clearly, construction sites are riddled with risk, which is why workers who refuse to wear their equipment – or superiors who don't

enforce it, or worse, make it available – can be fined so heavily. Thus, it's critical for you to figure out exactly which personal protective equipment is needed on your construction site, then ensure it's available at all times for your workers.

What Is Personal Protective Equipment?

According to **Universal Class**, "Personal protective equipment (PPE) is an all-encompassing term that includes gear worn by firefighters, soldiers, chemists, factory workers, miners, construction workers and police officers (among others), who wear in order for them to safely do their job or operate in a certain capacity safely."

Moreover, PPE isn't limited to a job site: "In theory, every time a motorcyclist dons a motorcycle helmet, he or she is putting on personal protective gear," but "the two major industries utilizing personal protective gear are the military and many employment industries."



Glossary of Construction Terms

OSHA offers another definition: "Personal protective equipment is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical or other workplace hazards."

The exact dangers you and your workers face varies with your industry, the materials you use, the equipment you employ and, most importantly, the effort you put into making your site safe.

How to Improve Worksite Safety

Luckily for you, OSHA has spent a lot of time thinking about how to enhance safety of jobsites. For starters, "All personal protective equipment should be safely designed and constructed, and should be maintained in a clean and reliable fashion. It should fit comfortably, encouraging worker use. If the personal protective equipment does not fit properly, it can make the difference between being safely covered or dangerously exposed."

Training is also a critical part of the PPE requirements set by OSHA. Workers must know how to use the equipment, when it's necessary to wear it, how to put it on and take it off, proper care and maintenance

and the "shelf life" of equipment. They must also know what the equipment cannot protect them from and a haphazard protective equipment program that isn't clear about limitations can do more harm than good.

Plus, OSHA offers very **specific instructions for the kinds of protective gear** to which workers must have access. A body has many parts, after all, which need to be protected in different ways. Therefore, personal protective gear takes many different forms accordingly.



Protecting Yourself, Piece by Piece

Depending on the industry, role, and even specific project environment, equipment will vary. You may need all forms available, or just some of them. In a nutshell, these broadly include:

Head Protection

- Hard hats or helmets when falling objects, knocks to the head or electrical hazards are an issue

Eye and Face Protection

- Safety glasses and face shields to protect against foreign objects for applications such as welding, cutting, grinding, nailing or working with concrete or chemicals
- Breathing masks for working with chemicals or hazardous materials such as asbestos

Foot Protection

- Nonslip work shoes or boots
- Puncture-resistant soles
- Safety-toed footwear to prevent crushing

Hand Protection

- Snug gloves that will stay on
- Gloves fitted to the task at hand, such as insulated gloves when working with live wires or rubber gloves for concrete work

Ear Protection

- Earplugs or earmuffs to protect against loud noise

Keep in mind that all equipment must also be inspected and replaced regularly. Especially important, is to immediately replace any equipment that comes into contact with and is damaged by hazardous materials. Failing to do so can make the equipment less effective next time and therefore increase the dangers and risk on a jobsite.

Know Your PPE Needs

At the end of the day, personal protective equipment isn't glamorous, but it is necessary. Understanding what it is, how it functions and what your responsibilities are can protect lives, **save money** and contribute to the bottom line and good name of your construction company.



Punch Lists

At some point, no matter how much of a joy (or hell) it's been, every project must come to an end. When they do, it's not enough to simply watch it fade away through the rearview mirror; you have to make sure all the i's have been dotted and the t's have been crossed—and that means a construction punch list. If you haven't yet implemented this in your checklist of successful project closeout, it's time to do so today.

But as most steps in construction, it's easier said than done. The construction industry has proven time and again that they're lagging behind the rest of the world when it comes to technological implementation. That could mean your current punch list isn't working, or that you don't use one at all, neither of which is ideal—especially when you have clients counting on you to deliver a high standard of work.

The first step in cleaning up your punch list game? Understanding the basics. Below, we'll cover what a construction punch list is, what's included in them, which phase of the process they're used in and who's responsible for their oversight. With a better understanding of why punch lists are important, you'll be able to refine your process and streamline your project closeout.

What Is a Construction Punch List?

The punch list, also known as a snag list in the U.K., is a document showing work that still needs to be done on a construction project. Another fun fact and mini history lesson is that the term punch list comes from the antiquated process of actually punching holes in a list to mark which items needed fixing.

In regards to construction today, the **Business Dictionary** defines a punch list as, "Listing of items requiring immediate attention" and as a "Document listing work that does not conform to contract specifications, usually attached to the certificate of substantial completion. The contractor must correct the punch list work before receiving payment."

Additionally, a punch list might include specifications on damages to other materials or items that occurred during construction and must now be fixed. It may also include incorrect installations or aspects of the building that currently do not function as promised. Typically, punch lists only include small fixes, because the majority of large issues have already been fixed or addressed previously through a **change order**. Nonetheless, however minor the changes are, it's incredibly important to execute a construction punch list correctly to ensure your project has the finishing touches it needs to be considered complete.



When Are Punch Lists Typically Executed?

While punch lists are not strictly speaking mandatory, points out Construction Claims Monthly, they are a widespread and traditional process that occurs toward the end of any construction project.

As the phrase “substantial completion” would suggest, a punch list is made only when the project is considered nearly finished. As such, the punch list is usually confined to minor tweaks and typically major fixes have already been addressed. Once this point has been reached, says Compton Construction, it is the general contractor’s job to set up the punch list walk through.

During the walk through, the owner or client attends to point out any issues they see. The general contractor is usually present on these visits to explain any changes from the original specifications and to note issues that need fixing. Usually, designers and/or architects will attend the walk through as well to ensure that the building matches the original design specifications. If anything doesn’t conform to the original specs because the client requested a change, the architect is also there to address that.

Who’s Responsible for What in a Punch List?

Although there are many parties involved in the oversight and execution of a construction punch list, there are two main phases: making it and addressing it. All stakeholders have a role in both phases, though some are more heavily involved in each phase than others. So just who is responsible for ticking off each item on your project punch list? While this obviously will vary a bit by project description and relevant stakeholders, here’s the basic breakdown of who does what:

- **Owner:** The owner’s job is to inspect work, ask questions about anything they don’t understand and list work that is incomplete or completed improperly. They then hand off this punch list to the general contractor and will perform another walk through when the additional requests have been addressed.
- **General Contractor:** The GC’s role is to examine the details, consult with the owner’s punch list, and make their own lists for subcontractors to address.

- **Subcontractors:** The role of each subcontractor is to take the list they’ve been given, address the requests and ensure each line item is completed. They must also be prepared to explain each fix and, if necessary, why it was not made to specifications.
- **Architect/Designer:** The role of architects and designers is to confirm what was designed was actually built.

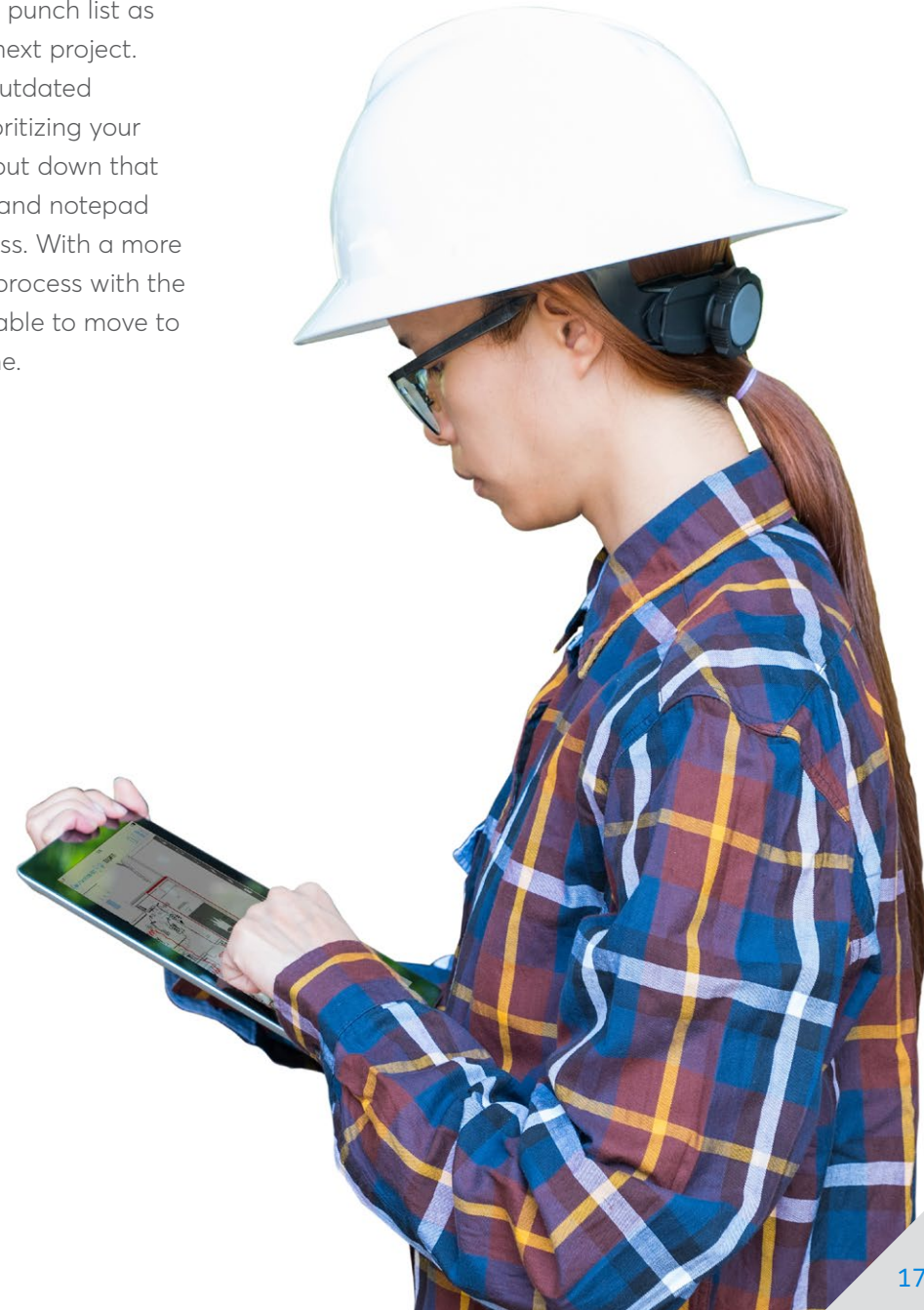
Once the punch list has been completed and distributed to all involved parties, time is allotted for fixing and another walk through is scheduled with both the general contractor and owner present. In a perfect world (or project), there are no new items found on the list, and each item that was originally placed there has been addressed. However, the owner will need to sign off on the punch list for the work to be considered fully completed.



A Better Way to Finish a Construction Punch List with Software

With so many small fixes to address, especially in large projects, most construction companies have started using dedicated software to help them efficiently manage their **punch lists** and distribute work accordingly. Construction software that enables punch list to be completed in real time on mobile devices allows companies—such as **JP Cullen**—to execute and close out projects with unparalleled efficiency. In fact, software allows contractors and owners in commercial, heavy civil and other industries to collaborate, collect and share project information from any desktop or mobile device through the entire project lifecycle. So, what are you waiting for to make the switch to digital?

Don't write off a construction punch list as an unnecessary step in your next project. Whether you've been using outdated methods or haven't been prioritizing your punch lists at all, it's time to put down that old-fashioned tape recorder and notepad and refine your current process. With a more streamlined and up-to-date process with the help of technology, you'll be able to move to project closeout in record time.



Request for Information (RFI)

Request for information, or colloquially known as a construction RFI. You know they happen, you don't like them, you don't like losing time over them and paying for them. At all. But as certain as death and taxes, RFIs are a necessity in the construction industry. Although there are ways to keep RFIs low, many contractors don't avail themselves of these options, and therefore end up paying through the nose and reducing their bottom line dramatically.

According to a Navigant Construction Forum survey of 1,362 projects, there is an average of 9.9 requests for information for each \$1 million of construction worldwide. This translated to an average project cost, once hours for review and response were taken into account, of \$859,680 dedicated to RFIs.

Of course, it's not because contractors, engineers and architects enjoy paying more than they have to. The main problem is that construction RFIs are often misunderstood, and as a result, mishandled.

Luckily, the common construction RFI dilemma has a clear solution. If you'd like to keep your RFIs low, it first starts with understanding what an RFI is—as opposed to an RPT, RFQ or RFT. It also requires knowing why a construction RFI is submitted, what goes into responding to them and why they're important to the project as a whole.

What is Request for Information (RFI) in Construction?

The American Council of Engineering Companies of Kansas explains that "In most Construction Documents, it is inevitable that the agreement, drawings and specifications will not adequately address every single matter." Therefore, "There may be gaps, conflicts or subtle ambiguities. The goal of the Request For Information (RFI) is to act as a partnering tool to resolve these gaps, conflicts or subtle ambiguities during the bidding process or early in the construction process to eliminate the need for costly corrective measures."

The phrase "request for information" might make this seem like a simple process in which a question is asked and then subsequently answered. Unfortunately, it's not always this easy. As the above definition indicates, an RFI is a formal and sometimes complicated process and needs an immense amount of detail.

Construction RFIs are used by many parties and for many purposes, as Quality in Construction explains. It may be "a question from the Contractor to the Designer asking for information and clarifications on some drawing" or "a question from the Contractor to the Client or other stakeholders of the project ... In some other cases, it's the Subcontractor who is asking information from the Main Contractor regarding the subcontracted works."

Frequently, RFIs are used much earlier in the procurement process by clients gathering information from a variety of companies to see which one might best fit their needs.



How Is an RFI Different from an RFP, RFQ or RFT?

RFI, RFP, RFQ and RFT, with so many “R’s” it can get difficult to remember which is which and how they are different. In order to understand the difference between these four basic requests, let’s take a look at the definitions of the other three procurement terms. **Negotiation Experts** defines them the following ways:

- Request for Proposal (RFP): Sometimes based on a prior RFI; a business requirements-based request for specific solutions to the **sourcing problem**.
- Request for Quotation (RFQ): An opportunity for potential suppliers to competitively cost the final chosen solution(s).
- Request for Tender (RFT): An opportunity for potential suppliers to submit an offer to supply goods or services against a detailed tender.

Note, each of these terms may be made as either a precursor to a construction RFI (when the RFI is part of a project) or as a subsequent step (when the RFI is in the initial phase of a client hiring a company).

What Are RFIs Commonly Used For?

An RFI may be used for any reason during the initial information-gathering phase of a construction project, before quoting has even commenced, and right up to the **final phases** of construction, in which contractors and subcontractors may need final queries answered regarding materials, building specifications and more. In addition to other questions not answered by the existing documents, RFIs may be commonly used to clarify the following:

- Design Drawings
- Specifications
- Standards
- **Contract**

What Does the Construction RFI Process Look Like?

As part of its formal process, an RFI is usually submitted by a form. However, since requests for information are such a standard part of any construction process, each architect, designer, contractor and subcontractor may have their own particular method of submitting one. Over time, this can become extremely confusing and costly, as all stakeholders struggle to track all the different methods of request—and, according to some statistics, **fail to receive a response 22 percent of the time**.

Instead of throwing your hard hat down in frustration, a better approach is to use **standardized technology** that enables every stakeholder to request information in a timely fashion, within a specific time period. That way, all questions actually get answered and the project operates more efficiently as a whole.



Why Are RFIs Important?

While requests for information may feel burdensome when they come through—or when you have to submit them yourself—they are critical for allowing the project to move forward in a timely and accurate fashion. Without the ability and platform to ask questions when necessary, projects may either come to a halt or be completed with below standard quality, neither of which pleases anyone.

When it comes to construction RFIs, change your mindset. Instead of seeing RFIs as a necessary evil to just put up with, view them as an opportunity for streamlining and improving the design, engineering and construction processes. When you need technical answers to a knotty question, you need mobile technology that can accommodate efficient, accurate and user-friendly RFIs and kill the drama before it can even begin.



Specifications

Have you ever failed to be specific? When was the last time you didn't describe something specific enough? Failing to do so might have resulted in someone getting lost from your incomplete directions, or worse, loss of a job or project that was meaningful to you. During construction, specifics are everything and failure to communicate specifically could create massive **change orders**, cost overruns and schedule delays, which can negatively impact your bottom line. In fact, specifics are such a key element of construction that there is an entire formal process dedicated to them; enter construction specifications.

Although **blueprints** and certain documents can illustrate what a building should look like visually, an in-depth written explanation is needed to describe the construction process. Simply put, construction specifications are documents prepared ahead of construction to describe how building should be carried out by contractors and subcontractors. As its name implies, they are descriptions that go beyond what photos and videos can explain and require a high-level of detail.

As a rule of thumb, specifications will usually never over-explain how to build. The vast majority of problems occur when specifications fail to provide enough information. Without the dedication and proper execution of these documents, issues will likely arise when the project is finally executed.

To improve your construction specifications, and in turn, the success rate of your project, it starts with a firm understanding of what these documents are and how they are prepared. As part of our Building 101 series, below, we'll discuss what specifications are in construction, why they're important, what are the common types on projects and how to improve the process to increase overall project efficiency.

What Are Construction Specifications?

Construction specifications, also known, as specs, detail the work and workmanship needed to complete a construction project. And there's no way to get around

them. As required documents during the design phase, they're part of a formal process. According to the **Dictionary of Architecture & Construction** a specification is, "a written document describing in detail the scope of work, materials to be used, methods of installation, and quality of workmanship for a parcel of work to be placed under contract; usually utilized in conjunction with working (contract) drawings in building construction."

Furthermore, according to The **Construction Specifier**, "specification sections are customized in order to accurately describe the intended materials, and then these sections are used by the team to identify the type of products that should be used onsite."

As mentioned, construction specifications are prepared before construction begins, in the design phase as part of the contract documents. Although their structure varies project-by-project, typically they reflect packages to be given to subcontractors from contractors. Specifically, this is extremely helpful in the **tender process**.



Who Handles Construction Specs?

Typically, specs are prepared by the architect or designers. Generally, architects will delegate them but oftentimes project engineers will be involved due to their breadth of technical knowledge. Sometimes, on large-scale projects, companies will even call for specialized and professional specification writers to ensure all details are covered.

Although they are separate from design drawings themselves, specs should be complementary to these documents and prepared in tandem. So, if the design advances, so should the specifications, with more and more details being added as plans get more complex.

Why Are Specs Important?

If you've been around the construction industry for more than a minute, you know the more details, the better. The clearer a description is, the more likely it will be executed correctly. Specifications can be considered a lot of like data. Without access to the right and an abundance of data, projects can easily fail. As construction projects become more complex and budgets become scrutinized, access to ample data is critical to making the right decisions when building. Most importantly, if specifications are done correctly, they **reduce risk**. In construction, controlling risk is essential to managing end-to-end project lifecycle.

Furthermore, specifications are particularly important during the tender process for pricing. With solid specs, the contractor should have no doubt about pricing during this process.

Main Types of Construction Specifications

Each project is unique and will need a different set of specifications and most likely corresponding packages. However, there are three main types of construction specifications commonly used on projects:

- **Prescriptive:** Provides details on the types of materials and installations needed to complete a project. Additionally, prescriptive specifications also describe how to measure installations to ensure that they were up to project quality and standards.
- **Performance:** Describes the operational requirements. Fundamentally, the performance specifications should describe to the contractor what is needed for the final product and how it should essentially function once completed.
- **Proprietary:** Although not as common as prescriptive and performance, proprietary specifications are used if only one specific product can be used for an installation.



How Can Specifications Be Improved?

Construction specifications will no doubt need dedicated time and resources to get them right. In general, the design phase is critical to setting up the success of a project and specs should be taken seriously. In the past, specifications were one of the last items to be written before tender. However, this is changing. As the industry faces increased competition and new technology like BIM provides a better analysis of what needs to be done before construction begins, specifications have increased in importance. A natural first step in creating valuable specifications is not waiting until the last minute. By including specifications early in the project lifecycle, performance requirements are established from the start and project risk is reduced on a whole.

Nonetheless, software can also make submittals easier and more collaborative. Certain construction apps will let you upload all your documents in one place, letting you link specifications to **design documents** for a full picture. Additionally, if your software includes past versions, you can revisit older specs for clarification if project changes aren't entirely clear. As a result, your whole project team works more efficiently and collaboratively because they're all on the same page.

Be Specific, Be Really Specific

Construction specifications, although time-consuming and sometimes part of a tedious process, are a necessary step in a successful project. If you're a designer or architect, spend the time to get these documents right so your vision for the project is executed correctly. If you're an owner or contractor, ensure you have all the information you and your team needs to carry out the details of your project on time and budget. And just remember, being overly specific never hurt anyone in a construction process.



Submittals

In this **new age of construction** **productivity**, it's more important than ever before to stay on top of your game. Fall just a bit behind on time or budget, and you may find yourself losing out to competitors or irretrievably late to forthcoming technology developments—not high on the list of ideal situations. Before construction begins, of the most important aspects of any contractor's job are construction submittals, which determine the accuracy of project completion, the success of the proposed timeline and the nitty-gritty of the budget.

If you want your construction company to rise above the rest, it's important to not only understand this term but grasp why it matters to your job, your projects and your life. In our newest installment of the "Building 101" blog series, we'll take with a close look at what exactly construction submittals are, why they matter, what they consist of and how the submission process typically proceeds.

Construction Submittals: A Basic Definition

While part of keeping your head in the game means using the most cutting edge organizational and communication systems to streamline submittals, a big part of remaining on the vanguard is simply understanding the terminology.

Construction submittals are defined by **bizfluent** as "documents submitted by the contractor to the architect for his approval for use in a project," while **Lexology** explains that "Submittals consist of information provided by the contractor to the design professional for approval of equipment, materials, etc. before they are fabricated and delivered to the project."

Unlike **as-built drawings**, which are meant to be submitted after construction is complete to show the final form of the project (and are also very important), submittals are furnished beforehand to guide how the project will actually be built.

Older Than You'd Think: A Brief History of Submittals

Although construction submittals is a relatively new term, coined in the last century, the basic idea behind them is very old indeed. Any large construction project requires **pre-construction planning**, as well as checking and compiling project **specifications** with the main stakeholders beforehand.

Today, project submittals include much more detailed elements completed in design programs. However, even when completed by hand in a pyramid-side office (one imagines, anyway), they still were a critical part of the building process.



What Documents Are Included in Construction Submittals and Why Do They Matter?

Before construction begins, every piece of equipment, material types and even details such as the exact color of paint need to be reviewed and approved via submittals. Depending on the individual project, construction submittals can involve thousands of different items. These include:

- Product cut sheets that identify the manufacturer, specifications and model number
- Shop drawings that lay out the dimensions of such prefabricated products such as trusses, cast concrete, windows, appliances, millwork and more
- Color and finish selections
- Color charts
- Finished product components
- Material data
- Samples
- ... and more

These docs are essential to successful construction because they show the project at a very granular level, and allow design professionals to approve the equipment, material and more. Approval needs to happen before items are fabricated and delivered because afterward it will be too late to prevent unnecessary setbacks in timeline and budget.

The quality of the submittals also matters. The more detail construction submittals provide the better chance of an accurate budget and schedule, resulting in overall project success. But as construction submittals often involve thousands of different materials relating to each project spec, an accurate and organized input is critical. If a high level of detail is not included, or errors are made when creating the submittals log, the whole project may be compromised.

The Construction Submittals Review Process

Construction professionals agree that the submittals review process has traditionally been long and arduous. First, all submittal items must be aggregated from subcontractors, ensuring you have detailed data and specifications for each facet of the project. In the past, this meant a time-intensive manual entry process, ripe for inaccuracies and mistakes. However, **new technology solutions on the market** can help automate this process. After submittal items are collected, the architect and design team must review everything for compliance, while the general contractor reviews them all to ensure they have the right products and specifications.

Obviously, the organization is key to this process. Without it, the thousands of documents involved and the many layers that comprise a construction project can quickly become overwhelming. To be sure you've completely covered your bases when sending off construction submittals, you should follow a routine, replicable number of steps so that you



Glossary of Construction Terms

do the same thing every time. Lorman offers a comprehensive look at the **tasks required before submitting shop drawings and samples.**

Because submittals can consist of so many different and types of documents, it's critical you have a **system for keeping them all in one place.** If you're wondering about a system that's robust enough to track so many different pieces of collateral all in one place, it may just be time to integrate the right software into the process to help.

Organize and Streamline Your Submittals Process with Software

Previously, the manual and fragmented system to create, track and approve submittals have been inefficient and a manual process. But now, PlanGrid has the **first submittals product** on the market to help streamline the submittals, saving enormous amounts of time and resources. If you're looking to automate and standardize submittals on your project, **PlanGrid's Submittals** and **Automatic Submittal Log** might be your answer. By using the right software as a tool to help move submittals along, you can get to construction faster with a reduced risk of error, delays and cost overruns.



See a Live Demo

or give us a call at +1 (800) 646-0796

PlanGrid construction productivity software is the easiest and most cost-effective way to get substantial return on your investment in construction mobile apps. By using PlanGrid you will:

- **Complete projects faster:** 90% of project costs occur in the field not the office and most can be attributed to time waste or delays. With PlanGrid, you can reduce wasteful trips to the trailer and time delays while eliminating costly rework with faster collaboration and communication.
- **Reduce costs:** PlanGrid allows you to optimize productivity in the field, which eliminates time waste that causes project overruns. By completing projects early or on time with PlanGrid, contractors will benefit from reduced costs.
- **Win more bids:** The best way to bid more competitively is not just to track costs so you can provide more accurate estimates—it's to improve your overall productivity. PlanGrid's construction productivity software will allow you to increase productivity so you can reduce costs and win more bids.



Try PlanGrid for Free



App Store

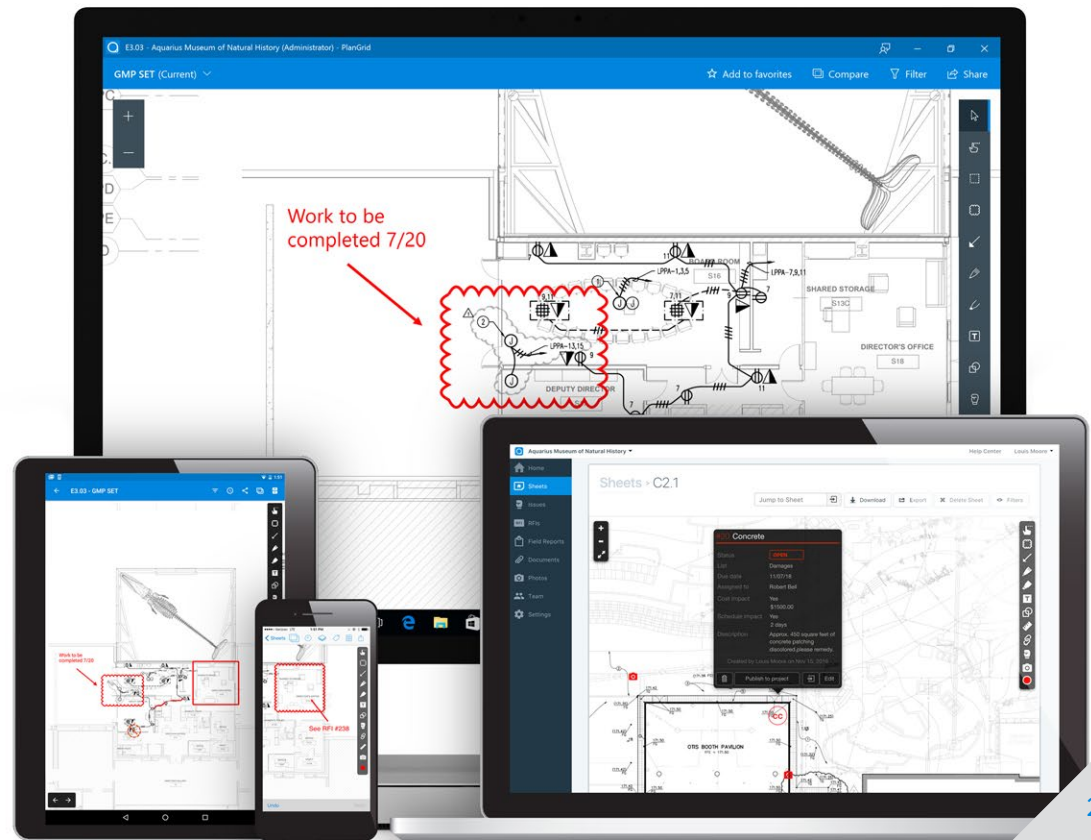


Google Play



Windows

There is a reason why PlanGrid is not only the #1 construction app, but also the highest rated. With PlanGrid construction productivity software, you can streamline document management, access all project information from any device, and seamlessly collaborate within teams.





Used on more than 500,000 projects around the world, PlanGrid is the first construction productivity software that allows contractors and owners in commercial, heavy civil, and other industries to collaborate, collect, and share project information from any desktop or mobile device through the entire project lifecycle.

PlanGrid increases project efficiency by streamlining document management, providing construction teams with easy access to all project information from any device, and enabling seamless collaboration within teams.

About the Guide:

Lynn Langmade

Director of Content Marketing, PlanGrid
[@llangmade](#)

————— Connect with PlanGrid —————



© 2018 PlanGrid, Inc. All Rights Reserved.

United States
+1 (800) 646-0796
www.plangrid.com

Australia
AUS 1800 316 406
www.plangrid.com/au

United Kingdom
+44 (0) 20 3695 0292
www.plangrid.com/gb

Canada
(800) 646-0796
www.plangrid.com/ca-en
www.plangrid.com/ca-fr