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How owners can
maximize efficiency in the
**SUBMITTAL
REVIEW PROCESS**





For construction project owners, grasping the fundamental importance of submittals is instrumental in driving project excellence, facilitating effective communication, and ensuring the realization of your project's objectives. Owners rely on submittals to maintain quality control and adhere to project build and installation schedules. Well-prepared submittals help minimize the need for change orders later in the project. Additionally, submittals serve as vital legal evidence indicating formal approval prior to installation.

In this guide, we will start by unraveling what submittals are and explore the different types you may commonly encounter in construction projects. Then we'll briefly go over the submittal review process and give you some tips to help you manage these documents more effectively.

What are submittals?

During the early stages of a project, contractors or subcontractors provide the design team or the owner with written and/or physical information, including documents, samples, drawings, mock-ups, etc., known as submittals. These are reviewed and approved before fabrication, delivery, or before being used in the project. They communicate project details, ensure compliance with specifications, and facilitate the necessary approvals prior to construction. Unlike post-construction activities like closeout and as-built processes, submittals play a pivotal role from the project's outset, guiding its execution.

Some common types of submittals

Product specifications or other technical data

These submittals entail furnishing comprehensive information, specifications, or data sheets for the materials, products, or equipment intended for project use. They may consist of product cut sheets, technical data, and/or performance characteristics. Additionally, they may encompass details about product composition such as, sizes, models, quantities, finishes as well as applicable warranties. For example, the plumber will submit a cut sheet of the butterfly valves that will be used on a project. The cut sheet will indicate the brand of valve being used, dimensions, materials or ingredients, and the unique features of each valve.



Shop drawings

Shop drawings differ from design drawings, as they depict the construction process. They are detailed diagrams, plans, or layouts that illustrate how specific materials, components, or systems will be fabricated, assembled, and installed. These drawings provide precise information about dimensions, connections, interfaces, and installation instructions. The design team reviews them to ensure compliance with quality standards and proper fit within the designated space. An example of this type of submittal would be drawings from a window provider illustrating the dimensions, style, and installation details of the windows.



Product samples and mock-ups

Contractors submit physical material, finish, or product samples for approval by the design team or owner. These samples are crucial for assessing material quality, appearance, and suitability. In some cases, a mock-up of a small portion of the project is assembled to visually demonstrate and identify any potential issues. While less common than other submittals, mock-ups have played a crucial role in preventing project failures. For example, a painting contractor will submit paint drawdowns so the owner and the interior designer can approve the color and finish.



Test reports and certifications

These submittals include reports and certifications that confirm compliance with industry standards, local codes, regulations, and project specifications. These reports often demonstrate that products or materials have successfully undergone standardized testing, such as [ANSI](#) or [ASTM](#) tests. Examples include material test reports, structural analysis reports and calculations, and certifications for equipment or systems.



Method statements and construction procedures

Contractors are often requested to provide detailed method statements and construction procedures that outline the specific tasks and project schedule. Method statements outline a logical sequence of work, including controls and precautions to address identified risks. These submittals help the design team and owner understand the contractor's approach, safety measures, and the sequencing and scheduling of activities. Method statements are widely used in construction to control health and safety risks, such as lifting operations, demolition, working at height, equipment installation, and plant usage.



Operations and maintenance manuals

Near the end of the project, contractors are usually required to submit comprehensive Operations and Maintenance (O&M) manuals for the installed products, systems, and equipment. These manuals help guide the owner in managing a property or a facility, maintenance, and troubleshooting procedures required to ensure the longevity and optimal performance of the project. This information also often includes warranties provided by manufacturers and contractors.

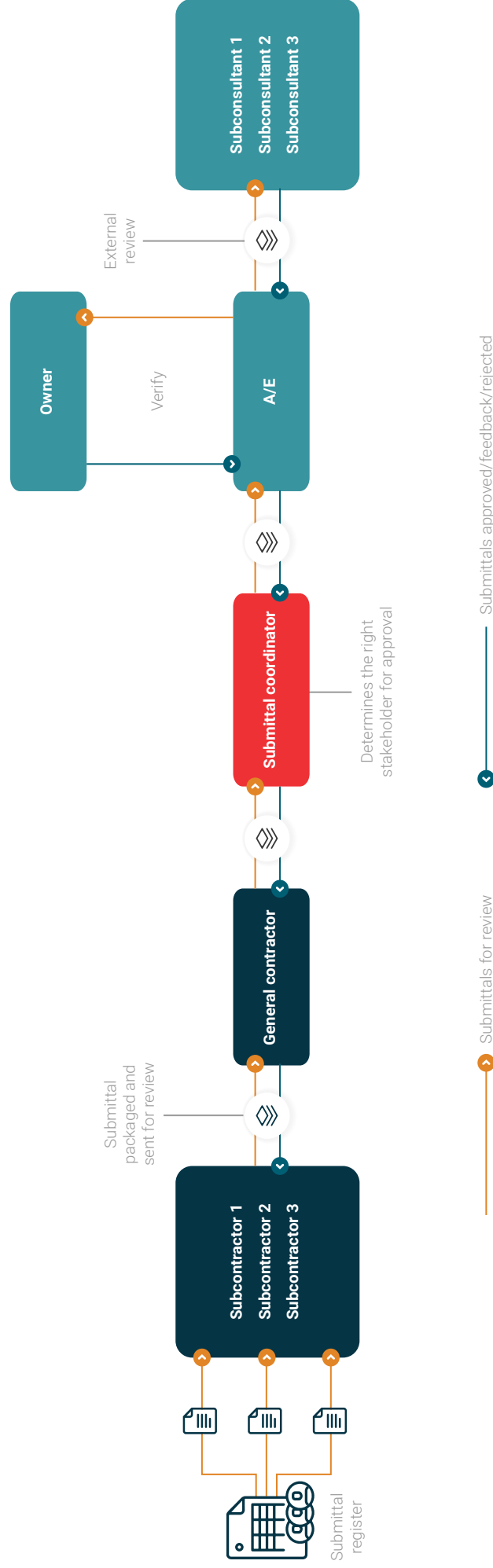


The submittal review process

To effectively handle the various types of submittals, it is important to establish a streamlined process for reviewing, evaluating, and approving each submission. This ensures compliance with project requirements and quality standards. However, reviewing them can be a daunting task, especially on larger projects where there may be hundreds or even thousands of submissions.



Here is an example of a typical submittal process



Construction submittal reviews are crucial steps in the process of project execution to ensure everything is in alignment with the construction documents and design intent. After the architect or engineer completes the design and an agreement is reached on the design documents, submittals come into play. While each project has its own set of teams, it can be beneficial to consider established models for the submittal review process as a reference.

01 | General contractor's role

This process begins with the General Contractor (GC), who is usually appointed to provide detailed information on how the design requirements will be met. The GC collects submittals from subcontractors according to the specifications outlined in the submittal register. This often involves collecting additional information from subcontractors. The submittals may include shop drawings, product data, samples, or any other documents that help provide a comprehensive understanding of the planned work and materials used. Usually, the GC conducts an initial review to verify compliance with the contract requirements.

02 | Submittal package and submittal coordinator

Similar submittals are often bundled together into a single submittal package for ease of approval and management. After the GC's review, the submittal package, along with supporting documents, is prepared and sent to the submittal coordinator, who examines the package for completeness and compliance with project requirements before passing it on to the appropriate party, such as the A/E or the owner.

03 | A/E review

The A/E thoroughly examines the submittals to ensure they meet the design specifications and quality standards. In some cases, the A/E may seek input from external subconsultants for additional review. Based on their findings and advice from external subconsultants, the A/E approves, rejects, or requests resubmittal of the documents.

04 | Owner's final review and approval

Once approved by the A/E, these submittals are forwarded to the owner for final review and approval. The owner primarily confirms that the submittals align with their expectations and the agreed-upon design. If discrepancies arise, revisions or rejections are communicated to the A/E, who in turn passes it to the submittal coordinator.

NOTE

Throughout the process a submittal register is used to track the status of each submittal, providing an overview of the project's progress. This register ensures a documented path of responsibility and decision-making.

Practical steps you can take to maximize efficiency

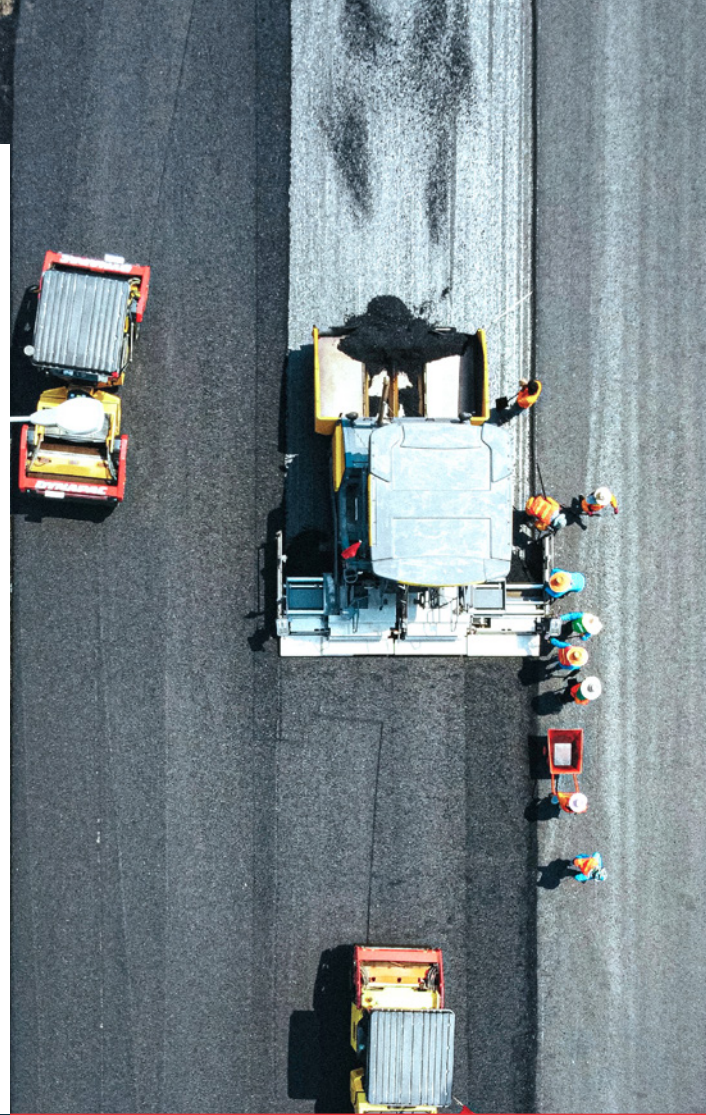
Project teams can streamline and improve this process in numerous ways. This guide suggests some practical steps that could be taken to help you and your design teams maximize efficiency, as well as prevent costly mistakes and delays.



Have a clearly defined submittal review process

Think strategically about your submittal review process for each project by identifying the submittals that may be required and the person who should evaluate them. It would be prudent to chart this with a flowchart, as it can reveal any possible bottlenecks or inefficiencies. As a best practice, you'll want to keep all submittals, files, and attachments in a virtual central repository that can keep the information secure and allow for digital reviews in addition to approvals.

Present the draft process to your staff, contractors, and the entire design team to allow them to provide their input. You'll want to make sure that everyone receives training on your submittals process. Doing this can save you countless hours of unnecessary review time and prevent potential delays and other problems in the future.



Clarify which submittals need to be reviewed

Along with a streamlined review process, it is essential to understand which submittals must be checked and by whom, in addition to identifying those presented for record only. Not every submittal will be evaluated by the same person; a few may have to go to a specialty consultant or other professional. Spotting these special submittals beforehand can help your submittal coordinator know where to send them.

As part of this process, create and maintain a detailed submittal log (aka submittal register) that includes all the documents, drawings, and samples that need to be reviewed or turned in. This will allow you to track crucial data like:

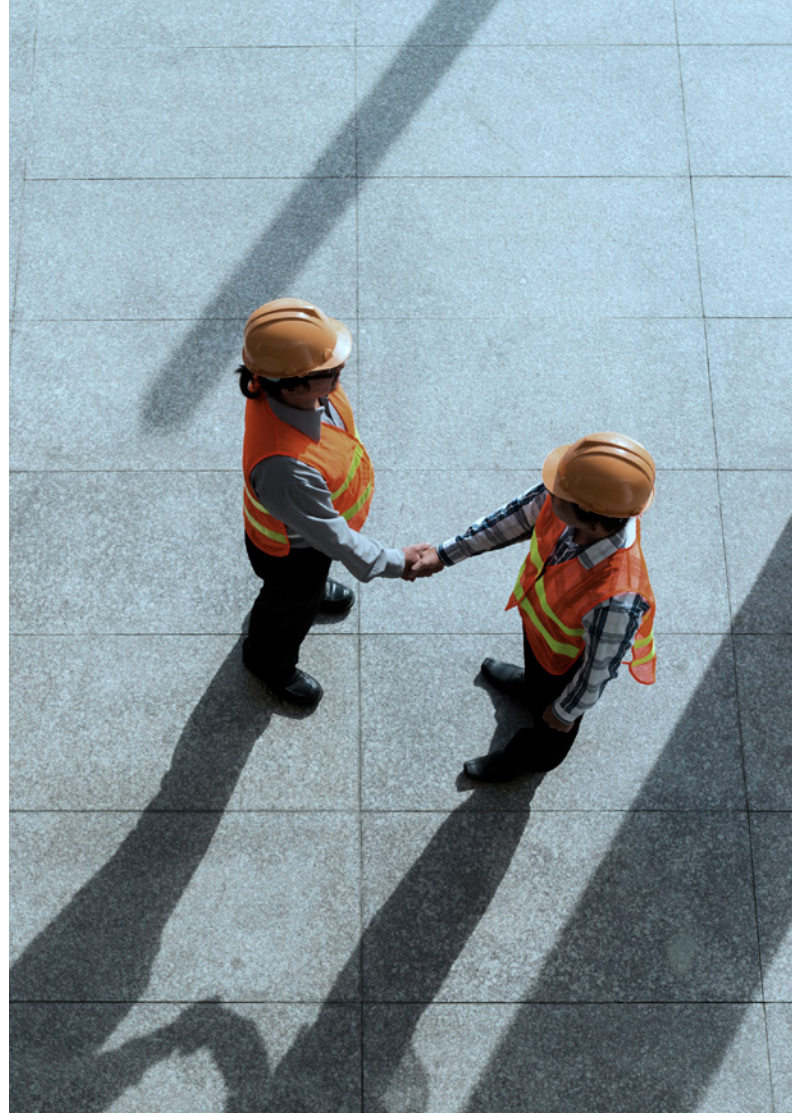
- Approval status
- Specification that the submittal applies to
- Submittal type
- Priority
- Critical deadlines or milestone dates
- Information about the contractor who made the submission
- Reviewer details

Sometimes the design team will provide the submittal register as an early deliverable. However, in some cases, the contractor must produce one themselves.

Maintain a great relationship with the A/E team

We all know that the submittal process can be protracted, and delays can lead to team members blaming one another for the lost time. If you don't have a healthy working relationship with your design, architecture, or engineering teams, you could end up spending more time arguing than getting the work done. If your rapport is already strained, further altercations could result in claims, lawsuits, and team members withdrawing from the project. The converse is true as well. If you are on good terms with your A/E, you are much more likely to resolve delayed reviews and disputes amicably, without impacting the project.

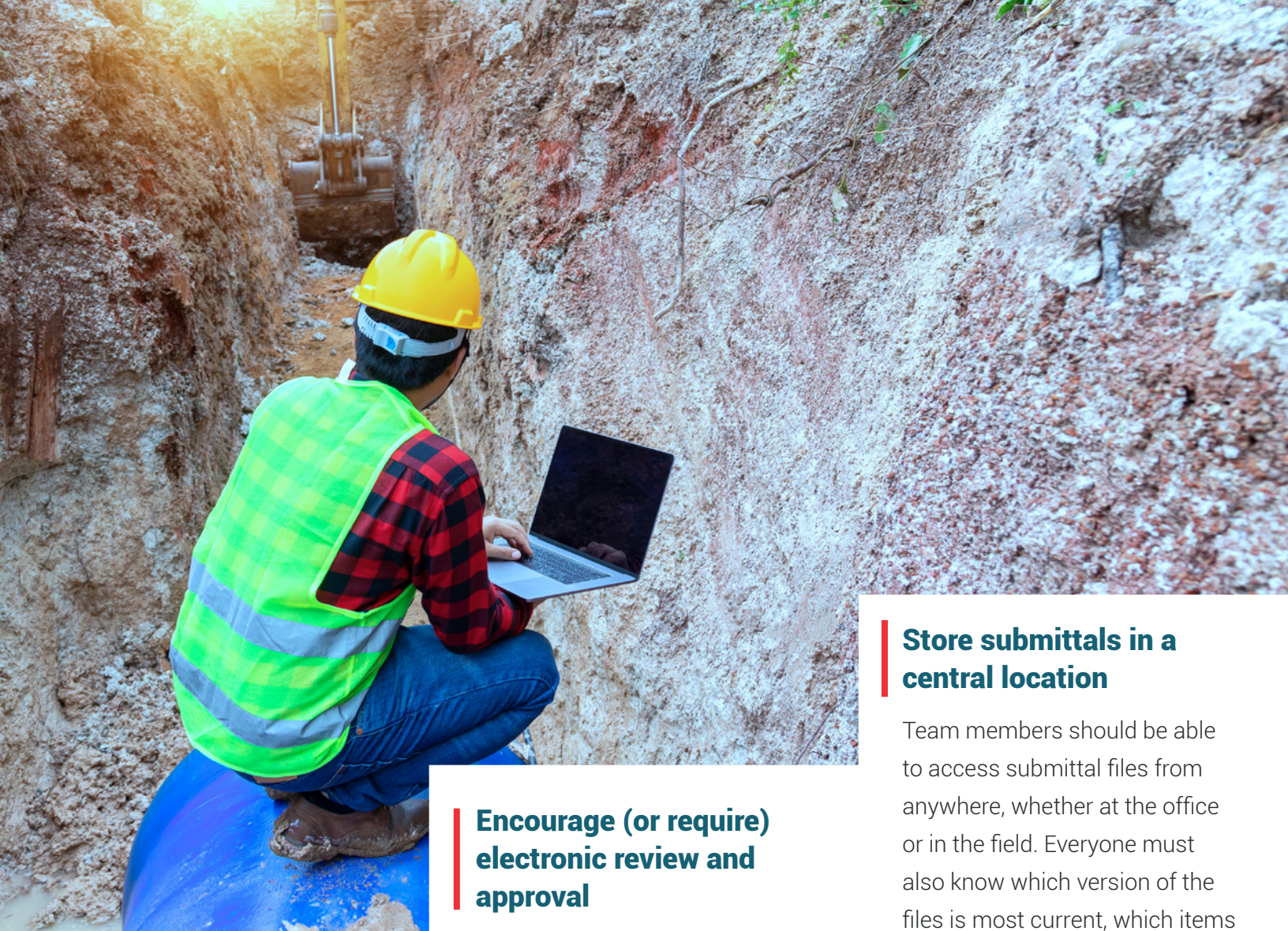
So, seek to establish and maintain harmony right from the start. This will help ensure that the submittal review process and the construction schedule stay on track.



Select the right submittals coordinator

Choosing the right submittal coordinator can make or break a project. Sometimes teams assign an administrative assistant or a junior designer to this role since it is key to keeping the project on schedule. It pays to designate someone with the relevant knowledge and experience to manage the overall process. It is prudent to identify when the submittal coordinator needs to change, especially when the project reaches a specific phase or if someone isn't performing the role adequately. Using a software solution that recognizes the advantage of flexibility in this role is crucial in making the transition smooth.





Align the submittal schedule with your project schedule

Your project schedule should determine and drive your submittal review schedule. Prioritize submittals for work that takes place early in the schedule or for materials that have long lead times. You don't want work delayed while waiting for an approval. It is crucial to keep the submittal schedule up-to-date and in sync with the project schedule, should there be any changes to it.

Encourage (or require) electronic review and approval

Save the time as well as the cost of printing and shipping submittals by encouraging or even requiring a digitized process. While this may not be possible for all submittal types (like product samples), it can substantially speed up the process for product information documents, MSDs, drawings, and calculations. With electronic reviews, you can cut physical storage costs.

Store submittals in a central location

Team members should be able to access submittal files from anywhere, whether at the office or in the field. Everyone must also know which version of the files is most current, which items have been checked, and the ones approved for installation. Storing digital files in an organized way helps to ensure that everyone can view the latest information. This can prevent costly disasters like your contractor working from an outdated drawing or specification or installing a building material that has not been reviewed or accepted for use.

Require detailed transmittals

Transmittals serve as the cover page of a submittal package. They perform as 'proof' that documents, files, or other items (such as samples) were presented. A good transmittal should include information about the person sending the submittal information, who is receiving it, the exact contents involved, the number of copies included (if applicable), and the method of transmission. Listing out in detail the attached documents (by name), files, drawings (by issuance number), or samples (by type) with the corresponding submittal item numbers helps avoid confusion for the receivers.

This detail could prevent delays in reviews and block potential claims. A construction management software solution like Aurigo Masterworks can allow you to link transmittals to the appropriate individual submittals, letting teams know when the information was sent, received, or returned.

Automate notifications and reminders

Team members may miss emails or fail to complete tasks on their to-do lists. Using a software solution that provides notifications and in-app reminders is an excellent way to keep your team on track and make them aware of their obligations. Automating these notifications could help keep the team focused on the task at hand in a friendly manner. Notifying team members of upcoming deadlines and reminding them when they are past the due date can help keep the project on schedule and prevent costly delays.





Encourage transparent communication

There is no substitute for clear communication among project team members. Claims often arise when communication breaks down. With so many ways to reach out, staying in touch can be overwhelming. It is advisable to ask your team to share the best way to reach them in case urgent situations surface, and then share these details with the rest of the team at the start of the project. Stating these preferred communication methods in the submittal process would be helpful.

Furthermore, discussing the submittal status regularly in your OAC meetings would be beneficial. This will help establish a culture of transparency where it is acceptable to talk about these items openly and without fear of repercussions.

Pulling it together

When it comes to software solutions to improve the efficiency of your submittal process, look for those that provide the structure you need with the flexibility to define your own processes when necessary. Setting up multiple contracts or SOWs under the same project can be handy, especially for large infrastructure projects. This allows you to track submittals from the general contractor and contractors with whom you are indirectly related. The ability to designate anyone on the project as the submittals coordinator, and change that assignment at any time, can be advantageous. The ability to customize forms such as the transmittal and the submittal registers will help you further tailor the process to fit your project's needs. Combine a flexible construction management software solution with the above tips, and your submittal process is sure to keep the project on track.

About Aurigo Software

Aurigo builds software that helps build the world. Aurigo is an AI-native company that helps capital owners connect planning, construction, and operations in a single environment, improving decision-making and execution. Trusted by over 300 organizations across infrastructure and facilities, Aurigo manages more than \$450 billion in capital programs, with over 40,000 projects throughout North America. Aurigo is a privately held U.S. corporation headquartered in Austin, Texas, with global offices in Canada, South Africa, and India.

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Schedule your demo today to learn how Aurigo Masterworks can help your organization streamline information, accurately track, forecast, and prioritize projects, and help you save time and money.



aurigo®

Aurigo Software Technologies Inc.
Austin, Texas

sales@aurigo.com | (512) 640-3377

aurigo.com