

Construction Administration & the Submittal Process

Anthony J. Shinsky, AIA, NCARB, LEED AP

Architecture & Construction Administration Expert

In this article, architect and construction administration expert, Anthony Shinsky discusses the purpose and importance of the submittal process. Mr. Shinsky and the other construction experts at Robson Forensic are frequently retained to provide expert witness investigations relevant to a broad range of construction claims.

Overview

For building construction projects, the architect and their consulting engineers prepare contract documents, which provide instruction to the general contractor in the form of drawings, details, and technical specifications. The contractor and their subcontractors are tasked with meeting the architect's design intent through compliance with these contract documents.

Due to the complex nature of building construction, and the division of responsibilities the contract documents do not include direction on means and methods of construction. The contract documents allow the contractor to use their best skill and judgement in their approach to the project. Otherwise, contract documents would appear more like the assembly manual for a bicycle or automobile transmission, rather than a finished building project.

While the assembly manual approach may seem reasonable, in practice, it is not.

Large, complex building projects can dwell in the design and document production process for an extended period of time, sometimes years. Product manufacturer's routinely discontinue products, make modifications to products, or create new and improved products that may be more suitable to the project conditions than those originally specified. New products and materials become available, which may not have been manufactured or available just a few years prior.

These dynamic industry factors must be accounted for in the building design and construction process.

For this reason, the purpose of the architect's contract documents, including those of their consulting engineers, is to express the design intent and the level of quality expected. The documents do not require an exacting means or methods in the construction of the

building. The contract documents are produced to allow variation in the products and materials available for use by the contractor with the implicit requirement that the furnished products and materials comply with the design intent.

The contractor has the responsibility to develop an understanding of the design intent and provide materials, products, and the means and methods necessary to construct a completed building, which meets the contract document requirements. In doing so, it is the contractor's responsibility to hire and manage the subcontractors, suppliers, and vendors that will provide the specified materials and products for the building.

Submittal Process Purpose

The submittal process is first and foremost the vehicle through which the contractor expresses his understanding of the design intent to the architect and owner. It is the responsibility of the contractor to select products and materials that comply with the contract document requirements, submit them to the architect for approval, and incorporate the approved products and materials into the work of the project.

Proper management of the submittal process is of vital importance to the success of a building construction project. The contractor implements this process to convey the approved product and material information between his selected subcontractors, material suppliers, and the field personnel in the construction of the building. The procedures for the scheduling, tracking, and documentation of the submittals is a joint effort among the project team and is led by the contractor.

In fact, the approved submittals become the detailed documents from which individual elements of the building are built. Shop drawings are a good example. The contract documents provide overall layout, and relative location of the required building components, as in the case of metal pan stairs, but do not show connection points or actual member sizes.

The architect too has a significant role in the process. The architect

receives submittals from the general contractor and, depending on the submittal, either reviews them, or, after a cursory review, forwards them to the appropriate consulting engineers for their review and approval. Once the consulting engineer has taken appropriate action the architect returns the submittal to the contractor with notice on how to proceed. In most cases, it is the architect that determines which submittals are necessary for the contractor to prepare and submit.

Submittals are not voluntary. Submittals are as integral to the construction process as the contract documents, the subcontractor scopes of work, the project schedule, and coordination between trades. The administrative management and coordination of submittals is normally the responsibility of the general contractor.

Construction Project Management, third edition, published in 2009, explains that:

The shop drawings become, in effect, the working drawings of the project and part of the contract documents...When the shop drawing is accepted, fabrication can begin. This acceptance assumes that all final coordination among trades has been accomplished.

The American Institute of Architects (AIA), founded in 1857 is the largest and most widely recognized organization in the United States active in the publication and maintenance of contract language for the construction industry. The AIA publishes a complete family of contract forms commonly used for the relationships between Owners and Architects, Owners and Contractors, and Contractors and Sub-Contractors. The standard of care is embodied in these forms of agreements, which are developed by the AIA in association with professional associations representing other portions of the construction industry, such as contractors and building officials.

The General Conditions of the Contract for Construction (AIA Document A201) defines the requirements for an effective submittal process:

- A) The contractor establishes a submittal schedule for approval by the Architect.
- B) The contractor submits the shop drawings, product data, and similar information as required by the architect's contract documents.
- C) The contractor reviews the submissions of the sub-contractors for compliance with the contract documents prior to forwarding such to the architect.
- D) The contractor develops and manages the project schedule and coordinates the sequence of the work in compliance with the approved submittals as returned by the architect.
- E) The contractor and their sub-contractors, under the contractor's supervision, shall not perform any work on site prior to approval of the submittals by the architect.

This contract language makes it clear that the contractor is the gate keeper for the work, including the scheduling, sequencing, coordination, and supervision of the subcontractors work on the project, much of which hinges on a successful submittal process.

Construction Jobsite Management, 2nd edition published in 2004, describes the importance of the General Conditions to the contractors' role as follows:

As the basis for the legal contract between the owner and contractor, the General Conditions of the Contract is a very important document. Each sentence in the General Conditions and the Supplementary Conditions can have an impact on the construction project. Complete understanding of these documents is essential to project management.

Deviating from this standard of care within the contract language, or in practice can negatively impact the successful outcome of a building construction project.

Submittal Process Management

Because the contractor is the gate keeper for the work of the project, it is essential that the contractor have a quality control program in place, which should include;

- A) Succinct and accurate scopes of work for each sub-contractor.
- B) A critical path project schedule inclusive of milestone dates reflecting;
 - a. Submittal submission and approval
 - b. Project duration and completion
 - c. Sub-contractor start and completion
 - d. Work and landmark Inspection dates
- C) A submittal log
- D) A Qualified project field superintendent

The contractor must carefully manage and supervise the work of the subcontractors. The contractor should provide distinct direction to the subcontractors regarding their individual scope of work, their expected schedule, required inspections, and the quality of their work. Without a complete understanding of these expectations, subcontractors are often left to make erroneous interpretations that can lead to defective work.

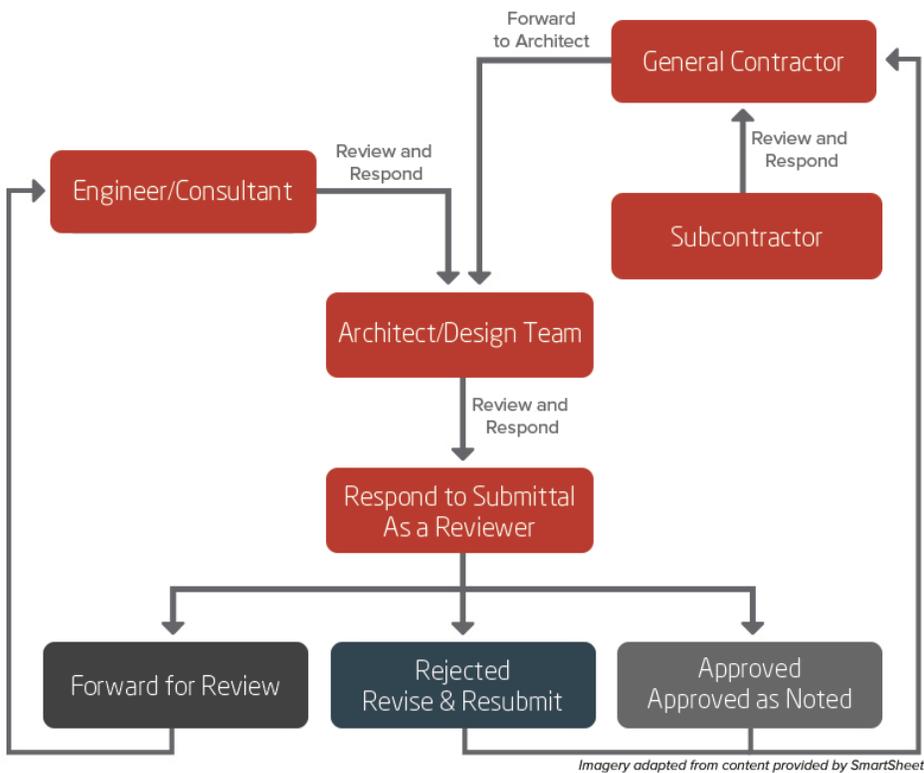
Just as the contractor expresses his understanding of the project to the architect through the submittal process, the same must occur between each subcontractor and the general contractor. Each subcontractor's submittals should be described by the general contractor within the subcontractor contractual scope of work. The submittals should be coordinated with the contract documents and the timing of their submission and approval should be determined by the project schedule. The Contractor should provide each sub-contractor with the necessary information to develop a submittal package that re-

mittals are usually kept as record documents and provided to the owner without action by the architect.

For Action submittals, the architect is required to review each one for general compliance. The architect's approval is not an assurance that the submitted materials or products meet the requirements of the contract documents. The responsibility for compliance ultimately remains with the contractor.

In the submittal review process, the architects' actions on the submittal include the following, or some variation thereof:

- A) Approved.
- B) Approved as Noted.
- C) Revise and Re-Submit.
- D) Incomplete submittal, complete and re-submit.
- E) Not approved.



The architect will inform the contractor of their action, generally with a stamp bearing these same action choices with an indication of which has occurred. The contractor should not proceed with any work associated with a particular submittal until such time as the architect has indicated that the submittal is complete, and approved.

The submittal action of the architect is directive and the process should therefore be treated with as much thoughtfulness as other contract terms. Advancing work with materials or products that have not been approved by the architect places the contractor and sub-contractor at substantial risk. For this reason, many contractors, and often the architect, require strict submission deadlines in the project schedule to ensure that all products, materials, and shop

drawings are submitted, reviewed, and approved before significant work begins on site.

Once the products, materials and/or shop drawings have been approved by the architect, the contractor has the responsibility to communicate the approval to each of the subcontractors that will have on-site work interaction with the approved component. It is the responsibility of the contractor to develop the means and methods of coordinating the approved material, product, or component into the ongoing, on-site work.

Field coordination is part of the submittal process management effort that is often performed inadequately and results in defective construction. A Contractor that simply distributes the approved submittals to each subcontractor, regardless of their role, and leaves the sequencing, scheduling and coordination of the field work to those same subcontractors is violating the standard of care. And more often

than not, when defective work is encountered, the contractor is quick to turn to subcontractors to cure the defect.

The subcontractor is not likely to have one. In fact, an examination of the contract that the contractor has with the owner is where the remedy will usually be found.

Subcontractors Role in Submittals

Most submittals are initiated by subcontractors, fabricators, and lower tier material suppliers and the subcontractors are responsible for the submission content.

A recognized cause of construction defects is the submission of a "substitute product" which fails to meet the original design intent on the pretext that the originally specified product(s) are either no longer available, or the Subcontractor is not a "Manufacturer's Certified Installer". In other cases, it may be that the sub-

contractor can purchase a substituted product for less cost than the product specified. When submitted, the subcontractor makes the claim that the substituted product is equivalent in performance to the originally specified product. This practice can create potential liability for the entire project team.

In making a submittal to the architect, the contractor must be diligent and exercise caution to ensure the submittal does not modify the architect's design intent.

In the book Construction Project Management, third edition, published in 2009, this principal is explained against the backdrop of 1981 Hyatt Regency walkway collapse in Kansas City, Missouri.

In this case, the steel fabrication subcontractor made a design modification to the walkway suspension system in the shop drawings that was either un-noticed or un-challenged at the time of submission review. The design modification failed causing and resulting in the death of 114 people. The book describes:

Because shop drawings often contain information that is outside the expertise of the architect or engineer, they cannot approve them beyond stating that they conform to the intent of the design documents. However, as the Hyatt example illustrates, this does not relieve the professional of responsibility for anything within his or her range of expertise. Information outside that expertise is usually related to fabrication process or to means and methods of construction and is the responsibility of the contractor.

This fatal construction defect was initiated by a subcontractor (the steel fabricator) that made a design modification within the shop drawings that was not explicitly noted as a change and, therefore was not readily identifiable as a modification to the design. The general contractor approved the submittal and then forwarded it to the architect, who in turn approved it and sent it to the consulting structural engineer. The structural engineer failed to verify the integrity of the proposed detail and approved the submittal. The structural framing was constructed as depicted in the steel fabricators shop drawings and the building completed.

The results of this chain of events ended in fatalities.

The importance of an effective and cooperative submittal process cannot be overstated. The failure of any one party to exercise the necessary care and diligence throughout the process can have catastrophic results. The architect must specify the submittals required in the contract documents and take appropriate action when they are received. The general contractor must:

- Create appropriate scopes of work so that each subcontractor understands their role in the project. Each scope of work must identify the submittals required of the subcontractor.
- Create a submittal log that identifies and tracks each submittal from every source, and the actions taken on those submittals by the contractor and the architect.
- Distribute the approved submittals to all those parties whose work is affected by it, and coordinate their work efforts accordingly.

Each subcontractor must submit products, materials and shop drawings that comply with the requirements of the contract documents. They must work together with the general contractor and other sub-contractors to accomplish the scheduling, sequencing, and coordination necessary to timely incorporate their work into the work of others. Every party with an interest in the project must collaborate to ensure a successful outcome.

CONSTRUCTION CLAIMS INVESTIGATIONS

For nearly any issue, Robson Forensic can assemble a tailored team of construction professionals to provide a thorough and efficient investigation. Our ability to analyze construction documents and evaluate the performance of construction parties allows our experts to identify liability, quantify damages, and assist in resolving disputes in a timely and cost effective manner.

For more information submit an inquiry or contact the author of this article.

FEATURED EXPERT

Anthony J. Shinsky, AIA, NCARB, LEED AP

Architecture & Construction Administration Expert
ashinsky@robsonforensic.com

With an architectural career spanning virtually every job description from designer and draftsman to project manager and firm owner, Anthony has experience in all aspects of the profession and has the hands-on experience necessary to address complex issues involving the design, construction, and occupancy of the built environment. His experience in management and leadership, from his years as a project manager and firm owner, provide in-depth knowledge in how the building industry works. His experience includes a wide range of building and facility types, from single and multi family residential, to commercial, retail, hospitality, industrial, and institutional facilities, with a particular focus on detention, correctional, municipal, police and fire, and judicial occupancies.

ARTICLE URL:

<https://www.robsonforensic.com/articles/construction-administration-submittal-expert-witness>

Published 10 July 2018