



# THE VALUE OF A SCHEDULING STANDARD OF CARE

Bryan Van Lenten, Managing Consultant, Americas, HKA

## LACK OF ACCURATE PERFORMANCE DATA

Since 2011, individual construction disputes have globally averaged \$40 million and 17 months to resolve.<sup>1</sup> The resolution of construction disputes is most often constrained by the lack of accurate and detailed project performance data. The schedule is arguably the single most important record of project performance data. Presented with a construction claim, one of the most common first tasks of a claims analyst is to determine the quality of the project schedules. There is a linear relationship between the quality of the schedules and the accuracy of information determined from their analysis. Determining the quality will inform the type of analysis that should be performed and how accurately the results will represent project events.

## THE NEED FOR STANDARDS

When evaluating the quality of anything, one must have a standard by which to perform the evaluation. Typically, the first place to look is the contract. Many contracts including standard forms like AIA A102 “Standard Form of Agreement Between Owner and Contractor,” and C191 “Multi-Party Agreement,” include a clause requiring the contractor to exercise a standard of care in the performance of its work. Scheduling is typically included as part of the contractor’s responsibilities under the general conditions section of the contract but specific quality standards and metrics may not be provided. Absent quality

requirements and metrics in the contract, to what might a claims analyst turn in evaluating the quality of a construction schedule?

One answer might be a scheduling standard of care. A standard of care establishes a baseline performance that a professional must meet. Standard of care is generally defined by common law as the ordinary and reasonable care usually exercised by one in that profession, on the same type of project, at the same time, and in the same place, under similar circumstances and conditions.

Some may argue that schedulers are not professionals but technicians and therefore not held to a design standard of care. This may be true historically but professional level certifications such as PSP (Planning & Scheduling Professional) have been introduced by groups like AACEi (American Association of Cost Engineers, International), and scheduling is becoming more professionalized at an accelerating pace. Modern scheduling software has enabled schedules to become orders of magnitude more complex than a generation ago. Today’s schedulers must be fluent in complex software suites like Primavera, and may have to maintain schedules of tens of thousands of activities and relationships. The question of scheduling professionalism is beyond the scope of this essay; but, if current trends such as 5D BIM continue to revolutionize construction management, scheduling will continue to become more complex and to be pulled ever further towards professionalism.

**THE INCONSISTENT QUALITY OF PROJECT SCHEDULES REPRESENTS A FAILURE OF THE INDUSTRY TO LEVERAGE THE POTENTIAL POWER OF NEW TECHNOLOGIES TO REDUCE CLAIMS COSTS AND INCREASE CERTAINTY.**

<sup>1</sup> Global Construction Disputes Report, 2017; ARCADIS

## THE BENEFITS OF STANDARDS

The idea of a standard of care exercised by scheduling professionals presents many benefits. It can serve as an objective standard against which to measure performance, shielding the competent scheduler. Additionally, a standard of care in scheduling would serve to publicly communicate scheduling expectations to all parties, thereby reducing some of the risk associated with uncertainty.

Note that the general definition of standard of care does not preclude mistakes in performance, much less delivery of a perfect product. The standard of care for design professionals is not the creation of a perfect plan or even the delivery of a reasonable result, but a comparison of the skill and care applied by the professional to the skill and care ordinarily applied by a similarly situated professional.

Importantly, regardless of their not being codified into a formal standard of care, scheduling best practices do already exist. Identifying and compiling these best practices can be a good place to start when considering a standard of care for scheduling. One place to find these best practices is among the published guidelines of the “major” industry groups. The Project Management Institute’s Best Practices Guidelines presents detailed step-by-step recommendations for schedule creation, and describes itself as being a “reflection of the concept that some sort of order was needed to come to the construction industry in terms of scheduling best practices and guidelines, based on an awareness of a need for improvement and standardization of the scheduling process.” The Defense Contract Management Agency’s 14-point assessment states that it, “provide(s) the analyst with a framework for asking educated questions and performing follow-up research” related to the project schedule. The Government Accountability Office presents, “10 best practices associated with developing and maintaining a reliable, high-quality schedule.” There is significant overlap between the recommendations of these three standards, as well as among many other industry standards; however, while these standards have significant overlap, they are not identical and the decision on which to use remains largely personal preference. This raises the possibility for the claims analyst to “cherry pick” standards that suit the needs of her client, thus undermining the objectivity of her analysis. A standard of care is an objective, industry-wide measure of performance.

Every project is different, and the schedule should reflect that. Typical practices like eliminating open ends and minimizing constraints are applicable in most situations, but not all. Certain best practices (for example, bifurcated schedule updates, in which multiple versions of monthly schedule updates are submitted in order to track the effect of schedule changes separately from the effect of progress updates) can drastically increase workload (more schedules created means more schedules to be reviewed) without a necessary direct improvement in project performance. Construction projects have numerous variables that affect the sophistication required for a schedule to track progress accurately. Sophisticated schedules required by large and complex projects would likely be a waste of resources in smaller or simpler projects. Additionally, large and complex projects typically have greater resources to accommodate greater schedule sophistication. The definition of standard of care provided above accounts for project individuality by specifying that the comparison shall be to a project of similar type, time, place, circumstance, and conditions.

## IDENTIFYING CONSISTENCIES IN INDUSTRY EXPECTATIONS

When evaluating a schedule retrospectively, are published best practices for construction scheduling useful in determining a standard representing the skill and care ordinarily applied by a similarly situated professional? Despite the differences inherent in each project, some documents produced by industry institutions could be useful in determining the skill and care expected to have been applied by a similarly situated professional. Certain commonalities among these documents could be viewed as widely accepted practices, and provide the basis for a standard of care. However, even this basis leaves substantial ambiguities. For example, what constitutes a “major” industry group? What are we to make of practices that are included in most but not all guidelines? How can we address the inherent problem of applying a standard set of metrics to the unique circumstances and conditions of each project and location?

## CONSTRUCTION YET TO CAPTURE TECHNOLOGICAL EFFICIENCIES

The advent of powerful scheduling tools have already enabled the creation of complex schedules tracking massive amounts of project data. New technologies will continue to disrupt the construction management world in powerful ways, and schedules

and scheduling are likely to continue to increase in complexity. The inconsistent quality of project schedules represents a failure of the industry to leverage the potential power of this new technology, allowing low hanging fruit in the form of reduced claims costs, increased certainty, etc. to wither on the vine.

One specific way to harness this technology might be to identify a standard care for scheduling, a single, industry-wide standard by which a scheduler might create, and by which an analyst might objectively measure, a construction schedule. The creation of an industry-wide standard of care for scheduling would appear to benefit all parties by clarifying expectations and reducing uncertainty for owners and contractors.

## ABOUT THE AUTHOR

**Bryan Van Lenten** has over 12 years’ experience in structural design of state, local, Federal government, and commercial projects including bridges, marine structures, electric transmission, hospitals, schools, and corporate headquarters. He has worked as an engineer for owners, consultants, and contractors. Bryan brings a wide variety of project experience and knowledge including new design, rehabilitation of existing structures, identifying deficiencies in existing structures, and construction inspection.

Bryan has performed analyses related to claims including delay and inefficiency, assessed responsibility for contract changes, and calculated damages. He has analyzed claims on highways, bridges, hospitals, schools, and national parks among other types of projects. He has also prepared discovery requests, performed document searches, drafted questions for depositions; and fielded questions for mediations, arbitrations, and settlement negotiations. Bryan is also an NHI certified instructor and has presented claims avoidance seminars to DOTs across the country.