Meglan, Meglan & Company, Limited
CONSTRUCTION
Claims Topics

Productivity and Efficiency Losses Caused By Unplanned, Out-of-Sequence Work

Most construction project schedules are prepared with definite, logical work sequences that require one trade, craft, or subcontractor to perform its work after another has completed its services. The work sequence is usually structured so that the skilled labor can perform its work in the fastest and most efficient manner. All tradesmen, craftsmen, and subcontractors expect to be given the most optimum work sequence. Those who prepare construction schedules know this and schedule work activities accordingly.

When an owner, a general contractor, another prime contractor, a construction manager, or a design professional directly causes or orders a change in the work sequence, one or more trades, crafts, or subcontractors usually experience *severe* productivity and efficiency losses and incur unnecessary additional costs due to delays, disruptions, or interferences not normally experienced. These costs are chargeable to the party or entity that caused or ordered the change in the as-planned work schedule.

The proof of sequence changes (out-of-sequence work) lies in a comparison of the as-planned, scheduled sequence with the as-built, as-performed sequence. Contractors and subcontractors who don't have as-planned and as-built schedules seldom prove out-of-sequence work claims, thereby failing to collect damages for the losses they incurred.

Proving and collecting for out-of-sequence work losses is one of the primary reasons why every construction project and every contractor should have an as-planned schedule or, at the very least, provide inputs into someone else's schedules. Similarly, proving and collecting for out-of-sequence work losses is also the basic reason why as-built schedules are maintained by "updating" as-planned schedules.

Moreover, maintaining daily construction record reports is how good contractors monitor what's being done where, when, how, and by whom, in addition to tracking what they're producing in terms of completed work units and whether that productivity is above average, average, or below average as compared to as-planned conditions and performance.

Examples of Out-of-Sequence Work

■ An overhead fire sprinkler system subcontractor generally installs its system off of a rolling scaffold after the concrete floor is placed, finished, and cured. The as-planned construction schedule shows the concrete floor placed *before* the sprinkler system is installed. In fact, the fire protection system installation is shown on the schedule as an activity that is tied to the end of the floor placement and curing activity.

In this example, the floor placement is delayed. The fire protection system subcontractor is ordered to begin placing the overhead sprinklers without the smooth, finished floor in place. Because of the disruption, two step ladders have to be used in place of one rolling scaffold. Instead of one ground worker and one aerial worker, there are now two of each,

doing the *same* work, though not nearly as quickly and efficiently. Consequently, the subcontractor has a legitimate claim for lost efficiency due to out-of-sequence work.

■ A construction project consisting of two eight-story, cast-in-place office buildings features many hand-laid concrete block walls on each of the eight floors of the two buildings and in an atrium section between them.

In this example, the cast-in-place concrete contractor is late in placing the columns, beams, and floors. The general contractor refuses to enclose the building with tarpaulins and heat it when the subcontractor who's installing siding on the buildings cannot get the work completed by winter. The unenclosed, unheated floors prevent the masonry subcontractor from installing its concrete block walls on most of the upper floors until warmer spring weather arrives. The electrical subcontractor, who usually works with the masonry subcontractor, inserting electrical conduit in partially completed concrete block walls, works all winter installing conduit on every upper floor in both buildings before the masonry contractor can lay the first block.

In the spring, the masonry subcontractor has to "cut in" around all the conduit to bury it in the walls, wasting manhours and a large amount of concrete block in the process. As a result, the masonry subcontractor has an out-of-sequence work claim and is due damages from the general contractor.

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Construction Claims Topics **serve as guidance documents only and are written for the expressed purpose of helping construction industry executives and supervisors learn better ways of identifying the sources and causes of construction claims and preventing disputes.**

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