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### ***Request for Information (RFI) and Rework***

Two studies -- “Impact & Control of RFIs on Construction Projects (2016)” and “The Impact of Rework on Construction & Some Practical Remedies (2012)” -- both by Navigant Construction Forum, provide quantitative insight into the harsh realities of two jobsite issues.

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#### RFIs

This study analyzed 1,362 projects and found an average of about 800 RFIs per project. And that the average time to review and respond to an RFI was about 8 hours, and the average cost per RFI was \$1,080. On a typical project, the average time to review and respond to RFIs exceeds 6,000 hours (8 x 800 = 6,400 hrs.). And the estimated total cost to review and respond to project RFIs \$860,000 (800 x \$1,080 = \$864,000).

The ratio of RFIs to construction cost is significantly higher for smaller projects. Projects between \$5M and \$50M have an average of 17.2 RFIs per \$1 million of construction cost, whereas projects between \$1 billion and \$5 billion have an average of just 1.1 RFIs per \$1 million of construction cost.

The study provided these suggested RFI best practices for contractors:

- Generate RFIs as soon as the contractor recognizes the need for the information requested.
- Submit all RFIs as soon as an issue arises and at least 10 days before the response is required to minimize potential project disruption or delay.
- Each RFI should be limited to a single subject of inquiry.
- Each RFI should have an assigned priority.
- Avoid “batching” RFIs for submittal to the owner.
- All RFIs should have specific references to design drawings or specification sections.
- Where alternative resolutions to the RFI inquiry are apparent to the contractor, the inquiry should include a suggested resolution.
- When it appears that resolution of the RFI may adversely impact project cost or schedule, this information must be included in the RFI.
- When the receipt of a response to an RFI is time-dependent or schedule-critical, the RFI must be coded as such and indicate a specific date by which the response must be received.
- When necessary for the owner to return an RFI to the contractor for additional information, the RFI should be re-issued with a revision number and revision date.

## Rework

The study defined rework as:

“Activities in the field that have to be done more than once in the field, or activities which remove work previously installed as part of the project regardless of source, where no change order has been issued and no change of scope has been identified by the owner.”

This study concluded that the direct cost of rework averages about 5% of the original contract cost. The study also concluded that the indirect cost of rework is about 80%, almost \$1 in indirect cost per every \$1 in direct cost. Totaling both, the total rework cost is about 10%. As for schedule, rework typically results in about a 10% schedule growth.

The causes of rework, for 32 buildings cited in the study, is shown below.

<b>Causes of Rework</b>		
<b>Sources</b>	<b>Definitions and Examples</b>	<b>32 Buildings Field Rework Cost</b>
Owner change	Result caused by the owner changing the project definition, scope, or requirements.	1.4%
Design error/omission	Result caused when necessary items or components in the project design are erroneous or omitted.	1.5%
Design change	Result caused when changes are made in the project design or requirements	0.3%
Constructor error/omission	Result caused by contractor’s errors or omission in construction methods, procedures, activities, or tasks.	0.0%
Constructor change	Result caused by changing constructors, construction methods or procedures.	0.6%
Vendor error/omission	Result caused when necessary items or components are erroneous or omitted by vendors.	0.1%
Vendor change	Result caused when vendors are changed.	0.1%
Transportation error	Result caused by mistakes, accidents, or errors in transportation.	0.0%
Other	Result caused by all other sources.	0.6%
	Total	4.6%