An Owner's Guide to Managing Trenchless Risks

John Parnass
Zak Tomlinson
Pacifica Law Group, LLP

Trenchless projects in the Pacific Northwest present a uniquely challenging set of risks. At best, these risks lead to an increase in the rate and size of project claims. At worst, these risks lead to outright project failure, and the inevitable litigation that saps the increasingly stressed financial and human resources of public owners.

There are straightforward and proven ways that a public owner can and should address these risks in the trenchless procurement process. This article highlights three effective contracting practices that we – as construction lawyers who have litigated numerous claims arising out of Pacific Northwest trenchless projects – have found proactively manage trenchless risk: **establish bidder qualifications; provide clear contractual baselines; specify the equipment to be used.**

None of these recommendations are novel or radical. We continue to find, however, that they remain practices most often observed in the breach. And so we reiterate: Where appropriate, these practices provide effective contractual means to mitigate owner risks in trenchless construction, and deserve careful consideration at the start of the procurement process.

Bidder Qualifications

The first key to ensuring a successful project is to ensure that the trenchless contractors bidding on the projects are qualified to do so (and conversely, to ensure that unqualified contractors do not bid on the project). The laws permitting this vary from state to state: In Washington, public owners may do so pursuant to RCW 39.04.350, which allows an owner to identify "supplemental bidder criteria" in the bid documents as an essential element of bidder responsibility.

The use of supplemental bid criteria on trenchless projects is nothing new. Many trenchless bid documents require the low bidder to identify key qualified personnel and demonstrable success in tunneling minimum distances through similar ground conditions. While some have critiqued overly specific supplemental criteria, these filters have been – and continue to be – useful: Relevant trenchless experience is critical in ensuring a successful project.

We suggest an additional step and require that the bidders demonstrate, as an element of bidder responsibility, that they possess or plan to acquire the trenchless equipment specified in the contract documents. Think of this as a pre-award submittal review. The early vetting of this crucial issue up front has obvious advantages. It prevents the awkward (and costly) situation of awarding the contract to a low bidder on faith that they will eventually mobilize the specified equipment, only to discover months into the job that they have no intent to bring the specified TBM. This is not a hypothetical concern, as we have seen numerous projects where the low bidder does not possess and refuses to mobilize the equipment specified in the contract.

Contractual Baselines

We strongly suggest that all public owners consider the inclusion of express contractual baselines in the procurement documents. Such provisions, if thoughtfully and properly drafted and tailored to the

specific project at hand, can provide owners (and courts) a clear and enforceable framework in which to assess and evaluate differing site condition (DSC) claims.

Public owners traditionally presented geotechnical baseline information by way of boring logs or the occasional Geotechnical Data Report. This approach led to ambiguous and often conflicting contract "indications" and is still (unfortunately) a widespread procurement practice to this day. At best, the traditional approach is ineffective in properly allocating risk. More often, it is profoundly counterproductive. In claims and litigation, owners pay exorbitant settlements and ultimately lose lawsuits because they have ineffectively and ambiguously conveyed baseline contract indications in the project documents.

Owners have gradually begun writing true baselines into project specifications or have adopted the use of a separate Geotechnical Baseline Report (GBR), both generally positive developments.

Regardless, we have found that truly-enforceable baselines share the following characteristics:

- **Clarity.** Contractual baselines (whether in a GBR or other contract documents) must be clear and easily understood. The parties (and ultimately a court) must be able to interpret those baselines consistent with the intended contractual risk allocation. Clarity is not easy to accomplish: It runs counter to the instinct of most geotechnical engineers to avoid specifically identifying inherently unpredictable geotechnical conditions. But a resort to descriptive wishy-washiness defeats the entire point of the GBR exercise, and reminds us to heed Randall Essex's mantra: A baseline condition is not a warranty of conditions as they actually are, but a contractual mechanism that allows the parties to allocate risk and ultimately determine whether a DSC exists. (**Tip:** In general use definitive words such as "shall" and "will," and avoid "may" and "might.")

War Story: A recent trenchless case we handled for a municipal water and wastewater district in King County, Washington, underscored the importance of clearly drafted and enforceable contract baselines. Among other things, the project specifications in the case instructed the contractor to assume the presence of cobbles in the tunneling alignment, and to provide a TBM "capable of ingesting any and all cobbles encountered." The court (which interpreted the baseline indications as a matter of law) dismissed the contractor's cobble-based DSC claim, finding that the DSC claim was barred because the contract clearly and unambiguously indicated cobbles.

- **Precedence.** Whether the owner chooses to specify baseline conditions in a formal GBR or in the contractual specifications itself, the contract should plainly establish that those baseline indications have precedence over the underlying data or summaries of data. For instance, while the data in a GDR is often helpful to the project participants, it should never take the place of a thoughtfully-considered contractual baseline indication.
- **A View to Administration.** An effective baseline is one that can be administered in light of the project and the chosen trenchless methodology. For instance, "cobble counting" baselines are often flatly inconsistent with the actual technology to be used on the project. MTBMs larger than 36 inches are capable of and (if the specification is written correctly) required to crush and ingest a high quantity of cobbles. Once the cobbles are crushed into small particles, it is impossible to "count" the number of in situ cobbles truly encountered by the machine from analyzing the spoils or the drive records, leading to inevitable disputes.
- **Legal Input.** It is imperative that a public owner enlist the assistance of both technical experts (i.e. the geotechnical consultant) and construction counsel in the drafting of the baseline documents. The baselines have profound legal implications: An owner embarks on a significant trenchless project without legal review at its own risk.

Machine Specification

We increasingly recommend that Pacific Northwest owners and their geotechnical consultants (particularly in MTBM projects) affirmatively specify the minimum type of TBM that is best suited to the geotechnical conditions on the project. While this strays from the traditional "let the Contractor pick its means and methods" school of thought, we have become convinced that owner direction in this area can address the unique risks associated with trenchless jobs.

This direction can take two forms, both project-specific. First, when the trenchless design consultant has concluded that certain types of TBMs, cutterheads and associated equipment are necessary for success, the specification should establish mandatory minimum machine requirements.

Second, when the trenchless design consultant establishes that certain equipment will likely fail in the anticipated ground conditions, the specification should be written to prohibit the use of specific machines—expressly. For instance, the specification should prohibit the use of an underpowered soft-ground head on an MTBM when the trenchless design consultant is aware of the presence of gravel, cobbles and boulders in the formation through which the tunnel will progress.

Finally, a word of caution: Every trenchless project is unique. There is no such thing as a canned set of contracts, specifications or language appropriate to all projects, and we advise as always to consult your legal counsel before embarking on any trenchless procurement.

Reprinted courtesy PTR Communications Inc.