Are You Capitalizing on Next Generation Civil Construction?
With both depressed commodity prices and juggernaut competition from Permian producers continuing to impact the western Canadian oil and gas industry, the push is on to adopt innovation and cutting-edge technology to find new ways to lower costs and compete for investment dollars. One of the largest costs to producers centers on infrastructure development projects, a large portion of which is earthworks construction in particular. Innovation in civil construction technology is proving to be one of the most effective ways to achieve cost reductions and cost certainty.

Unfortunately, most infrastructure development companies are still missing the mark on this key opportunity to drastically reduce their project costs and improve their project schedules. The “old school” approach to earthworks construction is still alive and well; surveyors put stakes in the ground with elevation tape on them, earthmover operators use those stakes to guide the removal or addition of dirt, and every week or so a surveyor comes out to evaluate how the project is going. For producers, one readily available and cost-cutting competitive advantage is finding civil earthworks companies who have accepted and adopted real-time, drone collected, data-driven, GPS integrated construction technology, and have paired it with an experienced team.

Gary Smolik, Lead Construction Manager at Integrated Sustainability, is a classic example of the veteran construction worker who came from the “old school” construction tribe. He reflects by saying, “We put sticks in the ground, we put ribbons on, we measured and set our heights, we used an eye level, and we built everything that way. If you have a good crew of people, you can build anything, and people have been doing it that way since the dawn of equipment. Most of the industry is still doing it that way today.”
When he was approached with the idea to integrate drone scanning and GPS construction technology into his operation, he wasn’t a believer. He reluctantly set aside a budget to integrate the technology into his most recent water reservoir construction project for a major Canadian oil and gas producer. As the project progressed and the improvement to communication, transparency, responsiveness, and change management emerged, the realization of how much better the project was progressing captured Smolik’s attention. He explained, “It became so fascinating and so interesting. I could validate that my crew was building [the reservoir] exactly to the design. The GPS on the equipment wouldn’t let them miss extents of excavation, fill zones, or elevations. The technology allowed me to have hands on involvement from Calgary for a site in Northern Alberta.”

Embedded sensors, GPS technology, construction management software, drones and geomatics software allow for real time status reporting and paint a much clearer picture of building progress, operational workflow, and material performance. Smolik comments, “When I was able to increase my productions, reduce my costs, and maintain and accelerate the schedule, there’s not a job out there now that I’m not willing to go after as long as I have the technology to support me”.

Smolik is confident that Integrated Sustainability has developed the winning formula for construction execution success. By acting as Prime Contractor, implementing the perfect blend of old and new earthworks strategies, and having the support from a skilled, dedicated project team, Smolik concludes, “I can take on the biggest, the toughest, the ugliest of jobs and know that we can do it; and execute it on schedule and under budget.”

Spotting problems before they become project killers and effectively managing them is one of the key benefits of this technology. Smolik explains, “When changes needed to happen, we could perform quick calculations or take a quick look at the area in question on the computer, and we had the answer going forward. We lost no productivity, no downtime, everything moved. We reduced cost, beat up our schedule and moved it ahead, and we came in under budget. It significantly increased our productions in the neighborhood of 30 to 45%. We reduced our idle time and fuel consumption; we reduced all of those costs associated with the job.”
Integrated Sustainability is an employee-owned water infrastructure delivery and operations company with extensive expertise in all aspects of water infrastructure design and execution.

Integrated Sustainability executes projects under a turnkey delivery model from concept to completion, assuming full risk and accountability for the entire infrastructure development. Due to our strong market position, strong supply chain relationships, and niche focus, we are uniquely positioned to offer lower prices to our customers. This transparent “design, build, operate” approach to water infrastructure development helps our customers realize substantial value.

To learn more about Integrated Sustainability’s unique approach to water infrastructure delivery, visit our website or contact us. Arrangements can be made to provide a more in-depth explanation and evaluation on how this vertically integrated, turnkey approach can benefit your operations.