

Cherokee Nation DOT Goes Digital to Streamline Bidding, Project Management, and Inspection

BACKGROUND

To ensure everyone was on the same page during construction project management, the team at the Cherokee Nation Department of Transportation started looking for a better way to track construction progress. Their search for a construction administration and inspection solution also led the team to an opportunity to revamp their bidding process by going digital.

"The majority of our team members can access Appia to check real-time updates from the field. It has saved us time and money by improving organization and keeping everyone on the same page."

ANDY HARRIS

UAS LEAD PILOT
CHEROKEE NATION DEPARTMENT
OF TRANSPORTATION

SOLUTION

Appia®

for construction administration
and inspection

Bid Express®

for secure online bidding

RESULTS

Through the combined use of the integrated Bid Express and Appia solutions, the team at Cherokee Nation DOT can embrace a completely digital bidding and construction management process. They leverage these software solutions for the following benefits →



**Expedited
bid set-up**



**Reduction in
late bids**



**Real-time
project updates**



**Digital, searchable
project records**



**Streamlined
inspections**



**Reduced
paper waste**



Project miscommunication sparks a search

In order to think outside the box, you must first start with a box.

That's how it started for the Cherokee Nation Department of Transportation. Boxes, to be specific. For more specifics, we go to Andy Harris, a drone pilot and former highway designer for the DOT:

“We were building a road that had a couple of washed-out areas. These sections were designed to receive large prefabbed concrete boxes. I had planned to capture drone pictures and videos of the installation, but wasn’t aware it had already taken place.”

Miscommunications happen – but with a little outside-the-box thinking, they can also be prevented. After discussing the issue with the project inspector and Andy Quetone, Director of Transportation, they agreed to find a better way to track construction progress with a digital solution.

Overcoming a language barrier

Harris started the process of vetting construction management software, but kept running into the same language issue – not one of dialect, but jargon.

“Most of what [Andy] found was more for building commercial construction stuff, and we just didn’t need all of that,” said Quetone.

Frustrated by the lack of progress, Harris took to Google to find Appia and went into the introductory meeting with some trepidation.

“After attending three or four other meetings, I was beginning to lose interest. Then, during our interview with [Infotech], they started speaking our language,” said Harris.

Regina Compelube, Chief Designer, appreciated that Appia fit the DOT’s specific needs:

“We started with [a different software], and most of that was geared towards architectural, mechanical projects. It was a lot more than we needed.”

As a frequent collaborator with the Oklahoma Department of Transportation, the Cherokee Nation DOT team was also swayed by Infotech’s work with the state agency. They were ready to move forward with Appia implementation.

The benefits of a digital construction process with Appia

Real-time updates from the field

Tracking project progress was the team's primary motivation in implementing a digital construction process. Appia allows project managers to receive real-time, daily updates from inspectors thanks to seamless syncing between field and office.

"The majority of our team members can access Appia to check real-time updates from the field," said Quetone. And since Harris can simply log into Appia to check up on projects instead of having to drive out to see what's happening, he's saving on what he calls "windshield time."

Accurate, searchable project records

When the DOT's inspectors were recording everything in handwritten fieldbooks, there were occasionally issues with legibility - it's not easy to scribble notes in a small book out in the field.

"You're no longer keep daily logs by hand; everything is digital now, and you can easily read the entries," said Harris.

And since these digital records are stored in Appia's searchable database, no one needs to dig through stacks of books to find a record, something that could greatly ease the burden of any potential future audits, as Quetone points out:

"When we do year-end closeouts, [FHWA] gets all of our project info. If they have any questions, it's going to be a lot easier to go into Appia and say 'here this is,'" he said.

"As opposed to going, 'let me dig this out.' The daily logs are all in Appia as opposed to the guys' books," added Compelube. "It's very easy to pull up when something happens out in the field. Everybody's going 'when was that?' You can just search. And there it is, in just a few seconds."

Time savings for inspectors, cost savings for the agency

Under the Cherokee Nation DOT's previous process, inspectors would often come into the office after a long day in the field to straighten up their notes and record them.

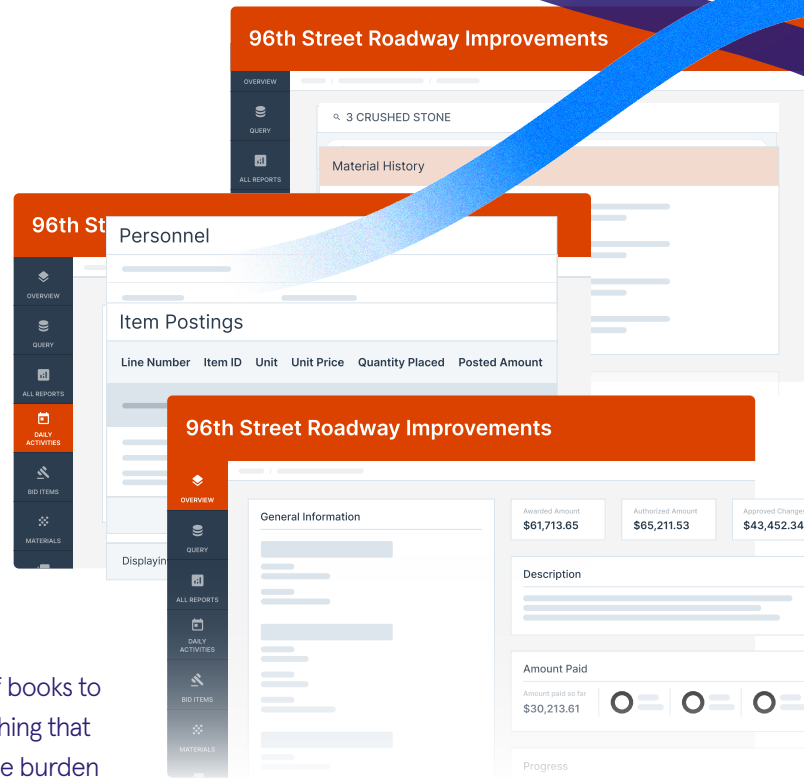
"Our inspectors were out in the field, they came back into the office, they're straightening their notes up, and that's overtime," said Quetone.

Now, inspectors are done as soon as the notes they've captured offline out in the field sync back to Appia. This process leads to time savings for inspectors and dollar savings for the DOT.

"Man-hours. That's a big dollar amount," said Quetone.

The team also notes that they're saving a substantial amount of paper by removing paper logs from their process.

"I love that we're not burning all those trees," said Compelube. "We used to have stacks this tall," she said, gesturing to indicate a substantial stack of field books.



The journey to e-bidding

The Cherokee Nation DOT team went searching for Appia, but finding Bid Express was just a happy coincidence.

We were talking to Infotech about using your software for inspectors and construction management,” said Quetone. “Then we found out about Bid Express and thought ‘pew, we’ll do that too!’”

The agency’s existing bidding process was time-consuming and required travel on the part of contractors, as Sherry Waters, Infrastructure Data Coordinator, details below:

“We would have to print numerous spec books, contracts, and then the plans, of course. To cover the cost, we would have to charge like a hundred dollars per plan. So, we had to deal with money and receipts for printing,” said Waters.

“We also had to fax everyone on our list a copy of the bid to let them know we were bidding this out. That process could take up to three days, with all of the printing, sorting, faxing, and getting it delivered to Tulsa to outside entities for advertisement.”

The process included in-person, manual bid openings that ate up time and required contractors to travel to the DOT office.

“We’d come in, and we’d have to manually open each one, and we would have an apparent low bidder, but once the meeting was over, we’d still go through every submitted contract to make sure they had all the correct information and that the calculations were correct,” said Waters.

Occasionally, that would mean a missed opportunity to bid for contractors who couldn’t get their bid submitted in time, shared Quetone.

“Our building is kind of hard to find if it’s a new contractor... if the door’s shut, I’m not going to open your bid,” he said.

Needless to say, the team was pleased that their search for Appia led to a solution that could resolve their bidding challenges as well.

Saving time for the agency and its contractors with Bid Express

With Bid Express, the Cherokee Nation DOT has streamlined its entire bidding process, from building and advertising the job to processing and awarding the low bid.

“From start to finish, the old way of getting a bid out was about three days. And now it takes what, an hour?” said Waters.

Here’s a breakdown of how the team’s process has evolved:

Bid notifications and advertisement

Prior to Bid Express, the process of informing the contractor community of upcoming bids and providing them with the necessary documentation was an arduous, time-consuming task that involved a fair amount of printing and faxing, as well as providing receipts for the purchase of plan sets.

Now, the contractor community is alerted via email and Bid Express notification, using contractor groups created by the DOT. This saves the agency ample time, as well as advertisement costs.

“Once we went digital, we were able to simply send out an email, letting everyone know we had a share website for larger files. And then we would just email the contractor group that I created, letting them know, ‘here’s the bid notice, and in the bid notice is the link to view the plans and specifications of contracts,’” said Waters.

Bid opening, tabulation, and award

Bid openings used to be an extensive affair, held in person, with some contractors rushing to find the agency and submit their bids on time. Now, the entire process occurs digitally, with a simple notice going via Bid Express, and there's no need for contractors to worry about not getting their bid in because of a traffic jam.

"I think it's definitely made it a lot easier," said Waters. "Especially now that we don't have people coming in. We had to greet everyone, get everyone settled down, then open all the bids."

Bid processing is also vastly more efficient for the agency. No longer does the team need to come through every bid to ensure that all the information, calculations, and required documents are correct – this is all handled automatically in Bid Express, with bid tabulation occurring at the click of a button.

"Sometimes it would take two to three hours just to do the bid tabs per opening," said Compelube.

"We went from what would be three hours, because we would have to put all the items in, all the quantities for each person. And now, we just click a button," added Waters.

Bid set-up

During the implementation process, Infotech and the Cherokee Nation DOT collaborated to create a variety of bid templates so the team could quickly build out contracts and post them for bid. This improvement, in conjunction with other efficiencies, has greatly reduced the agency's time to go to bid.

"We showed [Infotech] what we had and [they] made our template for us," said Compelube. "Building the contract itself is a lot easier. You just go in, fill in a few things, and you're done,"

The team estimates a reduction from multiple days to a matter of hours to get something out for bid.

e-Construction solutions for Tribal Nations

Infotech works with tribal communities to implement bidding and construction management solutions that simplify federal compliance, eliminate manual processes, and streamline construction project workflows.

Get started with digital construction solutions

Implementing solutions like Bid Express and Appia enables tribal nations to leverage electronic advertising, bidding, contract administration, and inspection to streamline construction project workflows.

Centralize data and eliminate paper processes

From e-bidding through construction project closeout, ensure all relevant data is accessible in a centralized, searchable record-keeping system and get rid of time-consuming paper processes.

Track Tribal Transportation Program (TTP) and grant funds

Eliminate the stress of tracking federal funds with a cloud-based, digital system that automatically ties construction work to specific and custom fund sources for easy compliance.