

## Project Overview

BX Civil & Construction was the prime contractor on the Sioux Falls Regional Airport Deicing/RON Apron Expansion, a project spanning a two-year frame time starting August 1, 2019 to substantial completion on September 4, 2020. The 9.7-million-dollar contract included a plethora of unique challenges for project leadership.

- Project Phases
  - 7 distinct phases over 2 years.
    - Phases 3, 4 and 7 having start and completion dates in late 2019.
    - Phases 1A, 1B, 2, 5 and 6 with scheduled completion dates in 2020.
  - All phases met on time or before completion dates.
- Work Overview
  - BX and many subcontractors worked tirelessly to:
    - Install/construct a new deicing system
    - Make modifications to the existing FAA electrical/communication access holes
    - Install storm sewer
    - Complete an immense concrete apron expansion consisting of 45,000 square yards.
  - This was one of the largest projects the Sioux Falls Airport has had in many years.

## Community Impact

The addition of the deicing apron provides increased flexibility with simplified logistics for airport personnel. The added area provides a safe place for planes to receive deicing treatments prior to take off without having to tie up valuable space which can delay incoming and outgoing flights. In warmer months, the added space makes it easier for airline staff to position aircraft for use and service without interfering with departures and arrivals.

On average the Sioux Falls Regional Airport services approximately:

- 1.1 million airline passengers
- 61 million pounds of freight
- 14.6 million pounds of mail

These improvements allow the Sioux Falls Regional Airport to better serve their customers as well as provide a ready foundation on which to continue their growth.

## Challenges

This project challenged our team leaders regularly and rewarded them equally.

- Tight Timeframes
  - Phase 1 had 75 Calendar days.
  - Phases 5 & 6 had a 40 Calendar Day count combined.
    - Both were completed on time, while simultaneously working on Phase 2.
  - Phases 3 & 4 were limited to 54 Calendar Days: August 19, 2019-November 2, 2019
  - All phases were completed on time
- Unprecedented Times
  - COVID-19 played a significant role on this project in 2020.
    - CDC Safety Precautions
  - Late start to self-performed work
  - Began 2020 season with 40% of BX workforce
  - Complete phase 1A and phase 1B on time (75 days) despite early obstacles.
    - Began self-performed work on April 28<sup>th</sup>, 2020 with completion on June 6<sup>th</sup>, 2020. Meeting the June 12, 2020 deadline.
      - Consistent crew of 10 guys
      - Crew aided other projects as needed due to small workforce
  - Did not exceed 40% of workforce until June.
    - BX Human Resources worked ensure everyone came back to work safely while following CDC guidelines and quarantine periods.

## Innovation

- Stringless Paving
  - Reduced labor hours and increased productivity
  - Advancement saved 4,855 labor hours alone
  - Reduces risk of rework
    - All concrete met strength and smoothness standards set by FAA
    - Enhanced smoothness and improved schedule and constructability
- Stringless Trimming
  - Reduced labor hours and increased productivity
    - Enhanced paving schedule
  - Advancement in stringless trimming ensured that the depth of our concrete met FAA Specifications.

## Excellence in Project Management

- Communication
  - Continuous on-site management and communication with subcontractors
  - Project Management worked tirelessly to ensure all subcontractors adhered to project schedule
  - Weekly progress meetings with project team and owners
    - Schedule updated and sent out weekly
    - Allowed for quick problem solving
- Establishing Relationships
  - BX established great relationships with all subcontractors and the Project Engineer. Ensuring open lines of communication and expedited problem solving to keep the project on schedule.
  - Key Partners
    - Project Owners (SF Regional Airport)
    - KLJ Engineering
    - Soukup
    - Sioux Falls Construction (A Journey Group Company)
    - Sioux Falls Electric
    - National Sealant
    - Splitrock Landscaping
    - Traffic Solutions
    - Concrete Materials (Redimix Supplier)
- Sequencing of Operations
  - 2019 work was sequenced so it would be ready for concrete paving operations to begin in 2020
    - Phase 2 prep work completed in 2019
    - All concrete operations began in 2020
  - Intense paving sequencing
    - Sequenced paving for efficiency and maximum productivity
    - Paving every day of the week to meet deadlines
  - Maintained route for airport maintenance vehicles and fuel trucks
    - Taxiway was shut down for duration of phase 1
    - Re-routed all airport vehicles through closed taxiway to ensure safety and efficient constructability of the new service road and phase 1A & B
      - Not originally part of construction plans.
      - Approved by airport due to low volume of airline traffic (COVID-19)

## Safety

Be Safe is one of our core values and something we strive for daily. In keeping with our values, we created and filled a new Safety Manager position to advance our existing safety program. The implementation of this position has pushed our safety program farther than we had hoped and helped make safety not just one of our values, but an integrated part of our company culture.

### On the Project

- Our Safety Manager made regular visits to all our job sites
  - providing toolbox talks
  - Q&A sessions
  - PPE distribution
  - Water to maintain hydration
- He worked to build positive relationships and open lines of communications with our Supervisors and Field Crews, focusing on relationship centered safety.

### Culture of Care initiative

- Company committed took the pledge in April.
- Rolled out to all employees and field staff in May including:
  - Personal site visits with all crews and discussions lead by company President, Kari Karst.
  - Culture of Care Tool Box Talks to all crews.
  - Implemented Culture of Care education with all Supervisory and Management Staff.

With an ethnically diverse staff we are passionate about providing education and resources to improve inter-cultural relationships and understanding whenever possible.

## AGC Inclusion

As dedicated AGC members, the AGC is part of every job we do; all BX equipment proudly displays the AGC logo.

While the pandemic did not allow us to participate in some of the regular youth construction safety programming, we were able to actively participate in the Construction Career Academy and the SD Roads 2 Jobs programs. Both programs focusing on increasing awareness of construction careers and employment opportunities. The future of our workforce depends on our ability to draw new talent to our field, by partnering with the AGC in these programs we are ensuring the continued growth to meet our industry needs.