



**SCOPE OF WORK**



Sand Creek project, template construction

The Sand Creek Stabilization project was a pre-designed 265-foot long secant pile cut off wall, to be used for scour prevention in the event of flooding of Sand Creek. The primary piles were designed to be backfilled with low strength concrete and the secondary piles were backfilled with 4,000 psi concrete reinforced with steel cages.

Total budgeted drilling for the project was about 3,200 lineal feet for both the primary and secondary drilling. Through the testing, the material did not meet the minimum strength. In

situ testing could not verify the minimum strength either. There is also no approved method to determine the situ strength of low strength concrete. The owner rejected the work that was installed with the low strength material. One third of the primary piers were replaced. All concrete was changed to the same concrete as the secondary piers. Also, the re-drilled primary holes were backfilled with 4,000 psi concrete mix because of the problems with the low strength concrete.

**CONCLUSIONS**

To prevent future issues, we will use the same concrete for all piers when possible and avoid low strength material, know the testing methods and make sure that the test agency follows required test procedures. We would also use a concrete supplier that we had prior work history with or verify the quality of the concrete supplier. Even with the additional drilling, the project was completed ahead of schedule. This was a Challenging project for Schnabel using secant piles and the Bauer BG vertical drills. Congratulations to the project team involved for completing all the work safely and efficiently.