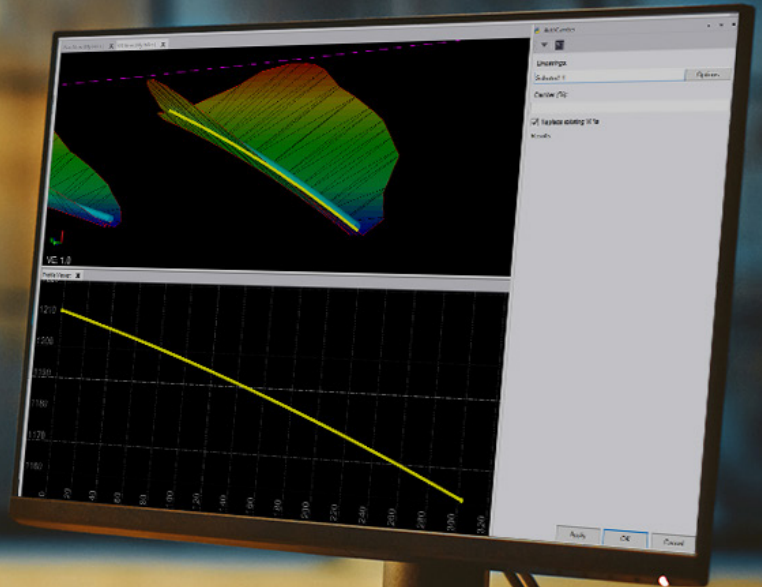




# How to Design & Inspect Culverts with Camber

- Read the Grade

Thursday, March 6, 2025  
8:30 AM - 3:30 PM



Associated General Contractors of Alaska  
8005 Schoon St | Anchorage, AK 99518



The Alaska Construction Survey Requirements specify a minimum of 1% camber on every culvert, but there is a lot more nuance to exactly what circumstances lend themselves to installing a string of pipes along a vertical curve. How does this impact the longevity of both the pipe system and the embankment? When should camber be avoided? How much is too much? What factors should be considered according to the Construction Manual? How much does added camber affect the excavation quantities?

We will discuss the theory as a group, then walk through the steps on how to model a culvert system with camber in Trimble Business Center. With our sample pipe models, now we can see how to review the design and inspect the installation of the pipes. Starting with a study on culvert camber from 1964, we end with the latest augmented reality technology to visualize the utility in 3D space before, during, and after construction!

#### Objectives/Topics:

- Longevity and Potential Cost Savings
- Theory from Kentucky Camber Design Study
- Guidance in the Construction Manual
- How to Model Camber in TBC & manually
- How contractors build trenches using Automated Machine Guidance
- Statewide specs
- Regional 'norms'
- Inspection methods
- How much is enough, too much?

