

## Core Area Amphitheatre Tensile Roof

### Background

The Town of Telluride, CO required the tensile fabric at the Telluride Town Park to be replaced. The structure is used as shelter, for concerts & events and as rest area for ice rink participants and other users of the park year-round. The original structural drawings were not available. Signature Structures LLC, of Bethlehem, PA, won the contract and followed the tensile fabric replacement process they have refined through multiple similar projects. The town requested that the steel structure, foundations, and cables be re-used to the maximum extent possible.

### Solution

A complete survey was conducted and the tensile roof was modeled using standard tensile software. Engineering documents were submitted to obtain a building permit. As is typical for membrane replacements projects in snow load areas in the USA, some compromises were required in regards to snow loads that are currently required versus what was originally used in the design. The existing roof of PVC coated fabric was 29 years old and code requirements have evolved substantially in that time.

The town requested minimal changes to the tensioning hardware to retain the rustic look that they favor. Although tensile technology has evolved greatly over the last 29 years, and options to update the technology were reviewed, the original tensioning methods were retained, both to keep the original aesthetics and to ensure that load distributions in existing frame parts and cable attachments would not change substantially.

The Signature Team has developed custom methods to replace the tensile roof system that allow cost reductions on a site having limited and difficult access as well as a 2 week time period to conduct the construction. Signature is proud to have the Town of Telluride as a long term, annual client that sees firsthand the Signature Difference™.

### Details

Signature did a complete overhaul of the existing infrastructure, sand blasted and painted the hardware, posts, bails and connection flanges. We replaced the cables with new PVC coated cables integrated within the fabric system and replaced the turnbuckles along with the catenary cables. The membrane was done with Ferrari 1202 and the demolition and construction was done in a one week period to facilitate events and seasonal activities, thanks to meticulous preparation and excellent cooperation with township personnel

***“We had such a positive experience working with Signature Structures and would certainly recommend and send any positive references to prospective clients. Signature met all commitments and exceeded the Towns expectations with the job performed.”*** - Town of Telluride, Facilities Mgr.

