Project Description:

The Sigurd to Red Butte Transmission Line, located in Southwest Utah, traverses five counties interconnecting the Sigurd and the Red Butte Substations. This transmission line consists of 172 miles of heavy steel H-frame construction supporting two-bundle 954 ACSR “Cardinal” conductor and 48-fiber OPGW fiber. The project includes lattice and steel pole designs with limited access areas that require innovative design and construction measures. Due in large part to environmental and topographic restrictions, numerous structures require heavy use of helicopter construction techniques.

ECI was responsible for final design tasks, including detailed transmission line design, PLS-CADD modeling, detailed structural design, bill of material and foundation design. All tangent structures are direct embedded with varying fill types as required by engineering design. Lattice towers and tubular steel running angle structures are supported by steel-reinforced drilled pier caisson foundations.

In addition, ECI was responsible for survey and staking of all structures, including leg extensions and structure offsets, field verification of the profile survey, and staking of all access roads and right-of-way boundaries. Included as part of our overall services are a complete review and revision to all PLS-CADD™ files, provision of construction drawings and specifications and preparation of all as-built documentation and drawings. ECI also provided engineering project management and on-site construction management services.

ECI’s responsibilities on the project include: design engineering, field engineering during construction, material management, and construction inspection.