



Overview: Single Span, Side-by-Side
Prestressed Concrete Box Girders

Owner: Noble Energy, Parachute, CO

Completion: 2007

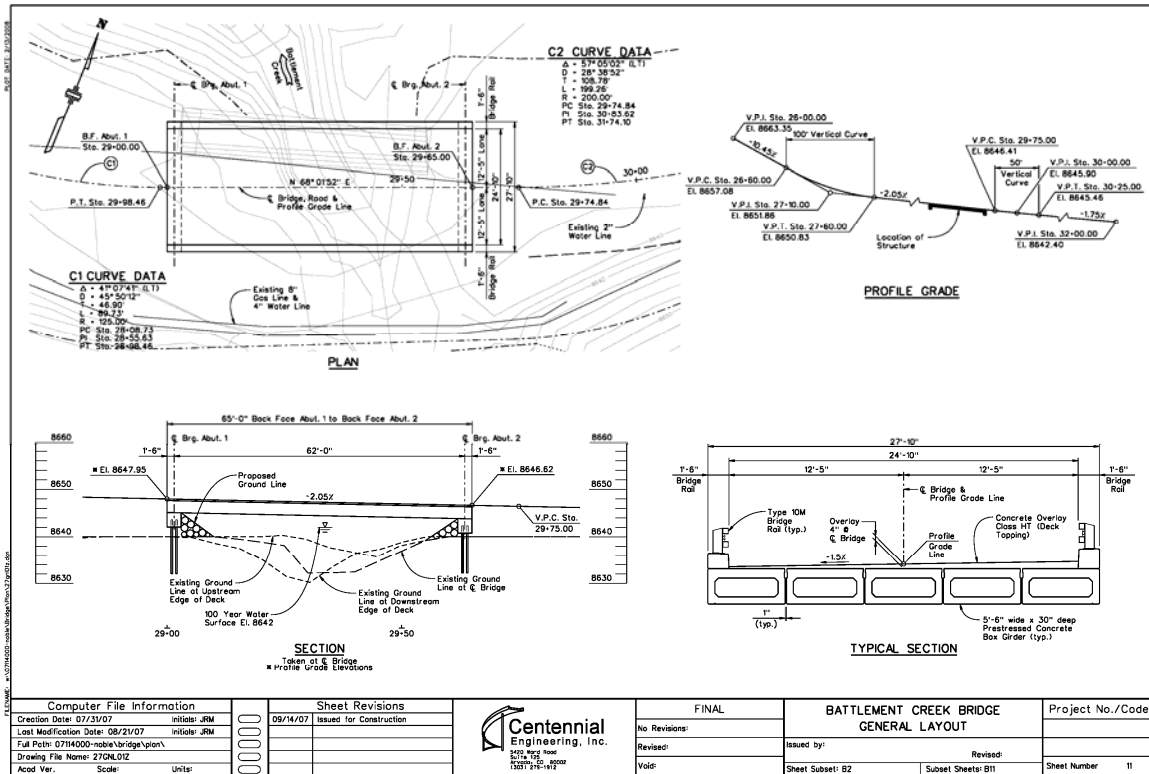
Access Road over Battlement Creek

Project Description

The Battlement Creek bridge is another example of Centennial's ability to work closely with a client to meet their needs in a way that is both timely and cost-effective. The new two-lane structure replaces a structurally deficient single-lane bridge and reduces the need to use the adjacent low water crossing for heavy loads, improving the water quality of the alpine stream. Situated at an elevation of nearly 9000 feet with a challenging access route, the CEI engineers had to tailor the design to meet the site-specific constructability constraints and the weather-dependent construction season. A project construction team was assembled during the design phase to streamline the build phase. The Centennial staff coordinated closely with the project team to provide a structure design that took advantage of each contractor's strengths. For example,

small diameter micropiles were used as the foundation elements enabling the foundation contractor (Yenter) to install the piles with standard rock anchor drilling equipment. The redundant nature of the micropile system also mitigated the variability of the alluvial overburden materials. Close coordination with the bridge contractor, (Colorado Constructors Inc.) was also key to the success of the project. Side-by-side precast concrete box girders were used to shorten the construction duration and to minimize the amount of concrete delivered to the site.

By optimizing the design and integrating it with the abilities of the project team, the bridge construction duration was trimmed to less than two months.



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