

Unlocking the Gateway



Clear Creek Canyon Park, Gateway Segment

Jefferson County, Colorado

Future Value to Engineering Profession / Enhanced Public Awareness

- › Engineered the future by rehabilitating 1930s Welch Ditch wooden flume and preserving 1870s Colorado Central Railroad stone walls
- › Tested cantilever bridge hung from cliffs for future project segments and new approach to permeable pavers to detain & treat water
- › *"The park design and engineering through the canyon is amazing. It is so picturesque from any angle."*
- Libby, mobility-challenged user

Social, Economic, & Sustainable Development Considerations

- › 14 recreational uses, from wheelchairs to biking, hiking to rock climbing, and fishing to kayaking
- › Wall stone veneer obtained from abandoned onsite quarry; restored Welch Ditch flume with timbers from closed sections
- › Improved environmental conditions by restricting access near sensitive plants and animals, removing extensive trash, and installing two permanent restroom buildings

Unique & Innovative Applications of Techniques

- › Steel cantilever bridge, anchored in cliff face, carries visitors across six spans
- › Welch Ditch suspension bridge and flume foundation repairs built without motorized equipment due to remote locations

- › Designed trail route via hiking and GPS due to inaccessible terrain and survey limitations



Fulfillment of Client / Owner Needs

- › Converted high-demand, challenging resource protection problem into the crown jewel of Clear Creek Canyon Park
- › Owner continuously involved in decisions via first Progressive Design-Build project administered by Colorado DOT
- › Met and surpassed all 12 pre-project goals



Complexity

- › 1.75-mile trail traverses creekside cliffs, rockfall areas, riparian areas, and historic features; maintained ADA-accessible grades of under 5%
- › Trailhead parking areas and highway turn lanes strategically arranged for traffic safety and rock cut avoidance

Entrant: Muller Engineering Company
Lakewood, Colorado



Owner: Jefferson County Open Space
Golden, Colorado



Client: Concrete Express Inc.
Denver, Colorado

