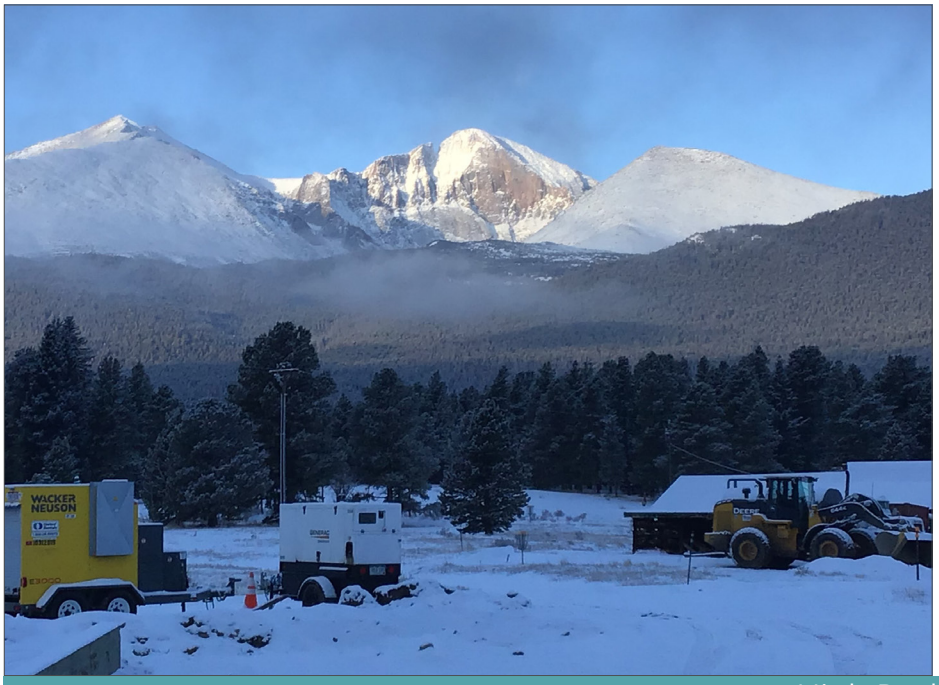

High Peak Camp Dam No. 4

Estes Park, CO

WHY THIS PROJECT IS RELEVANT

- Creative construction phasing
- Cost savings through VE
- High mountain elevation
- Collaboration with engineer
- Spans seasons
- Colorado project
- On time and within budget

PROJECT SIZE

50,000 Cubic Yards Zoned Embankment
8,000 Cubic Yards Imported Clay
25 feet of Excavation to Bedrock

INITIAL/FINAL COST

$2,818,958/2,803,328

CHANGE ORDERS

$162,000/Added Import Clay

COST SAVINGS

On Budget

SCHEDULE

September 2020 - August 2021

PROJECT TEAM

Dan Sewczak
Jesse Sewczak
Mike Sewczak

High Peak Dam is part of the Salvation Army's High Peak Camp located at the base of the Rocky Mountain's in Estes Park, Colorado. Located at an elevation of 9,000 feet, the new reservoir serves as a recreational area for the thousands that attend camps and retreats at the High Peak Camp each year.

The existing dam was breached during the 2013 flood and deemed unsafe by the State Engineer and Zak Dirt was hired to construct the new dam which consisted of:

› Demolition of the existing dam and outlet structure

› Foundation Excavation to bedrock

› A new outlet works (Intake structure, pipe encasement, gate tower, grade beam, baffled outlet and grouted rip rap outlet channel)

› A zoned excavation utilizing 50,000 CY of onsite material and 8,000 CY of imported clay

› Upstream rip rap protections

› Construction of a grouted boulder emergency spillway.

Zak Dirt became a part of an integrated process with the Salvation Army and the engineer, Deere and Ault and the QC testing firm, Ground Engineering to ensure that all potential cost and schedule savings were recognized and potential risks and constructability challenges were mitigated.

High Peak Camp Dam No. 4 (Continued)
Estes Park, CO

REFERENCES

OWNER
Will Raihl
Salvation Army
720-866-9297
will.raihl@usw.salvationarmy.org

ENGINEER
Mark Severin
Deere & Ault
970-231-3556
mark.severin@deereault.com

SELF PERFORM
95%

All scopes of work except seeding and planting

CREATIVE VALUE ENGINEERING AND CONSTRUCTABILITY

The bid date of the project was delayed due to design revisions required by the State Engineer and Zak was unable to start construction until October of 2020.

The existing dam and surrounding area required nearly 40% more excavation to get to stable bedrock and due to this Zak would be unable to complete the project prior to winter.

Zak worked with the owner and engineer to construct critical items prior to the winter and allow for the spillway and outlet structure (items not largely affected by cold weather) to be constructed in the winter while dam embankment was not possible.

This allowed for the project to be about 80% complete and only left about 6 weeks' worth of work to be completed once the site could be restarted in the summer.