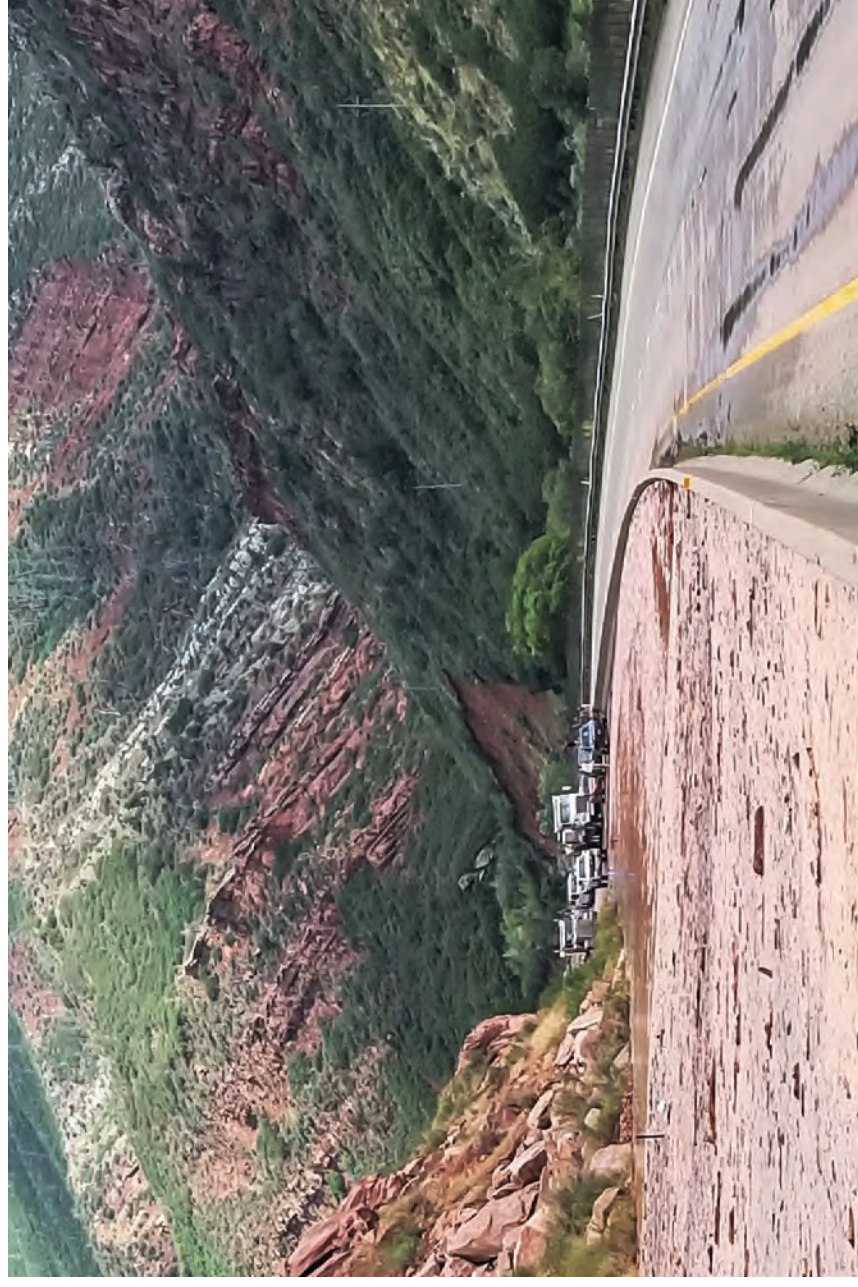
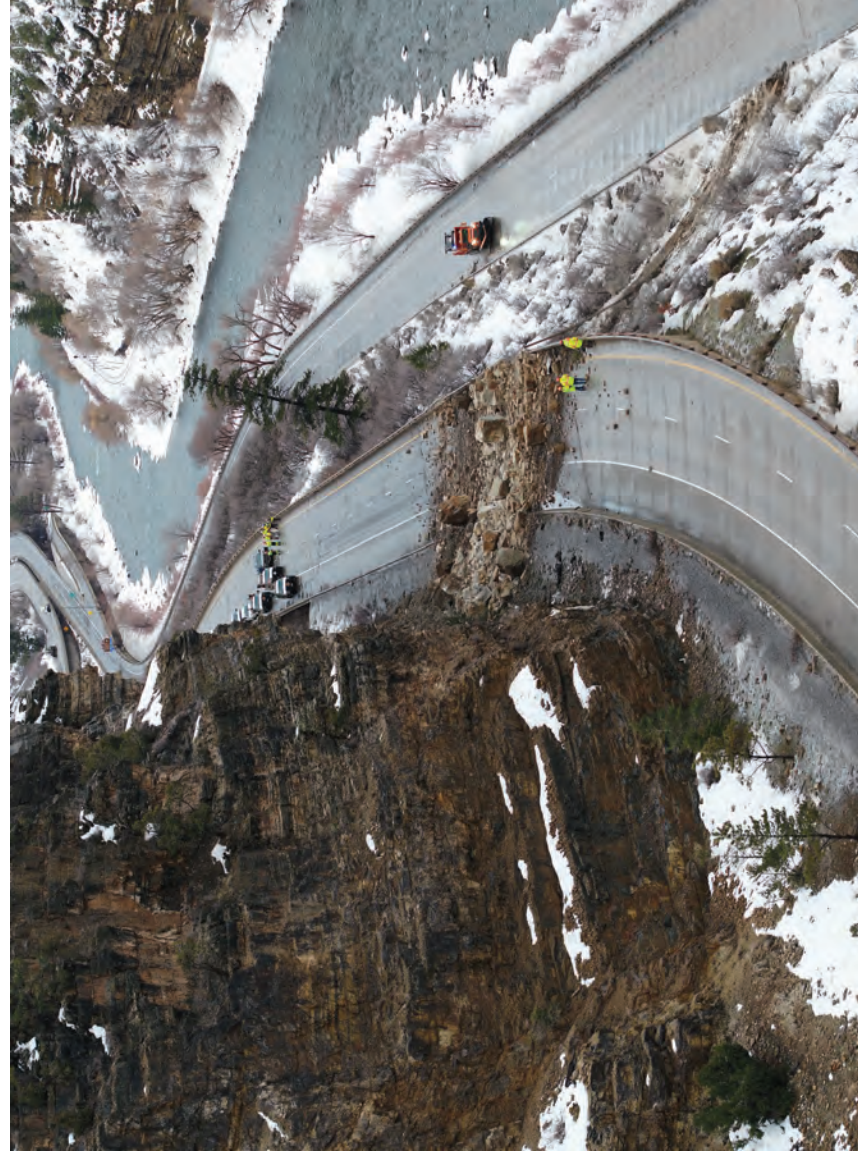


MURP Capstone: CDOT I-70 Risk and Resilience Refined Data Evaluation

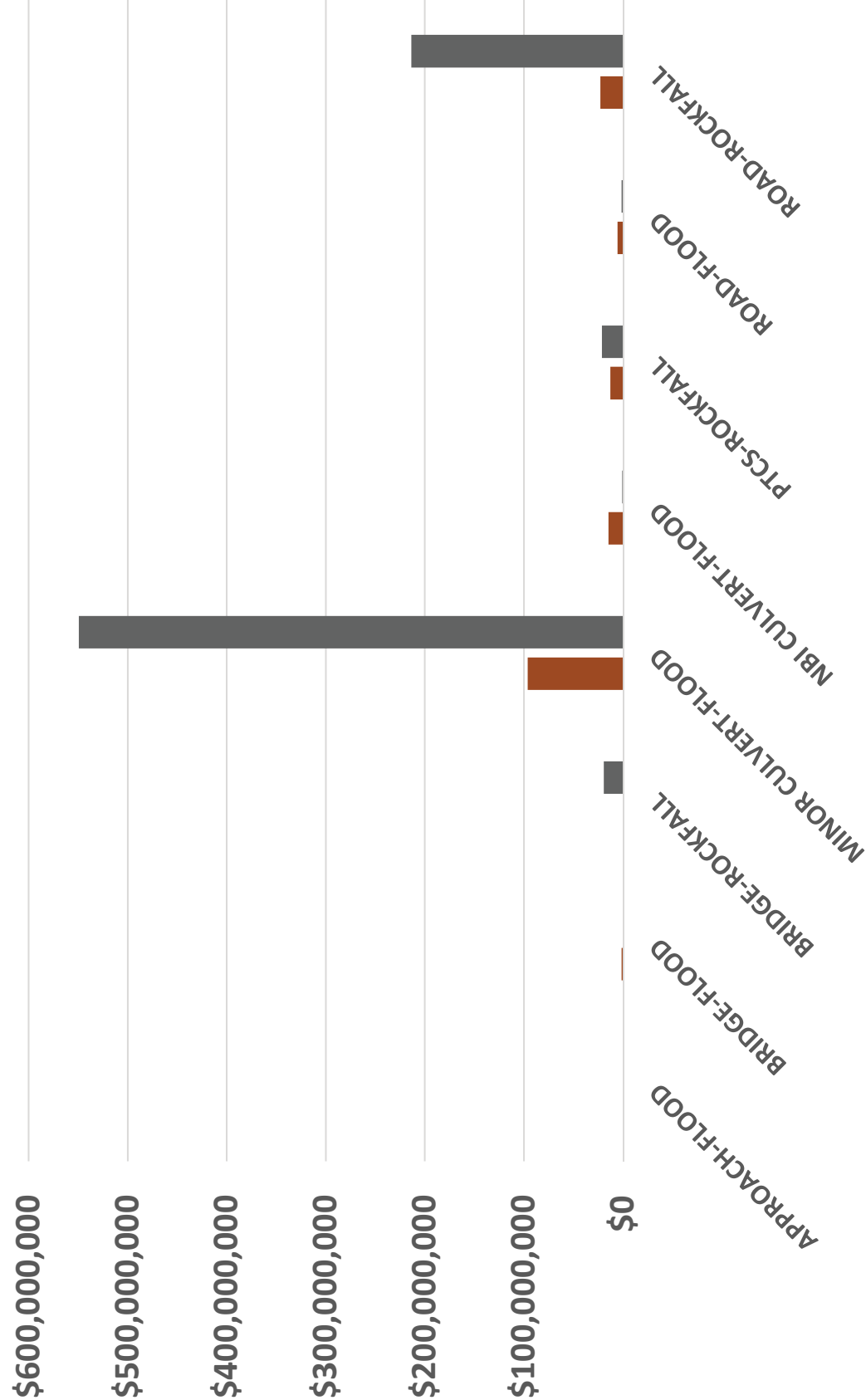
Project Background

In response to the 2013 floods, CDOT created the Resilience Program to develop strategies and projects that prepare the transportation system for future threats and challenges. The I-70 Risk and Resilience Pilot Study seeks to quantify the risk that threats pose to assets along the I-70 corridor and is a highly publicized example of best practice in the resilience field. The initial pilot study was completed in 2017, after which CDOT developed the Risk and Resilience Standard. The data model used to calculate risk was rerun using refined assumptions from the Standard. Comparing and evaluating the two data sets was the primary goal of the Capstone Project.



User Risk

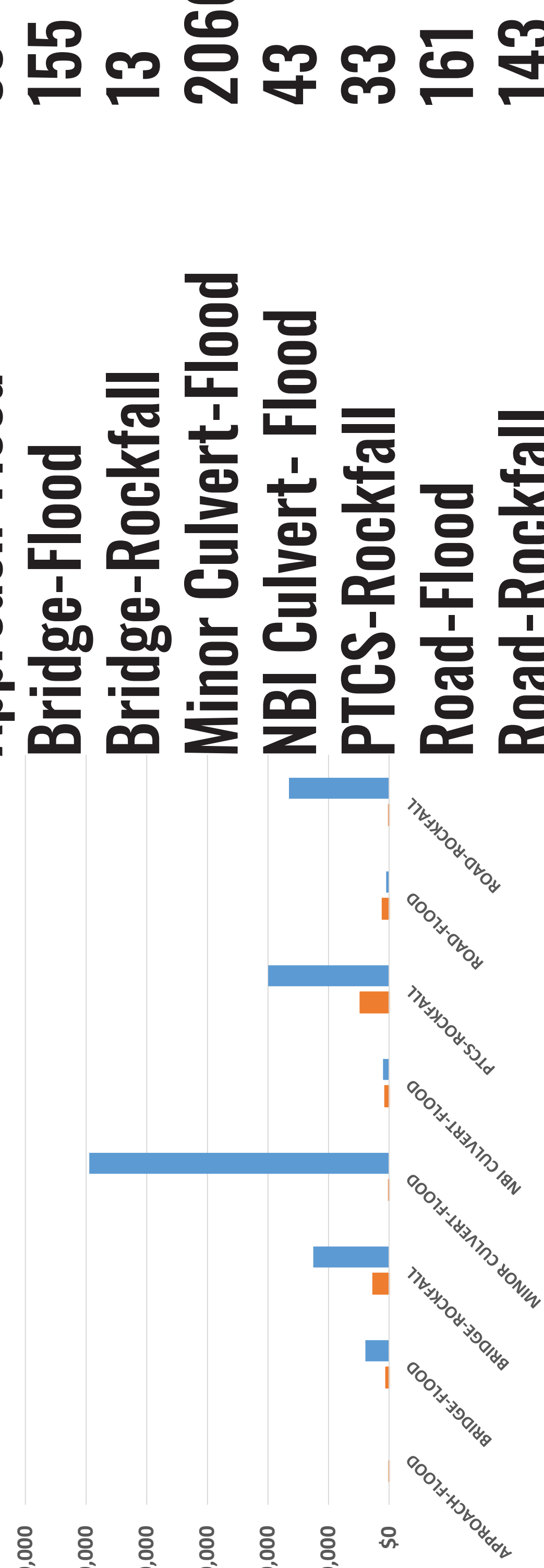
User Consequences (Road Closure/Delays) x Vulnerability to threat x Likelihood of threat



■ User Risk Round 1 ■ User Risk Round 2

Owner Risk

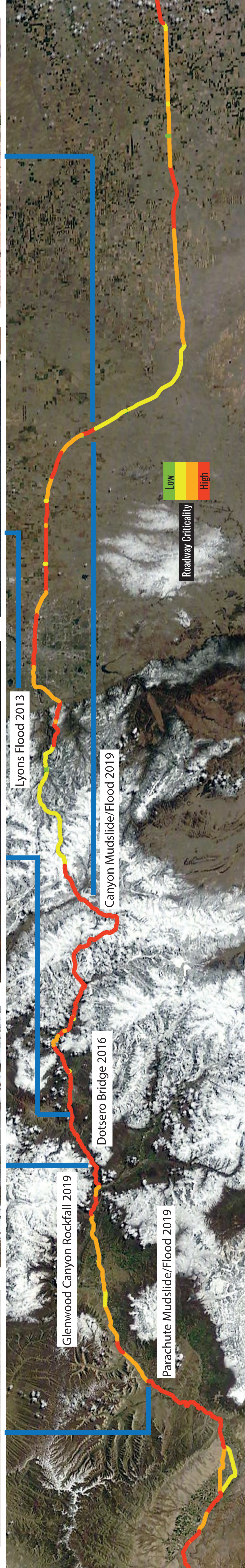
Owner Consequences (Cost to replace or repair) x Vulnerability to threat x Likelihood of threat



■ Owner Risk Round 1 ■ Owner Risk Round 2

Threat Asset Pairs

Threat Asset Pairs	#
Approach-Flood	53
Bridge-Flood	155
Bridge-Rockfall	13
Minor Culvert-Flood	2066
NBI Culvert- Flood	43
PTCS-Rockfall	33
Road-Flood	161
Road-Rockfall	143



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