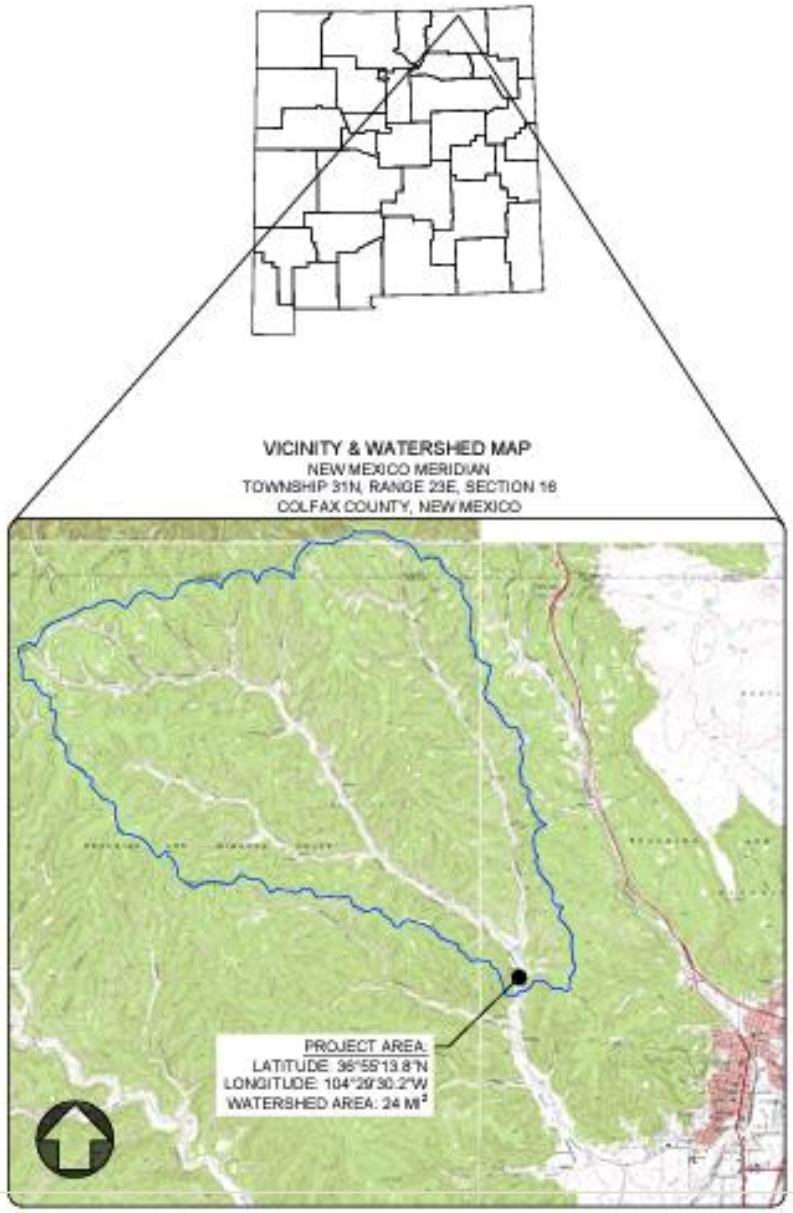
# Swastika Mine and Dutchman Canyon Maintenance and Stream Restoration Project Photos




*Project Location*

*Figure 1. Original completed project (left) and aftermath of 2012 storms (right). Banks of the channel were potentially eroding into buried gob material.*

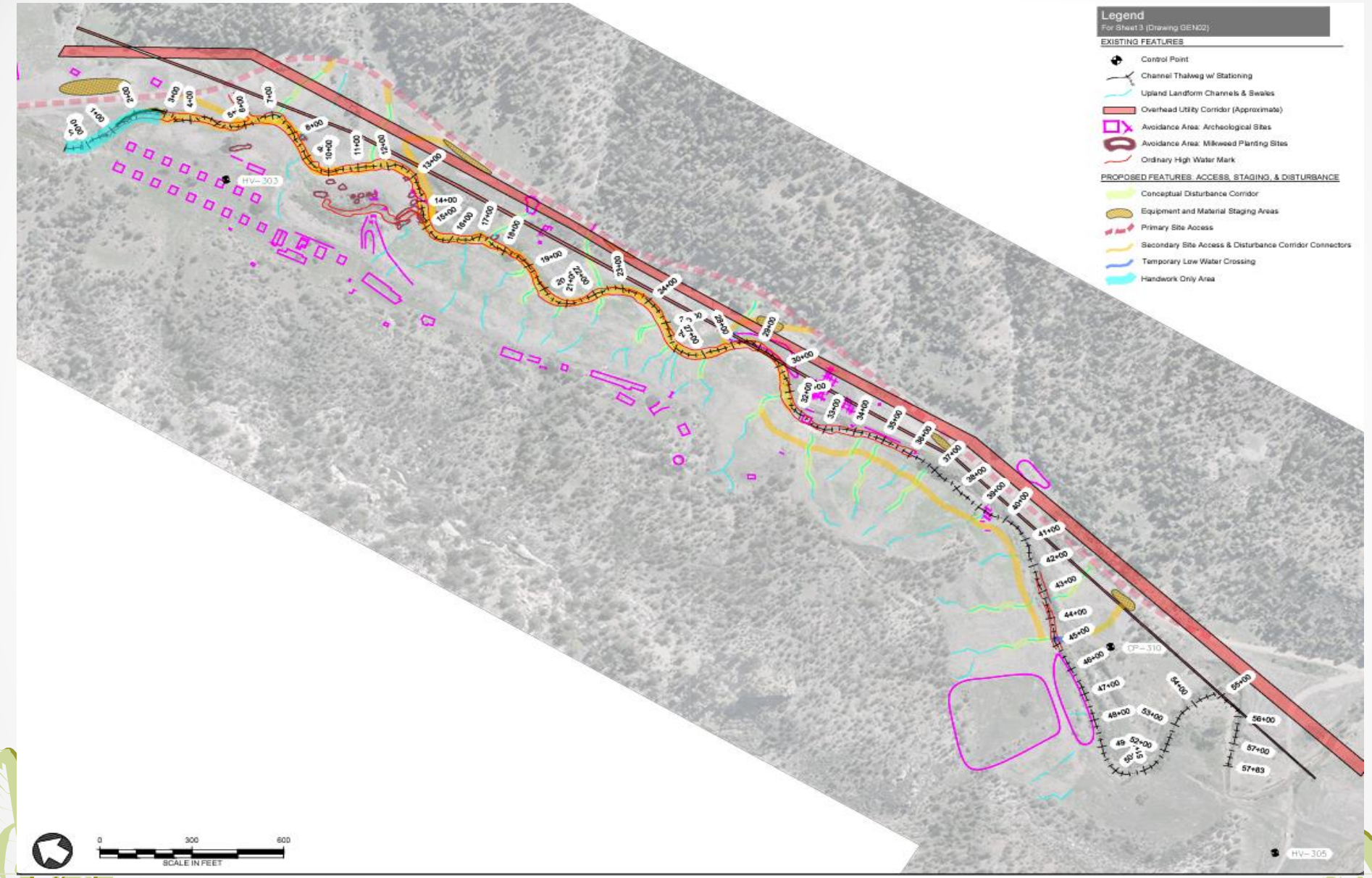



*Figure 2. Overview of the Stream Work Design Elements*

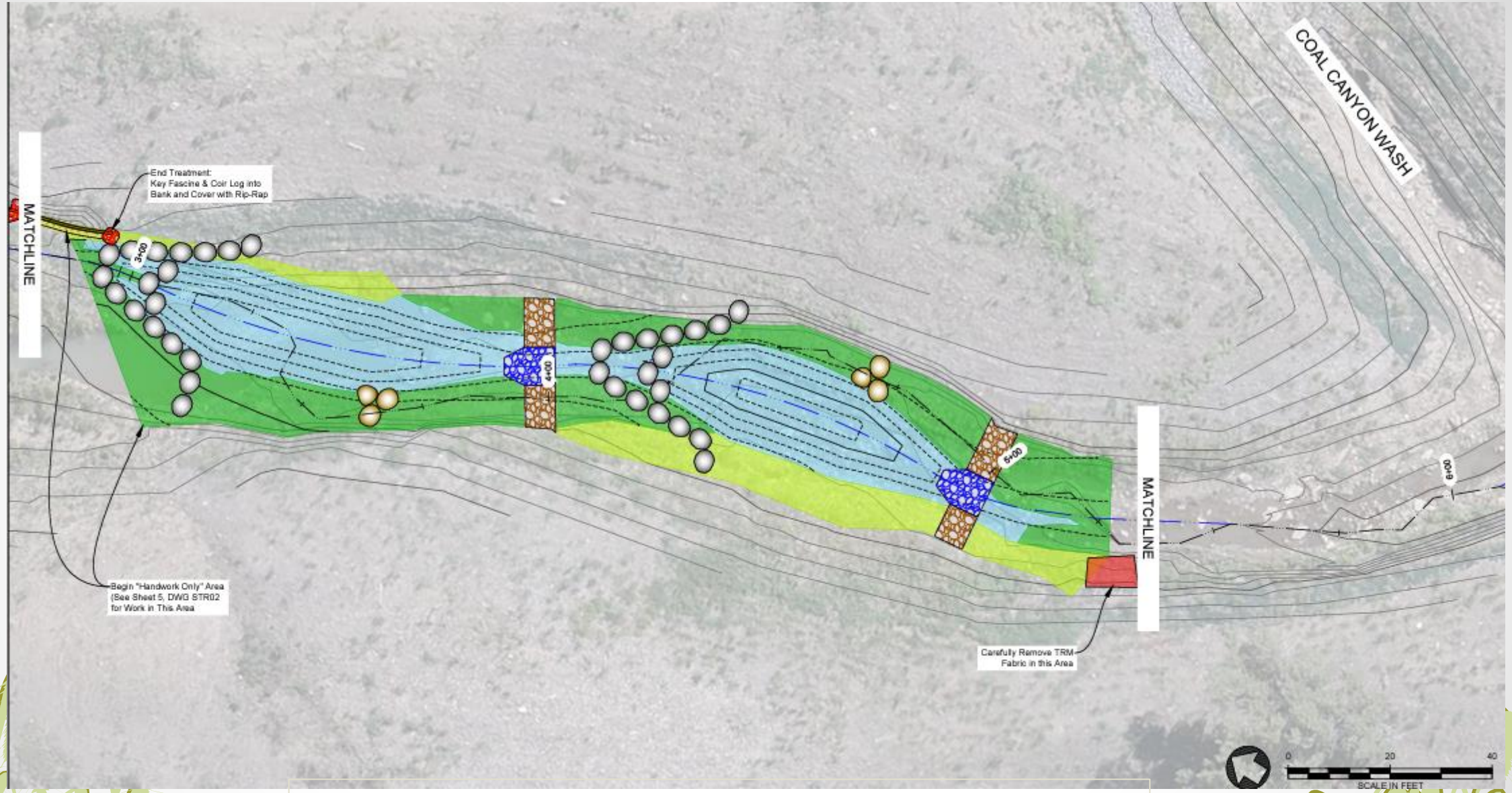



*Figure 3. Typical Meander Overview*

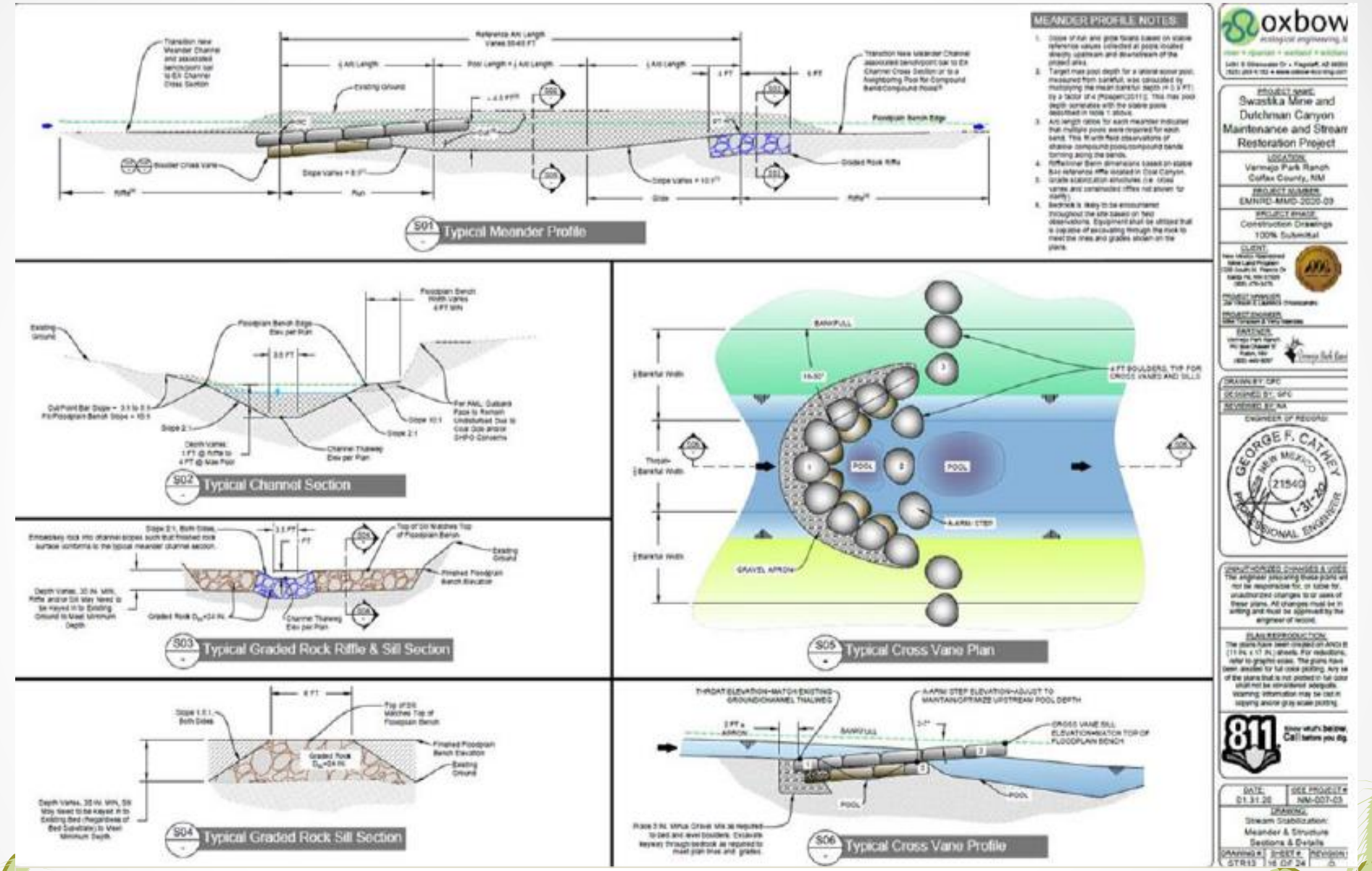



*Figure 4. Channel Structure details in Engineering Design*



*Figure 5. Conveyor belt being used to drop boulders into place in the stream channel across an archaeological avoidance area (left) and equipment work in the channel (above).*


*Figure 6. Shaping Pools within Channel for Installation of Rock Structures (Cross Vanes)*

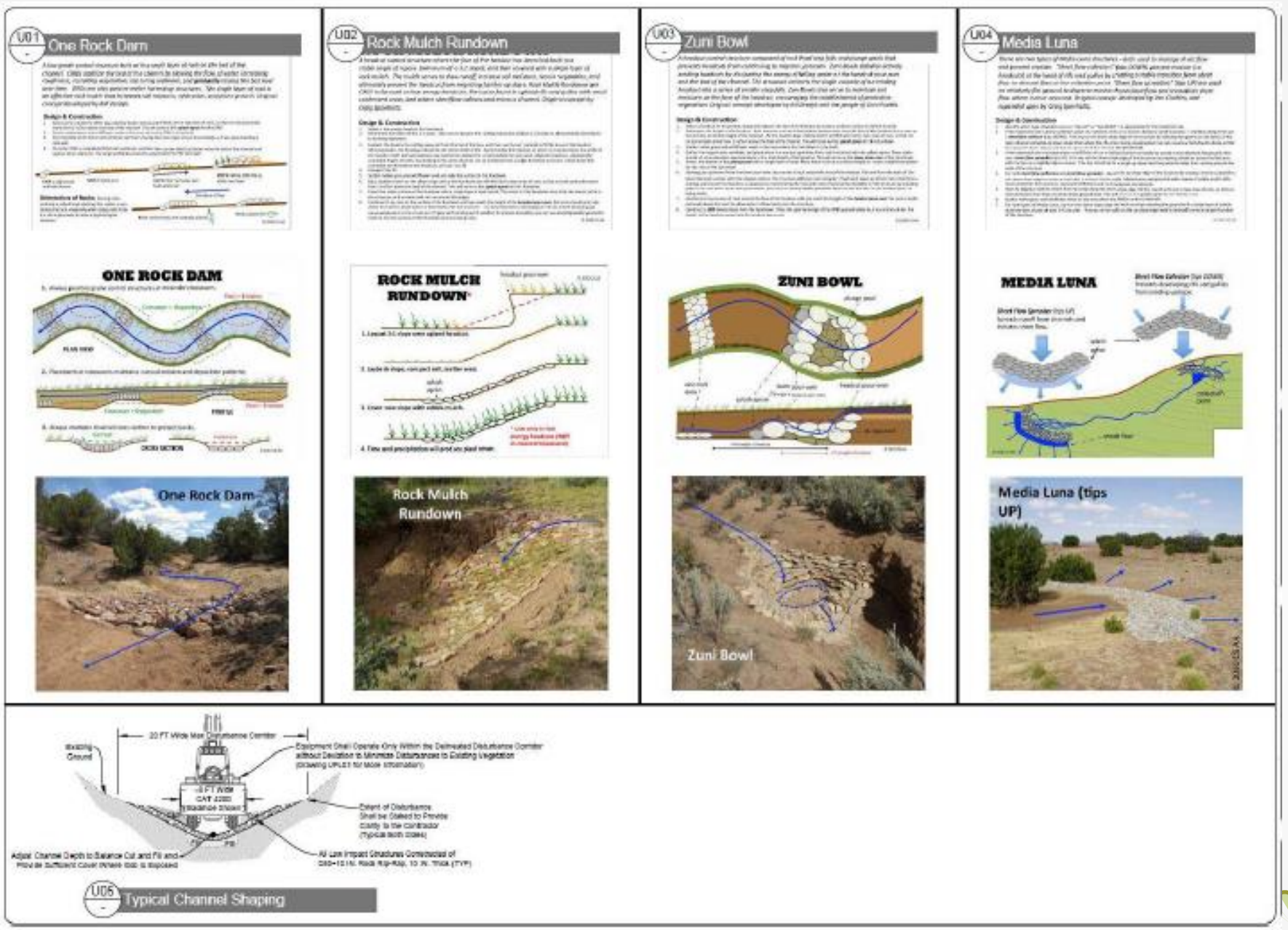



*Figure 7. Upland rock structures to address gullying and rilling*

*Figure 8. Working on upland erosion control structure in steep, frozen conditions.*

*Figure 9. Shaping and installation of upland rock structures (one-rock check dams and media lunas)*


*Figure 10. GPS-guided John Deere track loader above and Terramac Crawler below*

*Figure 11. Structures doing their job after rain events, moving the flow aways from eroding banks*

*Figure 12. One year after reclamation monitoring using small uncrewed aircraft systems. Notice the pant growth on benches.*