Using Ditches to Protect the Road Bed and Surface – Clear Ditches

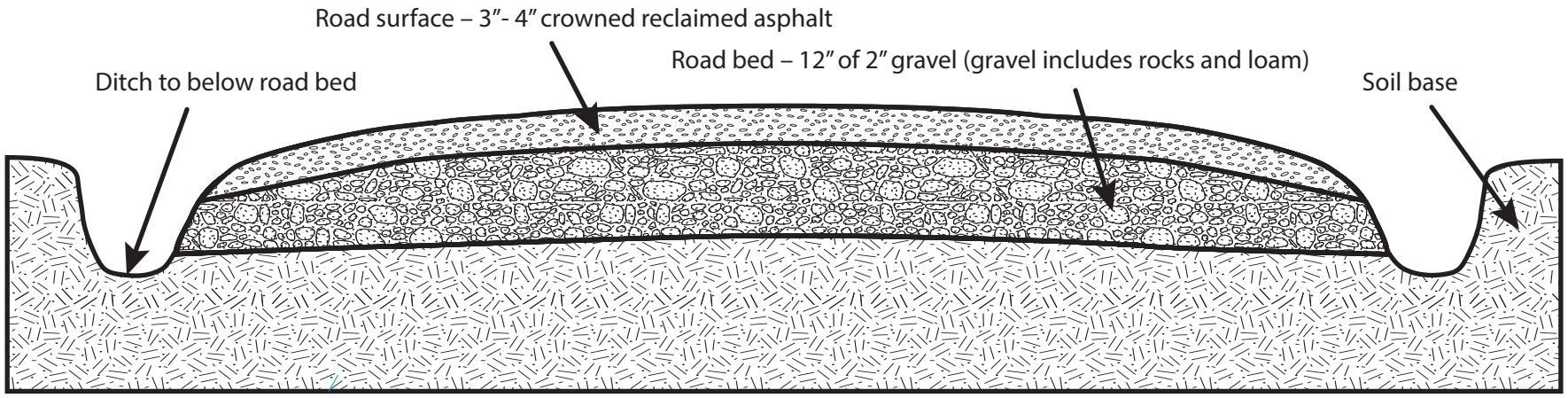

Figure A: Standard Construction

3" to 4" of crowned reclaim on top of a foot-thick 2" gravel base, with the crown directing water into the ditches to avoid erosion channels. While ditches drain the redirected surface water, they also drain water from beneath the road bed.

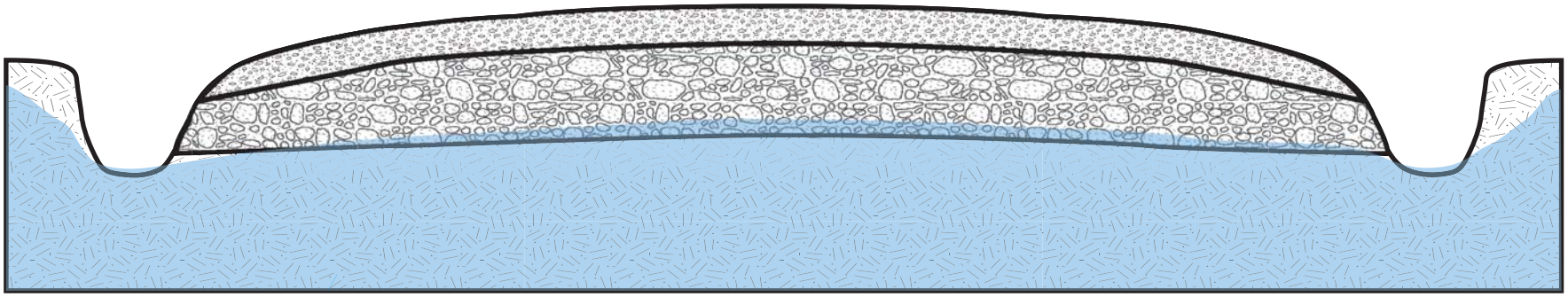

Figure B: Water Drainage

Ditches drain the water table to the bottom of the road bed, preventing saturation so it can support heavy loads and most construction traffic.

Using Ditches to Protect the Road Bed and Surface – Ditches with Rock Fill

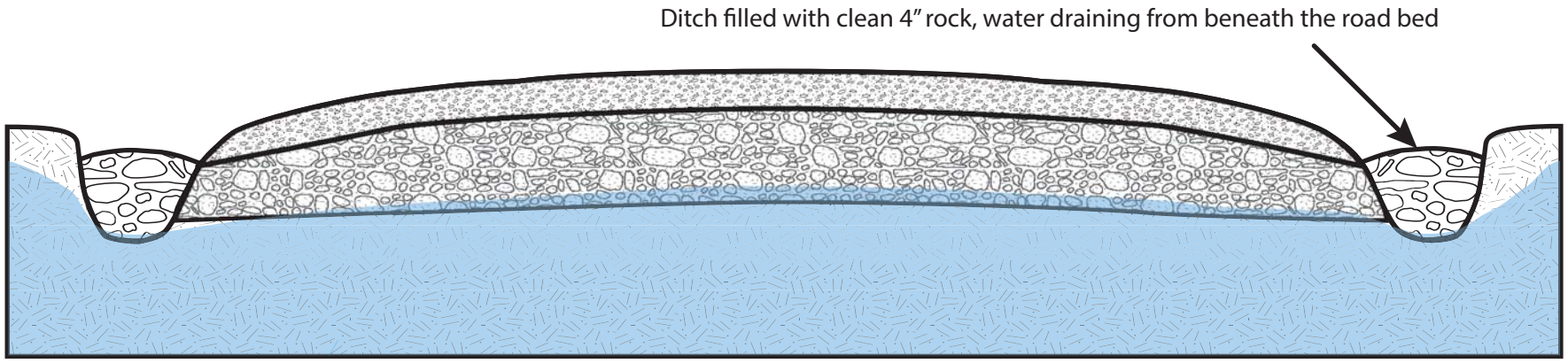

Figure C: Ditches filled with clean 4" crushed rock

Ditches filled with clean rock still protect the road bed from saturation. Water will drain freely if the gaps between the rocks are clear. The road can hold its shape under the weight of most vehicles as long as the water level in the ditch is close to the bottom of the road bed.

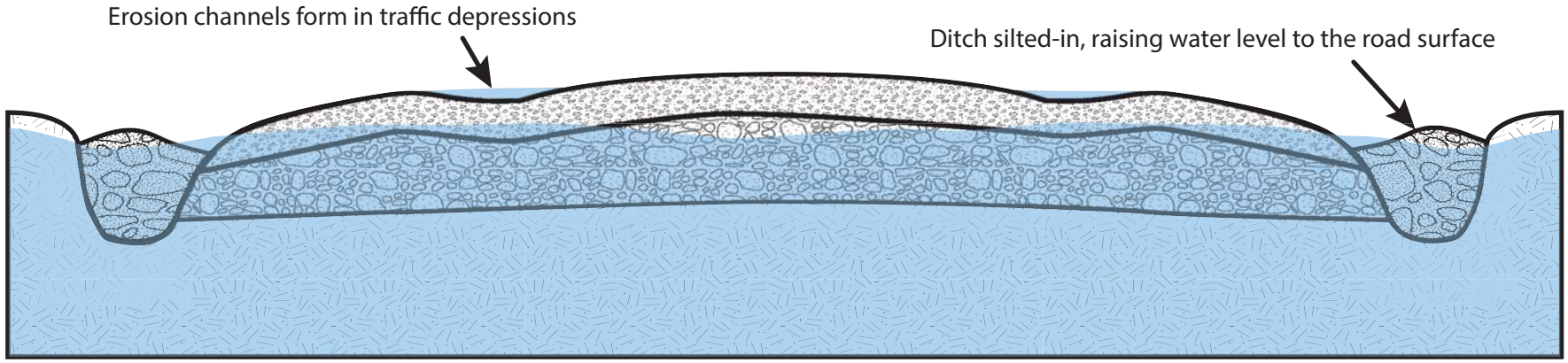

Figure D: Ditches silted-in, preventing drainage

Once the rock gaps fill with silt, the ditches can no longer drain beneath the road bed. The road then becomes saturated, allowing the weight of heavy vehicles to deform its shape. This is what caused the garbage truck to sink into the road in 2021. Ditch water is currently at or above the road surface after extended rains, as well as during mid-to-late spring, leaving the road unable to support big loads without deforming.