

When the spring rain arrives and umbrellas open over our heads, there will already be an umbrella of sorts open under our feet. The umbrella in this video is being installed now, a week before spring, in the [Confederation Line](#)'s Rideau Station cavern. The sequential excavation method being used to mine the tunnel includes the installation of these umbrellas to reinforce and support the tunnel during excavation. It's built with horizontal piling; holes are drilled and then steel pipes are inserted and grouted in place with concrete. It's probably not as portable and lightweight as your umbrella, but it does the job.