

Highway 401 Emergency Work

Mississauga, Ontario, Canada

Keller provides emergency grouting to stabilize the roadway following settlement from nearby tunneling.



The project

Highway 401 stretches 828 km from Windsor, Ontario, to the Ontario-Quebec border and is North America's busiest highway. Following a recent tunneling project at the intersection of Highway 401 and McCowan Road, a 200m² section of the highway directly above the proposed tunnel location experienced significant settlement requiring remediation.

The challenge

To avoid further settlement or sinkhole formation at the surface, it was essential to stabilize the ground effectively while minimizing disruption to the highway and the underlying subway tunnel.

The solution

Within 24 hours of being contacted by the owner and general contractor, Keller was mobilized to perform the emergency remediation. To mitigate the settlement, Keller recommended low-mobility (compaction) grouting, which involves injecting the grout under controlled pressure to enhance the ground's strength and stiffness. The grout fills the voids, increasing the density of the in situ soil with minimal disruption.

Keller collaborated closely with subcontractors and the client's team, working day and night shifts to accommodate the short schedule. Keller successfully completed 40 grouting points, injecting over 60 cubic meters of grout into the affected area.

Project facts

Owner(s)

Ministry of Transportation Ontario

Keller business unit(s)

Keller

Main contractor(s)

Strabag

Engineer(s)

Strabag, Keller

Solutions

Ground improvement

Markets

Infrastructure
Transportation

Techniques

Low mobility (compaction) grouting

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