

## PROJECT BACKGROUND

In spring 2019, MnDOT closed a portion of Highway 67 between Granite Falls and Echo. The roadway carries about 400 cars per day and is built along a slope near a bend in the Yellow Medicine River. The roadway is unstable due to movement of the earth underneath the roadway.

## OBSERVED PAVEMENT CRACKING

In April 2019, MnDOT observed pavement cracking along Highway 67 in this area. MnDOT closed the roadway and continued to monitor the cracking. The cracking continued to worsen (see images below). Monitoring movement in the hillside was MnDOT's first step in determining the best option to reopen Highway 67.



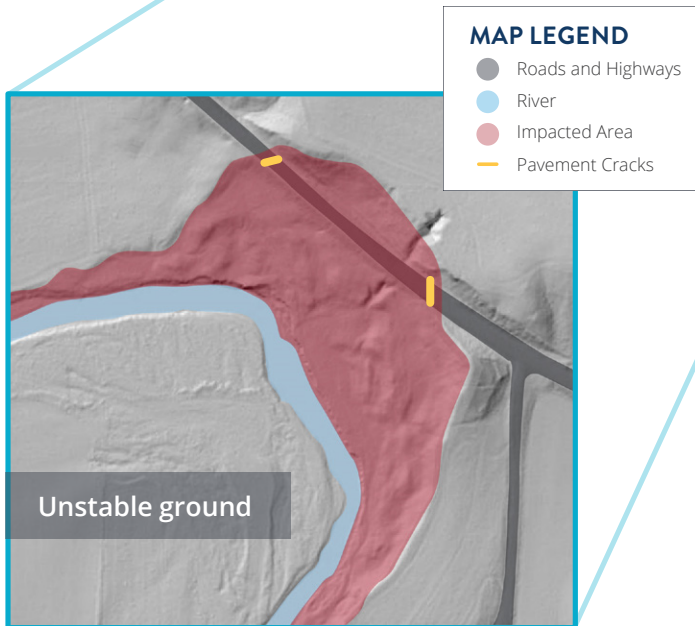
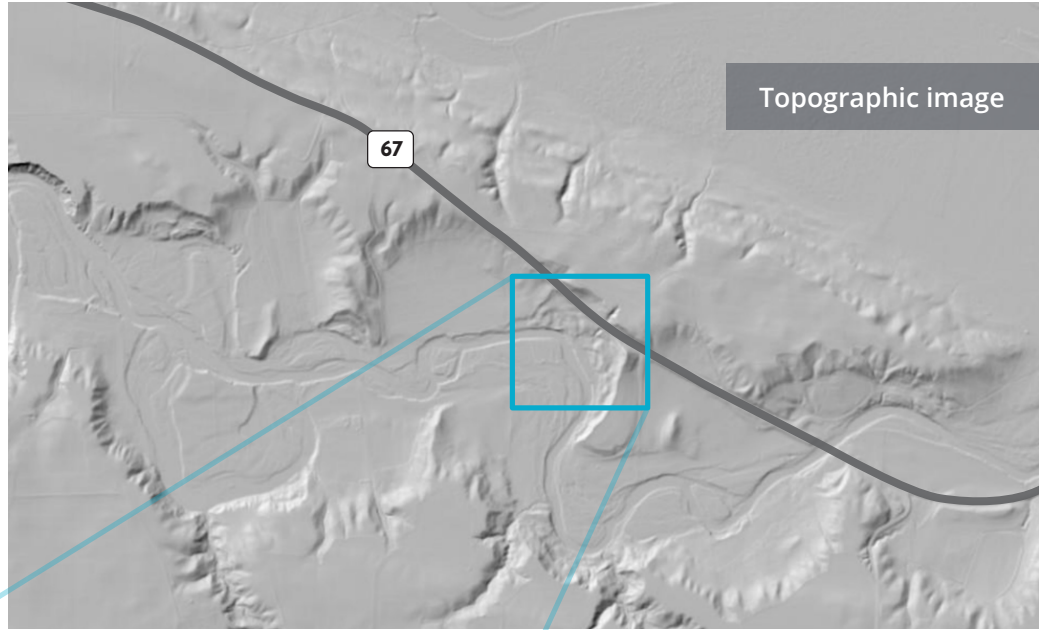
## ADDITIONAL OBSERVATIONS

In addition to the roadway cracking, MnDOT also observed significant ground movement along the Yellow Medicine River, located downhill from the roadway. The cracks in the ground captured at the river level show the scale of movement (see images below).

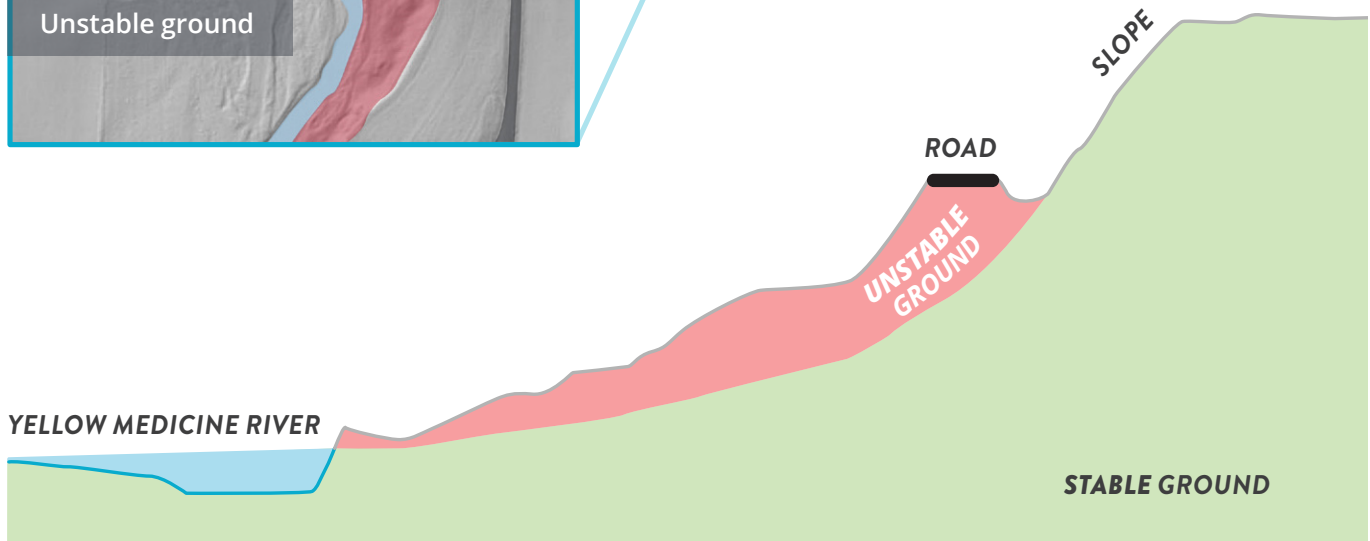


## ANALYSIS OF GROUND CONDITIONS

As a next step, MnDOT further analyzed the ground conditions near the closed portion of roadway. The analysis showed that the ground in this area has a history of movement due to its location near the river bend, drainage characteristics and soil types. The images show a topographic view of the area. Note the bowl shape along the bend of the river in the image below.



The illustration below highlights findings of this analysis – a lot of the ground underneath the roadway is unstable. Repairing the roadway in place would require significant specialized construction to stabilize the ground.



## POTENTIAL SOLUTIONS

MnDOT worked throughout 2019 to identify several potential solutions to re-open the closed portion of Hwy 67. The potential solutions considered included repairing the roadway in place, realigning the roadway along the existing route or rerouting Highway 67 via other roadways.

MnDOT evaluated the potential solutions and determined that repairing or realigning the roadway are not feasible options due to:

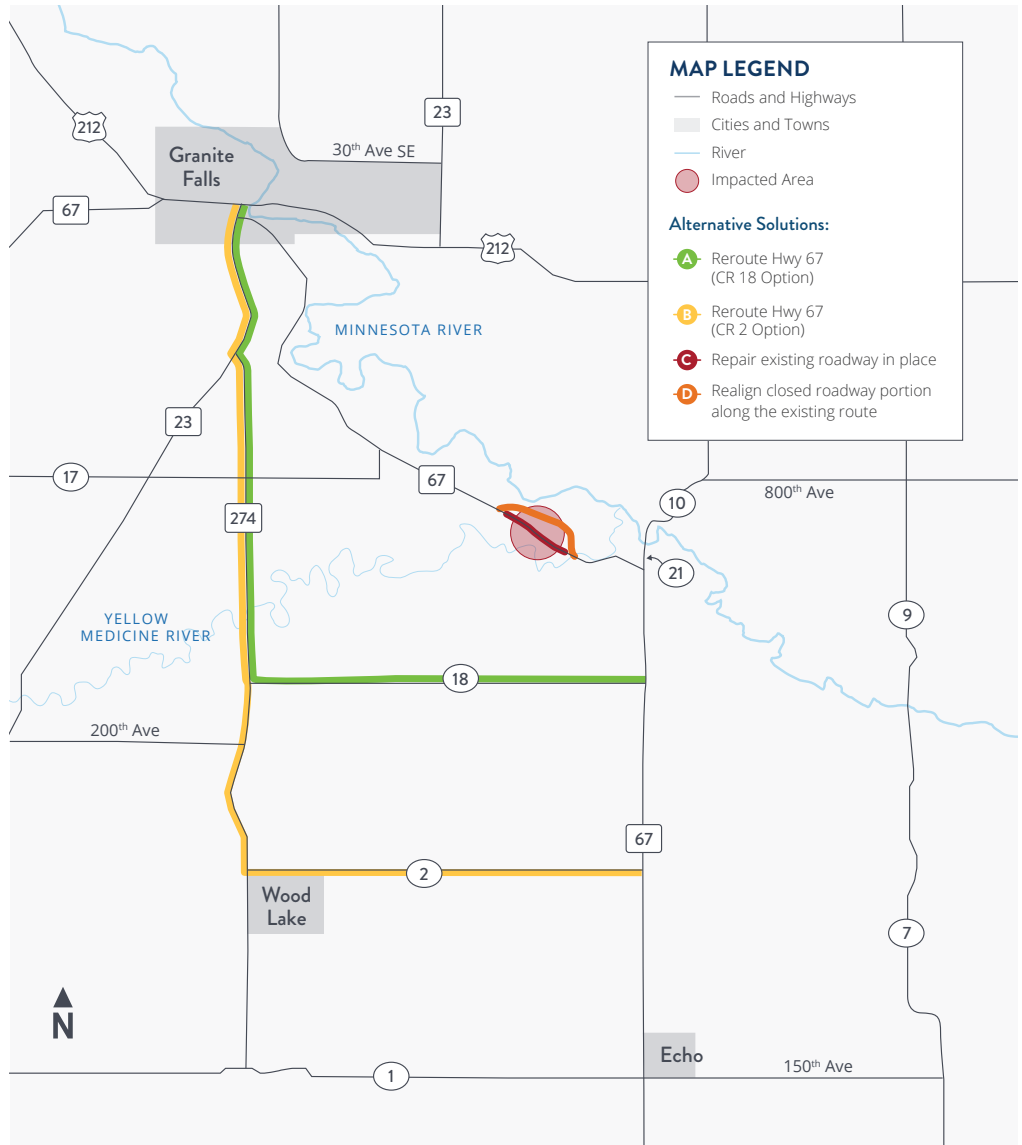


High cost (repairing the roadway in place would cost roughly \$30 million)



Significant impacts to the environment and historic and cultural sites because of the level of construction required to stabilize the ground

MnDOT is continuing to explore two options to reroute Highway 67 between Granite Falls and Echo.



REROUTE ALTERNATIVES				
POTENTIAL SOLUTION:	<b>A</b> Reroute Hwy 67 (Co. Rd. 18 Option)	<b>B</b> Reroute Hwy 67 (Co. Rd. 2 Option)	<b>C</b> Repair Existing Roadway in Place	<b>D</b> Realign Closed Roadway Portion Along the Existing Route
DESCRIPTION:	Move the Hwy 67 designation from the existing roadway to portions of Hwy 274 and Co. Rd. 18 (210th Ave.)	Move the Hwy 67 designation from the existing roadway to portions of Hwy 274 and Co. Rd. 2 (180th Ave.)	Reinforce the ground and built a new roadway in the same location. Protect the river bank from future erosion.	Build a new roadway on the top of the bluff to replace the closed portion and avoid the unstable ground.
COST:	\$	\$	\$\$\$\$	\$\$\$
SCHEDULE:	One year to fully complete	One year to fully complete	Three years to fully complete	Three years to fully complete
IMPACTS:	<ul style="list-style-type: none"> <li>• Park and property access: Medium</li> <li>• Environmental: Low</li> <li>• Historical: Low</li> </ul>	<ul style="list-style-type: none"> <li>• Park and property access: Medium</li> <li>• Environmental: Low</li> <li>• Historical: Low</li> </ul>	<ul style="list-style-type: none"> <li>• Park and property access: Low</li> <li>• Environmental: High</li> <li>• Historical: High</li> </ul>	<ul style="list-style-type: none"> <li>• Park and property access: Low</li> <li>• Environmental: High</li> <li>• Historical: High</li> </ul>

## CHALLENGES OF REPAIRING IN PLACE (OPTION C) OR REALIGNING (OPTION D)

Significant specialized construction is required to stabilize the ground and repair the roadway in place. This is both time and cost intensive. Initial estimates put the cost of repairing the roadway in place at roughly \$30 million. Additionally, the process to do this construction, including ground stabilization work and building temporary access roads, would have significant impacts to the environment and historic and cultural sites in the area. Impacts to the environment include clearing trees, broader disturbance of the ground within the project area (see map), and risk to threatened and endangered species. Impacts to historic and cultural sites are highly likely due to the historical context of the surrounding area. The map below shows the anticipated impacts.

Similarly, realigning the roadway within the existing corridor but outside of the area with unstable ground, would also require significant construction. This construction would also have significant costs and environmental and cultural impacts.

Learn more about the project at:

[mndot.gov/d8/projects/hwy67granitefallstoecho](https://mndot.gov/d8/projects/hwy67granitefallstoecho)

