



District 7 Erosion and Emergency Projects

Peter Harff | ADE, Program Delivery

Highway 4, south of Fairfax Slope Failure

PROBLEM: Steep slope failure.

PLANNED SOLUTION: Repairs were made with maintenance forces. Blanket was placed and “taco wrapped” to help provide slope stabilization.

TIMEFRAME: Completed summer 2020

ESTIMATED COSTS: \$20k done by Maintenance



Highway 22, south of Mankato at Kibble Culvert Culvert Failure

PROBLEM: 48" pipe separated – steep slope and guardrail over top of culvert need replacing.

PLANNED SOLUTION: Pipe jack new pipe and fill existing pipe (realign channel) and slope correction.

TIMEFRAME: This fall.

ESTIMATED COSTS: \$660k



Saint Peter Trail/Bridge 40005 [near Highway 22, south of Saint Peter] Wash-out

PROBLEM: Rip rap has deteriorated, creating scour holes near the trail and causing the asphalt trail to erode.

PLANNED SOLUTION: Protect trail with riprap.

TIMEFRAME: Fall 2020

ESTIMATED COST: \$80k



Highway 60, West of Waterville Slope Failure

PROBLEM: Steep slope failure due to heavy rain events and saturated soil conditions.

PLANNED SOLUTION: Stabilize slope.

TIMEFRAME: Summer/Fall 2020

ESTIMATED COST: *Maintenance cost



Highway 68, South of Courtland Slope Failure/Slide

PROBLEM: Slope failure due to heavy rains and saturated soils.

PLANNED SOLUTION: Repair only bottom bench, impacted drainage features, reroute tile through new pipe from top of slope to the toe, and establish turf on remainder of failed area.

TIMEFRAME: Summer/Fall 2020

ESTIMATED COST: \$686k (contractor)



Highway 68, at Kat 'n Fiddle Slope Repair

PROBLEM: Steep slope failure due to heavy rain events and saturated ground soil, and pipe repairs.

PLANNED SOLUTION: Construct soil nail wall to protect road (done). Repair pipe and add energy dissipation structure.

TIMEFRAME: 2020-2021

ESTIMATED COST: \$572k > and \$100k-\$200k



Highway 99, East of Highway 13 Culvert Failure

PROBLEM: Foundation under pipe failure.

PLANNED SOLUTION: Install timber pilings, replace culvert with arch pipe, raising it up approximately 2½' .

TIMEFRAME: Fall 2020 (underway now)

ESTIMATED COST: \$615k +



Highway 99, East End of Le Center Pipe Failure

PROBLEM: Pipe under road and shoulder separated because of freeze-thaw cycles.

PLANNED SOLUTION: South barrel sections reset along with resetting new extension and apron. North barrel sections will be reset once the contractor starts work on the westbound lane.

TIMEFRAME: Summer/Fall 2020

ESTIMATED COST: \$[unknown]



Highway 169 at Old Highway 112 Near Le Sueur Slope Failure

PROBLEM: Slope/slide failure due to heavy rain events and groundwater.

PLANNED SOLUTION: Add culvert and structures that will outlet water at bottom of the slope; fill in slide area and establish vegetation.

TIMEFRAME: Currently in pre-design. Let date in 2021.

ESTIMATED COST: \$250k



Highway 169, South of Saint Peter, Northbound Slope Failure

PROBLEM: Slope failure(s) due to heavy rain events.

PLANNED SOLUTION: Repair work to be done by Maintenance with recommendations from Foundations. Jetting work to be done on the fan drains.

TIMEFRAME: 2021

ESTIMATED COST: <\$50k materials; \$1k jetting



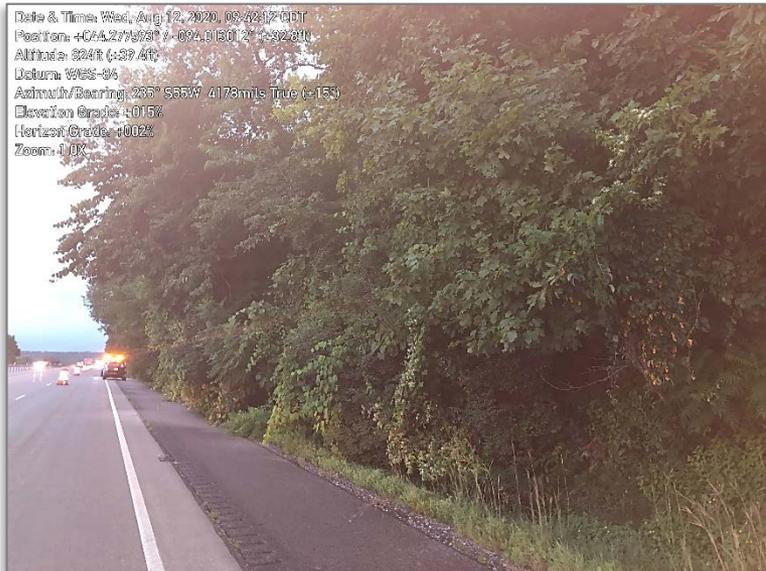
Highway 169, South of Saint Peter, Southbound Hill Slide

PROBLEM: 150' stretch of trees and 20'-45' of soil slid to shoulder of highway. Soil stabilization issue.

PLANNED SOLUTION: Maintenance cut down some trees. Materials in contact with Geology unit to discuss solutions.

TIMEFRAME: August-September 2020

ESTIMATED COST: \$[unknown]



Highway 169, North of Saint Peter Culvert Failure

PROBLEM: Pipe installed in 2014 is 10' away from new pipe; needs to be plugged and abandoned.

PLANNED SOLUTION: MnDOT Maintenance will pump concrete mixture into pipe (fill and abandon).

TIMEFRAME: This will be done before winter.

ESTIMATED COST: \$20K



Cost of this Work

Effort	Cost Estimates
TH 22 Kibble Culvert	\$660,000
TH 22 Saint Peter Trail	\$80,000
TH 68 Slope	\$686,000
TH 68 Kat & Fiddle	\$772,000
TH 99 East of 13 Culvert	\$615,000
TH 99 Le Center Culvert	?
TH 169 Le Sueur	\$250,000
Total	\$3,063,000 at least



Thank you!

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