

<b>SITE NUMBER AND NAME</b> <b>S051 Pekisko Bank Erosion</b>	<b>HIGHWAY &amp; KM</b> 540:02, 4.624	<b>PREVIOUS INSPECTION DATE</b> May 28, 2024	<b>INSPECTION DATE</b> <b>May 27, 2025</b>
<b>LEGAL DESCRIPTION</b> 08-14-17-02 W5M	<b>NAD 83 COORDINATES</b> UTM    Northing    Easting 11       5590158    701158	<b>RISK ASSESSMENT</b> PF: 10    CF: 10    TOTAL: 100	
<b>AVERAGE ANNUAL DAILY TRAFFIC (AADT):</b> 780 (east) (Ref. No. 71130)		<b>CONTRACTOR MAINTENANCE AREA (CMA):</b> 521	

<b>SUMMARY OF SITE INSTRUMENTATION:</b>  There is no instrumentation at the S051 site.  <b>LAST READING DATE:</b> N/A	<b>INSPECTED BY:</b> Chris Gräpel (KCB) Jorge Rodriguez (KCB) Alex Frotten (TEC) Rishi Adhikari (TEC)
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<b>PRIMARY SITE ISSUE:</b> Bank erosion on the outside of a bend along a reach of Stimson Creek. The head scarp has encroached onto highway right-of-way and undermined the north (westbound) highway ditch. Flows from the ditch are being conveyed over the slope, exacerbating erosion.
<b>APPROXIMATE DIMENSIONS:</b> The site is approximately 100 m long. The length of the fence that is undermined is approximately 25 m. The erosion scarp is approximately 5 m away from the edge of the highway.
<b>DATE OF ANY REMEDIAL ACTION:</b> There have been no repairs to the slope. However, tarps have been installed by KCB along the left (south) bank of Stimson Creek as part of bank swallow mitigation measures ahead of summer 2025 construction.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress		X	N/A – none observed during the 2025 inspection.		X
Slope Movement	X		Tension cracking in highway ditch near the west end of the site.	X	
Erosion	X		A large scour hole has formed due to surface water runoff erosion along the outside bend of the creek. Ongoing gully erosion is occurring where the ditch discharges water onto the slope face.	X	
Seepage		X	N/A – none observed during the 2025 inspection.		X
Culvert Distress		X	N/A – none observed during the 2025 inspection.		X

**COMMENTS**

S051:

- No distress in the highway surface was observed.
- The height of the embankment is approximately 5 m to 6 m. The overall slope of the embankment is between approximately 1H:1V to 2H:1V.
- The site is along the south (left) shoreline of Stimson Creek (Photos 1 and 2). The angle of attack for Stimson Creek is 110°.
- The erosion is impacting the north (westbound) ditch (Photos 3 and 5), within approximately 5 m of the high-tension cable barrier (HTCB), has undermined the barbed wire fence along the site (Photo 3), and has exposed a black telecommunications cable that is owned by TELUS (Photo 5).
- Flow from the ditch is being redirected into the failure zone, exacerbating erosion (Photo 4). Between the 2024 and 2025 inspections, no significant changes to the erosion feature were observed.
- During the 2025 inspection, eight fence posts were undermined and are hanging (Photos 3 and 4). The length of the fence that is undermined is approximately 25 m.
- Multiple slide blocks appear to be forming near the fence line and are expected to eventually slide into the erosion feature, which will enlarge the erosion site and cause additional retrogression towards the highway.
- There are bedrock outcrops along the toe of the slope along the left bank of Stimson Creek. The exposed bedrock appears to be fractured and highly weathered (Photo 6).
- A tension crack was observed near the western extent of the site.
- In spring 2025, tarps were installed by KCB at the crest of the slope (Photos 1, 2, and 6) to reduce the likelihood of bank swallows nesting ahead of construction (planned for late-summer/early-fall 2025). The tarps appear to be in good condition, and no swallows were observed where the tarps were installed. Many swallows were observed further north along the shoreline, outside of the construction footprint and required an offset.

Maintenance/Repair/Monitoring Recommendations:

Short-term:

- The site should be regularly inspected by TEC's Maintenance Contract Inspector (MCI).
- The site should continue to be inspected as part of the Southern Region GRMP Section B inspections.

Long-term:

- KCB prepared a repair design (including rebuilding the embankment with geogrid-reinforced granular fill, an armoured channel at the west extent of the site to convey flow to Stimson Creek, and riprap armouring (including a brush layer). The project was tendered in June 2025, awarded in July 2025, and construction began in August 2025 (TEC Contract No. CON0022019). The work was awarded to Ironclad Contracting and will be monitored by KCB.

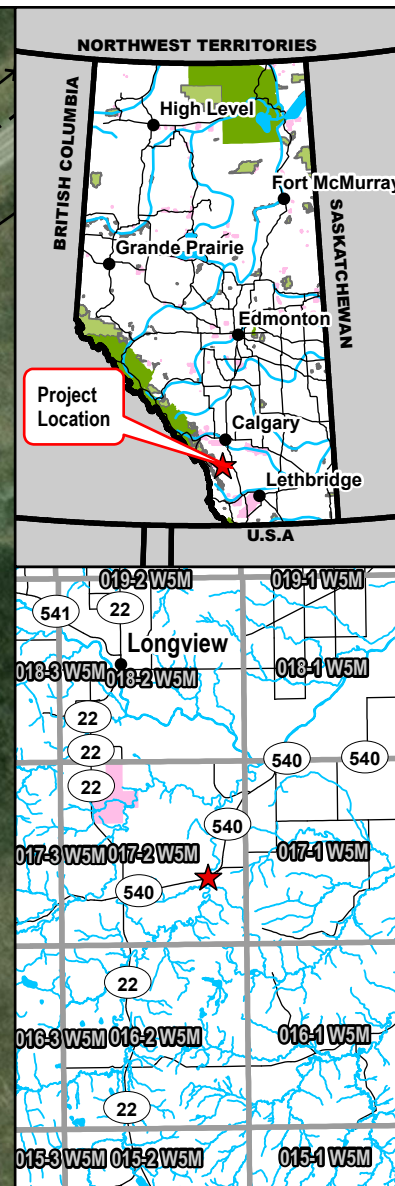
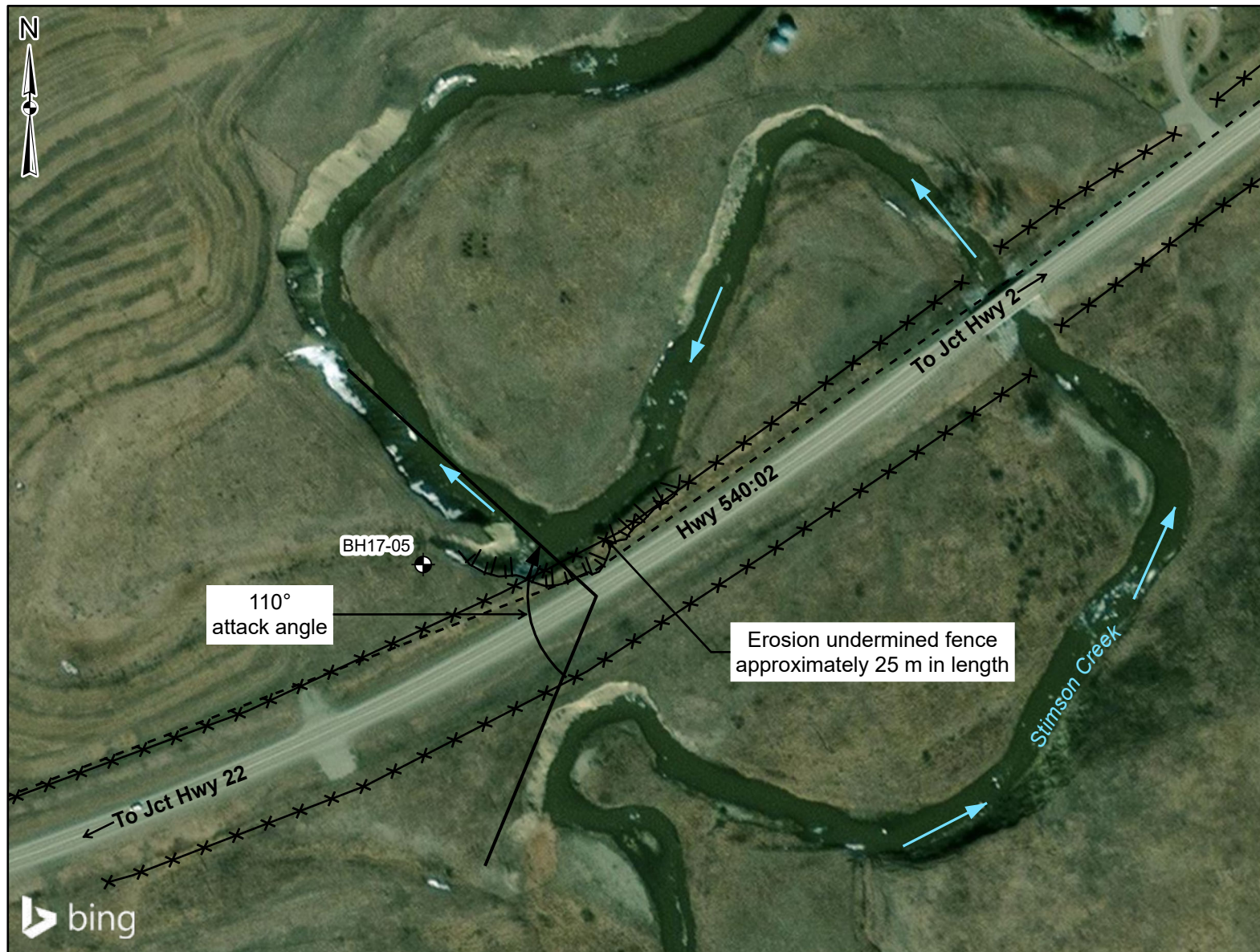
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Jorge Rodriguez, Ph.D., M.Sc., P.Eng.  
Geotechnical Engineer



## Legend

- Borehole
- Flow Direction
- Scarp
- Fence
- TELUS Trench

NOTES:  
1. HORIZONTAL DATUM: NAD83  
2. GRID ZONE: UTM ZONE 11N  
3. IMAGE SOURCE: MAXAR 2025

CLIENT

Alberta

Klohn Crippen Berger

PROJECT

SOUTHERN REGION GEOHAZARD RISK MANAGEMENT PROGRAM

TITLE

Site Plan  
S051 - Pekisko Bank Erosion  
Hwy 540:02, km 4.591

SCALE  
1:2,500

PROJECT No. A05116A03

FIG No. 1

0 100 Metres



## Inspection Photographs

**Photo 1** Aerial photo of the site highlighting Stimson Creek, erosion and slope instability, and tarps (red line) installed as part of bank swallow mitigation measures. Photo taken May 27, 2025, facing southeast.





**Photo 2** Aerial photo of the site highlighting Stimson Creek, erosion and slope instability (red dashed line), and tarps (red line) installed as part of bank swallow mitigation measures. Photo taken May 27, 2025, facing northwest.





**Photo 3** Erosion and hanging barbed wire fence along the site. Photo taken May 27, 2025, facing east.



**Photo 4** Erosion and hanging barbed wire fence along the site. Photo taken May 27, 2025, facing west.





**Photo 5** Erosion undermining the north (westbound) ditch and has exposed a black telecommunication line (indicated by red arrow) owned by TELUS. Photo taken May 27, 2025, facing west.



**Photo 6** Tarps installed by KCB as part of the ongoing bank swallow mitigation measures. Bedrock outcrop at the toe of the slope indicated by red arrow. Photo taken May 27, 2025, facing northwest.

