

SITE NUMBER AND NAME: S056-IV West Gorge Creek, West of Turner Valley		HIGHWAY & KM: Sheep River Road	PREVIOUS INSPECTION DATE: May 6, 2019	INSPECTION DATE: May 28, 2024
LEGAL DESCRIPTION: 12-36-019-05 W5M	NAD 83 COORDINATES: UTM Northing Easting 11 5614130 671333		RISK ASSESSMENT: PF: 13 CF: 6 TOTAL: 78 (Rockfall)	
MONTHLY AVERAGE DAILY TRAFFIC (MADT): May 2024 242 (west) & 232 (east) (Reference No. 55460220)			CONTRACTOR MAINTENANCE AREA (CMA): 27	

SUMMARY OF SITE INSTRUMENTATION: None LAST READING DATE: N/A	INSPECTED BY: Chris Gräpel (KCB) Peter Roy (KCB) Renato Macciotta (U of A) Alex Frotten (TEC) Kristen Tappenden (TEC) Maury Siddons (TEC)
PRIMARY SITE ISSUE: Rock slope adjacent to the highway with ongoing sloughing. Rocks from the slope are falling onto the road.	
APPROXIMATE DIMENSIONS: Rock face north of highway is approximately 120 m long, ranging from 20 m to 40 m in height. On the south side of the highway, surface runoff erosion has undermined the safety barrier in one location.	
DATE OF ANY REMEDIAL ACTION: N/A	

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Damage to pavement observed due to rockfalls.		X
Slope Movement		X	Rockfalls from slope north of the highway		X
Erosion	X		Surface water runoff leading to slope erosion on southern side of highway. Erosion at the brow of the slope		X
Seepage		X	None observed.		X
Culvert Distress		X			X

COMMENTS
The rock slope on the north side of the highway consists of folded and fractured sandstone and conglomerate with claystone and coal layers. The toe ditch is shallow and rocks are falling onto the highway. Rock blocks up to 1 m x 0.5 m x 0.5 m are present in the ditch.
Erosion at the brow of the slope is causing debris to fall into the ditch and onto the highway.
The MCI reported that rock falls appeared to be increasing in frequency and that the ditch was being cleaned out annually.
A culvert under the road is present at the east end and is plugged with a rock.
Surface runoff from the highway is eroding the slope on the south side of the highway. Erosion has undermined the safety barrier and reached the pavement edge at one location, but no pavement distress was visible in 2024.

Some (three to four) rock particles approximately 0.15 m x 0.15 m x 0.15 m, were noted on the south side of the highway which would have travelled across the highway from the rock slope.

Maintenance/Repair/Monitoring Recommendations:

- The site should be regularly inspected by TEC's MCI and annually as part of the Southern Region GRMP Section B inspections.
- Clean out the toe ditch regularly to maintain storage capacity for future rockfalls; and
- Unplug the culvert beneath the road to minimize runoff erosion at the existing erosion site.
- Installation of rockfall fence partway up the rock slope to catch rocks with the potential to bounce onto the highway.
- Install jersey barriers at the at the edge of the pavement to help prevent rock fall particles from reaching the highway.
- This site was included in the K-Country Rockfall Hazard Assessment completed by KCB in 2023. A draft report was submitted on September 18, 2023. One of the recommendations in the report included that the risk rating should be re-assessed during the next Section B inspection based on the results of the rockfall hazard assessment. The risk rating was re-assessed as part of the 2024 Section B inspection based on the results of the rockfall hazard assessment.

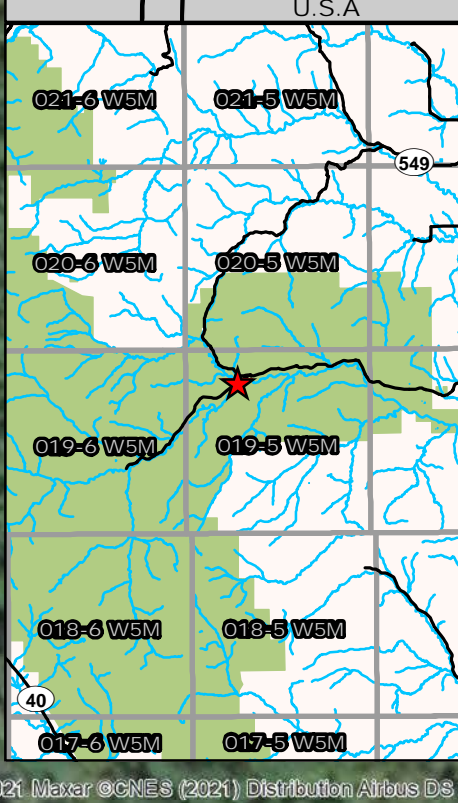
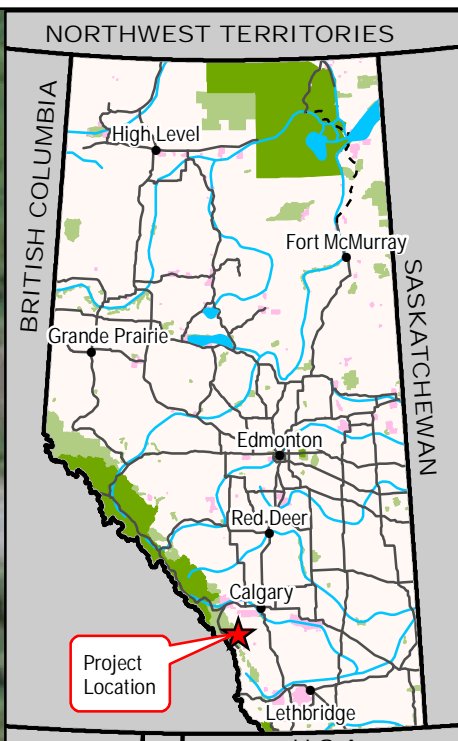
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<p>Peter Roy, P.Eng. Civil Engineer</p>	
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Legend

- ▲ GPS Waypoint



NOTES: 1. HORIZONTAL DATUM: NAD83 2. GRID ZONE: UTM Zone 11N 3. IMAGE SOURCE: Bing Maps 2019, Microsoft Corporation.	CLIENT 	PROJECT SOUTHERN REGION GEOHAZARD RISK MANAGEMENT PROGRAM	
		TITLE Site Plan S056-IV West Gorge Creek Site IV Sheep River Road	
	SCALE 1:1,000	PROJECT No. A05116A03	FIG No. 1

Time: 10:15:20 AM
 Date: October 08, 2021
 File: Z:\A\CCY\Alberta\A05116A03\ABT_Southern Region GRMP\400 Drawings\2021\Section B figures\MXD\WestGorgeCreek_IV_211008.mxd

Photo 1 Rock slope north of highway. Photo was taken facing northeast on May 28, 2024.



Photo 2 Rock slope north of highway. Coal seams creating rock overhang on slope. Photo was taken facing northwest on May 28, 2024.



Photo 3 Rock slope north of highway. Photo taken facing northeast on May 28, 2024.



Photo 4 Rock blocks in the ditch on the north side of the highway. Photo taken on May 28, 2024.



Photo 5 Rock blocks in the ditch on the north side of the highway. Photo taken facing east on May 28, 2024.



Photo 6 Surface runoff erosion on the south side of highway has undermined the guardrail and reached the pavement edge. There was no evidence of pavement crack during the 2024 inspection. Photo taken facing east on May 28, 2024.

