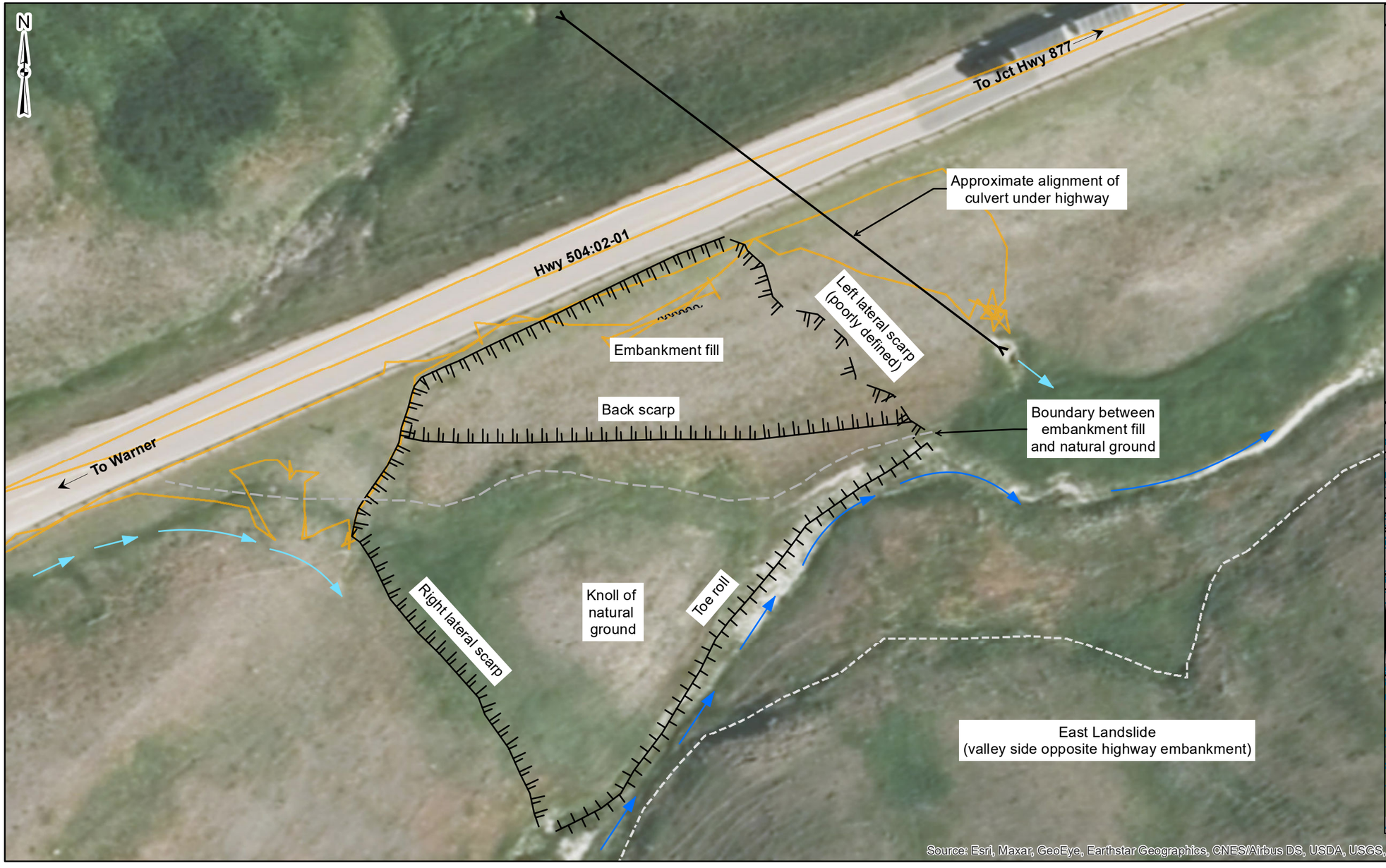
SOUTHERN REGION GRMP
SITE INSPECTION FORM

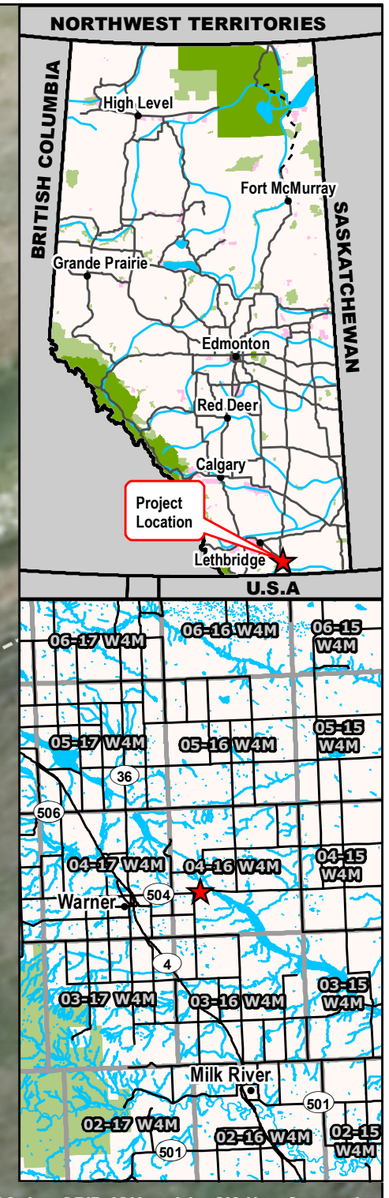
SITE NUMBER AND NAME: **S049 Hoot and Howl Slide**	HIGHWAY & KM: 504:02, 5.072	PREVIOUS INSPECTION DATE: May 3, 2018	INSPECTION DATE: **June 9, 2020**
LEGAL DESCRIPTION: 03-17-004-16 W4M	NAD 83 COORDINATES: UTM 12 Northing 5460493 Easting 417931	RISK ASSESMENT: PF: 8 CF: 3 TOTAL: 24	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 250 (east), (Ref. No. 7000054)		CONTRACTOR MAINTENANCE AREA (CMA): 24	

SUMMARY OF SITE INSTRUMENTATION: None LAST READING DATE: N/A	INSPECTED BY: Chris Morgan (KCB) Margot Lederman (KCB) Alex Frotten (AT) Roger Skirrow (AT)
PRIMARY SITE ISSUE: Large translational earth slide on the south embankment of the highway. Approximately 18 m of guard rail on the south side of the highway is being undermined by the evolving head scarp.	
APPROXIMATE DIMENSIONS: Approximately 20 m of highway is being impacted by the head scarp. The landslide is approximately 50 to 70 m wide in the middle of the embankment.	
DATE OF ANY REMEDIAL ACTION: Guard rail repaired.	

ITEM	**CONDITION EXISTS**		**DESCRIPTION AND LOCATION**	**NOTICABLE CHANGE FROM LAST INSPECTION**	
	YES	NO		YES	NO
Pavement Distress	x		Some undermining of the south shoulder at the guard rail, pavement edge is spalling.	x	
Slope Movement	x		Translational slide with open back scarp approximately 1/3 the way down the slope.	x	
Erosion	x		Some erosion below fence line		x
Seepage		x			x
Culvert Distress		x			x

COMMENTS
Guard rail has dipped in the area where it is being undermined, up to 50 mm deflection. The pavement edge is cracking due to slope movement and asphalt pieces are rolling down the slope. Extra deep guard rail posts should be installed in this area to allow guard rail to be at the required height.
No significant changes were noted since the 2018 site visit. Site was well vegetated at the time of the 2020 visit.
Culvert through the embankment just west of the observed slide movement shows no distress.
There is a well-developed toe roll at the toe of the slope. There is no evidence of upward movement at the toe, which indicates translational, not rotational, slide movement.
A berm appears to be present at the toe of the slope adjacent to the slide area and culvert. However, the berm is also located the opposite side of the embankment and appears to be an old roadway.
Drainage could be improved at the site to redirect surface water away from the head scarp.
Two owls (appeared to be burrowing owls) were noted at the time of the site visit, flying out of the bank face opposite the slide.
Site will be visited every second year as part of the GRMP tour.





Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- GPS Track (June 9, 2020)
- Estimated boundary between fill and original ground
- Tension Crack
- Toe Roll
- Scarp
- Culvert
- Flow Direction

0 25 Metres

NOTES:
1. HORIZONTAL DATUM: NAD83
2. GRID ZONE: UTM Zone 12N
3. IMAGE SOURCE: World Imagery, ESRI ArcGIS Online Source date May 21, 2018 (Village of Warner)

CLIENT: Alberta

Klohn Crippen Berger

PROJECT: SOUTHERN REGION GEOHAZARD RISK MANAGEMENT PROGRAM

TITLE: Site Plan
S049 - Embankment Earth Slide
Hwy 549:02-01, km 4.831

SCALE	PROJECT No.	FIG No.
1:600	A05115A03	1

Time: 10:03:18 AM
Date: December 04, 2020
File: Z:\AIEDM\A05115A03 ABT Southern Region GRMP\400 Drawings\202002_Section B\MXD\S049_201203.mxd

Photo 1 **High embankment slope instability, translational slide. Presence of back scarp infers a reverse graben has formed which is evidence of translational slide movement usually along a horizontal weak layer at depth. Higher head scarp at west end indicates slide is exhibiting hinged movement, dropping more at the west end where more of the slide mass involves natural ground and a pre-existing basal rupture surface exists and is controlling movement. Photos northward taken June 16, 2016.**

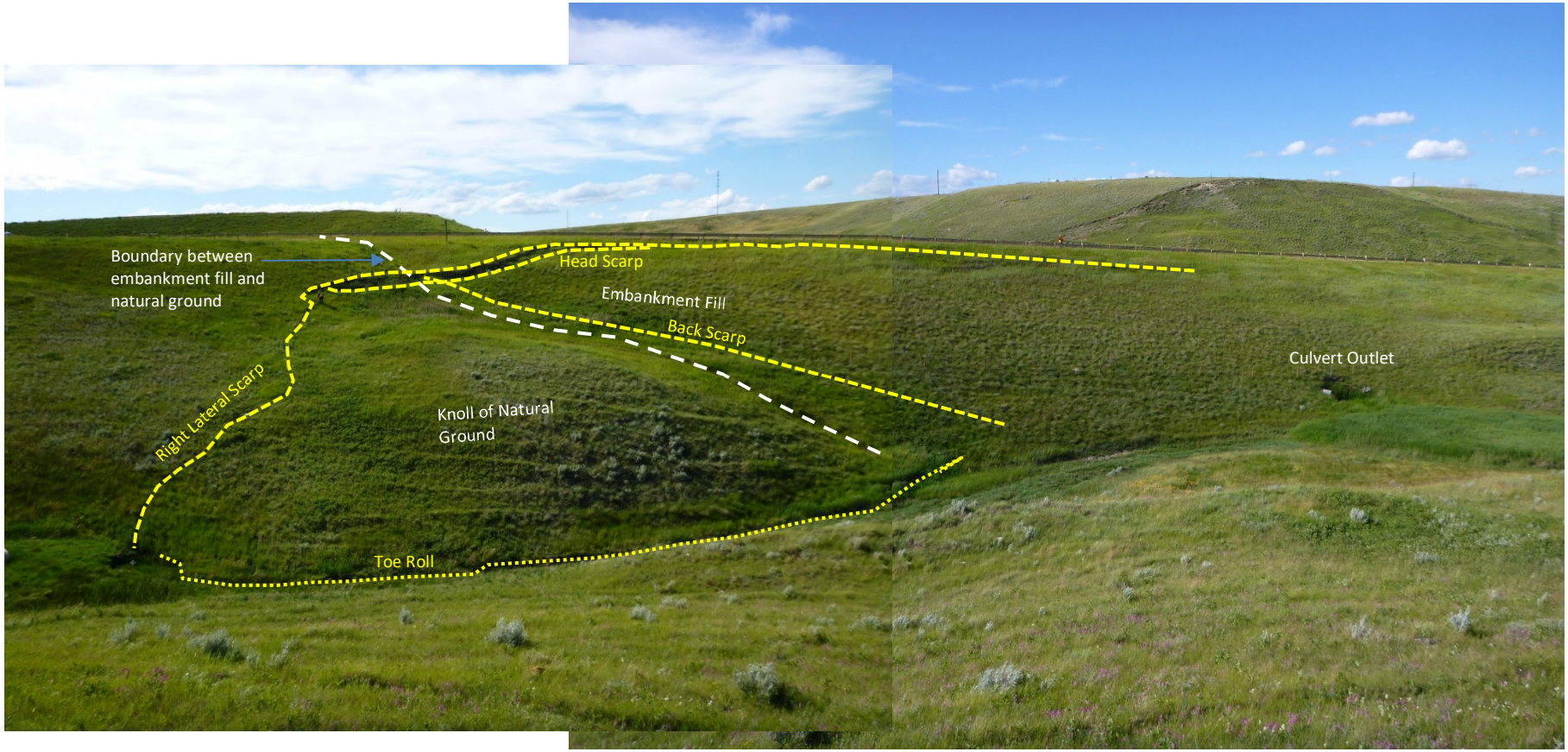


Photo 2 **View east across the slide zone. Long grass obscures visible features. Photo taken on June 9, 2020.**

Photo 3 **Head scarp at the edge of the pavement. Loss of pavement support over approximately 18 m length. Photo taken facing east on June 9, 2020.**

Photo 4 **Head scarp on right flank. Photo taken facing northeast on June 9, 2020.**

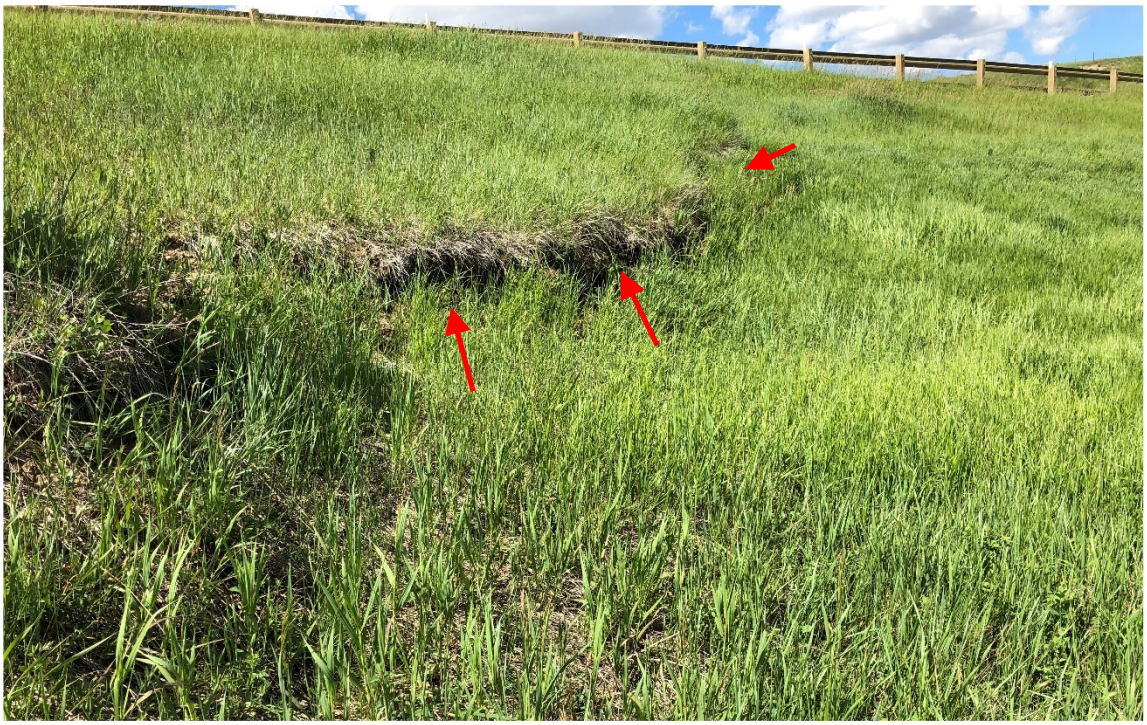


Photo 5 **Culvert under the highway embankment on left flank of slide zone. Photo taken facing south on June 9, 2020.**