

SITE INSPECTION FORM

SITE NUMBER AND NAME: GP038-I and -II Slides 1.6 km and 2.0 km North of Kakwa River Bridge (North Little Prairie Creek)		HIGHWAY & KM: 40:38, 25.831 and 25.426	PREVIOUS INSPECTION DATE: May 26, 2020	INSPECTION DATE: June 15, 2022
LEGAL DESCRIPTION: GP038-I SE 08-63-04 W6M GP038-II SE 08-63-04 W6M	NAD 83 COORDINATES: UTM Northing Easting 11 6033163 398377 11 6032912 398677	RISK ASSESSMENT: PF: 4 CF: 2 TOTAL: 8 PF: 2 CF: 4 TOTAL: 8		
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 1000 (north) & 960 (south) (Reference No. 70000851, 2021)		CONTRACT MAINTENANCE AREA (CMA): 504		

SUMMARY OF SITE INSTRUMENTATION: Operable: One slope inclinometer (SI), four pneumatic piezometers (PNs), and one standpipe piezometer (SP) installed in 2017. Inoperable: Two SIs, two PNs, and one SP installed in 2017. LAST READING DATE: June 21, 2022	INSPECTED BY: Chris Gräpel (KCB) Courtney Mulhall (KCB) Ed Szmata (AT) Kristen Tappenden (AT) Max Shannon (AT)
PRIMARY SITE ISSUE: Two landslides in the Hwy 40:38 embankment that were repaired in 2018.	
APPROXIMATE DIMENSIONS: An approximate 60-m and 10-m length of highway was being impacted at the GP038-I and -II sites, respectively, before the slides were repaired.	
DATE OF ANY REMEDIAL ACTION: 2017/2018 – culvert extended, and toe berm built at GP038-I site; and slide reconstructed with compacted granular fill at GP038-II site with a sheet-pile wall installed to isolate work from creek. Unknown (maybe 2019) – overlay completed. 2022 – cracks sealed.	

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Minor cracking and a small dip at both sites (WP211 at GP038-I site) . As well, as some pavement settlement at GP038-I at WP 213. Prior to repair, alligator cracking previously observed in payment surface at GP038-II site.		X
Slope Movement	X		Movements recorded in SI are slow to indiscernible (less than 10 mm/year).		X
Erosion	X		Some rill erosion along upper portion of highway embankment (unvegetated gravelly material).		X
Seepage	X		At GP038-I site wet area and cattails along north side of toe berm at WP212. At GP038-II wet area to north of culvert outlet.		X
Culvert Distress	X		Outlet drain at GP038-II separated at joint. Culvert outlet and riprap at GP38-II site is a barrier to fish passage.		X

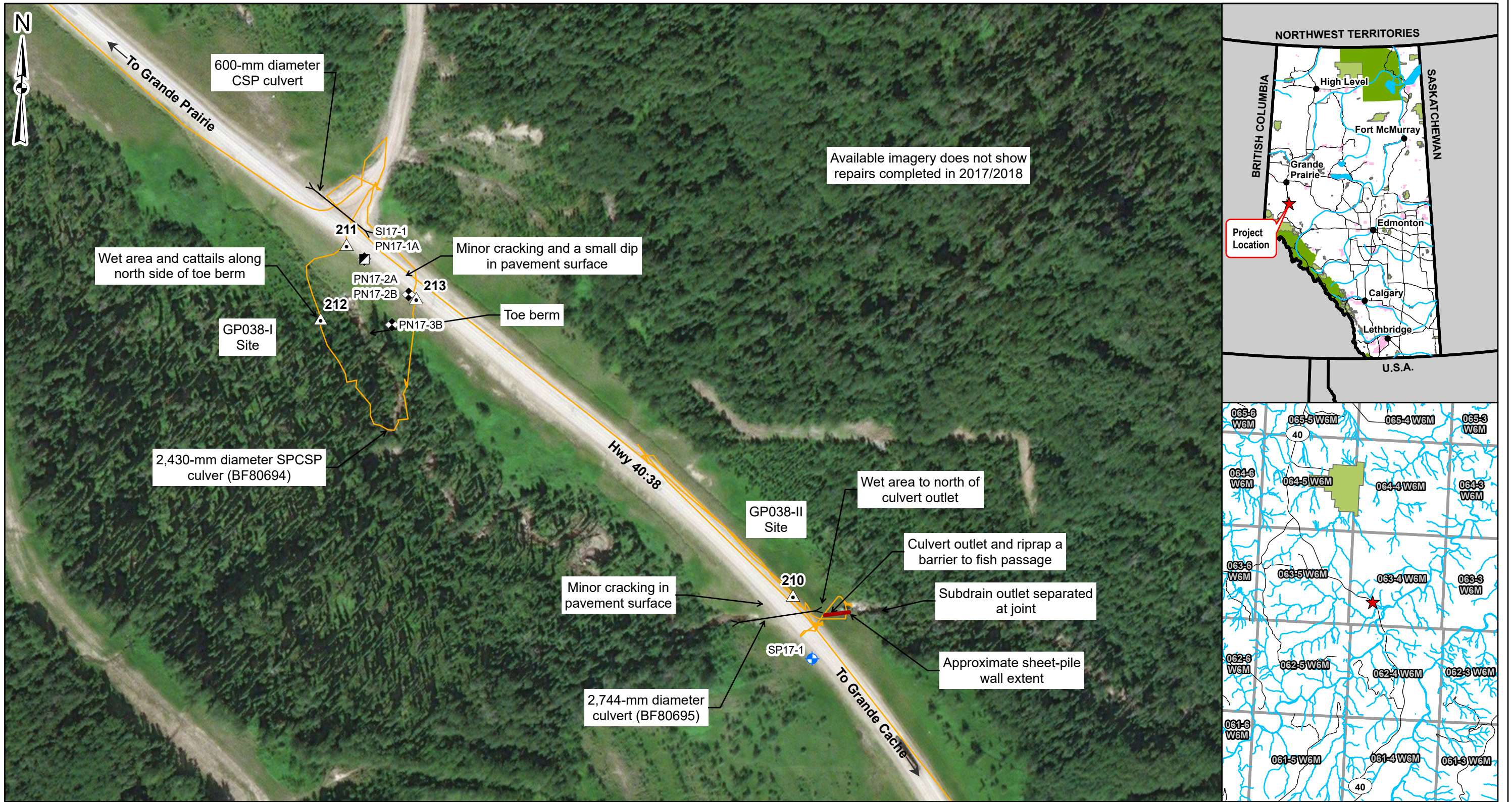
COMMENTS
Vegetation well established at both sites.
Pore pressures/water levels recorded in the piezometers at both sites are near (0.1 m above to 1.0 m below) ground surface.
<p><u>Maintenance/Repair/Monitoring Recommendations:</u></p> <ul style="list-style-type: none"> • At the GP038-I site, the highway has narrow shoulders and the south slope of the highway embankment is high and steeply graded. This poses a risk to motorist who need to stop or go off the highway. AT should consider widening and/or flattening the highway shoulders along an approximate 30-m length of the highway at the GP038-I site. Estimate cost: \$10,000 to \$20,000. • Above-ground-steel-casing protectors for some instruments are close to pavement edge. These are potential roadside hazard to motorists who go off the highway. These should be removed if instrument(s) are inoperable or replaced with flush-mounted casing protectors. • Repair drain outlet drain at the GP038-II site where it is separated. • Silt fencing around culvert outlet at the GP038-I site, and in the ditch and along the creek channel at the GP038-II site is falling down and should be removed/disposed of. • Following review of the Spring of 2022 instrumentation data, KCB will make a recommendation to keep or remove these sites and the associated instrumentation from the GRMP.
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PEACE REGION
(GRANDE PRAIRIE DISTRICT – SOUTH) GRMP
SITE INSPECTION FORM



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Legend

- ◆ Approximate Pneumatic Piezometer Location
- Approximate Slope Inclinometer Location
- ⊕ Approximate Standpipe Piezometer Location
- △ GPS Waypoint (June 15, 2022)
- GPS Track (June 15, 2022)
- Sheet-pile Wall
- Culvert

NOTES:
 1. HORIZONTAL DATUM: NAD83
 2. GRID ZONE: UTM ZONE 11N
 3. IMAGE SOURCE: 2022 MICROSOFT CORPORATION, 2022 MAXAR CNES, DISTRIBUTION AIRBUS DS

CLIENT



PROJECT

PEACE REGION (GRANDE PRAIRIE DISTRICT-SOUTH)
 GEOHAZARD RISK MANAGEMENT PROGRAM

TITLE

Site Plan
 GP038-I and -II - Slides 1.6 km and 2.0 km
 North of Kakwa River Bridge
 Hwy 40:38, km 25.831 and 25.426

SCALE

1:2,500

PROJECT No. A05116A01

FIG No.

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Inspection Photographs

Photo 1 Minor cracking and dip in pavement surface of Hwy 40:38 at GP038-I site at WP211. Photo taken June 15, 2022, facing northwest.



Photo 2 Settlement in pavement surface of Hwy 40:38 at GP038-I site at WP213. As well as rill erosion along south side of highway embankment. Photo taken June 15, 2022, facing southeast.



Photo 3 Wet area and cattails at WP212 along north side of toe berm at GP038-I site. Photo taken June 15, 2022, facing southeast.

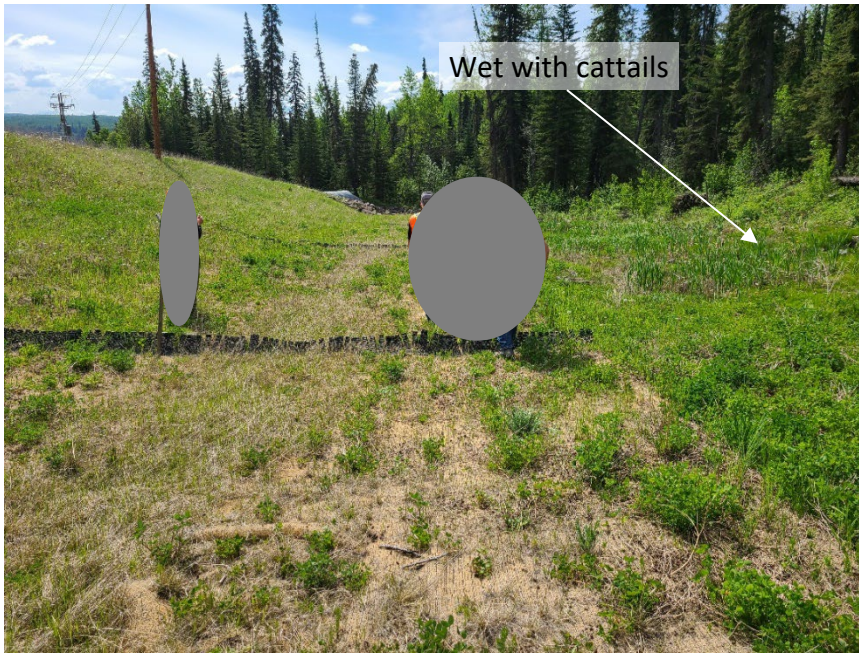


Photo 4 Flowing water and cattails at WP212 along north side of toe berm at GP038-I site. Photo taken June 15, 2022, facing north.



Photo 5 Outlet of culvert at GP038-I site. Photo taken June 15, 2022, facing north.



Photo 6 Minor cracking in pavement surface of Hwy 40:38 at GP038-II site. Photo taken June 15, 2022, facing northwest.



Photo 7 Highway embankment and ditch above and north of GP038-II site. Photo taken June 15, 2022, facing northwest.



Photo 8 Highway embankment and ditch above and south of GP038-II site. Photo taken June 15, 2022, facing southeast.



Photo 9 Overview of GP038-II site. Photo taken June 15, 2022, facing southeast.



Photo 10 Outlet of culvert at GP038-II site. Note sheet-pile wall along south side and wet area along north side of culvert inlet/creek channel. Photo taken June 15, 2022, facing west.

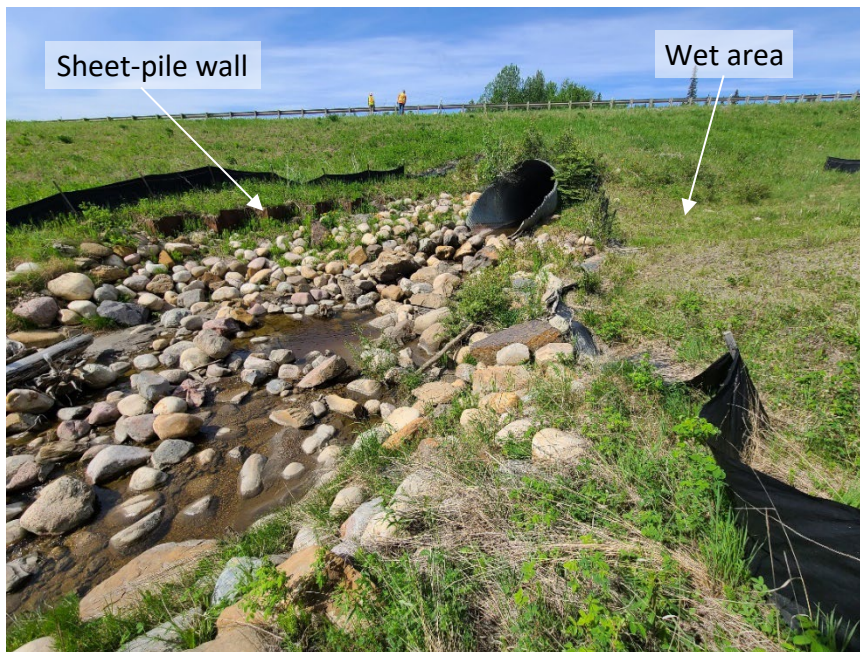


Photo 11 Culvert outlet and riprap at GP38-II site is a barrier to fish passage. Photo taken June 15, 2022, facing southwest.



Photo 12 Channel downstream of culvert at GP038-II site. Photo taken June 15, 2022, facing northwest.



Photo 13 Subdrain outlet at GP038-II separated and not flowing. Photo taken June 15, 2022, facing east.

