


PEACE REGION – SWAN HILLS
GEOHAZARD RISK ASSESSMENT
SITE INSPECTION FORM

SITE NUMBER SH 11 (-3, -4)	SITE NAME Little Smoky SH11-3 Little Smoky SH11-4	HIGHWAY & KM HWY 744:02	PREVIOUS INSPECTION DATE July 5, 2012	INSPECTION DATE June 18, 2013
LEGAL DESCRIPTION LSD 02-20-76-22 W5M	NAD 83 COORDINATES N6161152 E476601	PREVIOUS RISK ASSESSMENT		
		PF: 9	CF: 2	TOTAL: 18
		CURRENT RISK ASSESSMENT		
		PF: 9	CF: 3	TOTAL: 27

<p>SUMMARY OF SITE INSTRUMENTATION:</p> <p>No Instruments</p> <p>LAST READING DATE: N/A</p>	<p>INSPECTED BY:</p> <p>(i) AMEC: John Richmond, John Heilman, Curtis Treen</p> <p>(ii) AT: Ed Szmata, Rocky Wana</p> <div style="text-align: center;">  </div> <p>John A. Richmond, P.Eng. Permit Number: P 04546</p>
---	--

<p>PRIMARY SITE ISSUE:</p> <p>Ongoing pavement repairs are required at both sites.</p> <p>SH11-3 Pavement cracking and subsidence (undulations) of the highway. The site is part of a larger valley wall failure. The site is located on the southwest flank of a large valley wall block slide. A terrace (sag pond) is below the embankment and forms part of the benched valley wall.</p> <p>As shown in Figure 1, two new longitudinal cracks and extension of the longitudinal cracking observed in July 2012 were observed in June 2013. Further, a new transverse pavement crack and an area of pavement distortion were observed in June 2013.</p> <p>SH11-4 Pavement cracking and subsidence (undulations) of the highway. The site is part of a larger valley wall failure. The site is located on the southwest flank of a large valley wall block slide. A terrace (sag pond) is below the embankment and forms part of the benched valley wall. The backslope ditch was wet with standing water in June 2013. Movement at SH11-4 is considered to be more severe than at SH11-3.</p> <p>As shown in Figure 2, one new longitudinal crack was observed in June 2013. Further, two severe transverse pavement cracks and two dips (distortions) were observed in June 2013 within areas that had been recently milled.</p> <p>Note: Refer to previous inspection reports for further details</p>
--

<p>APPROXIMATE DIMENSIONS:</p> <p>Both sites extend approximately 200 to 250m along a highway curve. At both sites, the road embankment and the backslope are sloped at approximately 3H:1V.</p>

DATE OF ANY REMEDIAL ACTION:

Crack sealing, pavement milling and patching as required.

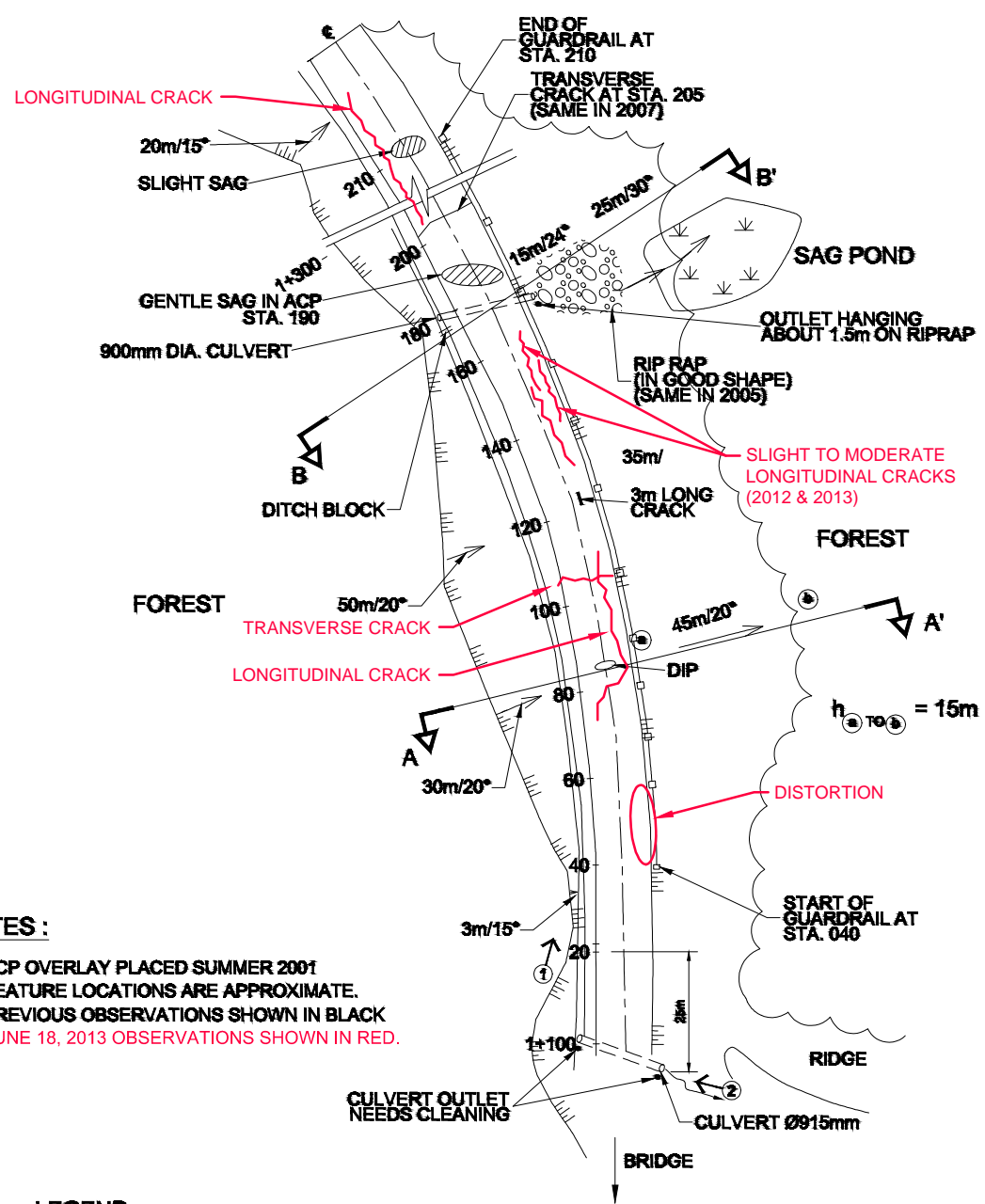
ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION		
	YES	NO		YES	NO	See Comment
PAVEMENT DISTRESS	X		New cracking and distortion in the pavement were visible and shown on Figures 1 and 3.	X		
SLOPE MOVEMENT	X		The site is located on the southwest flank of a larger valley wall block failure		X	
EROSION		X			X	
SEEPAGE		X			X	
CULVERT DISTRESS		X			X	

COMMENTS:

Annual inspection of the sites should be continued and it is recommended that a lidar assessment of both sites be carried out to understand how the sites fit in with the larger valley wall failure.

Short term repairs of the road surface including, milling, patching, and crack filling should be carried out as required when distortion/settlement and cracking of pavement occurs. Records of maintenance should be kept for review.

Other than pavement repairs, no remedial works are planned for the sites. Long term remediation of the sites may include consideration for re-routing the highway to the valley crest. A re-route may be the only way to avoid the overall valley wall failure and prevent further damage to the highway.



NOTES :

1. ACP OVERLAY PLACED SUMMER 2001
2. FEATURE LOCATIONS ARE APPROXIMATE.
3. PREVIOUS OBSERVATIONS SHOWN IN BLACK
4. JUNE 18, 2013 OBSERVATIONS SHOWN IN RED.

LEGEND

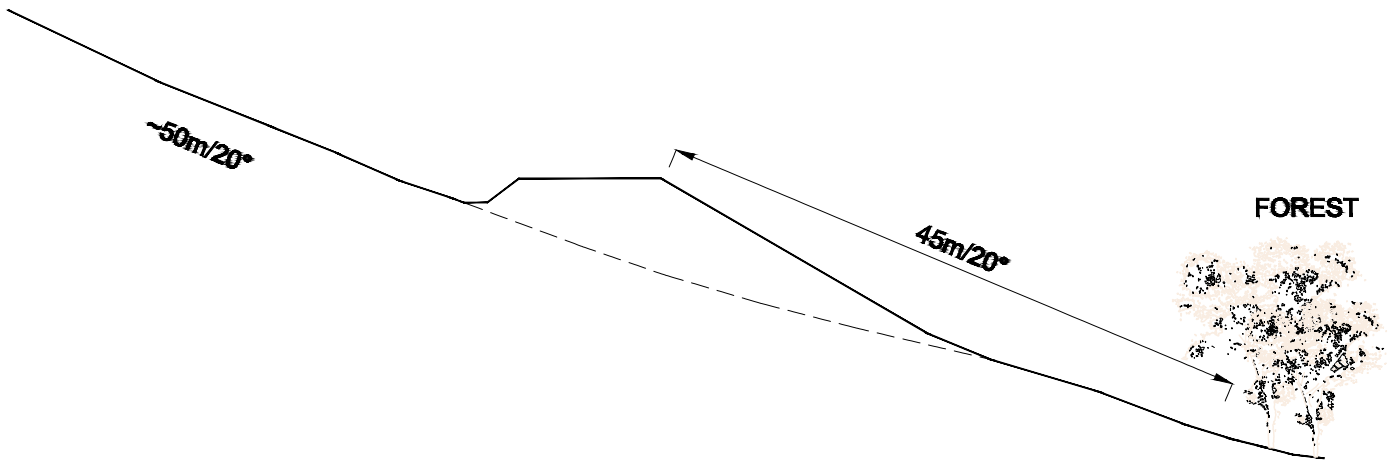
- 50m/20° SLOPE ANGLE DISTANCE
- CRACKS
- CULVERT
- PHOTO AND DIRECTION
- PATCHED PAVEMENT
- EROSION
- LANDSLIDE SCARP

SITE LOCATION (2007):
SECOND SET OF
GUARDRAIL FROM
BRIDGE.

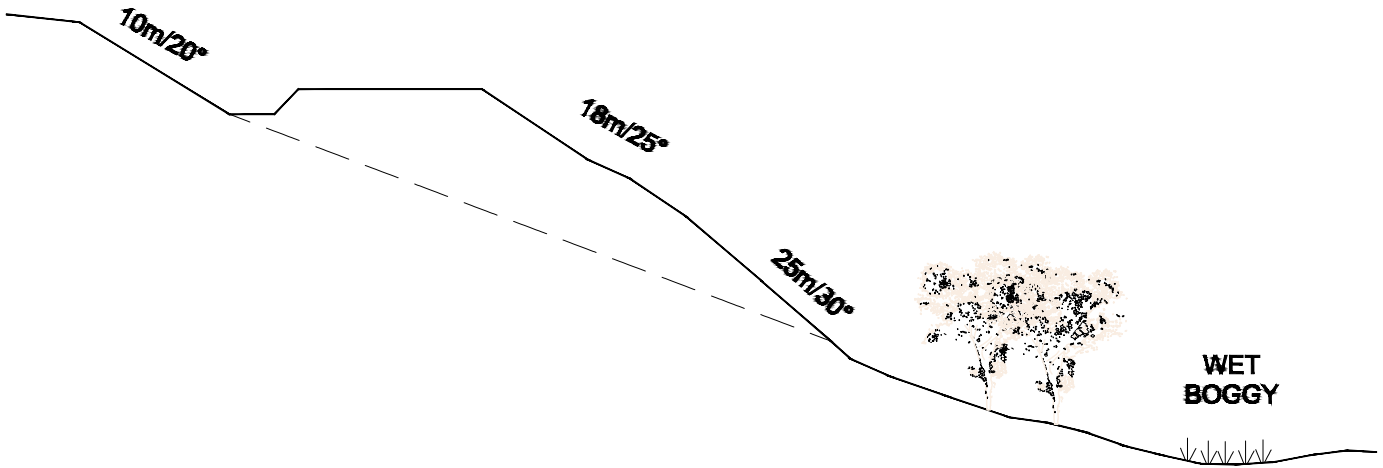
REFERENCE: BASE "SITE PLAN", SH11-3.pdf, SUPPLIED BY ALBERTA INFRASTRUCTURE AND TRANSPORTATION.

CLIENT:	DWN BY: CMG	PROJECT: GEO HAZARD ASSESSMENT PEACE REGION (SWAN HILLS)	DATE: DECEMBER, 2013
	CHK'D BY: EP		PROJECT No.: EG10030
 AMEC Environment & Infrastructure 5681-70 STREET, EDMONTON, ALBERTA, T6B 3P6 PHONE 780-436-2152, FAX 780-435-8425	DATUM: -	TITLE: SH11-3 HWY 744:02 LITTLE SMOKY RIVER VALLEY SITE PLAN	REV. No.: A
	PROJECTION: -		FIGURE No.: FIGURE 1
	SCALE: NOT TO SCALE		

S:\Cadd\Geo\EG10000\EG10030_2013 SH11-3 Inspection Report.dwg - Figure 1 - 12/13/2013 1:14:07 PM - elvin.lee-Half-Colour2.ctb



SECTION A-A'
N.T.S.



SECTION B-B'
N.T.S.

REFERENCE: BASE "SITE PLAN", SH11-3.pdf, SUPPLIED BY ALBERTA INFRASTRUCTURE AND TRANSPORTATION.

CLIENT: 	DWN BY: CMG	PROJECT: GEO HAZARD ASSESSMENT PEACE REGION (SWAN HILLS)	DATE: DECEMBER, 2013
	CHK'D BY: EP		PROJECT No.: EG10030
 AMEC Environment & Infrastructure 5681-70 STREET, EDMONTON, ALBERTA, T6B 3P6 PHONE 780-436-2152, FAX 780-435-8425	DATUM: -	TITLE: SH11-3 HWY 744:02 LITTLE SMOKY RIVER VALLEY SITE PLAN	REV. No.: A
	PROJECTION: -		FIGURE No.: FIGURE 2
	SCALE: NOT TO SCALE		



Photo 1: Looking upgrade to the east at the SH11-3 road surface



Photo 2: Looking upgrade to the east at the SH11-3 road surface. Note cracking (foreground) and distortion (background).



Photo 3: Looking downgrade to the west at the SH11-3 road surface. Note transverse cracking near centre of photo.



Photo 4: Looking south down the embankment at SH11-3 road surface. Note the sag pond at the bottom of the embankment.



Photo 5: Looking upgrade to the west at the SH11-4 road surface. Note cracking and distortion of pavement.



Photo 6: Looking upgrade to the west at the SH11-4 road surface. Note severe transverse crack and distortion of pavement in recently milled area.



Photo 7: Wet backslope ditch at SH11-4.



Photo 6: Looking downslope at sag pond from SH11-4.