


**PEACE REGION – SWAN HILLS
GEOHAZARD RISK ASSESSMENT
SITE INSPECTION FORM**

SITE NUMBER SH 28	SITE NAME Little Smoky Valley	HIGHWAY & KM HWY 744:02	PREVIOUS INSPECTION DATE June 18, 2013	INSPECTION DATE July 3, 2014
LEGAL DESCRIPTION LSD 13-18-76-22 W5M	NAD 83 COORDINATES N6160721 E474084	PREVIOUS RISK ASSESSMENT		
		PF: 8*	CF: 3	TOTAL: 24
		CURRENT RISK ASSESSMENT		
		PF: 8*	CF: 3	TOTAL: 24
*There are currently no slope movement instruments installed at this site and it is difficult to estimate rates of slope movement.				

<p>SUMMARY OF SITE INSTRUMENTATION:</p> <p>No Instruments</p> <p>LAST READING DATE: N/A</p>	<p>INSPECTED BY:</p> <p>AMEC: John Richmond, Vincent Huang Alberta Transportation: Ed Szmata, Roger Skirrow</p> <p>Prepared by: Vincent Huang, E.I.T. Geotechnical Engineer</p> <div style="text-align: center;">  </div> <p>John Richmond, P.Eng. Senior Geotechnical Engineer</p> <p>Reviewed by: Curtis R. Treen, M.Eng., P.Eng. Senior Associate Geotechnical Engineer</p> <p>AMEC Environment and Infrastructure Permit Number: P 04546</p>
<p>PRIMARY SITE ISSUES:</p> <p>The primary issue at this site is a failure on the embankment (4 to 5 m high) and natural slope that has historically been encroaching on the highway. The oval-shaped failure occurred in Fall 2004. Currently, the failure backscarp is 3.0 m from the highway (asphalt) and there appears to have been no change between the 2013 and 2014 inspections (see Photos 1-3).</p> <p>Based on a discussion with AT staff and local AMEC experience, it is possible that the feature is failed uncontrolled fill material that has been saturated and subsequently failed on the natural grade. The backslope ditch is wet and it is possible there is seepage from the backslope side, under the highway and into the failure area.</p> <p>There was no evidence of movement activity at the time of the inspection. Grass (vegetation) has grown along the failure mass and scarps (Photo 3).</p> <p><u>Note:</u> Refer to previous inspection reports for further details</p>	

APPROXIMATE DIMENSIONS:

Oval shaped failure approximately 45 m wide (along highway) and about 35m in length (perpendicular to highway). The headscarp is up to 3 m in height, and currently 3 m from road (5.1 m from the white line). The failure mass is estimated to be approximately 3 m deep at its deepest. The overall embankment slope is at ~19 degrees from horizontal in the area.

DATE OF ANY REMEDIAL ACTION:

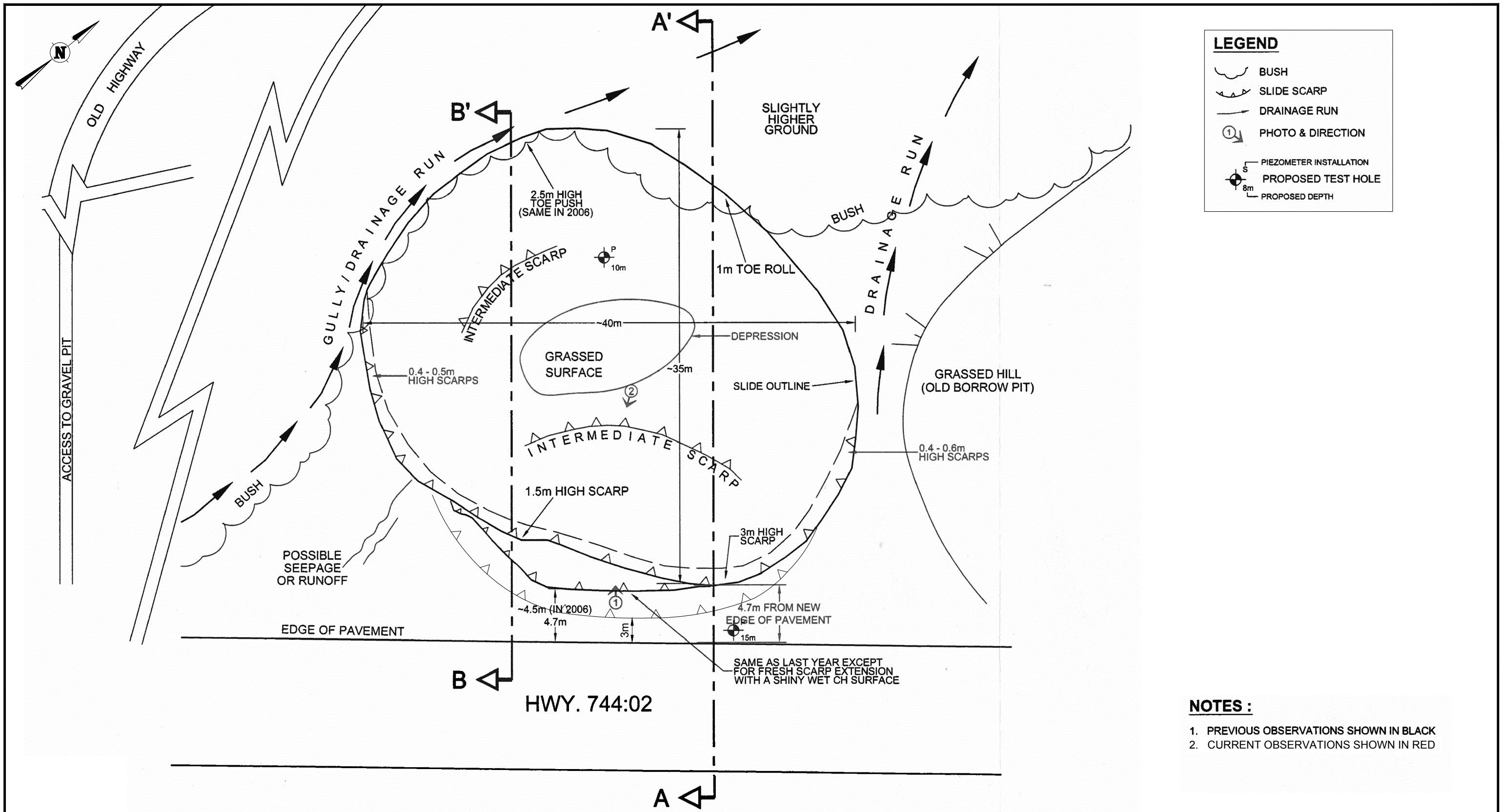
None.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION		
	YES	NO		YES	NO	See Comment
PAVEMENT DISTRESS		X			X	
SLOPE MOVEMENT	X		Oval shaped failure of possible saturated, uncontrolled fill.		X	
EROSION		X			X	
SEEPAGE	X		Possible seepage from backslope ditch, under highway and into failure area.		X	

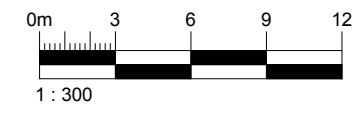
COMMENTS:

The mechanism of failure is not known with certainty. It is possible that the feature is failed uncontrolled fill that has been saturated and failed on the natural grade.

Annual inspection of the site should be continued. A guard rail would be required along the roadway if the headscarp of the failure is within or retrogresses into the Clear Zone of the roadway. If retrogression is observed in the future, stabilization of the failure would be required to preserve the R/W and to mitigate further retrogression and encroachment towards the highway. Stabilization/remediation may include drainage improvements and slope flattening/buttrressing. An investigation and possibly instrumentation would be required if remedial works were planned.



REFERENCE: BASE "SITE PLAN", SH1010plan.pdf, SUPPLIED BY ALBERTA INFRASTRUCTURE AND TRANSPORTATION.



CLIENT:

Alberta
Transportation

AMEC Environment & Infrastructure
5681-70 STREET, EDMONTON, ALBERTA, T6B 3P6
PHONE 780-436-2152, FAX 780-435-8425

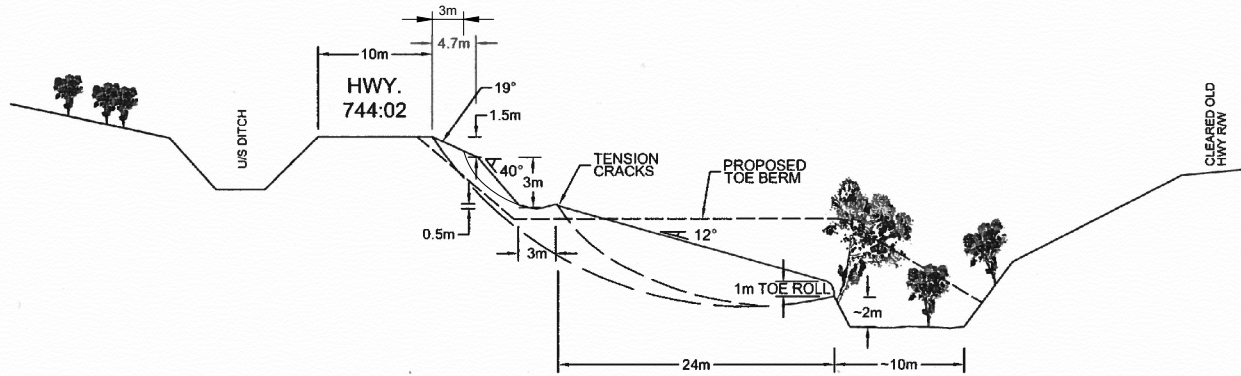
amec

DWN BY: BGR
CHK'D BY: JAR
DATUM: -
PROJECTION: -
SCALE: 1:300

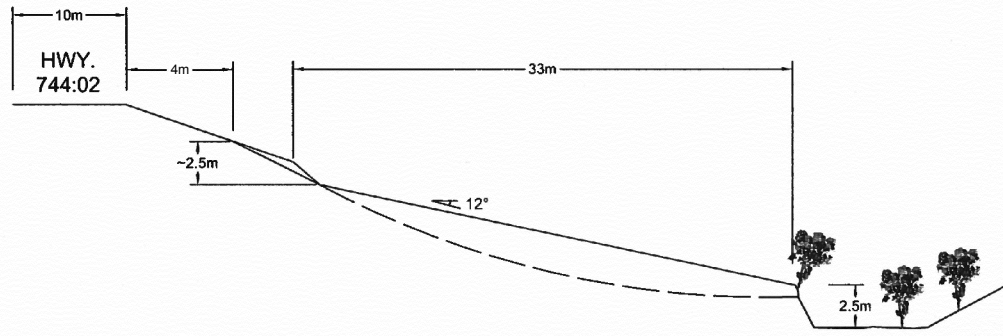
PROJECT: GEO HAZARD ASSESSMENT PEACE REGION (SWAN HILLS)

TITLE: SH28, PEACE RIVER (SWAN HILLS) REGION SITE PLAN

DATE: OCTOBER, 2013
PROJECT No.: EG10030
REV. No.: A
FIGURE No.: FIGURE 1



SECTION A-A'
N.T.S.



SECTION B-B'
N.T.S.

NOTES :

1. BASE PLAN AND CONTOURS PROVIDED BY EXH ENGINEERING SERVICES LTD.
2. PREVIOUS OBSERVATIONS SHOWN IN BLACK
3. CURRENT OBSERVATIONS SHOWN IN RED

REFERENCE: BASE "SITE PLAN", SH1010plan.pdf, SUPPLIED BY ALBERTA INFRASTRUCTURE AND TRANSPORTATION.



CLIENT: 	DWN BY: BGR	PROJECT: GEO HAZARD ASSESSMENT PEACE REGION (SWAN HILLS)	DATE: OCTOBER, 2013
	CHK'D BY: JAR		PROJECT No.: EG10030
AMEC Environment & Infrastructure 5681-70 STREET, EDMONTON, ALBERTA, T6B 3P6 PHONE 780-436-2152, FAX 780-435-8425 	DATUM: -	TITLE: SH28, PEACE RIVER (SWAN HILLS) REGION SECTION A-A' & SECTION B-B'	REV. No.: A
	PROJECTION: -		FIGURE No.: FIGURE 2
	SCALE: AS SHOWN		



Photo 1 (looking north).
No indications of pavement distress or deformation were observed.



Photo 2 (looking north).
The distance between the edge of the pavement and backscarp was unchanged from June 2013.



Photo 3: (looking south)

Backscarp is relatively well vegetated and appeared unchanged from June 2013 inspection.