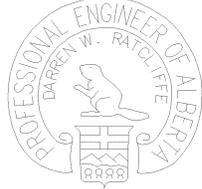


SITE NUMBER AND NAME C31 H11:02 Debris Flow		HIGHWAY & KM 27.2	PREVIOUS INSPECTION DATE July 9, 2014	INSPECTION DATE June 23, 2015
LEGAL DESCRIPTION	NAD 83 COORDINATES		RISK ASSESMENT PF: 1 CF: 1 TOTAL: 1	

SUMMARY OF SITE INSTRUMENTATION: None LAST READING DATE:	INSPECTED BY: 
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PRIMARY SITE ISSUE: The site experienced a localized heavy rainfall and run off event in 2004 that triggered debris flow that resulted in 300 m³ to 500 m³ of mud and rock materials being deposited on the highway up to the centerline. The origin of the debris materials is believed to extend from near the highway to the upper elevations of the catchment on the nearby mountain side.

APPROXIMATE DIMENSIONS:

DATE OF ANY REMEDIAL ACTION: In the fall of 2004, AT constructed earthen diversion berms to direct flow to the south along the ditch to reduce the potential for debris flows impacting the highway. It is understood that there has been no change or debris flow activity at this site in the past 11 years, including during and immediately after the severe flood event of June 2013.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress					
Slope Movement					
Erosion					
Seepage					
Culvert Distress					

Continued on next page

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
COMMENTS					
<p>Upon assessment of the debris flow event in July 2004, KCB recommended that berms and channels be constructed to divert future water and debris flow events to the south along the ditch parallel to the highway. Two converging channels with training berms were constructed in the fall of 2004 above the highway on a natural bench. The berms were constructed with coarse gravel and cobbles with some sand that was derived from colluvial and debris flow materials. The channels are approximately 4 m wide across the bottom with 1.5H to 2H:1V side slopes. The berm height was approximately 1.5 m.</p> <p>Since completion of this work there have been no further debris flows that have impacted the highway surface at this area, including during the severe flood events of June 2005 and June 2013. KCB recommends that AT continue to maintain the existing channel and berm system which includes regular inspections and removal of accumulated debris materials and any vegetation growing in the channel system. Revisions to the width or depth of the channels are not required at this time.</p>					









