

SITE NUMBER AND NAME: C007 Kenilworth Lake		HIGHWAY & KM: 16:30, 23.89	PREVIOUS INSPECTION DATE: June 21, 2018	INSPECTION DATE: July 12, 2019
LEGAL DESCRIPTION: 11-27-050-04 W4M	NAD 83 COORDINATES: UTM Northing Easting 12 5910761 532907		RISK ASSESSMENT: PF: 3 CF: 2 TOTAL: 6	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 7,710 (west) & 7,460 (east) (Ref No. 137470 & 134470)			CONTRACT MAINTENANCE AREA (CMA): 15	

SUMMARY OF SITE INSTRUMENTATION: Operational: Two slope inclinometers installed along the H-pile wall. Inoperable: Two slope inclinometers and two standpipe piezometers. LAST READING DATE: May 16, 2019		INSPECTED BY: Chris Gräpel (KCB) Ryan Gazley (KCB) Rishi Adhikari (AT) Tom Sommerville (AT)
PRIMARY SITE ISSUE: Slope failure on south side slope of eastbound lanes, and settlement of eastbound lanes. Pavement cracking has continued after pile wall was installed.		
APPROXIMATE DIMENSIONS: Approximately 60 m long. Slope is approximately 20 m high sloped at 6H:1V.		
DATE OF ANY REMEDIAL ACTION: 2001 – keyed in berm constructed at toe of failing slope, changing the effective slope angle to 6V:1H. 2015 – H-pile wall constructed at top of failing slope and asphalt overlay constructed on eastbound lanes.		

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Tension cracks observed on the south shoulder of the eastbound lanes extend towards the eastbound passing lane		X
Slope Movement		X			X
Erosion	X		Settlement of surface materials into voids between the flanges of the H-pile wall are creating sinkholes along the top of the H-pile wall.		X
Seepage		X			X
Culvert Distress		X	Not applicable		

COMMENTS
Instrumentation data indicates that deflection of the pile wall is slowly attenuating. Asphalt cracking has extended past the pile wall to the east and west. The pavement cracks are beginning to settle and expand, likely due to surface water infiltration.
MCI mentioned that the sinkholes along the top of the H-pile wall have been filled repeatedly with sand but sinkholes continue to form at the pile locations as the fill near the top of the piles continues to settle. The sinkholes present a tripping and falling hazard to the public. W-beam guardrail was installed adjacent to pile wall in 2018 or early 2019.
Discussed remedial actions: Continue to add sand and gravel to sinkholes to reduce potential for someone stepping in a void and getting injured; extend pile wall to the east and west (approximately 50' on either side) to encompass area where pavement cracks have extended past the ends of the pile wall. KCB's proposal for design of pile-wall extension was submitted to AT on September 12, 2019.

Photo 1 View of cracking on the south side of eastbound lanes and new guardrail adjacent to SIs. Photo taken July 12, 2019 looking west.



Photo 2 Photo showing settlement and expansion of pavement cracks. Photo taken July 12, 2019.



Photo 3 Sinkholes continuing to develop along the top of H-pile wall. Photo taken July 12, 2019 looking east.



Photo 4 Cracking along south shoulder of east bound lanes, east of H-pile wall. Photo taken July 12, 2019 looking west.

