PAVISION®

Date:	March 27, 2017
Location:	California, La Media Road
PaVision® Serial Number:	#001

Background

PaVision® is a pavement data collection and analysis system developed and deployed by Applied Research Associates, Inc. (ARA). The data collection hardware consists of forward-facing and downward-facing high-resolution digital camera, an accelerometer, a GPS antenna, and an onboard computer to control the systems and integrate the data. After image and roughness data are collected, the data are moved to a cloud-based analysis system for automated pavement distress identification processing using a proprietary software algorithm. The identified pavement distresses are aggregated into a traditional Pavement Condition Index (PCI) score following the methods in ASTM D-6433.

Location Map

Figure 1 shows Google map image where PaVision images were collected.

Figure 1: Google Map Image of the surveyed section

Cracking Results

This section represents the various distresses measured by the system on the different segments. Table 1 shows the distress on various lanes on La Media Road.

Table 1: Distress Results for La Media Road

Distresses	Southbound			Northbound	
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2
Area	4320	4440	4440	5040	5160
Alligator(L)	2.6	21.9	99.1	0	19.6
Alligator(M)	0	0	0	0	0
Alligator(H)	0	0	0	0	0
Block Cracking(L)	0	0	0	0	0
Block Cracking(M)	0	0	0	0	0
Block Cracking(H)	0	0	0	0	0
Edge Cracking(L)	0	0	0	0	0
Edge Cracking(M)	0	0	0	0	0
Edge Cracking(H)	0	0	0	0	0
Longitudinal / Transverse(L)	32.7	28.8	22.4	32.8	63.3
Longitudinal / Transverse(M)	65.5	77.8	7.2	70.0	111.3
Longitudinal / Transverse(H)	0	1.9	0	0	9.8
Pothole(L)	0	0	0	0	0
Pothole(M)	0	0	0	0	0
Pothole(H)	0	0	0	0	0
Blowups(L)	0	0	0	0	0
Blowups(M)	0	0	0	0	0
Blowups(H)	0	0	0	0	0
Corner Break(L)	0	0	0	0	0
Corner Break(M)	0	0	0	0	0
Corner Break(H)	0	0	0	0	0
Durability Cracking(L)	0	0	0	0	0
Durability Cracking(M)	0	0	0	0	0
Durability Cracking(H)	0	0	0	0	0
Linear Cracking(L)	0	0	0	0	0
Linear Cracking(M)	0	0	0	0	0
Linear Cracking(H)	0	0	0	0	0
Patch(L)	0	0	0	0	0
Patch(M)	0	0	0	0	0
Patch(H)	0	0	0	0	0
Map Cracking(L)	0	0	0	0	0
Map Cracking(M)	0	0	0	0	0
Map Cracking(H)	0	0	0	0	0
Spalling(L)	0	0	0	0	0
Spalling(M)	0	0	0	0	0
Spalling(H)	0	0	0	0	0

Roughness Results

Error! Reference source not found. shows the amount of roughness measured along the road segments. Since the PaVision system does not have a Class I profiler, it does not produce an International Roughness Index (IRI) or Profile Index (PI). Rather, it reports a roughness index that is unique to the PaVision system. The results have been analyzed and a reliable approximation is reported here.

Table 2: Roughness results for different sections

Section	Roughness
La Media Rd Southbound Lane 1	317.2
La Media Rd Southbound Lane 2	263.2
La Media Rd Southbound Lane 3	268.1
La Media Rd Northbound Lane 1	151.3
La Media Rd Northbound Lane 2	165.5

PCI Results

Error! Reference source not found. contains the final PCI scores for each segment as defined by the user. For reference, figure 2 depicts the PCI scale as described in ASTM D-6433.

Figure 2. ASTM D-6433 scale for PCI ratings.

PCI Results for different sections

Section	PCI
La Media Rd Southbound Lane 1	85.5
La Media Rd Southbound Lane 2	82.6
La Media Rd Southbound Lane 3	82.1
La Media Rd Northbound Lane 1	88.5
La Media Rd Northbound Lane 2	79.8