

**2016 MnROAD/NCAT Cracking Group Construction
Weekly Construction Update
For the week of August 22, 2016**

- August 22, 2016
 - Strain gauges for Cell 17 and 19 were placed. In order to provide bonding between the strain gauges to the base surface, emulsion (CSS-2) was first applied on the top of the base. Then, each strain gauge was secured with the slurry (emulsion with fine aggregates, Sieve No.4). Strain gauges installation steps are shown in Figure 1.



(a)

(b)

Figure 1: Strain gauge installation: (a) emulsion application; (b) slurry application

- August 23 – 29, 2016
 - A trial mix for each cell was placed on Aug. 23, 2016, and the AC content of JMF for each cell was adjusted. The JMF AC contents were reduced by 0.3%, 0.2%, 0.2%, and 0.1% for Cell 16, 17, 18, and 19, respectively.
 - The paving began on Aug. 23, 2016 and ended on Aug. 29, 2016. For each Cell (Cell 16 – 19), the driving lane was constructed first then followed by the passing lane and the right shoulder lane. It should be noted that the paving was called off on Aug. 27, 2016 due to inclement weather conditions. The 2nd lift for Cell 18 and 19 were placed on Aug. 29, 2016. The construction details are provided in Table 1.
 - During the paving, temperature of placed mat temperature was recorded for each lane. For driving lane and passing lane of each cell, the mix was sampled for additional laboratory testing. The mix was directly sampled from material transfer vehicle (MTV) using a skid loader, as shown in Figure 2, and placed into steel buckets, as shown in Figure 3.

Table 1: Construction for Cell 16 – 19

Action	Cell	Lane	Lift	Date	Begin Time	End Time	Avg. Mat Temp. [F]
Paving	16	Driving	1	8/24/2016	8:40 AM	10:04 AM	260
Paving	16	Passing	1	8/24/2016	10:13 AM	11:25 AM	255
Paving	16	Shoulder	1	8/24/2016	11:51 AM	12:40 PM	256
Paving	17	Driving	1	8/24/2016	1:24 PM	2:00 PM	265
Paving	17	Passing	1	8/24/2016	2:23 PM	3:56 PM	263
Paving	17	Shoulder	1	8/24/2016	4:07 PM	4:36 PM	272
Paving	18	Driving	1	8/25/2016	7:53 AM	8:19 AM	270
Paving	18	Passing	1	8/25/2016	9:04 AM	10:29 AM	248
Paving	18	Shoulder	1	8/25/2016	10:37 AM	11:55 AM	265
Paving	19	Driving	1	8/25/2016	12:25 PM	1:38 PM	263
Paving	19	Passing	1	8/25/2016	1:42 PM	2:59 PM	264
Paving	19	Shoulder	1	8/25/2016	3:12 PM	4:21 PM	274
Paving	16	Driving	2	8/26/2016	9:10 AM	9:38 AM	257
Paving	16	Passing	2	8/26/2016	9:44 AM	10:52 AM	256
Paving	16	Shoulder	2	8/26/2016	10:55 AM	12:01 PM	261
Paving	17	Driving	2	8/26/2016	12:14 PM	12:38 PM	255
Paving	17	Passing	2	8/26/2016	12:58 PM	1:41 PM	260
Paving	17	Shoulder	2	8/26/2016	1:53 PM	2:45 PM	265
Paving	18	Driving	2	8/29/2016	7:30 AM	N/A	
Paving	18	Passing	2	8/29/2016	N/A	N/A	
Paving	18	Shoulder	2	8/29/2016	N/A	9:30 AM	
Paving	19	Driving	2	8/29/2016	9:45 AM	N/A	
Paving	19	Passing	2	8/29/2016	N/A	N/A	
Paving	19	Shoulder	2	8/29/2016	N/A	12:00 PM	

*For the paving of 2nd lift of Cell 18 and 19, only the beginning and end time for each cell were recorded.



Figure 2: Sampling from MTV



Figure 3: Mix samples