

I-64 BATTLEFIELD BLVD: PERFORMANCE MEETS EXPECTATION

March 1, 2019

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Presentation Outline

1. Introduction
2. Project Descriptions
3. Pavement Performance
4. Predicted Performance

CRC Pavement: Do you still think of 295?



Longitudinal Steel Fed Through Tubes



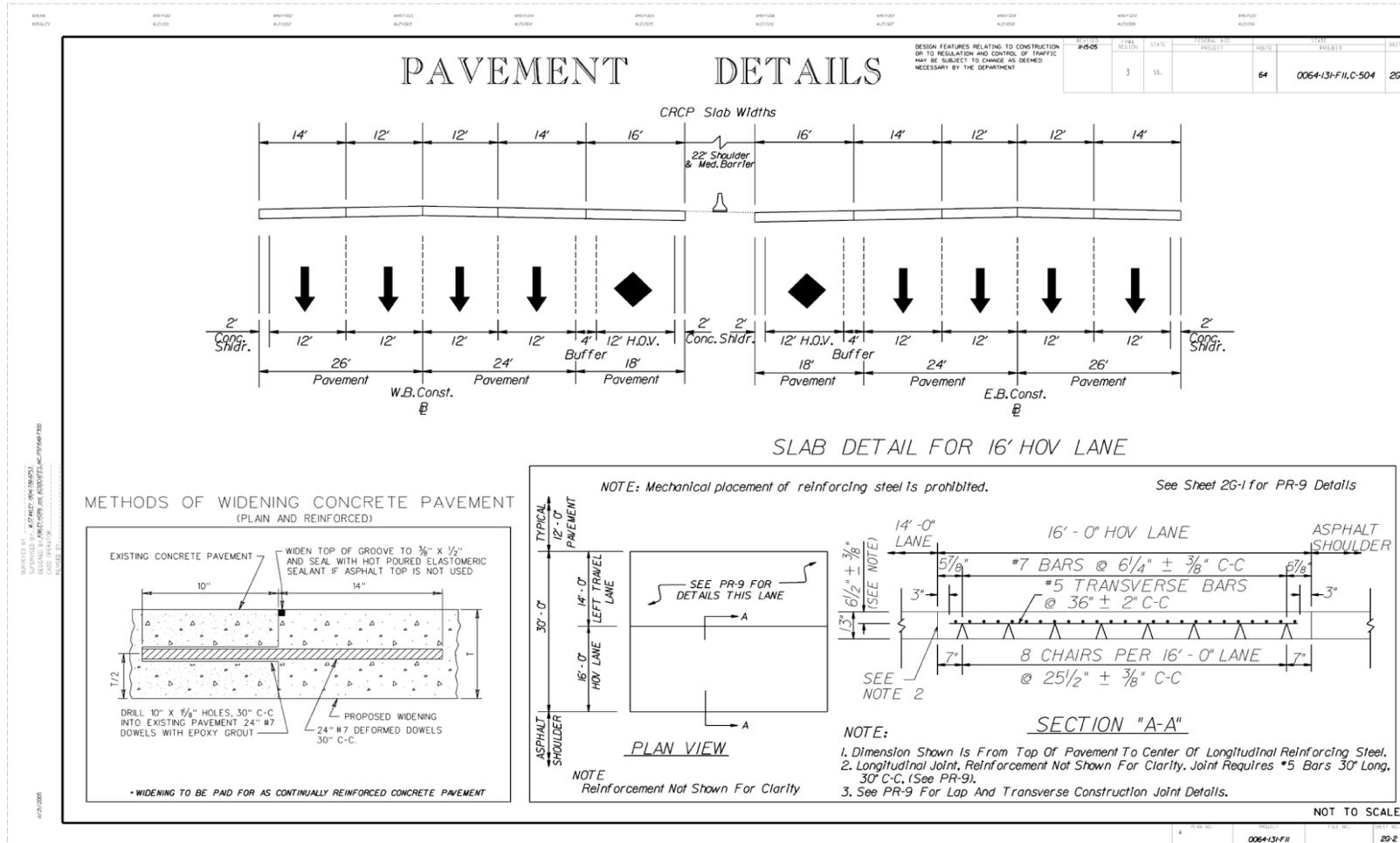
Longitudinal Steel Placement on Chair



Project Summary

- **Project Length: 1.1 miles approximately**
- **Increased interstate capacity from 6 lanes to 10 lanes including two 12 foot shoulders**
- **Four Regular and one HOV lane in each direction**
- **Added 4 CD lanes to separate local traffic from through traffic (2 in each direction)**
- **Average Annual Daily Traffic : 112,400 with 6% Truck**

Project Schematics



Pavement Structure

AASHTO 1993 Pavement Design Guide with design inputs from VDOT's Materials Manual of Instructions (MOI), Chapter VI – Pavement Design and Evaluation was used for Pavement Design

Layer	Type	Material	Thickness Inches
1	Concrete	CRCP	13
2	Asphalt	Open Graded Drainage Layer (OGDL)	3
3	Base	Cement Treated Recycled Concrete (CTRC)	6
4	Subgrade	A-3 & A-2-4	Semi infinite

Pavement Construction -2008



Recycled Concrete to be used for CTA



Pavement Construction -2008



EB View - 2018

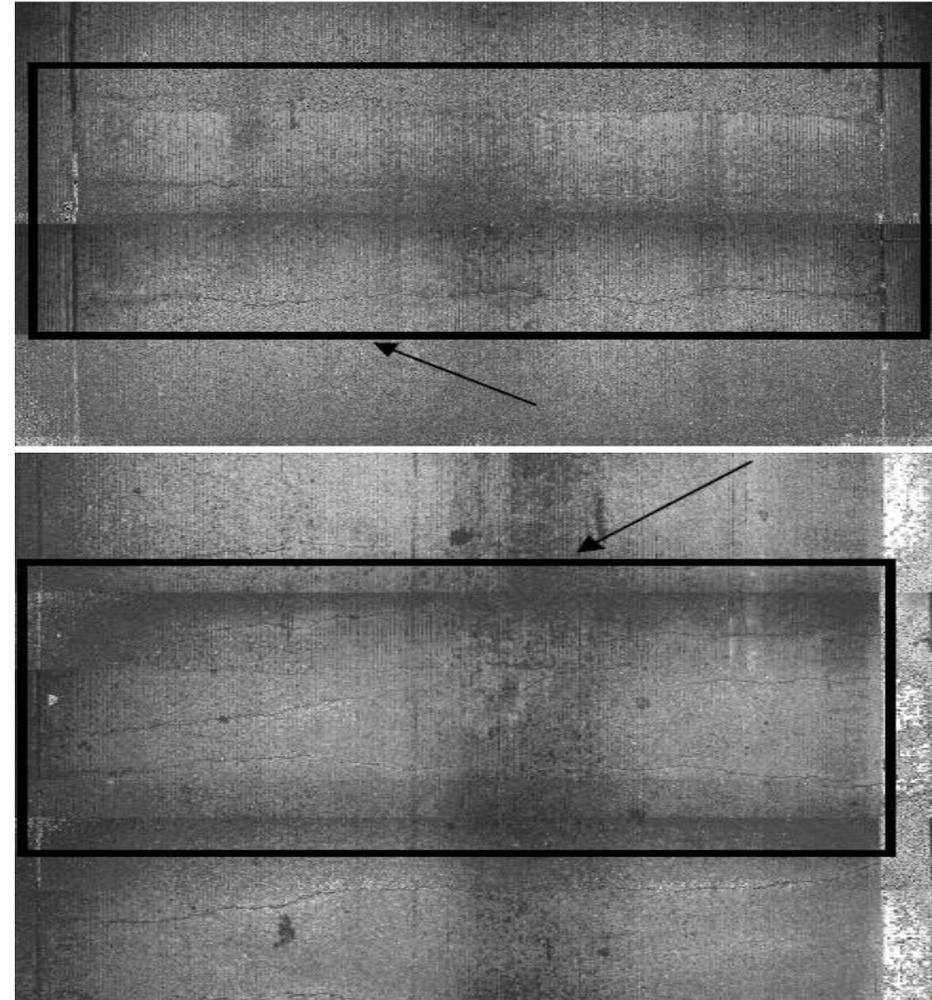


WB View - 2018

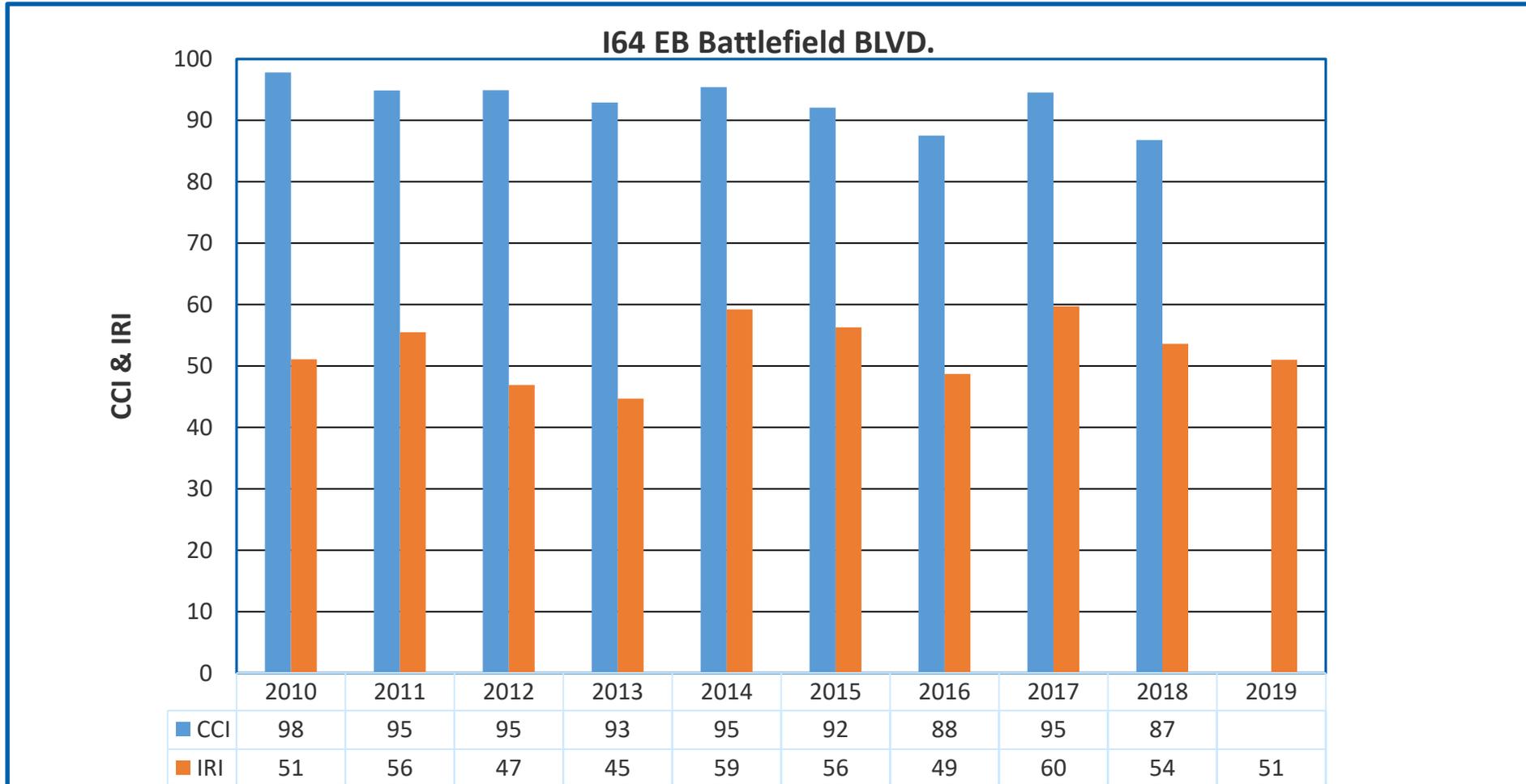


Performance To Date

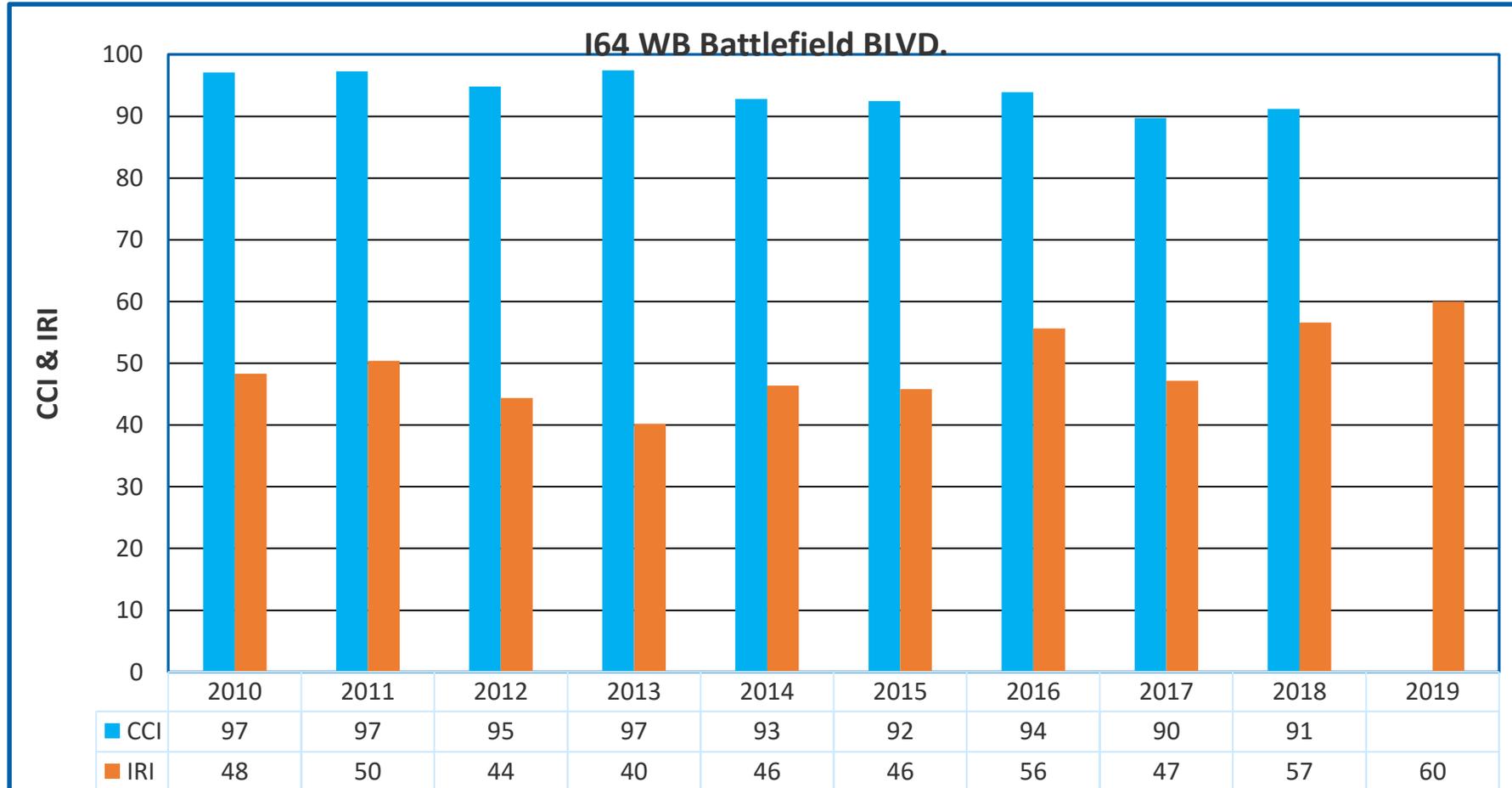
- Annual PMS condition rating
 - IRI
 - CCI
 - Punchouts
 - Cluster crack



EB Pavement Condition Rating



WB Pavement Condition Rating



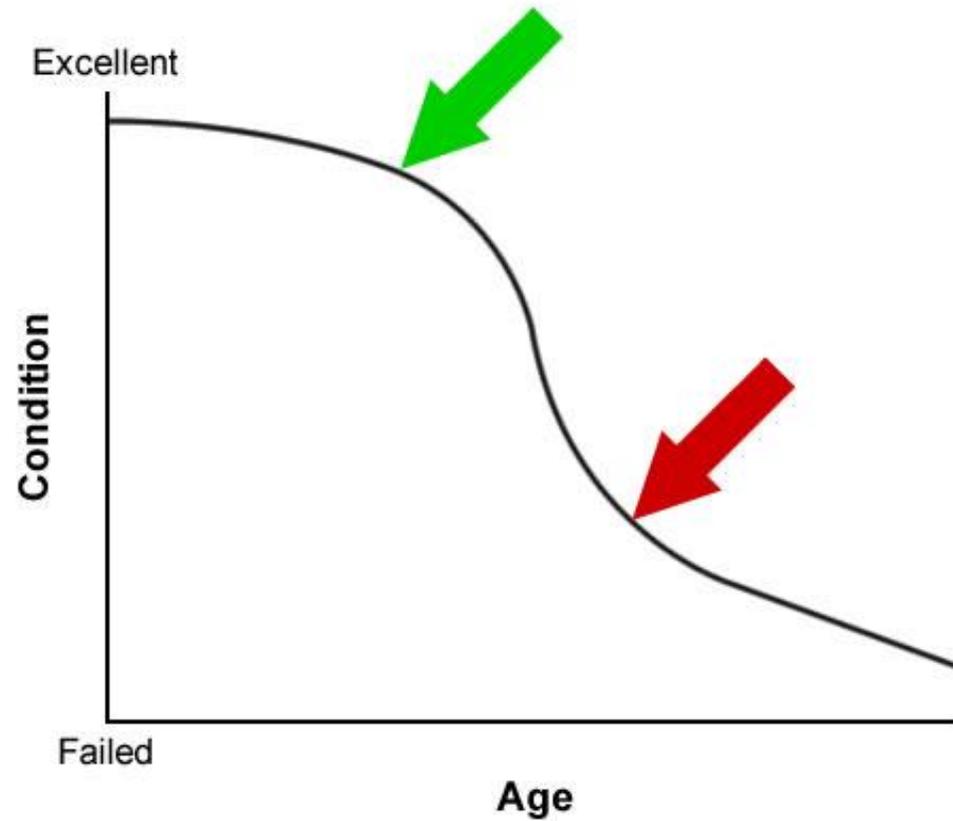
Pavement Distresses-EB

Year	Transverse Cracking	Clustered Cracks, Square feet (sft)	Punch outs and Spalled Y-cracks (sft)	AC Patching(sft)	PCC Patching (sft)
2018	Average Spacing 5.7 feet	3149 (4.4%)	0	0	0

Pavement Distresses-WB

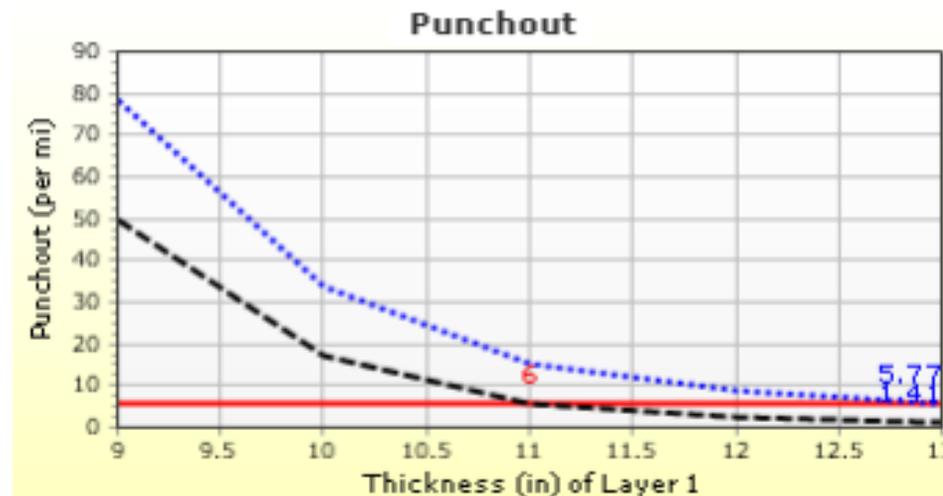
Year	Transverse Cracking	Clustered Cracks, Square feet (sft)	Punch outs and Spalled Y-cracks (sft)	AC Patching(sft)	PCC Patching (sft)
2018	Average Spacing 4.83 feet	2986 (4.91%)	0	0	0

So Far So Good: What's ahead?



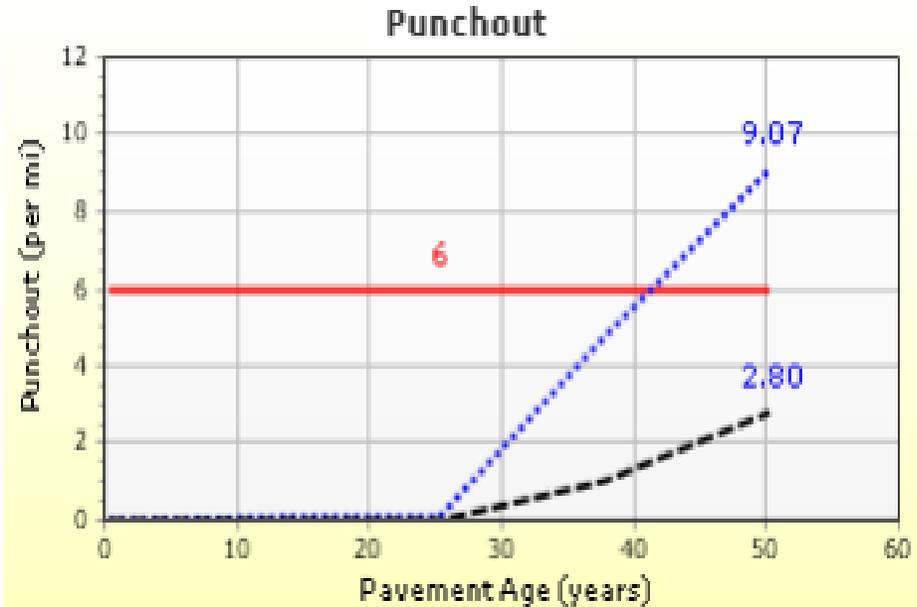
Performance Prediction Using MEPDG

Performance parameters for CRC: IRI and Punchout

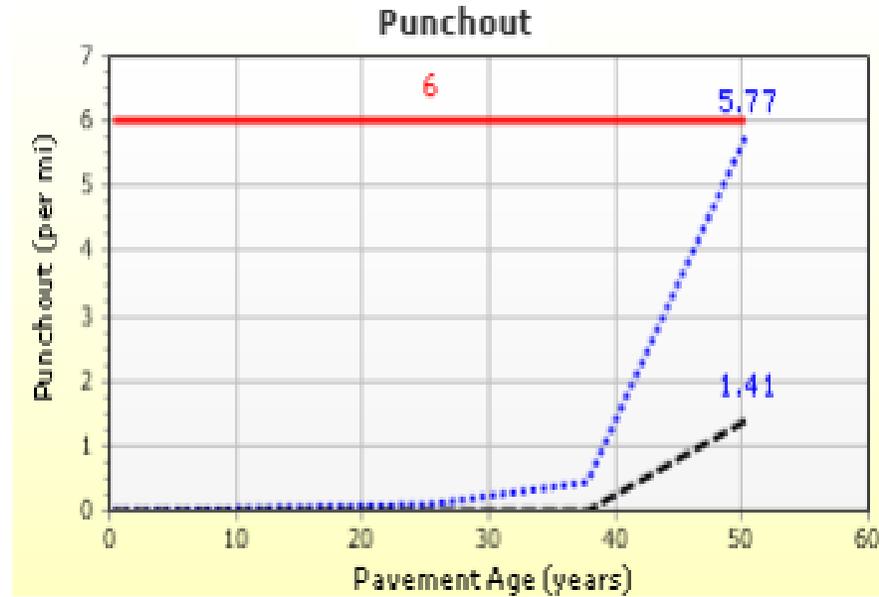


Performance Prediction Using MEPDG

- Punchout prediction



Predicted punchout for 12" CRC



Predicted punchout for 13" CRC

- IRI is predicted to remain around current levels for quite some time

So What Can We Conclude?

- The 'fix' on steel placement is working
- Battlefield Blvd. is still on the 'good' zone of performance
- ~~It is performing excellent~~ It has performed as designed to date
- We can think beyond 295 when it comes to CRC pavement
- Expecting a long life pavement with some patching need initiated beyond 20 years.

Thank You