



# PAVEMENT CONDITION

## Change in Pavement Condition Index Calculation for Cities

Starting with the 2017 data there are new calculations for how PCI is measured for cities. The Iowa Pavement Management Program Users' Group is made up of various members from local municipalities, consultants, and other users that discuss and review pavement data collection and analysis. Through this group it was determined that a new PCI calculation was needed because the use of pavement differs between cities and counties. A subcommittee was formed that came up with new weights to be used in the new City PCI calculation.

### Old PCI Weights

Original Concrete Pavement	Weights
IRI (ride)	35
Transverse Cracking	25
D' Cracking and Spalling	40

### New PCI Weights

New Concrete Pavement	Weights
IRI (ride)	15
Transverse Cracking	20
D' Cracking and Spalling	30
Logitudinal Cracking (Total)	10
Patching	25

Original Composite Pavement	Weights
IRI (ride)	35
Transverse Cracking	20
Longitudinal Cracking (non wheel path)	15
Longitudinal Cracking (wheel path)	15
Alligator Cracking	7.5
Patching	7.5

New Composite Pavement	Weights
IRI (ride)	5
Transverse Cracking	10
Longitudinal Cracking (Total)	40
Alligator Cracking	20
Patching	25 (Bad Only)

Original Asphalt Pavement	Weights
IRI (ride)	35
Transverse Cracking	10
Longitudinal Cracking (non wheel path)	5
Longitudinal Cracking (wheel path)	10
Alligator Cracking	20
Patching	20

**No Change**

## Iowa Pavement Management Program

Each year, the Institute for Transportation at Iowa State University (InTrans) collects pavement condition data for roads in Iowa. As part of this data collection, InTrans records cracking, defects, surface type, and other roadway attributes that are used to manage the roadway network. With the collected data, InTrans provides a Pavement Condition Index ranging from zero to one hundred, which represents the level of quality users should expect while driving on the roadways.

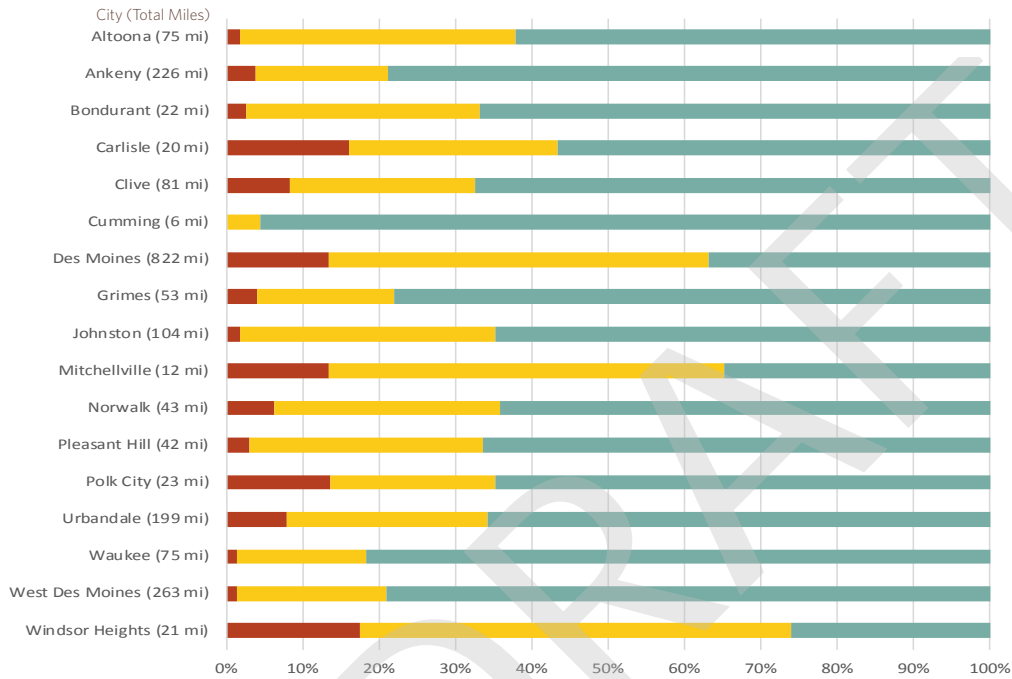
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## Pavement Condition Index by Percent of Total Miles

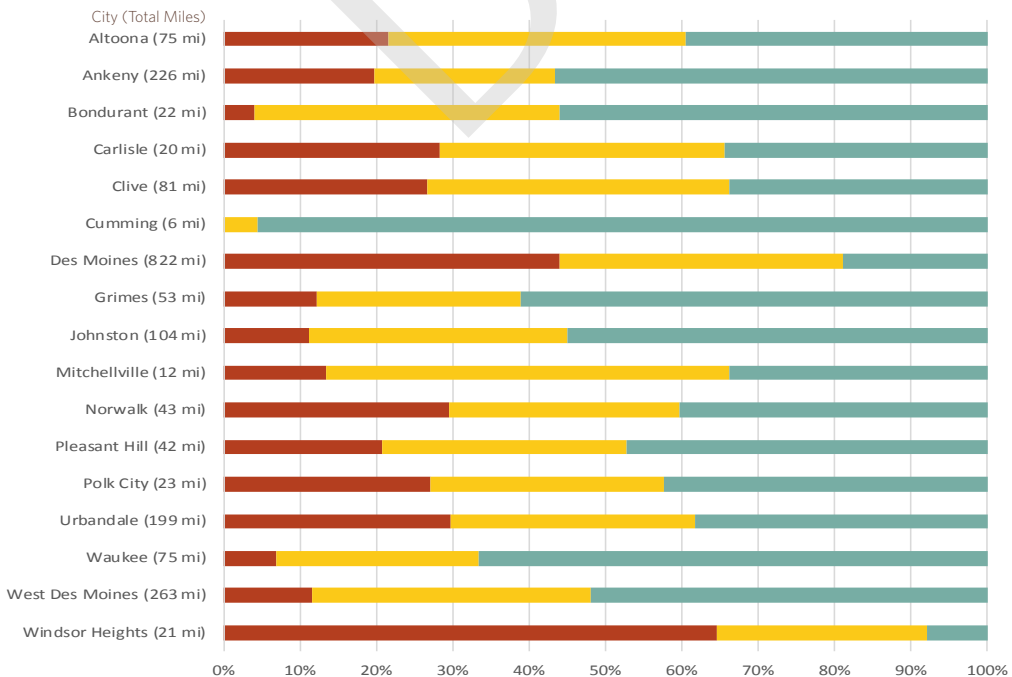
The charts below show the percent of miles of roadway by condition and city using the new City PCI and older PCI calculations. On-going monitoring of pavement condition is needed for roadway maintenance planning. Because of how the data is collected, miles shown below will differ from roadway miles calculated from other sources.

Interactive map of pavement conditions is available at: [dmampo.org/maps](http://dmampo.org/maps)

### New 2017 City PCI Calculation



### Old 2017 PCI Calculation (Illustrative Only)



### Cost of Poor Roads

A November 2016 report by TRIP, a national transportation research group, examined the cost of additional vehicle maintenance due to roads in fair or worse conditions. The report finds that nationally the average motorist spends \$532 annually due to poor road conditions. In the Des Moines region, the report found that motorists pay \$705 in additional maintenance, approximately \$173 more than the national average.

# \$532

Average Additional Vehicle Maintenance Cost in 2015 (Nationally)

# \$705

Average Additional Vehicle Maintenance Cost in 2015 (Des Moines Area)



Source: Iowa Pavement Management Program, 2017  
\*Does not include state roads.