



2016 HPMS PAVEMENT DATA SUBMISSION



Road Profilers User Group
November 15, 2017
Max G. Grogg, FHWA



Agenda

- HPMS Pavement Data Report Card (PRC)
 - User Manual
 - Updates to the PRC
 - How are we doing



Key Acronyms

- CRCP: Continuously Reinforced Concrete Pavement
- HPMS: Highway Performance Monitoring System
- IRI: International Roughness Index
- JCP: Jointed Concrete Pavement
- LRS: Linear Referencing System
- NHS: National Highway System
- PRC: HPMS Pavement Data Report Card
- PSR: Present Serviceability Rating
- TPM: Transportation Performance Management



User Manual

HPMS 8.0.1

DATA CHECK AND PAVEMENT DATA QUANTITY (INTERSTATE)

Stage: Review
Year: 2016
State: 99 - UTOPIA
Date: 05/04/2017

DATA CHECK

FIPS CODE	99	STATE NAME	UTOPIA	STATE ABBREVIATION	UP
YEAR 2015 HMA-H INTERSTATE CENTERLINE MILES					
SUBMITTED DATA INTERSTATE CENTERLINE MILES					951.836
DELTA					0.000
YEAR 2015 HMA-HB INTERSTATE LANE MILES					
SUBMITTED DATA INTERSTATE LANE MILES					1,140.576
DELTA					0.000
TOTAL INTERSTATE LANE MILES FULL EXTENT EXCLUDING SECTIONS CODED AS A BRIDGE					1,090.314

DATA QUANTITY - PAVEMENT

TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING CRACKING PERCENT DATA FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	47.923
TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING FAULTING DATA FROM POC PAVEMENTS AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRS DATA IS NULL OR ZERO FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRS COLLECTION DATE NOT VALID FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING RUTTING DATA FROM AC PAVEMENTS AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE IS NULL AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	1,783.727
LANE MILES FULL EXTENT SURFACE TYPE = 1 UNSURFACED AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE = 11 OTHER AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE IS AC	1,416.755
LANE MILES FULL EXTENT SURFACE TYPE IS POC	879.832
LANE MILES FULL EXTENT SURFACE TYPE IS ORCP	0.000
TOTAL INTERSTATE LANE MILES WHERE THROUGH LANES IS CODED AS A 1, 2, OR 3, ALTHOUGH THIS IS POSSIBLE AT INTERSTATE TERMINAL SECTION OR SOME INTERCHANGES THESE SECTIONS SHOULD BE VERIFIED.	2.064
TOTAL CENTERLINE MILES WHERE THROUGH LANES IS MISSING - MARKED AS UNRESOLVED DATA	0.000

ITEMS SHADED-ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

Comment [M9918]: Page 2 of the POC focuses on missing data, both geometric and pavement distress.

Comment [M9917]: Interstate centerline miles based on previous year's submission as reported in Table HMA-41.

Comment [M9918]: Interstate centerline miles from submitted data.

Comment [M9919]: Significant variations should be investigated and explained in submission comments.

Comment [M9920]: Significant variations should be investigated and explained in submission comments.

Comment [M9921]: Interstate lane miles based on previous year's submission as reported in Table HMA-42.

Comment [M9922]: Interstate lane miles from submitted data.

Comment [M9923]: Significant variations should be investigated and explained in submission comments.

Comment [M9924]: This is the expected value of lane miles that will be rated as Good Fair/Poor on page 1. Exceptions would be if a State has surface types of Unpaved or other.

Comment [M9925]: These rows identify lane miles of pavement where required pavement distress data is missing or invalid.

Comment [M9926]: Lane miles where surface type is NULL and rating cannot be determined. Previously, surface type was only required on samples. 23 CFR 630 requires surface type as full extent on the NHS.

Comment [M9927]: Unpaved surface type is not an acceptable value for the Interstate.

Comment [M9928]: See exclude on Surface_Type = 11, Other.

Comment [M9929]: This and following two rows quantify lane miles by surface type.

Comment [M9930]: See exclude.

Comment [M9931]: Through lanes are required for all sections of the highway per 23 CFR 630. Any value greater than 0.000 is a valid entry.



Updates to PRC

- Updates reflect Performance Management Final Rule
 - Full extent (required; 23 CFR 490.307 & 490.309)
 - Missing or invalid data (no more than 5%; 23 CFR 490.313)
- Planned updates
 - Link to standard operating procedures calculations
 - Spatial alignment
 - Present Serviceability Rating (PSR)



2016 Interstate

- 39 States were on time
- 35 States had less than 5.0% missing data
- 20 States had less than 5.0% missing or invalid data
- Unresolved data – comments in HPMS software forwarded to states

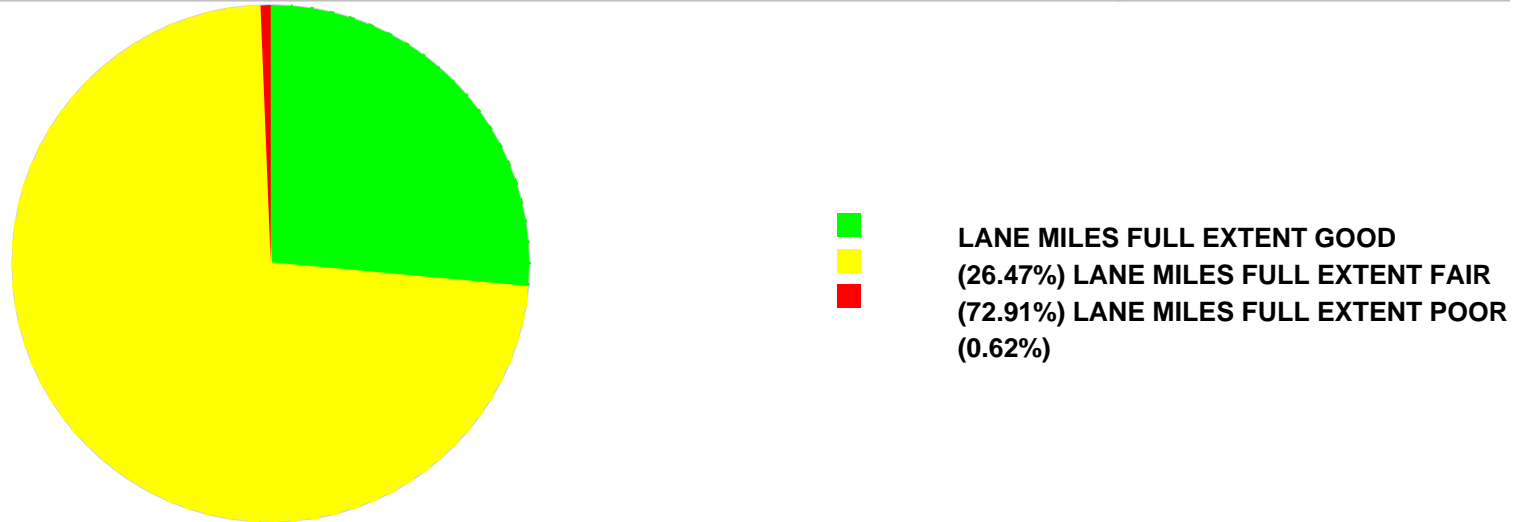


HPMS 8.0.1

**FULL EXTENT LANE MILES RATING
(INTERSTATE)**

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

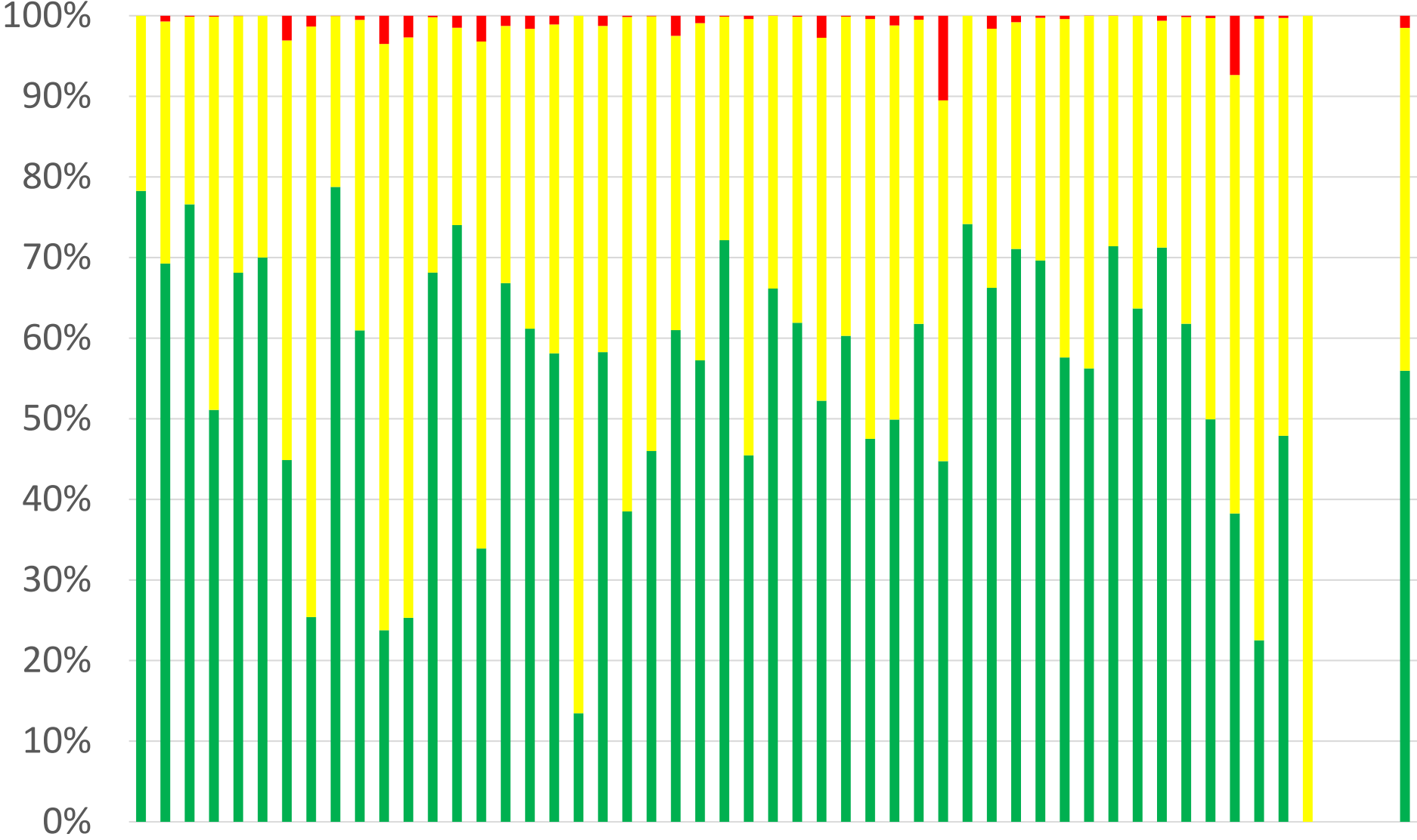
LANE MILES FULL EXTENT GOOD	367.700
LANE MILES FULL EXTENT FAIR	1,012.884
LANE MILES FULL EXTENT POOR	8.680
TOTAL	1,389.264
ESTIMATED TOTAL INTERSTATE LANE MILES MISSING OR INVALID DATA	3,942.812
% ESTIMATED TOTAL INTERSTATE LANE MILES MISSING OR INVALID DATA - LIMIT 5.0%	73.95 %
SAMPLE SIZE	26.13 %
% SURFACE TYPE BETWEEN 2 AND 10 RATED AS G-F-P	95.81 %



THE HPMS PAVEMENT REPORT CARD'S PURPOSE IS TO PROVIDE FEEDBACK TO DIVISIONS AND STATES ON THEIR HPMS PAVEMENT SUBMITTAL DATA IN RESPONSE TO REQUIREMENTS OF 23 CFR 490. THE REPORT CARD IS FOR INFORMATION ONLY AND SHOULD NOT BE CONSIDERED THE OFFICIAL CALCULATION OF MEASURES OR MISSING OR INVALID DATA FOR A STATE.

BASED ON 23 CFR 490 THE REPORT CARD IS ANALYZING FULL EXTENT, NOT SAMPLE BASED, PAVEMENT DATA. STATES ARE ENCOURAGED TO SUBMIT FULL EXTENT DATA PRIOR TO ITS REQUIREMENT SO THEY CAN BETTER ASSESS THEIR DATA SUBMISSION.

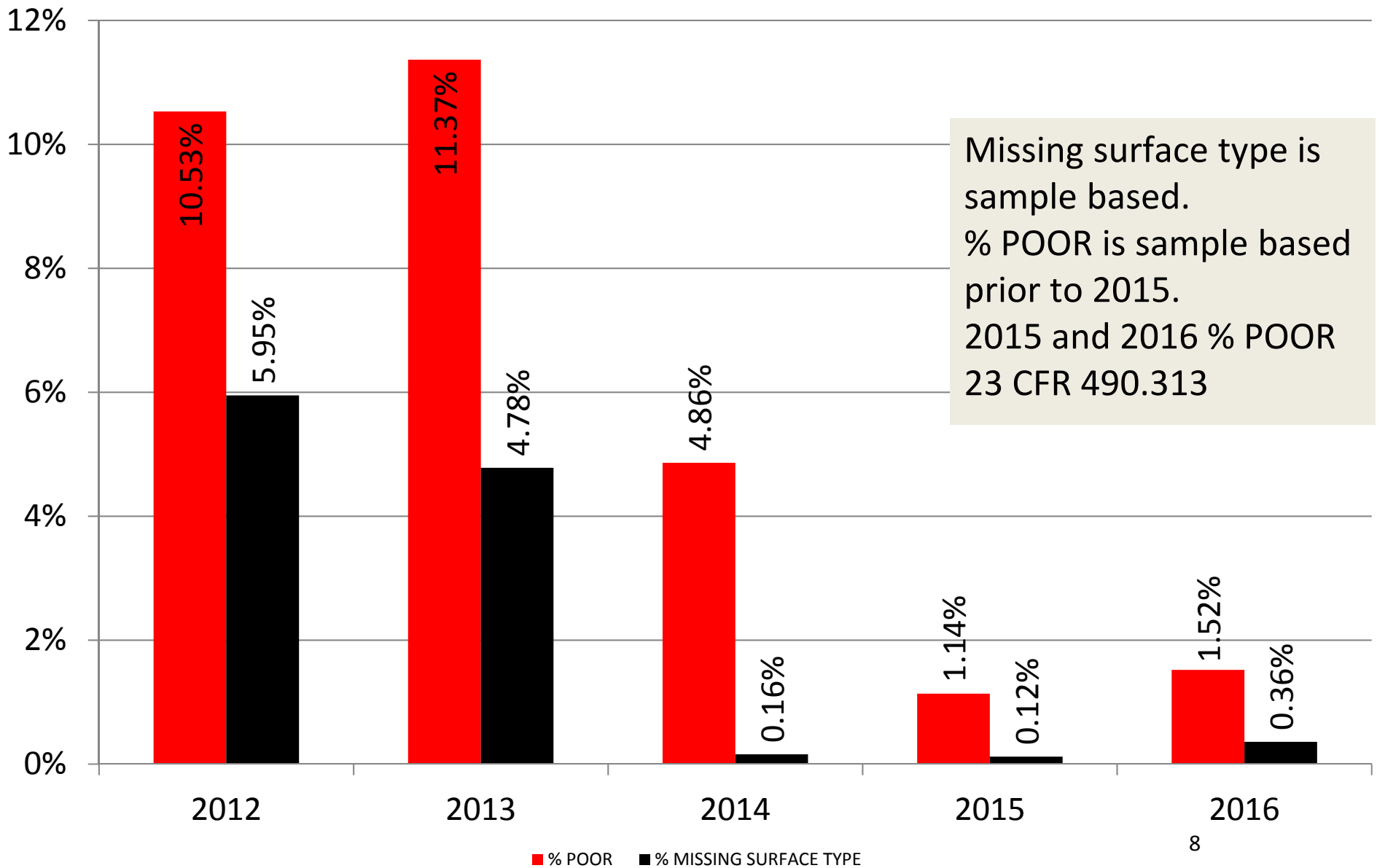
2016 INTERSTATE G-F-P



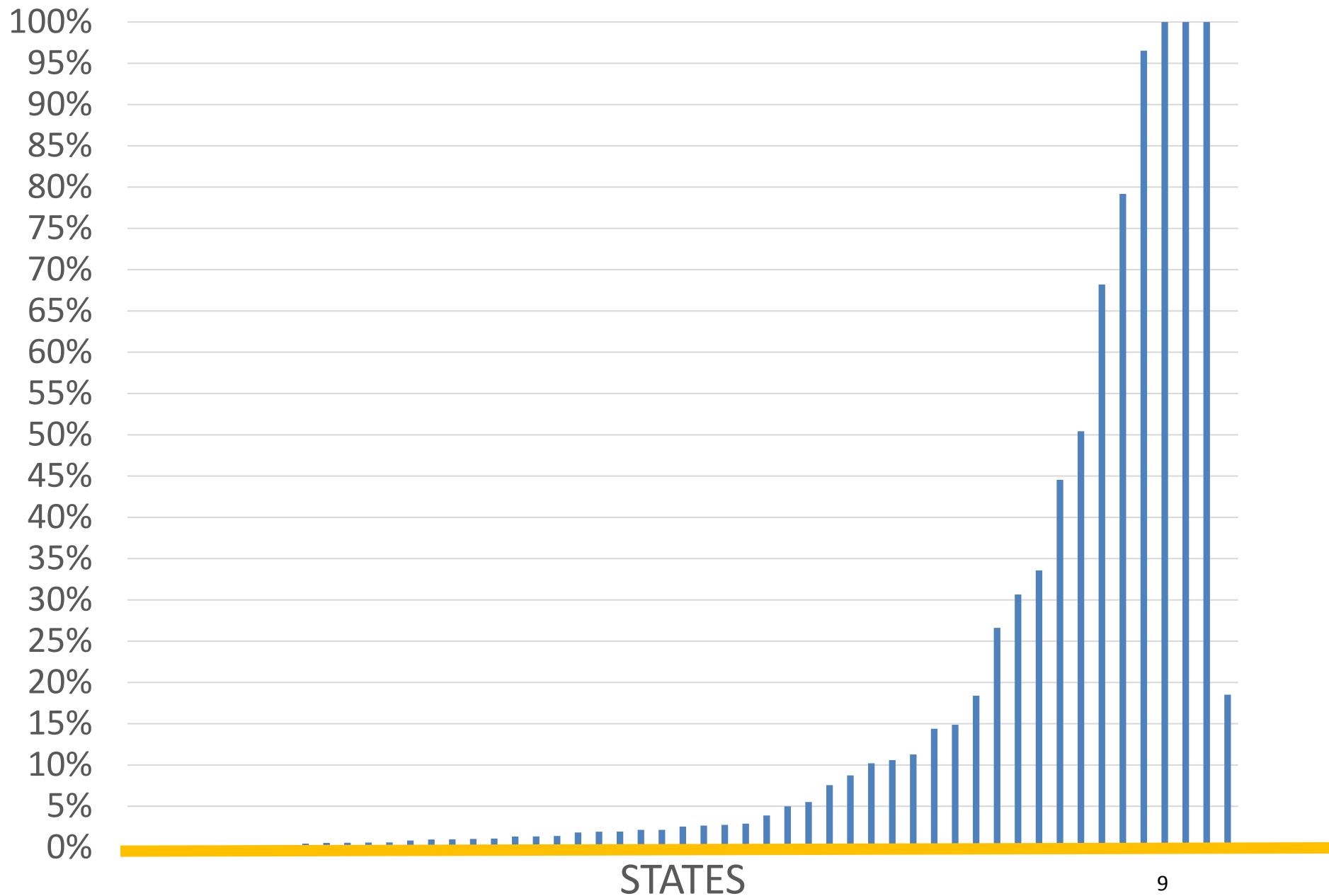
STATES

%GOOD %FAIR %POOR

INTERSTATE % POOR AND MISSING SURFACE TYPE



% MISSING OR INVALID



HPMS 8.0.1

DATA CHECK AND PAVEMENT DATA QUANTITY (INTERSTATE)

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

DATA CHECK

FIPS CODE	99	STATE NAME	UTOPIA	STATE ABBREVIATION	UP
YEAR 2015 HM-41 INTERSTATE CENTERLINE MILES					1,104.300
SUBMITTED DATA INTERSTATE CENTERLINE MILES					1,181.590
DELTA					77.290
YEAR 2015 HM-43 INTERSTATE LANE MILES					5,179.415
SUBMITTED DATA INTERSTATE LANE MILES					5,508.695
DELTA					329.280
TOTAL INTERSTATE LANE MILES FULL EXTENT EXCLUDING SECTIONS CODED AS A BRIDGE					5,332.076

DATA QUANTITY - PAVEMENT

TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING CRACKING PERCENT DATA FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	59.608
TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING FAULTING DATA FROM PCC PAVEMENTS AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI DATA IS NULL OR ZERO FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	1.200
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI COLLECTION DATE NOT VALID FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	1.200
TOTAL INTERSTATE LANE MILES FULL EXTENT MISSING RUTTING DATA FROM AC PAVEMENTS AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE IS NULL AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	3,882.004
LANE MILES FULL EXTENT SURFACE TYPE = 1 UNSURFACED AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE = 11 OTHER AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	0.000
LANE MILES FULL EXTENT SURFACE TYPE IS AC	1,390.464
LANE MILES FULL EXTENT SURFACE TYPE IS PCC	59.608
LANE MILES FULL EXTENT SURFACE TYPE IS CRCP	0.000
TOTAL INTERSTATE LANE MILES WHERE THROUGH LANES IS CODED AS A 1,2, OR 3. ALTHOUGH THIS IS POSSIBLE AT INTERSTATE TERMINAL SECTION OR SOME INTERCHANGES THESE SECTIONS SHOULD BE VERIFIED.	1.980
TOTAL CENTERLINE MILES WHERE THROUGH LANES IS MISSING - MARKED AS UNRESOLVED DATA	0.000

ITEMS SHADED ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

HPMS 8.0.1

PAVEMENT DATA QUALITY – IRI (INTERSTATE)

Stage: Review 2016
 Year: 99 - UTOPIA
 State: 05/09/2017
 Date:

TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI COLLECTION DATE NOT VALID FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA. IRI DATA IS REQUIRED TO BE COLLECTED AND REPORTED ANNUALLY ON THE INTERSTATE ALONG WITH THE DATE OF COLLECTION. IRI COLLECTION YEAR SHOULD EQUAL YEAR_RECORD	1.200
% INTERSTATE LANE MILES FULL EXTENT IRI COLLECTION YEAR DOES NOT EQUAL YEAR_RECORD. CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	0.08 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI DATA IS NULL OR ZERO FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES - MARKED AS UNRESOLVED DATA	1.200
% INTERSTATE LANE MILES FULL EXTENT WHERE IRI DATA IS NULL OR ZERO. CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	0.08 %
FULL EXTENT LANE MILES WITH MISSING OR INVALID IRI, FROM SURFACE_TYPE BETWEEN 2 AND 10 AND EXCLUDING SECTIONS CODED AS BRIDGES	1.200
% FULL EXTENT LANE MILES MISSING OR INVALID IRI EXCLUDING SECTIONS CODED AS BRIDGES - SIP SP5	0.08 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI IS LESS THAN 30.0 INCHES/MILE. ALTHOUGH VALUES LESS THAN 30.0 INCHES PER MILE ARE POSSIBLE THEY ARE NOT LIKELY AND SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED IRI CUMULATIVE DISTRIBUTION.	85.744
% INTERSTATE LANE MILES FULL EXTENT IRI LESS THAN 30.0 INCHES PER MILE. AVERAGE VALUE IS 1.23%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	5.91 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE IRI IS GREATER THAN 400.0 INCHES/MILE. ALTHOUGH VALUES GREATER THAN 400.0 INCHES PER MILE ARE POSSIBLE THEY ARE NOT LIKELY AND SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED IRI CUMULATIVE DISTRIBUTION.	0.120
% INTERSTATE LANE MILES FULL EXTENT IRI GREATER THAN 400.0 INCHES PER MILE. AVERAGE VALUE IS 0.0%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	0.01 %
LANE MILES FULL EXTENT GOOD BASED ON PSR WHERE IRI IS NULL	0.000
LANE MILES FULL EXTENT POOR BASED ON PSR WHERE IRI IS NULL	0.000

ITEMS SHADED ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

HPMS 8.0.1

**PAVEMENT DATA QUALITY – CRACKING PERCENT
(INTERSTATE)**

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED AS 0.00%. MULTIPLE STATES REPORTED VERY HIGH VALUES FOR THEIR PAVEMENTS AND THESE SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED CRACKING PERCENT CUMULATIVE DISTRIBUTION.	766.642
% INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED AS 0.00%. AVERAGE IS 61.79% WITH A SD OF 26.02%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 87.82%	52.87 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED > 0.00% AND < 1.00%. THIS MAY BE AN INDICATION THAT A STATE MAY HAVE A PROBLEM CONVERTING DECIMAL TO PERCENTAGES. CRACKING PERCENT IS TO BE REPORTED WITH A PRECISION OF 1.00% OR LESS. MULTIPLE STATES REPORTED VERY HIGH VALUES FOR THEIR PAVEMENTS AND THESE SHOULD BE VERIFIED.	153.831
% INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED > 0.00% AND < 1.00%. AVERAGE IS 9.53% WITH A SD OF 17.26%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 26.79%	10.61 %
TOTAL INTERSTATE LANE MILES FULL EXTENT FOR PAVEMENTS CODED AS HMA WHERE CRACKING PERCENT IS REPORTED GREATER THAN 54.00%. CRACKING PERCENT FOR HMA IS LIMITED TO WHEELPATH AND THEREFORE SHOULD NOT EXCEED 54.00% FOR A 12-FOOT LANE WIDTH. MULTIPLE STATES REPORTED VERY HIGH VALUES FOR THEIR PAVEMENTS AND THESE SHOULD BE VERIFIED.	7.084
% INTERSTATE LANE MILES FULL EXTENT FOR HMA PAVEMENTS WHERE CRACKING PERCENT IS REPORTED GREATER THAN 54.00%. AVERAGE IS 0.29% WITH A SD OF 0.46%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	0.51 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED AS 100.00%. MULTIPLE STATES REPORTED VERY HIGH VALUES FOR THEIR PAVEMENTS AND THESE SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED CRACKING PERCENT CUMULATIVE DISTRIBUTION.	0.000
% INTERSTATE LANE MILES FULL EXTENT WHERE CRACKING PERCENT IS REPORTED AS 100.00%. AVERAGE IS 0.16% WITH A SD OF 0.65%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.81%	0.00 %

ITEMS SHADED ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

HPMS 8.0.1

PAVEMENT DATA QUALITY - FAULTING AND RUTTING
(INTERSTATE)

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS JOINTED PCC AND FAULTING IS EQUAL TO 0.00. MULTIPLE STATES REPORTED VERY HIGH VALUES AND THIS DATA SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED FAULTING CUMULATIVE DISTRIBUTION.	0.000
% INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS JOINTED PCC AND FAULTING IS EQUAL TO 0.00. AVERAGE IS 56.41% WITH A SD OF 36.57%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 92.98%	0.00 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS JOINTED PCC AND FAULTING IS GREATER THAN 1.00 INCH. MULTIPLE STATES REPORTED VERY HIGH VALUES AND THIS DATA SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED FAULTING CUMULATIVE DISTRIBUTION.	3.594
% INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS JOINTED PCC AND FAULTING IS GREATER THAN 1.00 INCH. AVERAGE IS 0.06% WITH A SD OF 1.12%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	6.03 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS HMA AND RUTTING IS EQUAL TO 0.00. MULTIPLE STATES REPORTED VERY HIGH VALUES AND THIS DATA SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED RUTTING CUMULATIVE DISTRIBUTION.	0.000
% INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS HMA AND RUTTING IS EQUAL TO 0.00. AVERAGE IS 15.07% WITH A SD OF 23.93%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 39.00%	0.00 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS HMA AND RUTTING IS GREATER THAN 1.00 INCH. MULTIPLE STATES REPORTED VERY HIGH VALUES AND THIS DATA SHOULD BE VERIFIED. YOU MAY WISH TO REFER TO THE ATTACHED RUTTING CUMULATIVE DISTRIBUTION.	1.700
% INTERSTATE LANE MILES FULL EXTENT WHERE SURFACE TYPE IS HMA AND RUTTING IS GREATER THAN 1.00 INCH. AVERAGE IS 0.00% WITH A SD OF 0.02%, CUTOFF VALUE TO FLAG FOR VERIFICATION IS 0.00%	0.12 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE RUTTING IS REPORTED ON SURFACE TYPE = PCC OR CRCP	59.608
MANY STATES REPORT ALL DISTRESSES REGARDLESS OF SURFACE TYPE. VALUES OTHER THAN 0% SHOULD BE VERIFIED AS THIS MAY BE AN ERROR OR THE RESULT OF DIFFERENT SOURCES OF REPORTING DATA	100.00 %
TOTAL INTERSTATE LANE MILES FULL EXTENT WHERE FAULTING IS REPORTED ON SURFACE TYPE = HMA OR CRCP	0.000
MANY STATES REPORT ALL DISTRESSES REGARDLESS OF SURFACE TYPE. VALUES OTHER THAN 0% SHOULD BE VERIFIED AS THIS MAY BE AN ERROR OR THE RESULT OF DIFFERENT SOURCES OF REPORTING DATA	0.00 %

ITEMS SHADED ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

HPMS 8.0.1**PAVEMENT DATA QUALITY - BRIDGE AND SECTION LENGTH
(INTERSTATE)**

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

BRIDGE LOCATION

PER MAP-21 BRIDGES ARE EXCLUDED FROM THE PERFORMANCE MEASURE CALCULATION. THE ABILITY TO ACCURATELY LOCATE BRIDGES IN HPMS IS VERY IMPORTANT IN THE CORRECT CALCULATION OF PAVEMENT CONDITION.	
COUNT OF MAINLINE INTERSTATE BRIDGES OF DATA YEAR 2016 FROM NBI INVENTORY	1,282
TOTAL INTERSTATE LANE MILES OF BRIDGES OF DATA YEAR 2016 FROM NBI INVENTORY	194.009
TOTAL LANE MILES ON FULL EXTENT BASIS CODED AS A BRIDGE IN HPMS	176.619
PERCENT HPMS BRIDGE LANE MILES OF NBI BRIDGE LANE MILES. CUTOFF FOR VERIFICATION IS LESS THAN 90.00% OR GREATER THAN 100.00%.	91.04 %

SECTION LENGTH

DISTRESS DATA SHOULD BE REPORTED IN SECTIONS 0.1 MILE IN LENGTH OR SHORTER	
TOTAL INTERSTATE LANE MILES WHERE SECTION LENGTH IS GREATER THAN 0.11 MILE (0.1 MILE NOMINAL) EXCLUDING BRIDGES - MARKED AS UNRESOLVED DATA	0.00
CUTOFF VALUE FOR VERIFICATION IS 0.00%	0.00 %

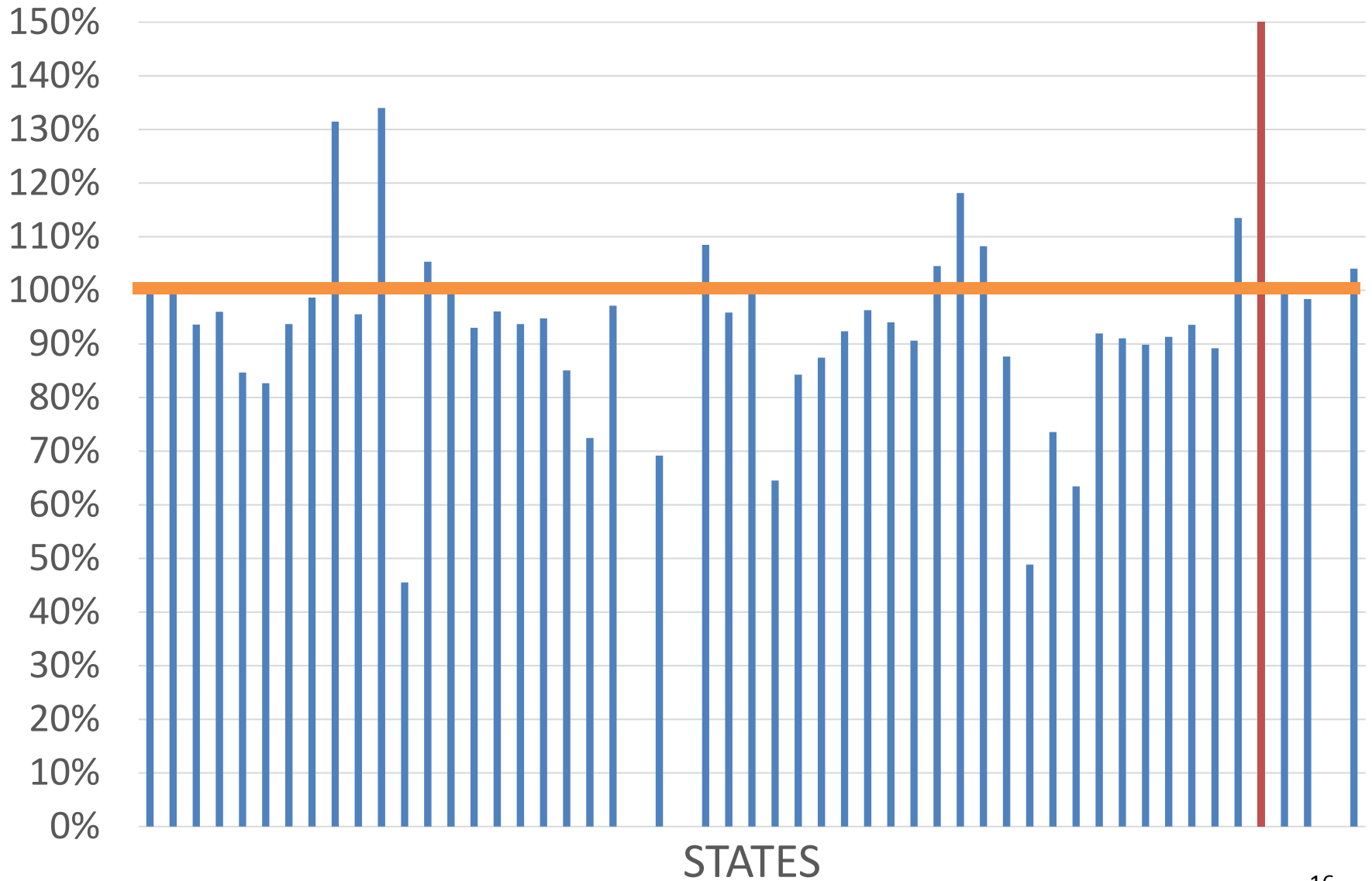
ITEMS SHADED ORANGE ARE HPMS PAVEMENT PERFORMANCE DATA IMPROVEMENT ZONES WHERE DATA SHOULD BE VERIFIED OR CORRECTED

Bridges

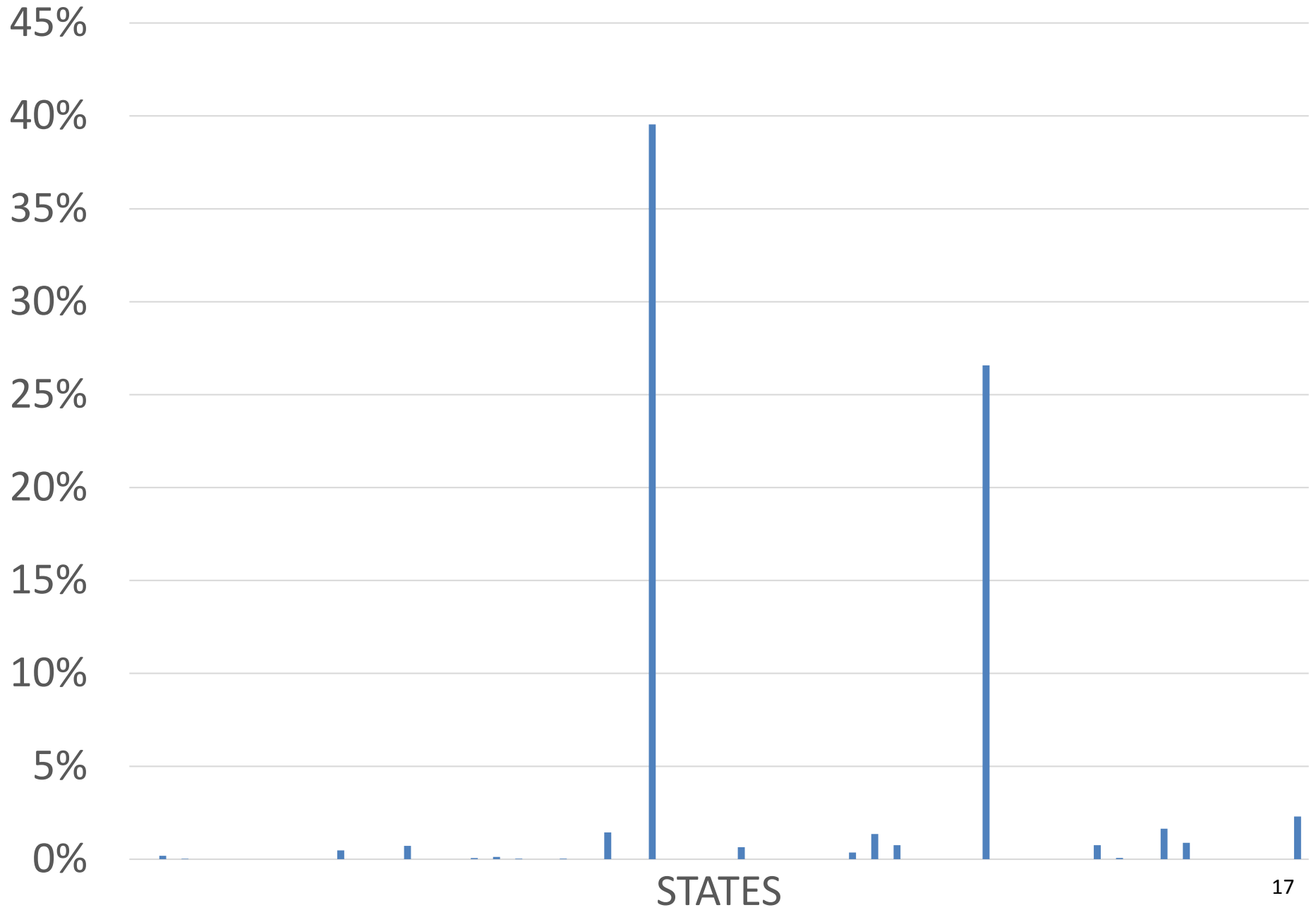
- MAP-21 excluded bridges from pavement performance calculation and required establishment of separate measures to assess bridge performance. [23 USC 150(c)(3)]
- NBI definition of bridges – length \geq 20 ft. [23 CFR 650.305]
- Comparing lane-miles of bridges from NBI
- Will never match – 90 to 100% target
 - Definition of lanes
 - Dual carriageway
 - Border bridges
- Issues
 - HPMS error
 - NBI error
 - LRS error



% 2015 NBI BRIDGE LANE MILES REPORTED IN HPMS

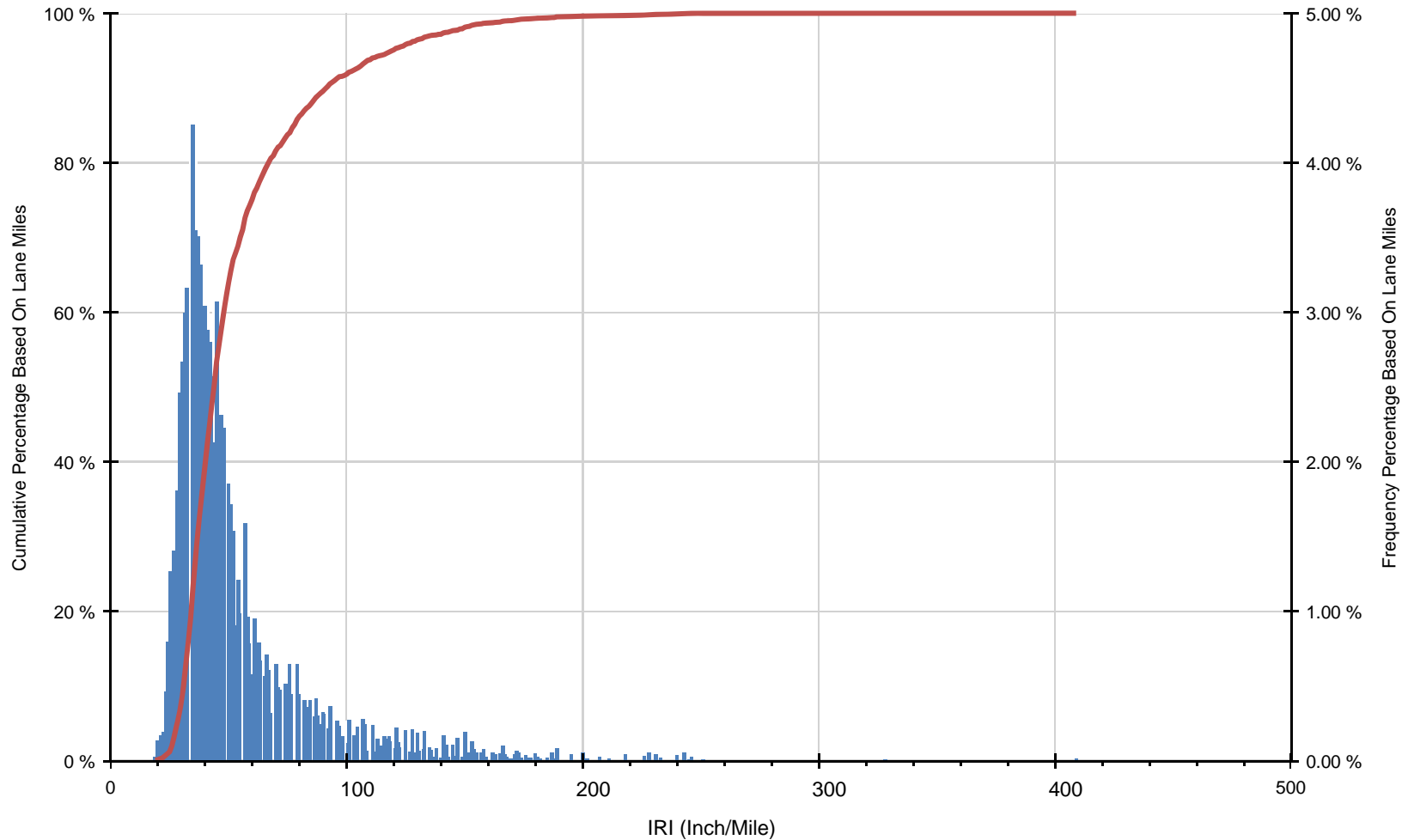


% SECTION LENGTH EXCEEDS 0.11 MILE



CUMULATIVE AND FREQUENCY DISTRIBUTION – IRI (INTERSTATE)

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:

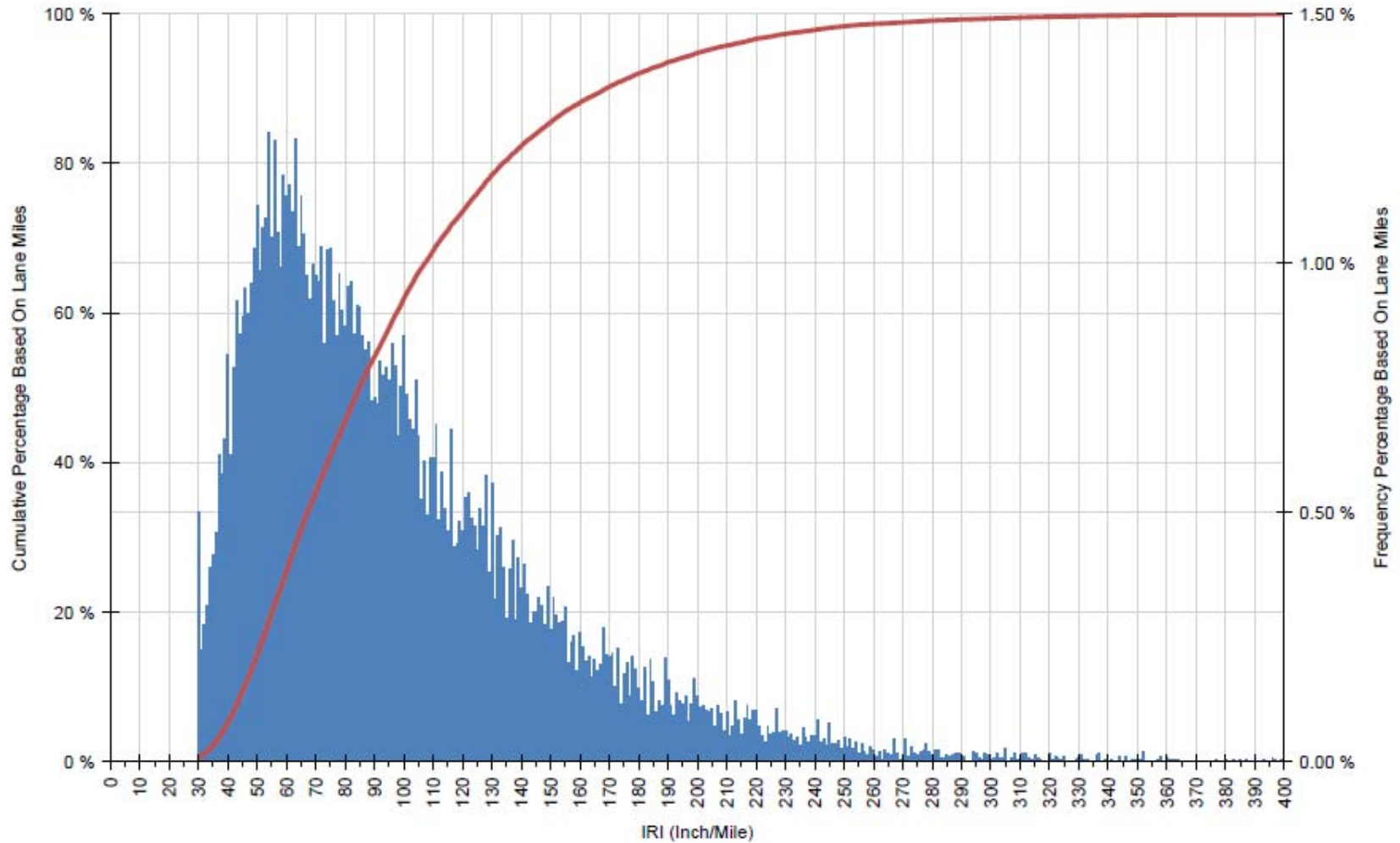


(Frequency of Missing IRI = 0.083%, missing data is included in the cumulative distribution graph.)

HPMS 8.0.1

CUMULATIVE AND FREQUENCY DISTRIBUTION - IRI - CLOSEUP 0 TO 400 (INTERSTATE)

Stage: Submit
Year: 2015
State: 100 - ROUNDOFF
Date: 05/11/2017

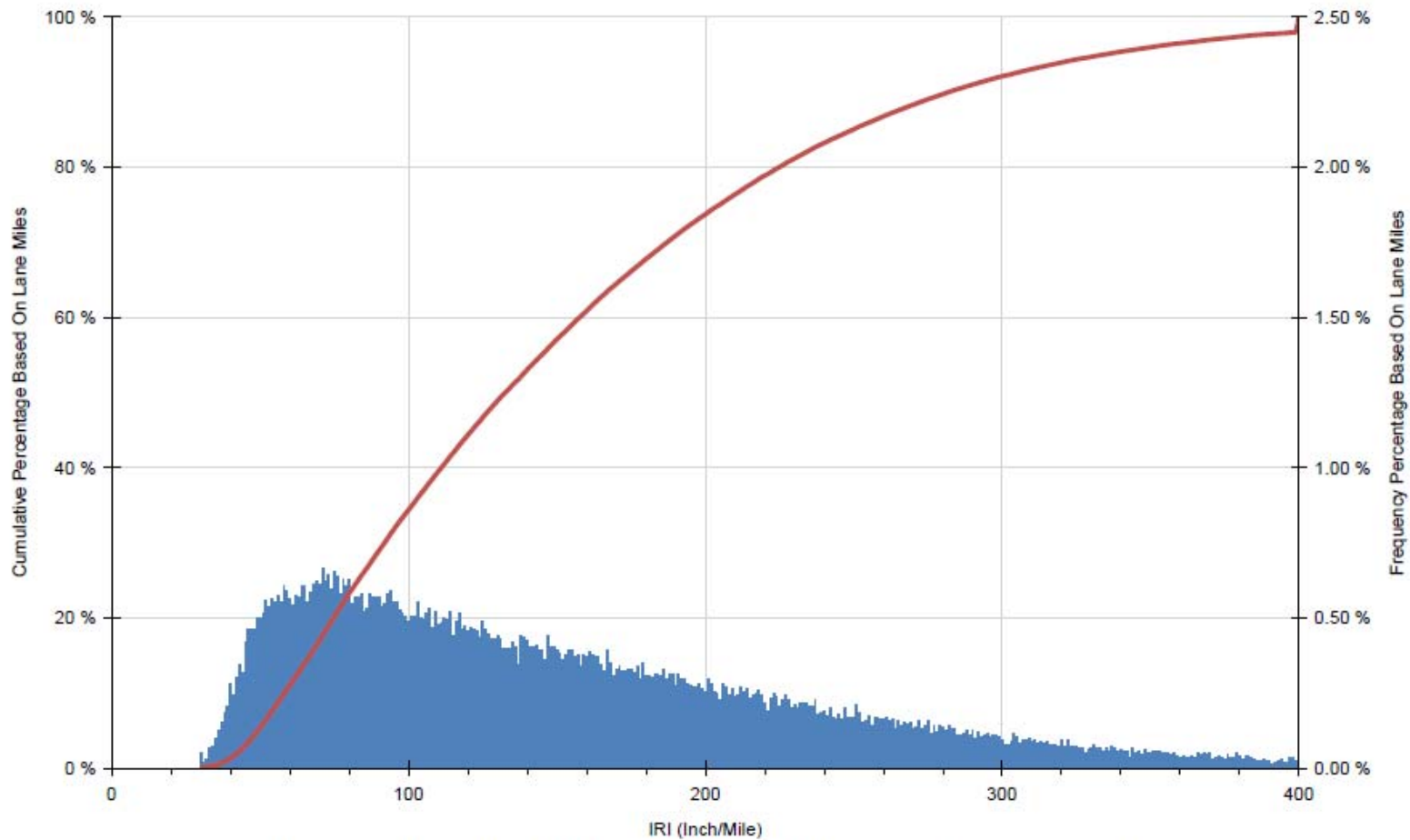


(Frequency of Missing IRI = 0.113%, missing data is included in the cumulative distribution graph.)

HPMS 8.0.1

CUMULATIVE AND FREQUENCY DISTRIBUTION - IRI (NON-INTERSTATE NHS)

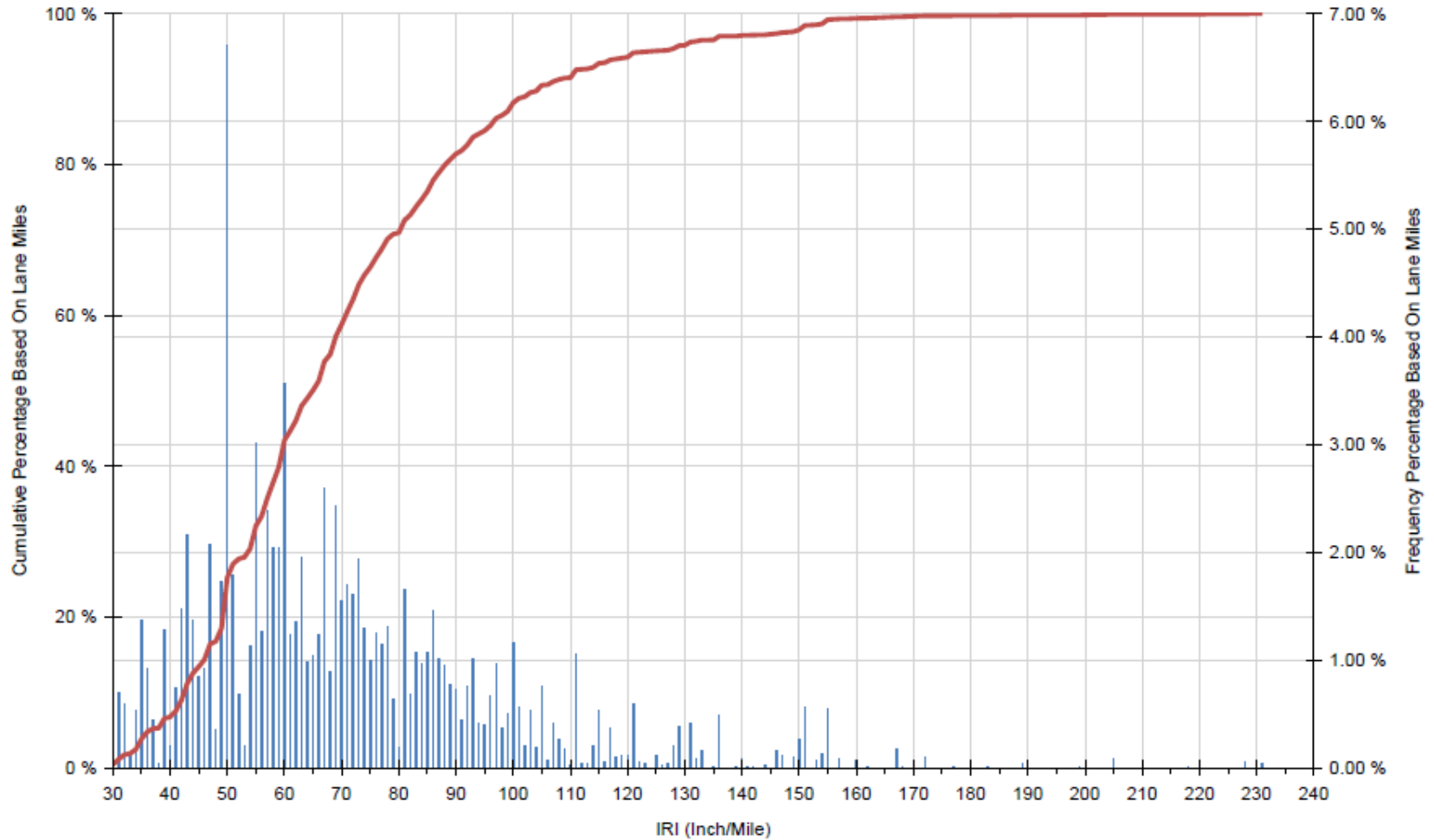
Stage: Submit Year:
2015
State: 100-ROUNDOFF
Date: 05/11/2017



(Frequency of Missing IRI = 0.066%, missing data is included in the cumulative distribution graph.)

CUMULATIVE AND FREQUENCY DISTRIBUTION - IRI (INTERSTATE)

Stage: Review
Year: 2016
State: 00-DEFAULT
Date: 04/27/2017

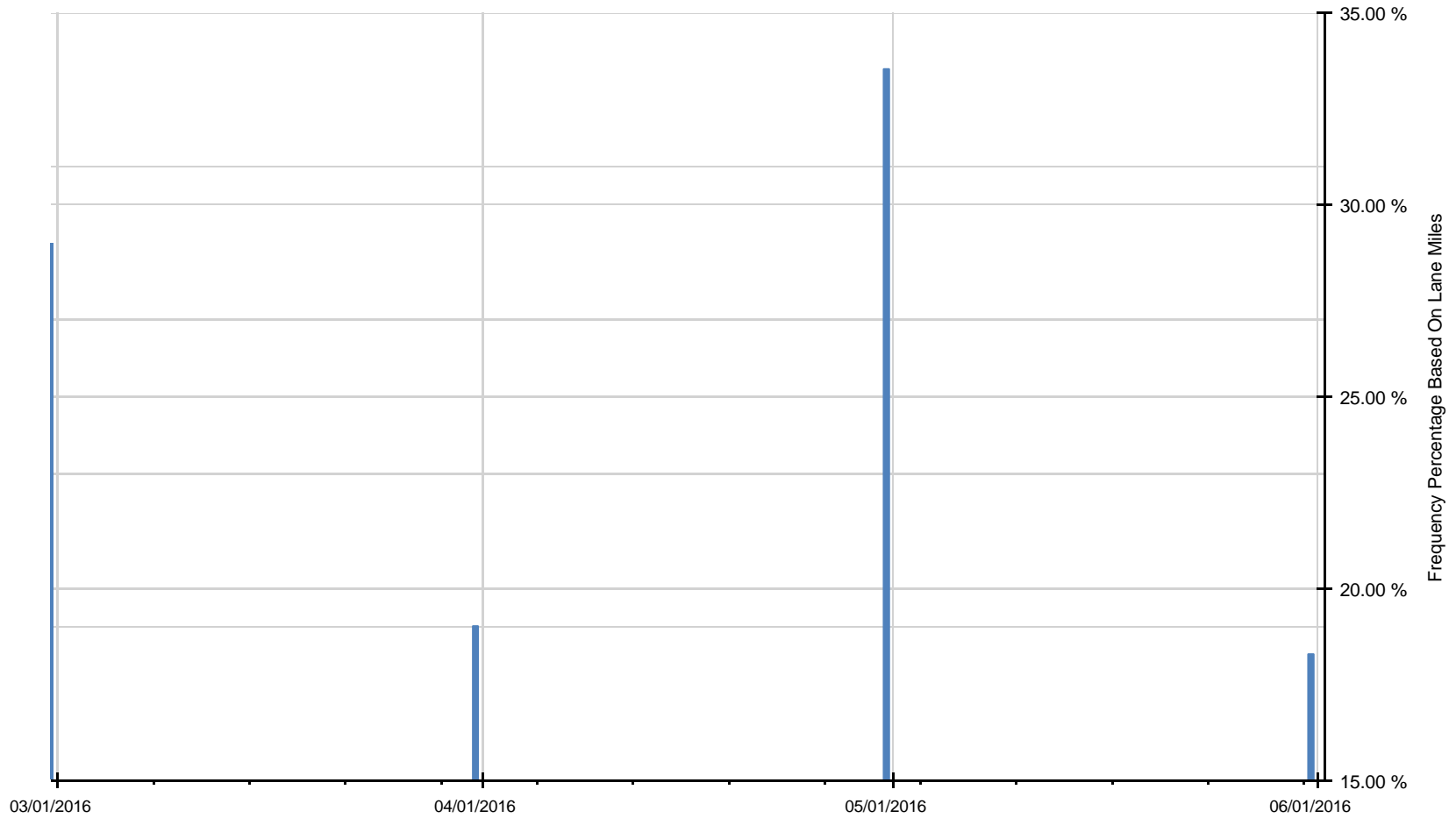


(Frequency of Missing IRI = 0.000%, missing data is included in the cumulative distribution graph.)

HPMS 8.0.1

CUMULATIVE AND FREQUENCY DISTRIBUTION (INTERSTATE IRI COLLECTION DATES)

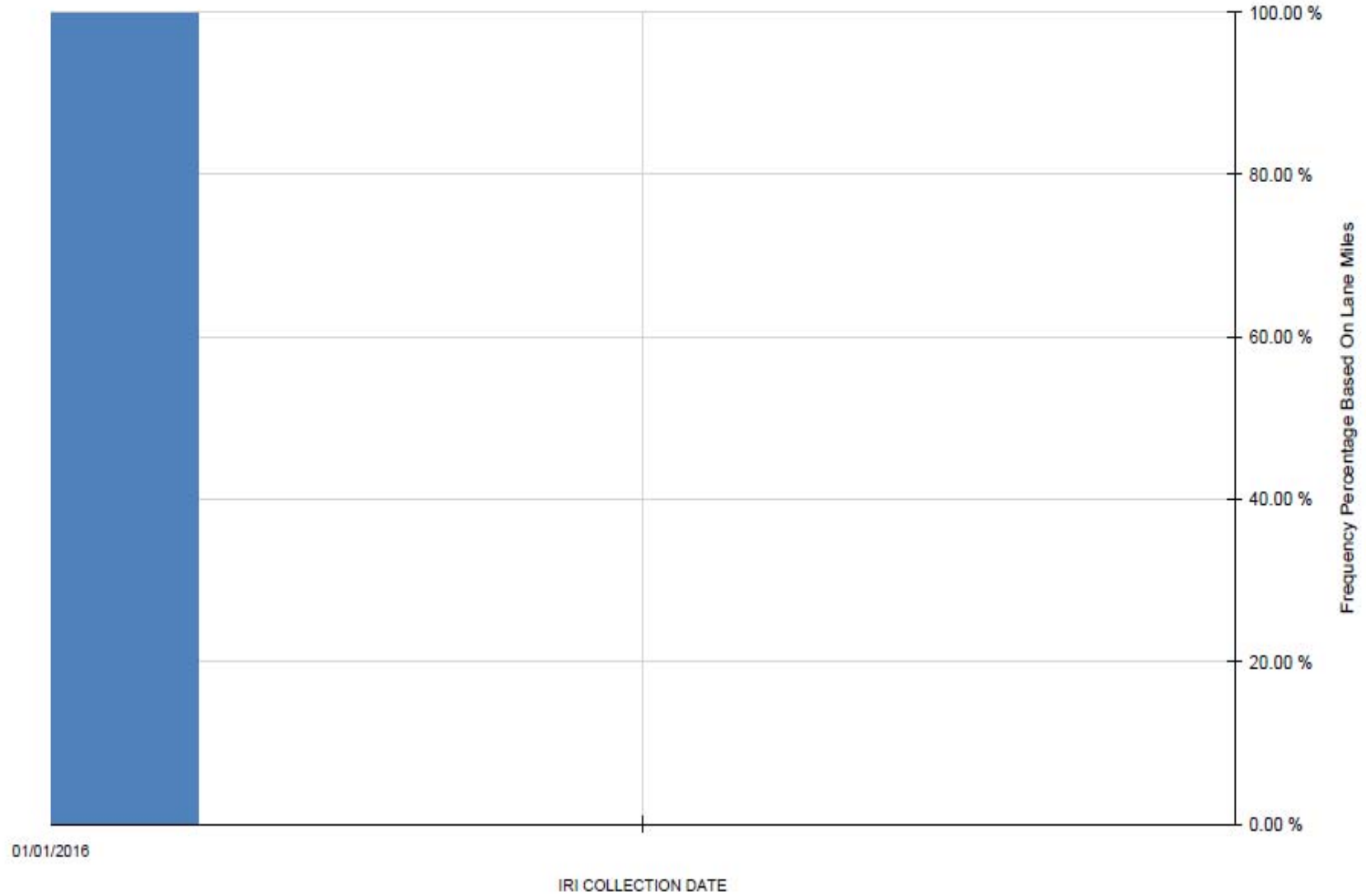
Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:



HPMS 8.0.1

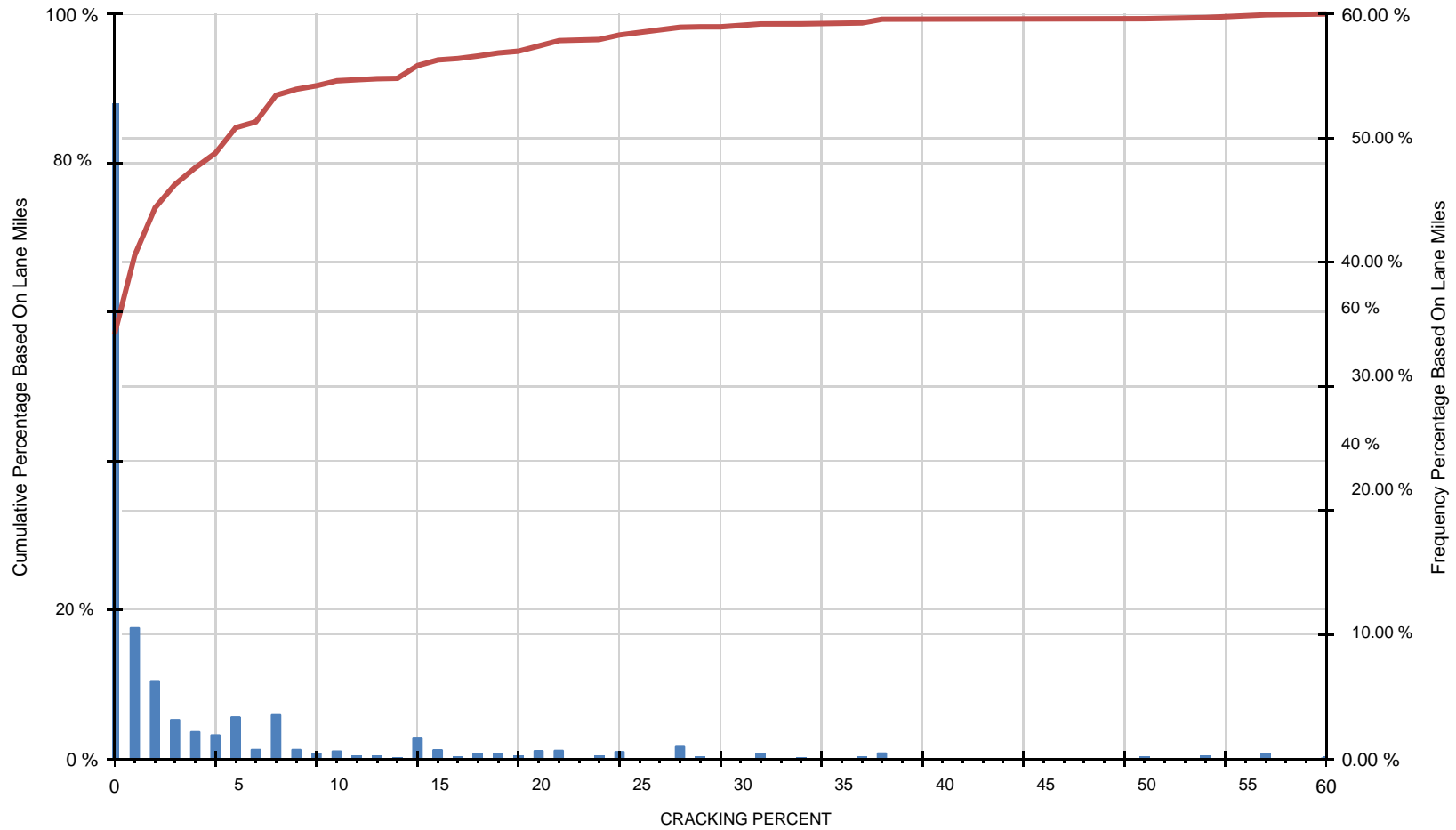
CUMULATIVE AND FREQUENCY DISTRIBUTION (INTERSTATE IRI COLLECTION DATES)

Stage: Review
Year: 2016
State: 00-DEFAULT
Date: 04/27/2017



CUMULATIVE AND FREQUENCY DISTRIBUTION - CRACKING PERCENT (INTERSTATE)

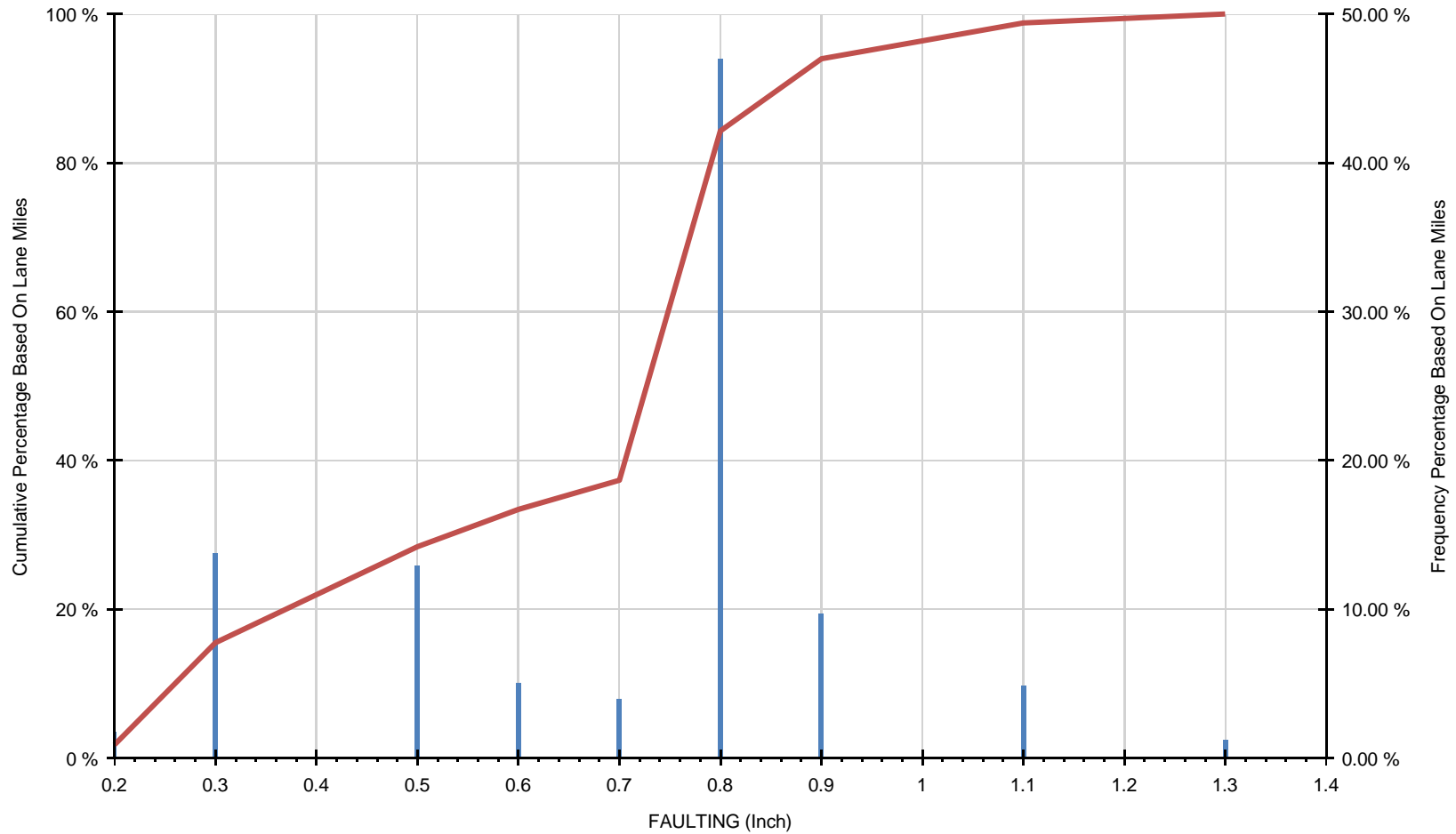
Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:



(Frequency of Missing CRACKING_PERCENT = 4.111%, missing data is included in the cumulative distribution graph.)

CUMULATIVE AND FREQUENCY DISTRIBUTION - FAULTING (INTERSTATE)

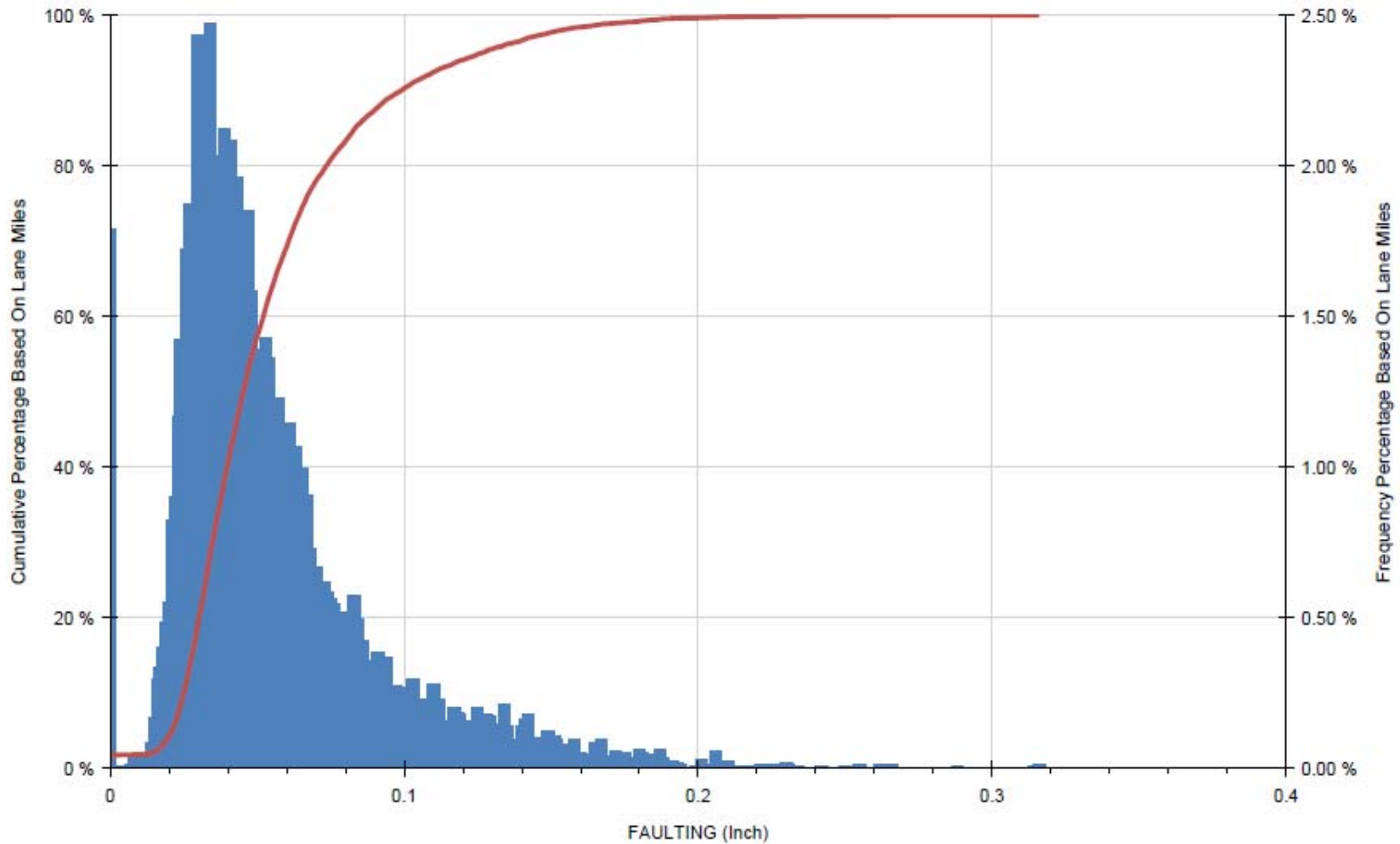
Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:



(Frequency of Missing FAULTING = 0.000%, missing data is included in the cumulative distribution graph.)

CUMULATIVE AND FREQUENCY DISTRIBUTION - FAULTING (INTERSTATE)

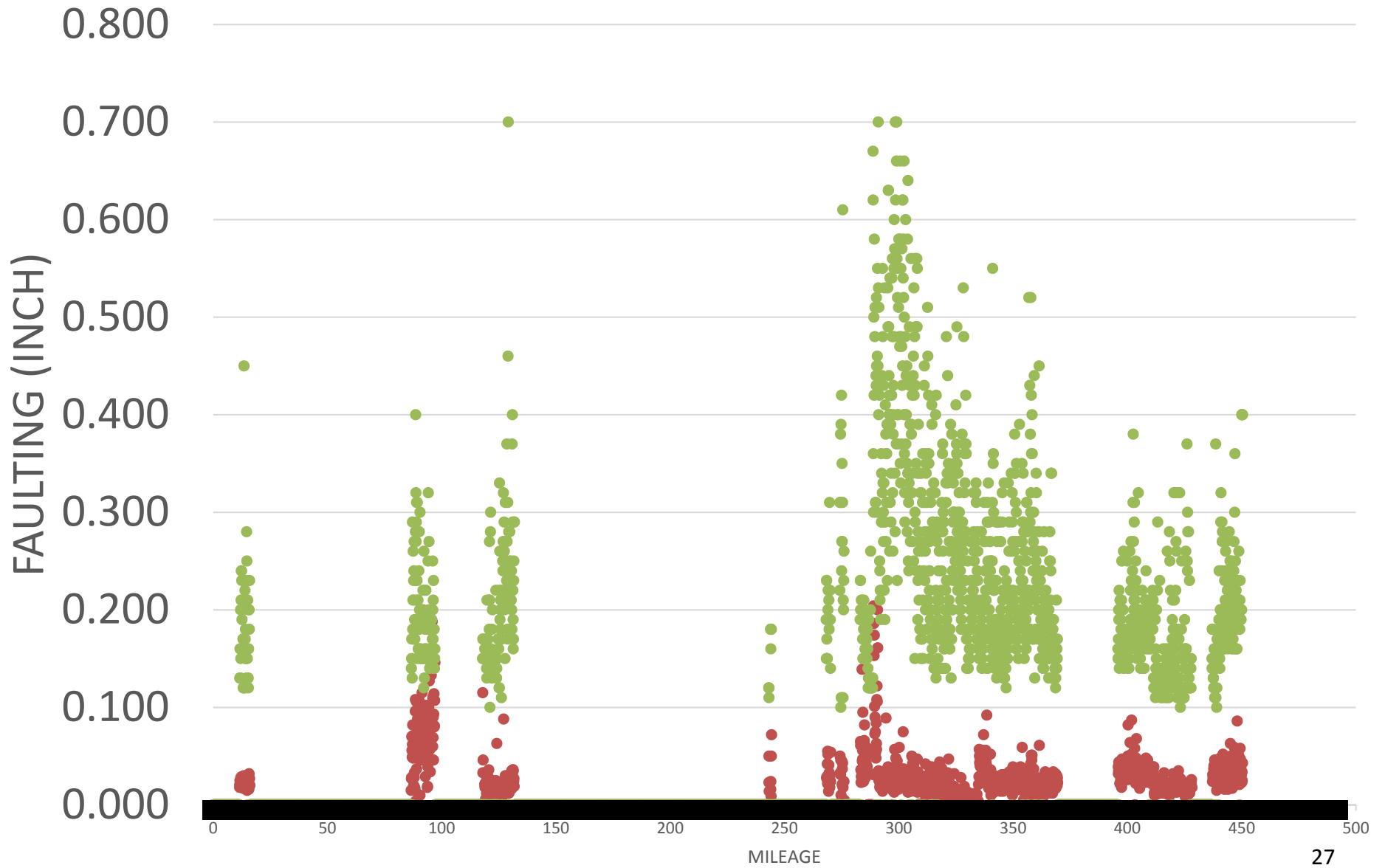
Stage: Submit
Year: 2015
State: 98 - BLISS
Date: 05/11/2017



(Frequency of Missing FAULTING = 0.000%, missing data is included in the cumulative distribution graph.)

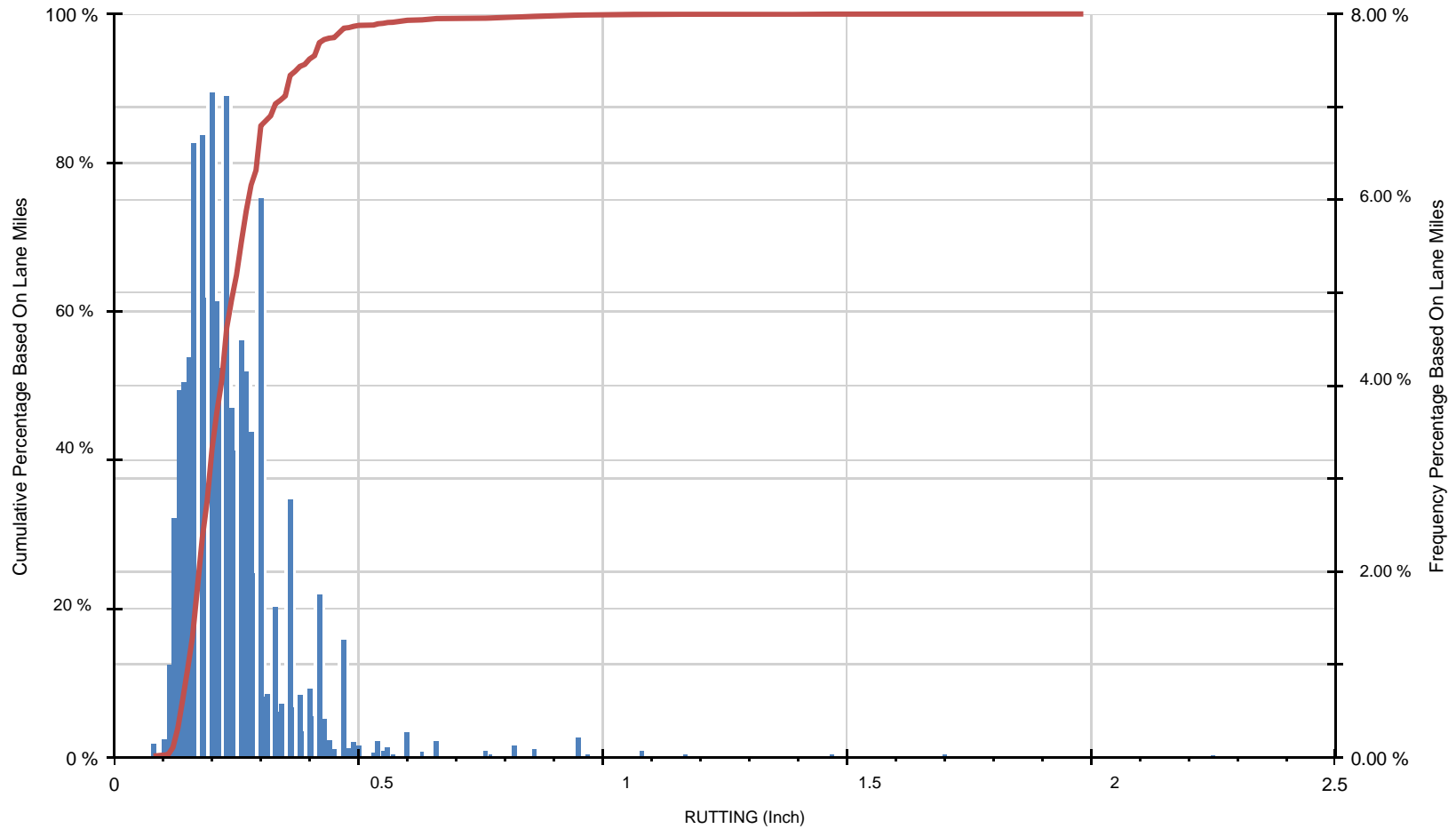
GROUND TRUTH

● Avg_LCMS_Fault ● HPMS FAULTING



CUMULATIVE AND FREQUENCY DISTRIBUTION - RUTTING (INTERSTATE)

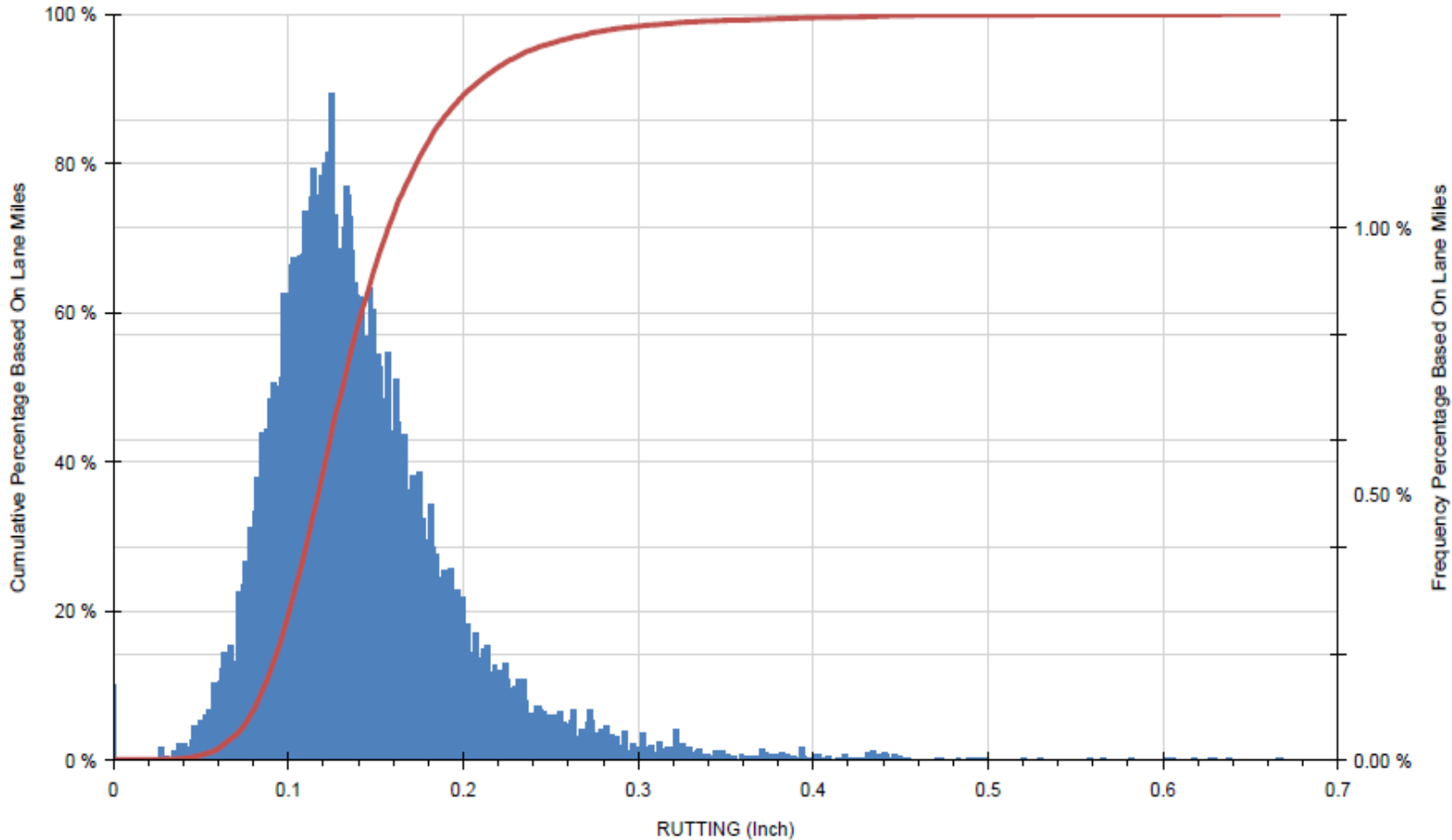
Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:



(Frequency of Missing RUTTING = 0.000%, missing data is included in the cumulative distribution graph.)

CUMULATIVE AND FREQUENCY DISTRIBUTION - RUTTING (INTERSTATE)

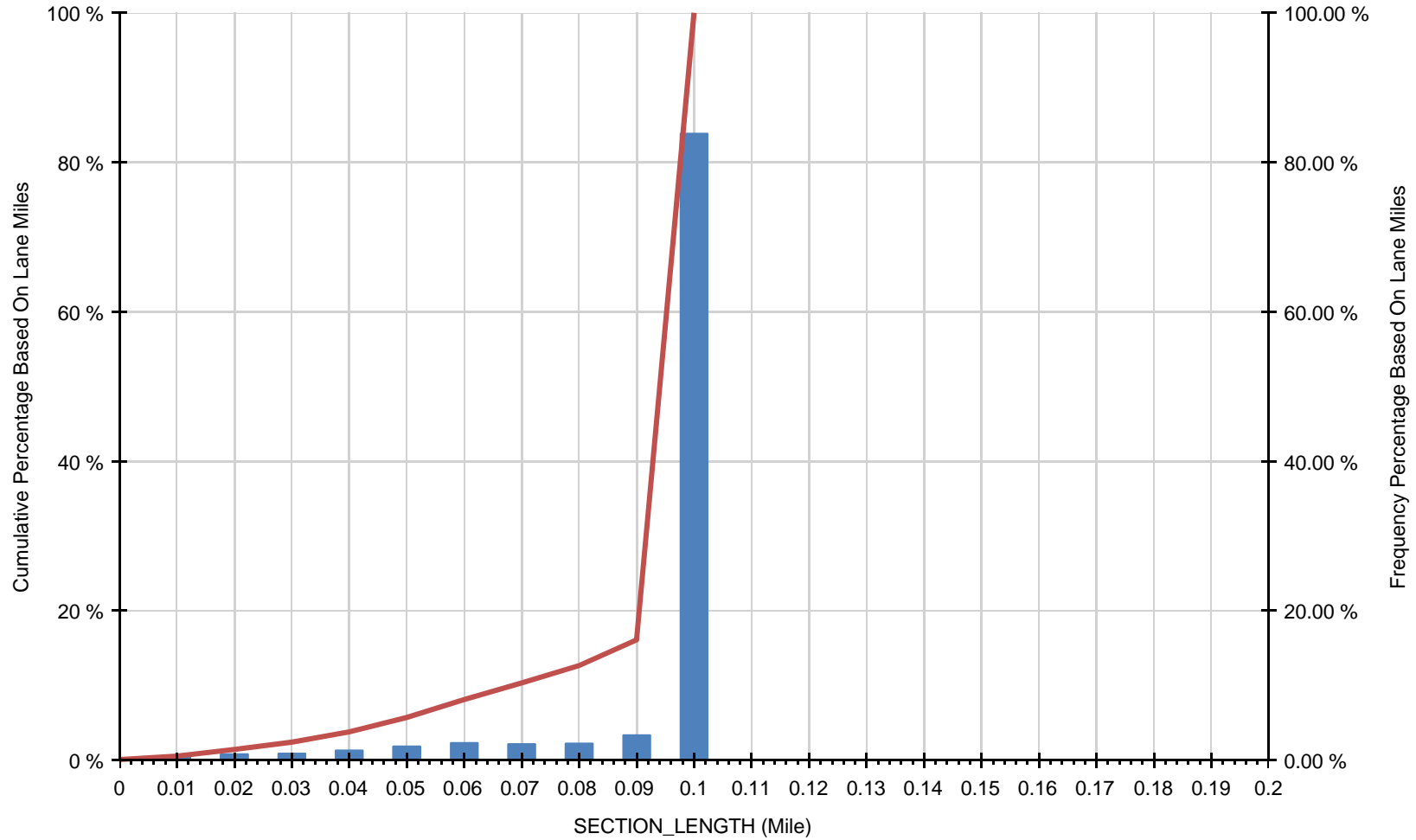
Stage: Submit
Year: 2015
State: 98-BLISS
Date: 05/11/2017

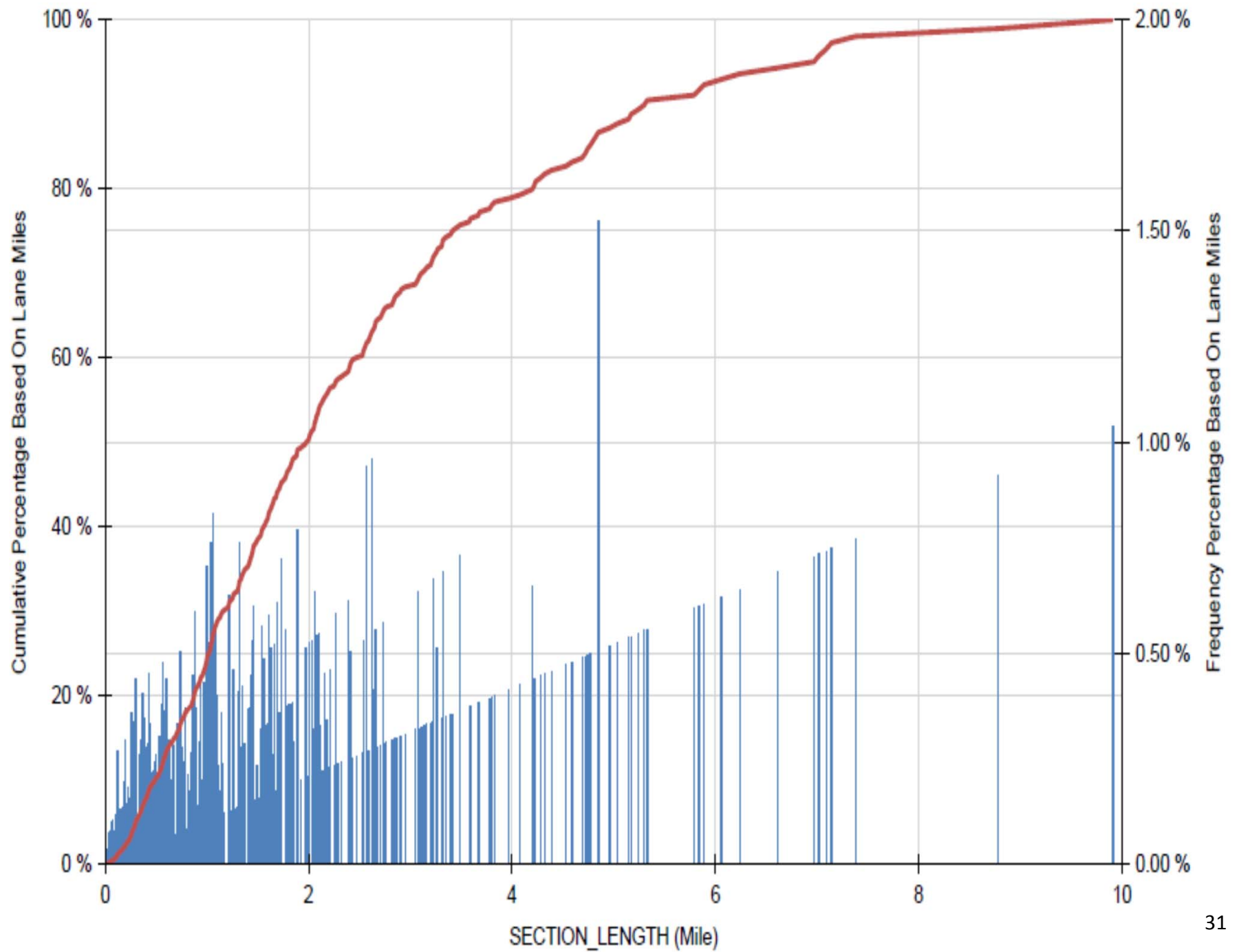


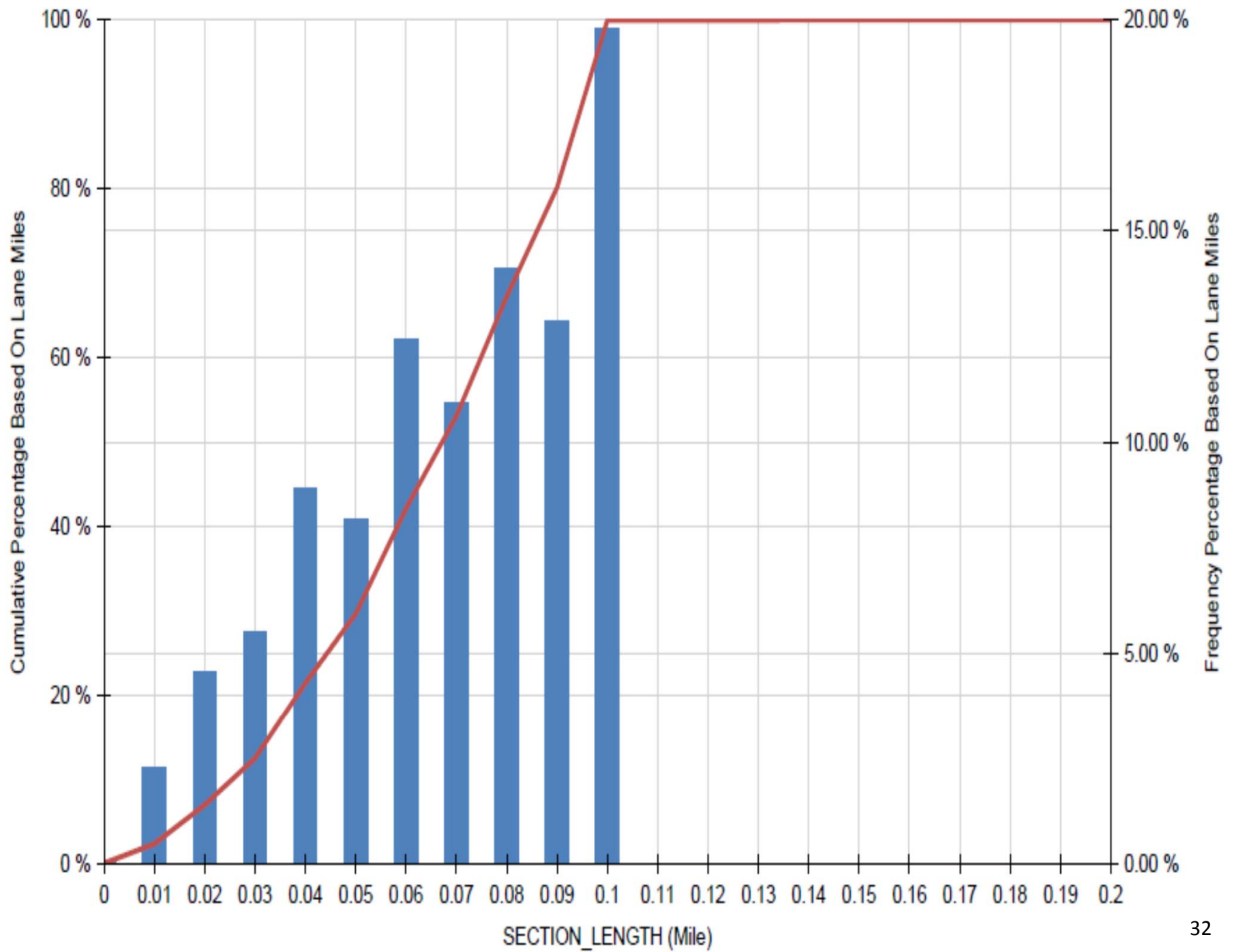
(Frequency of Missing RUTTING = 0.000%, missing data is included in the cumulative distribution graph.)

CUMULATIVE AND FREQUENCY DISTRIBUTION - SECTION LENGTHS - CLOSEUP 0.0 TO 0.2 MILE IN LENGTH (INTERSTATE)

Stage: Review 2016
Year: 99 - UTOPIA
State: 05/09/2017
Date:







HPMS PAVEMENT DATA REPORT CARD GOALS

- Improve HPMS Pavement Performance Data quality so the agency has confidence as we use it in performance management.
- ***The debate should be on the quality of the pavement, not the quality of the data.***



QUESTIONS

Max Grogg

Pavement Performance and
Implementation Engineer

max.grogg@dot.gov

515-233-7306

