



SYSTEM RELIABILITY & FREIGHT MOVEMENT PERFORMANCE MEASURES

Data Reporting Year 2024



FHWA'S 3 SYSTEM RELIABILITY & FREIGHT MOVEMENT PERFORMANCE MEASURES



Data Source: RITIS

- 1 Interstate Travel Time Reliability Measure (TTRM):**
% of person-miles traveled on the Interstate that are reliable (LOTTR)
- 2 Non-Interstate Travel Time Reliability Measure (NTTRM):**
% of person-miles traveled on the Non-Interstate NHS that are reliable (LOTTR)



Data Source: RITIS

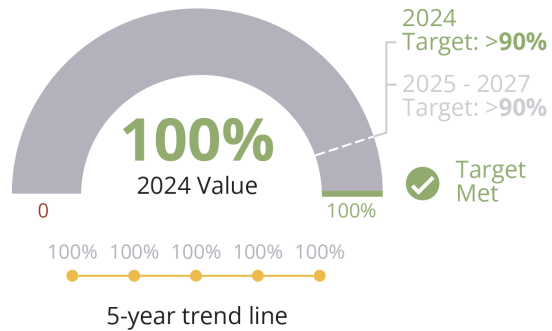
- 3 Interstate Freight Reliability Measure:**
Truck Travel Time Reliability (TTTR) Index



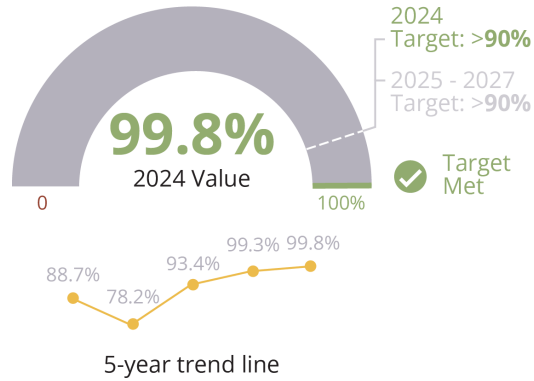


SYSTEM RELIABILITY & FREIGHT MOVEMENT: SUMMARY

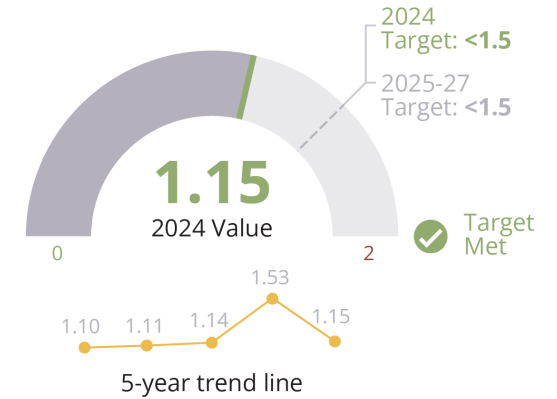
PM 1: % of Person-Miles Traveled on Interstate with Reliable Travel Time



PM 2: % of Person-Miles Traveled on the NHS with a Reliable Travel Time



PM 3: Truck Travel Time Reliability (TTTR) Index on our Interstate System





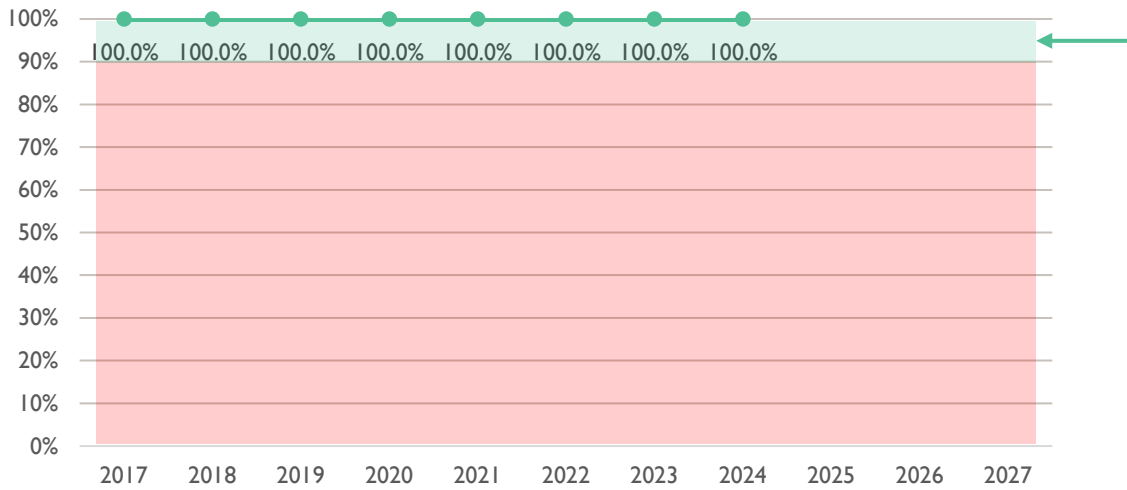
TARGET ①: INTERSTATE TRAVEL TIME RELIABILITY MEASURE (TTRM)

Year	TTRM	Target
2017	100.0%	>90%
2018	100.0%	>90%
2019	100.0%	>90%
2020	100.0%	>90%
2021	100.0%	>90%
2022	100.0%	>90%
2023	100.0%	>90%
2024	100.0%	>90%
2025		>90%
2026		>90%
2027		>90%



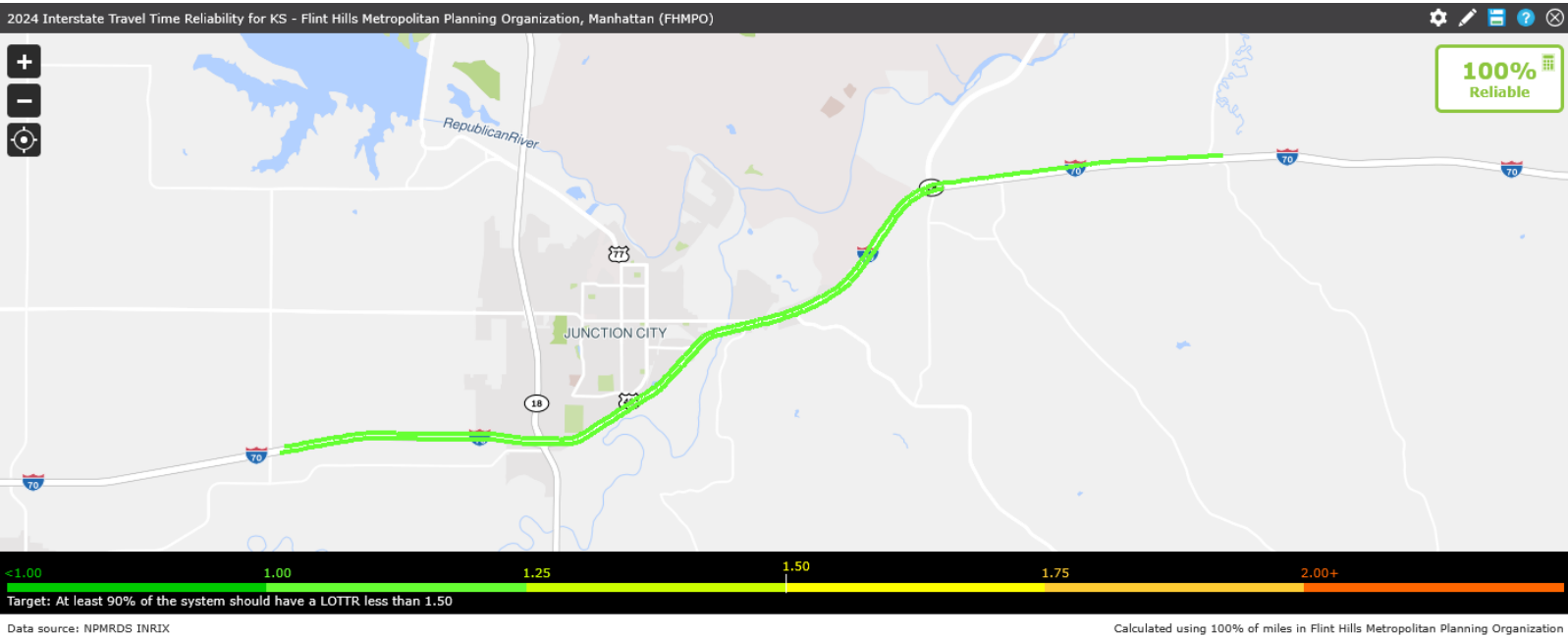
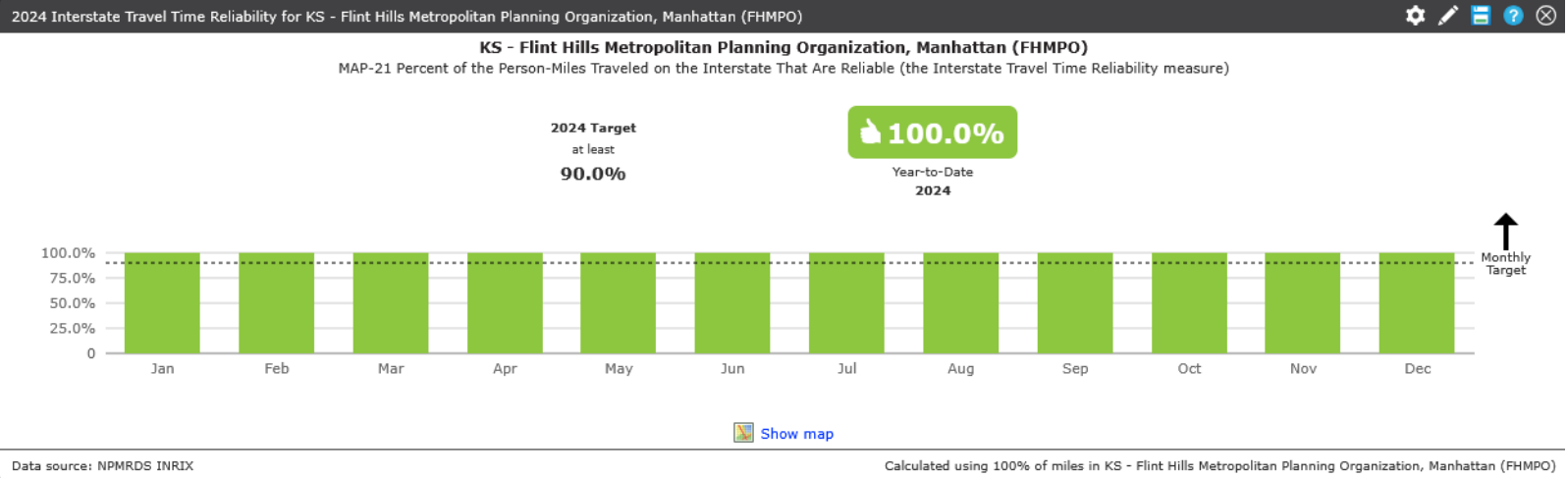
On Target

Interstate Travel Time Reliability (TTRM)





TARGET 1: INTERSTATE TRAVEL TIME RELIABILITY MEASURE (TTRM)



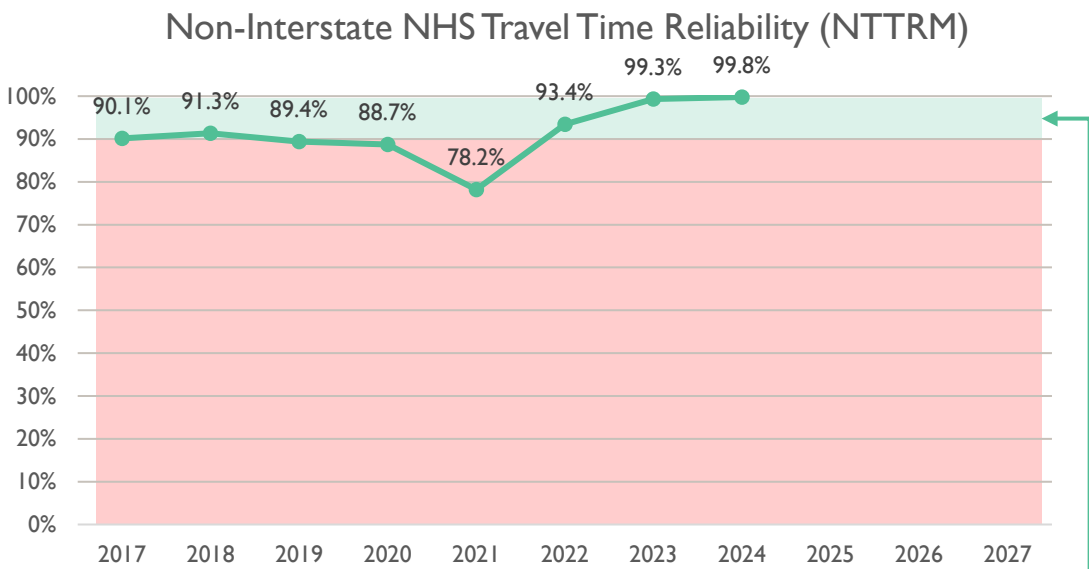


TARGET ②: NON-INTERSTATE TRAVEL TIME RELIABILITY MEASURE (NTTRM)

Year	NTTRM	Target
2017	90.1%	>90%
2018	91.3%	>90%
2019	89.4%	>90%
2020	88.7%	>90%
2021	78.2%	>90%
2022	93.4%	>90%
2023	99.3%	>90%
2024	99.8%	>90%
2025		>90%
2026		>90%
2027		>90%

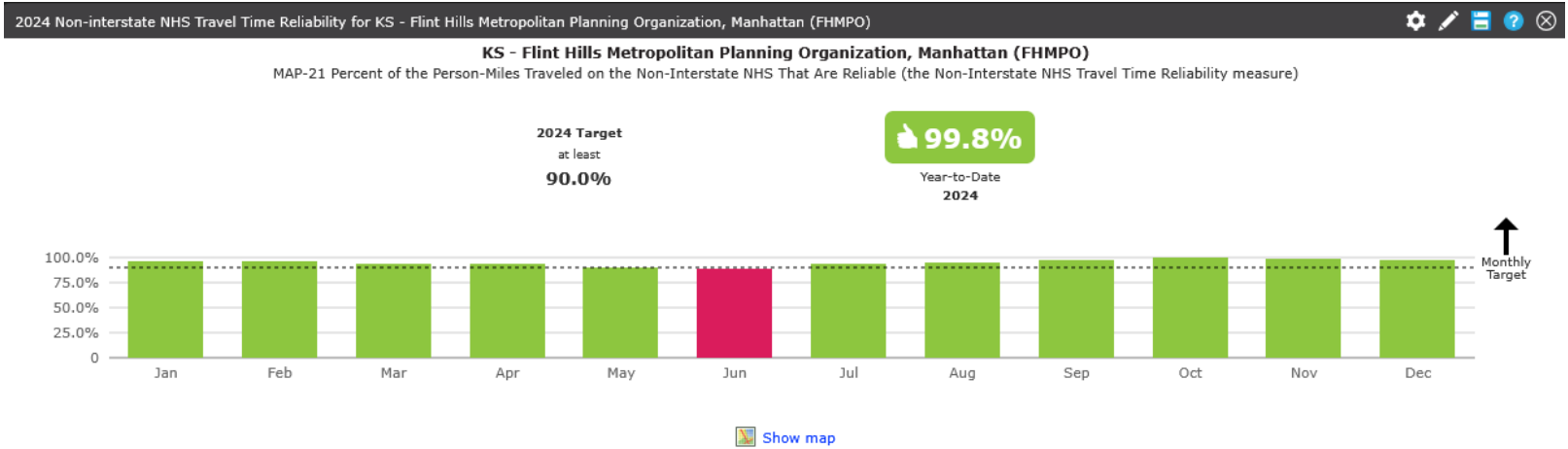


On Target

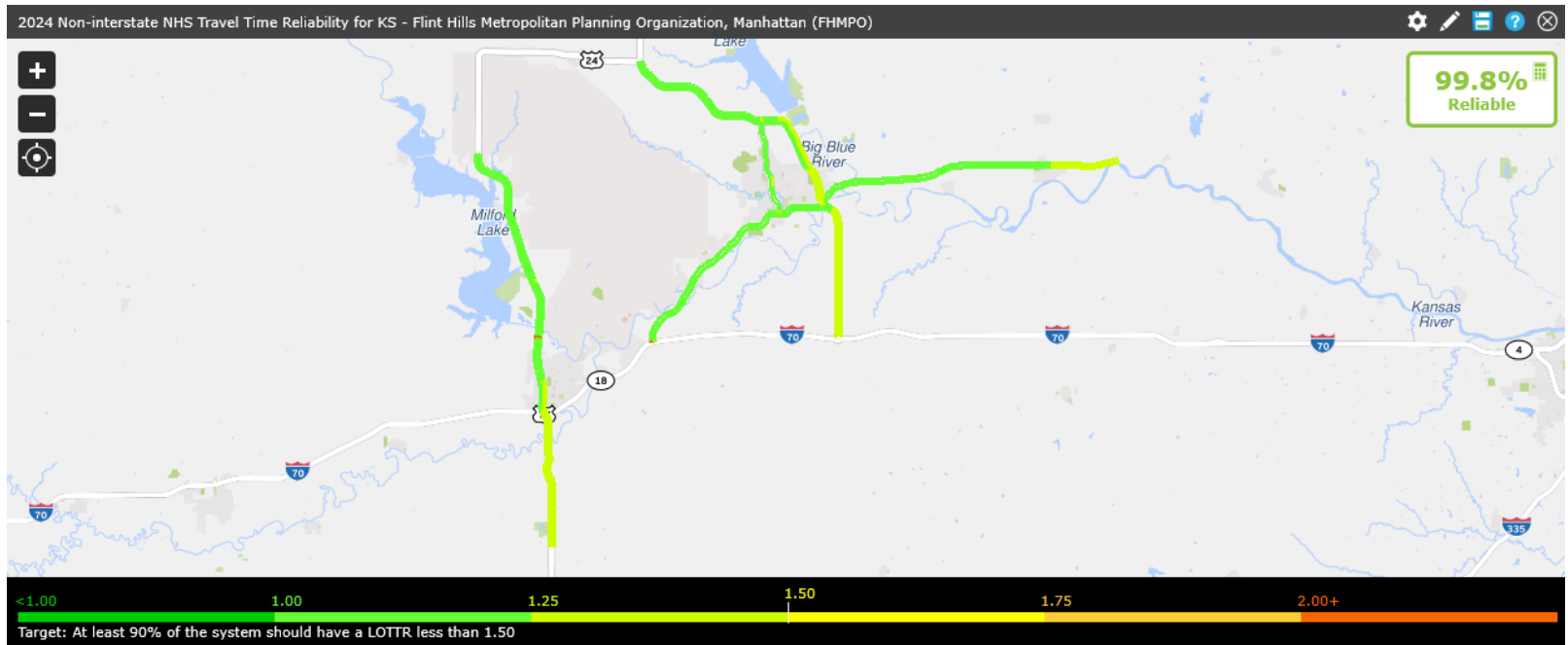




TARGET ②: NON-INTERSTATE TRAVEL TIME RELIABILITY MEASURE (NTTRM)



Data source: NPMRDS INRIX Calculated using 100% of miles in KS - Flint Hills Metropolitan Planning Organization, Manhattan (FHMP)



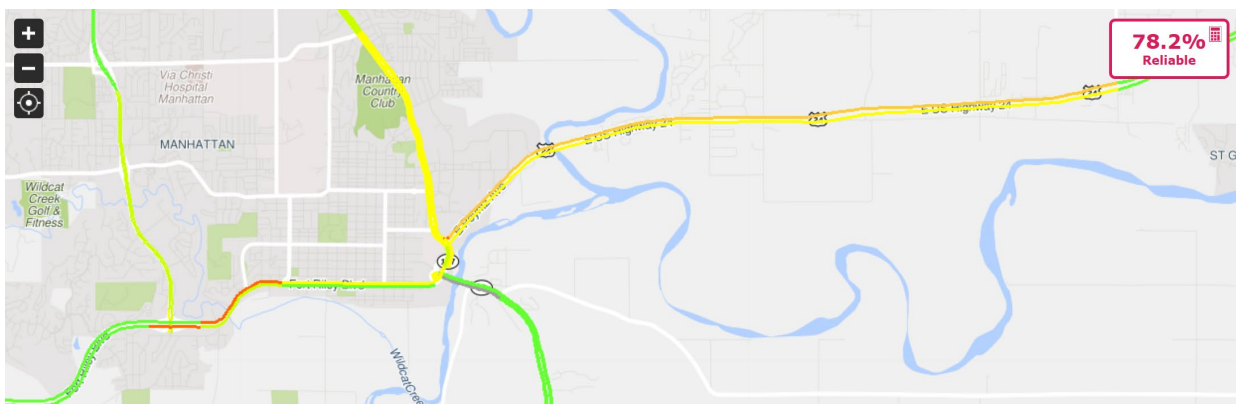
Data source: NPMRDS INRIX Calculated using 100% of miles in Flint Hills Metropolitan Planning Organization





TARGET 2: CONSTRUCTION IMPACTS

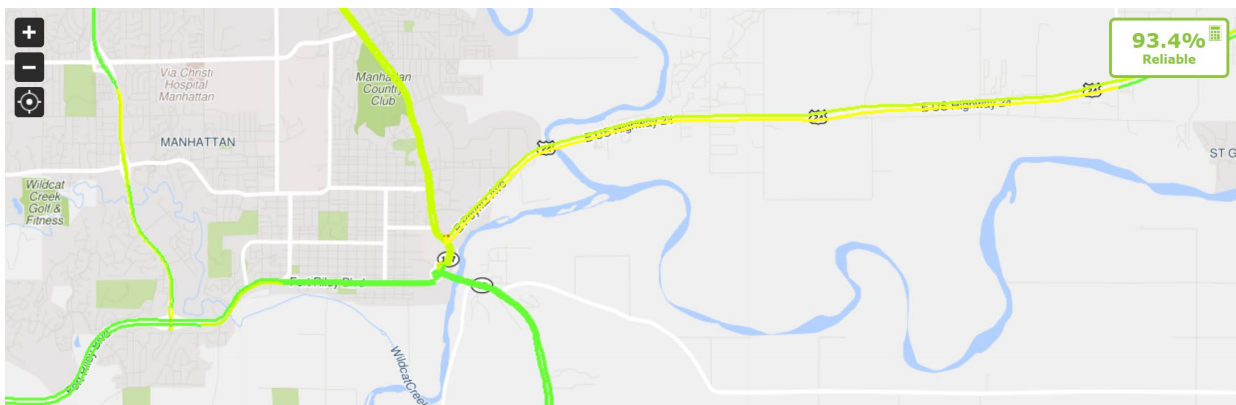
2021



K-18: Wildcat Creek Bridges

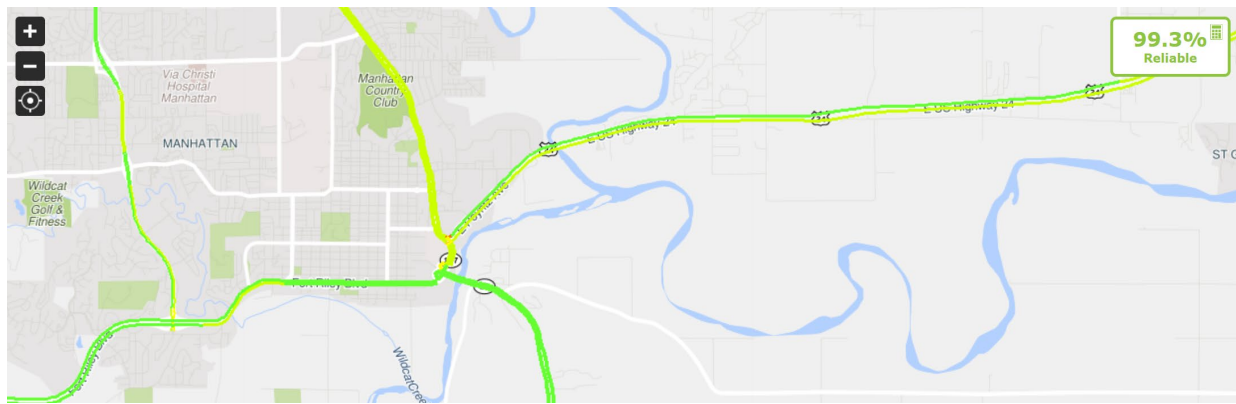
US-24: GVR intersection & turn lanes

2022



US-24: GVR intersection & turn lanes (portion of year)

2023



→ 2024: increased to 99.8% reliability





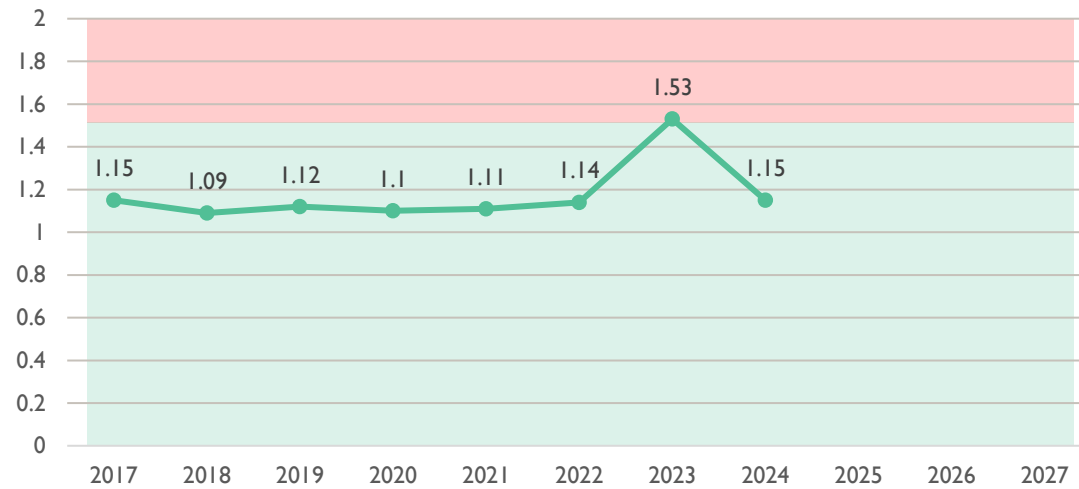
TARGET 3: INTERSTATE FREIGHT RELIABILITY MEASURE (TTTR)

Year	TTTR	Target
2017	1.15	<1.50
2018	1.09	<1.50
2019	1.12	<1.50
2020	1.10	<1.50
2021	1.11	<1.50
2022	1.14	<1.50
2023	1.53	<1.50
2024	1.15	<1.50
2025		<1.50
2026		<1.50
2027		<1.50



On Target

Non-Interstate NHS Travel Time Reliability (NTTRM)





TARGET ③: INTERSTATE FREIGHT RELIABILITY MEASURE (TTTR)

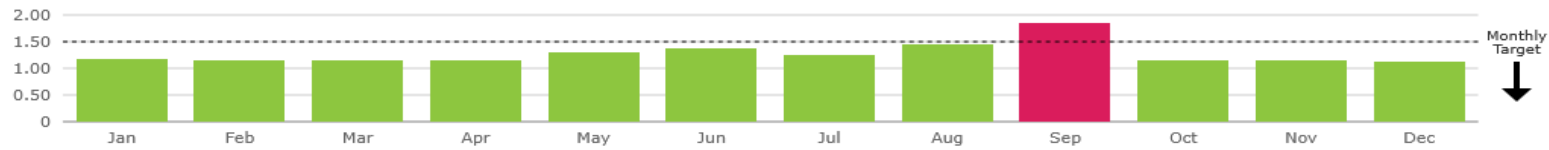
2024 Truck Travel Time Reliability Index for KS - Flint Hills Metropolitan Planning Organization, Manhattan (FHMP)

KS - Flint Hills Metropolitan Planning Organization, Manhattan (FHMP)

MAP-21 Truck Travel Time Reliability Index (for interstate roads only)

2024 Target
less than
1.50

1.15
Year-to-Date
2024

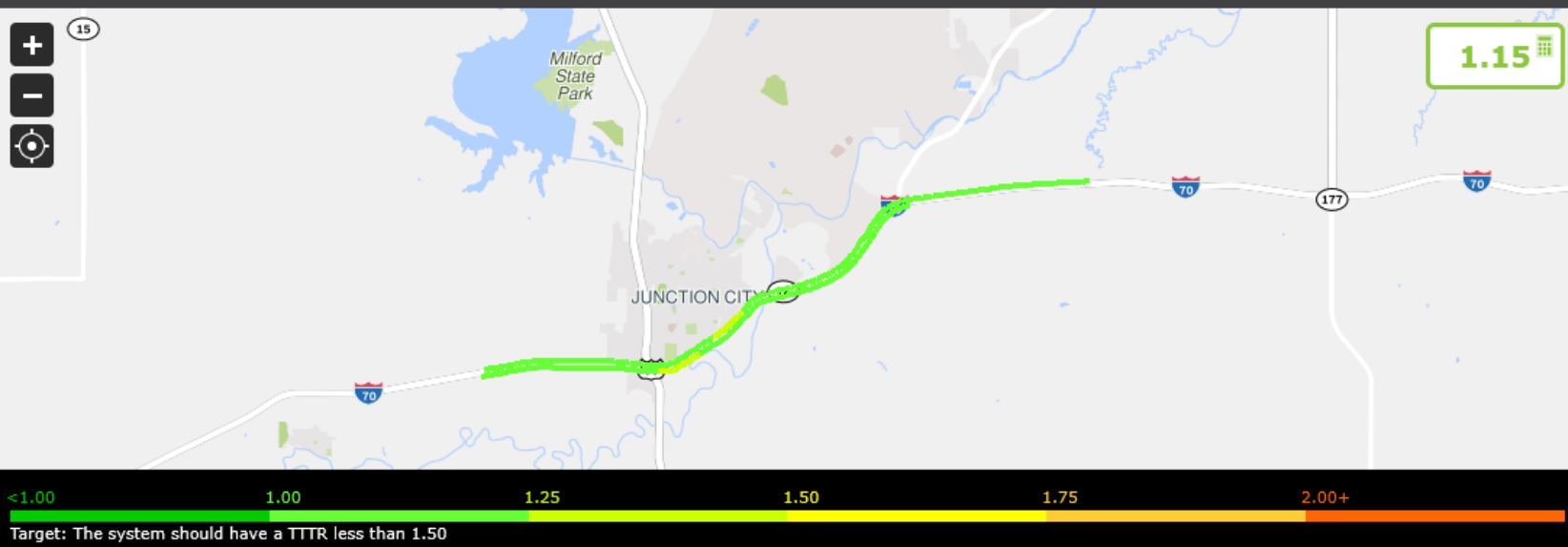


[Show map](#)

Data source: NPMRDS INRIX

Calculated using 100% of miles in KS - Flint Hills Metropolitan Planning Organization, Manhattan (FHMP)

2024 Truck Travel Time Reliability Index for KS - Flint Hills Metropolitan Planning Organization, Manhattan (FHMP)



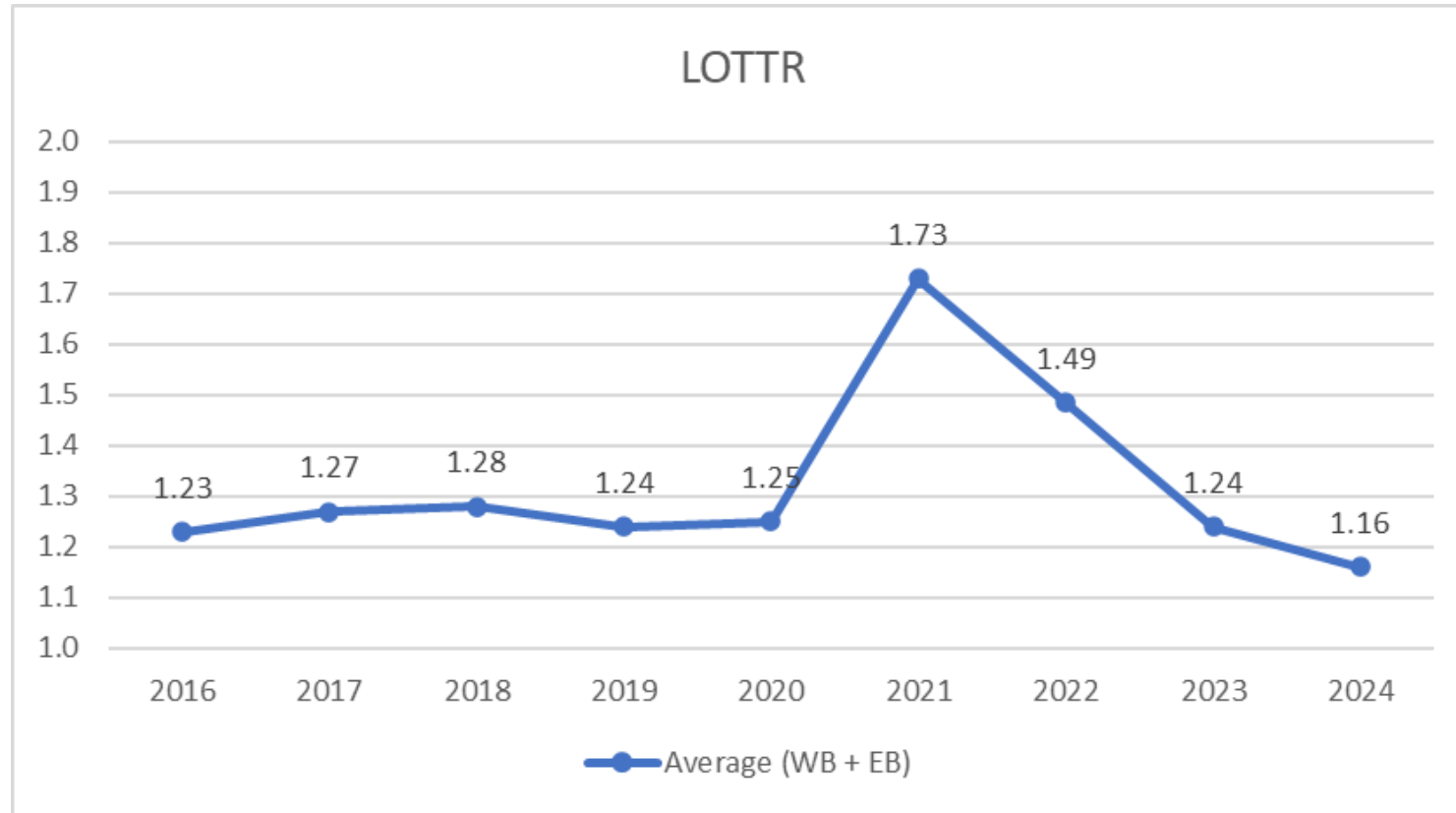
Data source: NPMRDS INRIX

Calculated using 100% of miles in Flint Hills Metropolitan Planning Organization





CHANGES OVER TIME: US-24, MALL TO FLUSH ROAD

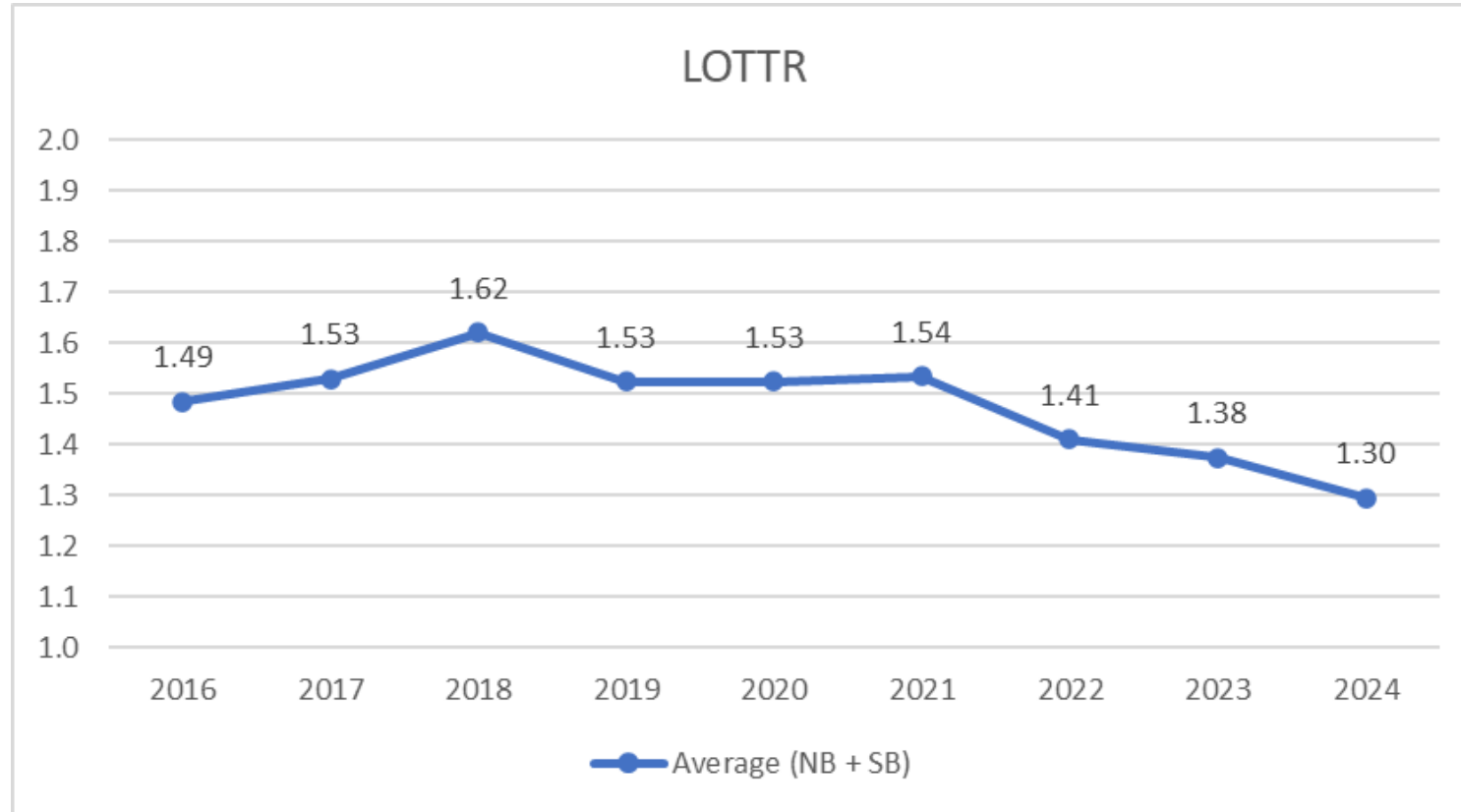


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
WB	LOTTR <1.5	1.25	1.28	1.3	1.27	1.27	1.79	1.4	1.21	1.15
EB	LOTTR <1.5	1.21	1.26	1.26	1.21	1.23	1.67	1.57	1.27	1.17
Total	LOTTR <1.5	1.23	1.27	1.28	1.24	1.25	1.73	1.49	1.24	1.16
Note	* 2021 & 2022 = GVR intersection & double left construction									





CHANGES OVER TIME: US-24, MALL TO KIMBALL

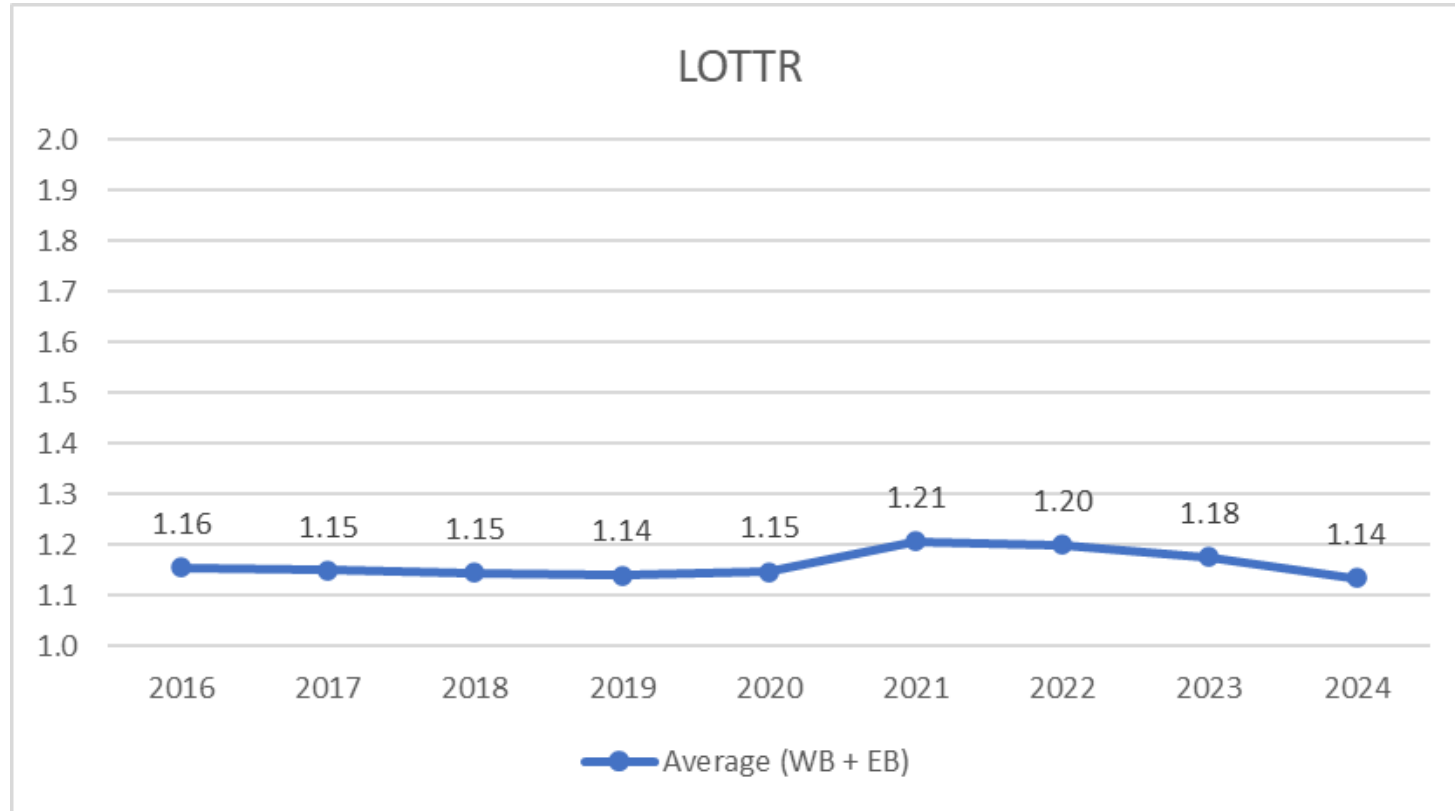


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
NB	LOTTR <1.5	1.49	1.56	1.65	1.55	1.52	1.55	1.39	1.35	1.28
SB	LOTTR <1.5	1.48	1.5	1.59	1.5	1.53	1.52	1.43	1.4	1.31
Total	LOTTR <1.5	1.49	1.53	1.62	1.53	1.53	1.54	1.41	1.38	1.30
Note										





CHANGES OVER TIME: US-24, KIMBALL TO US-77

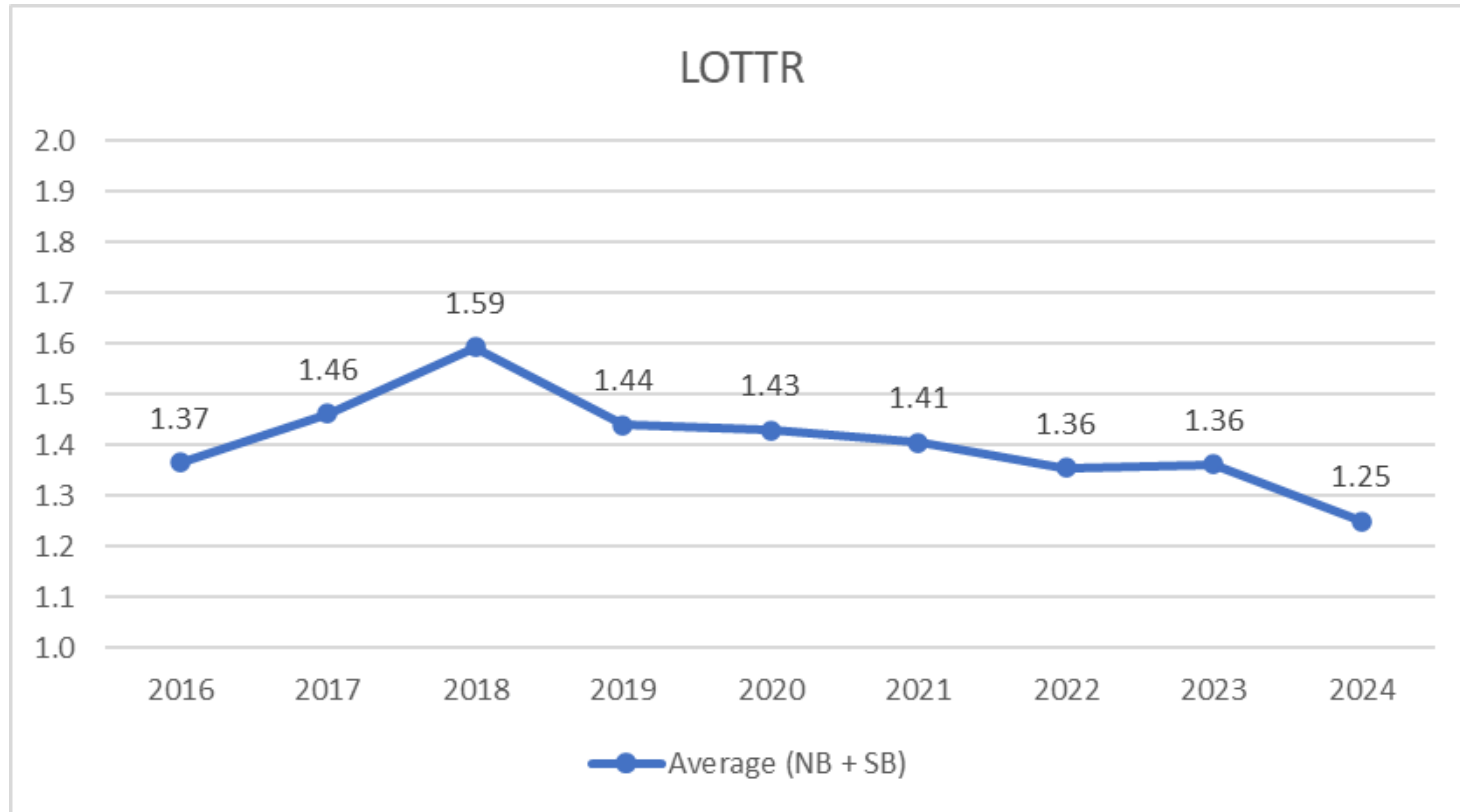


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
WB: Kimball - K13	LOTTR <1.5	1.23	1.21	1.2	1.26	1.22	1.4	1.44	1.25	1.31
WB: K13 - K113		1.16	1.13	1.09	1.1	1.14	1.19	1.15	1.1	1.08
WB: K113 - US-77		1.07	1.08	1.08	1.07	1.07	1.13	1.12	1.23	1.07
WB Total		1.15	1.14	1.12	1.14	1.14	1.24	1.24	1.19	1.15
EB: Kimball - K13	LOTTR <1.5	1.31	1.32	1.34	1.27	1.29	1.35	1.29	1.34	1.22
EB: K13 - K113		1.1	1.09	1.08	1.08	1.1	1.12	1.14	1.09	1.08
EB: K113 - US-77		1.07	1.07	1.08	1.06	1.06	1.06	1.06	1.05	1.05
EB Total		1.16	1.16	1.17	1.14	1.15	1.18	1.16	1.16	1.12
Total	LOTTR <1.5	1.16	1.15	1.15	1.14	1.15	1.21	1.20	1.18	1.14





CHANGES OVER TIME: K-113, ANDERSON TO STAGG HILL

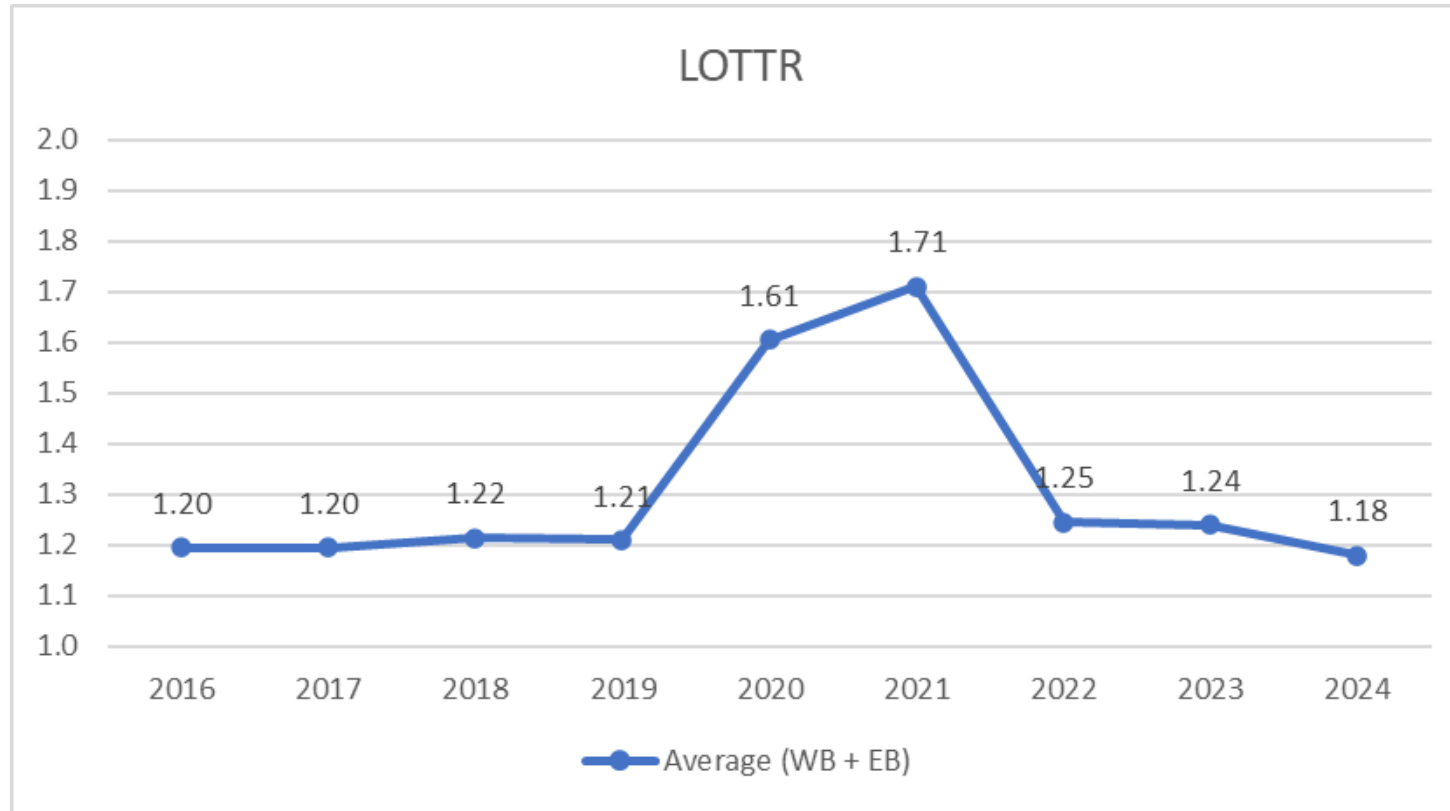


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
NB: Anderson - Southwind	LOTTR <1.5	1.29	1.32	1.33	1.31	1.33	1.27	1.24	1.25	1.18
NB: Southwind - Stagg Hill		1.48	1.61	1.83	1.55	1.57	1.43	1.56	1.55	1.35
NB Total		1.39	1.47	1.58	1.43	1.45	1.35	1.40	1.40	1.27
SB: Anderson - Southwind	LOTTR <1.5	1.28	1.36	1.33	1.3	1.32	1.38	1.26	1.24	1.18
SB: Southwind - Stagg Hill		1.41	1.56	1.88	1.6	1.5	1.54	1.36	1.41	1.29
SB Total		1.35	1.46	1.61	1.45	1.41	1.46	1.31	1.33	1.24
Total	LOTTR <1.5	1.37	1.46	1.59	1.44	1.43	1.41	1.36	1.36	1.25
Note	* DDI construction in 2018									





CHANGES OVER TIME: K-18, MLK JR TO RICHARDS

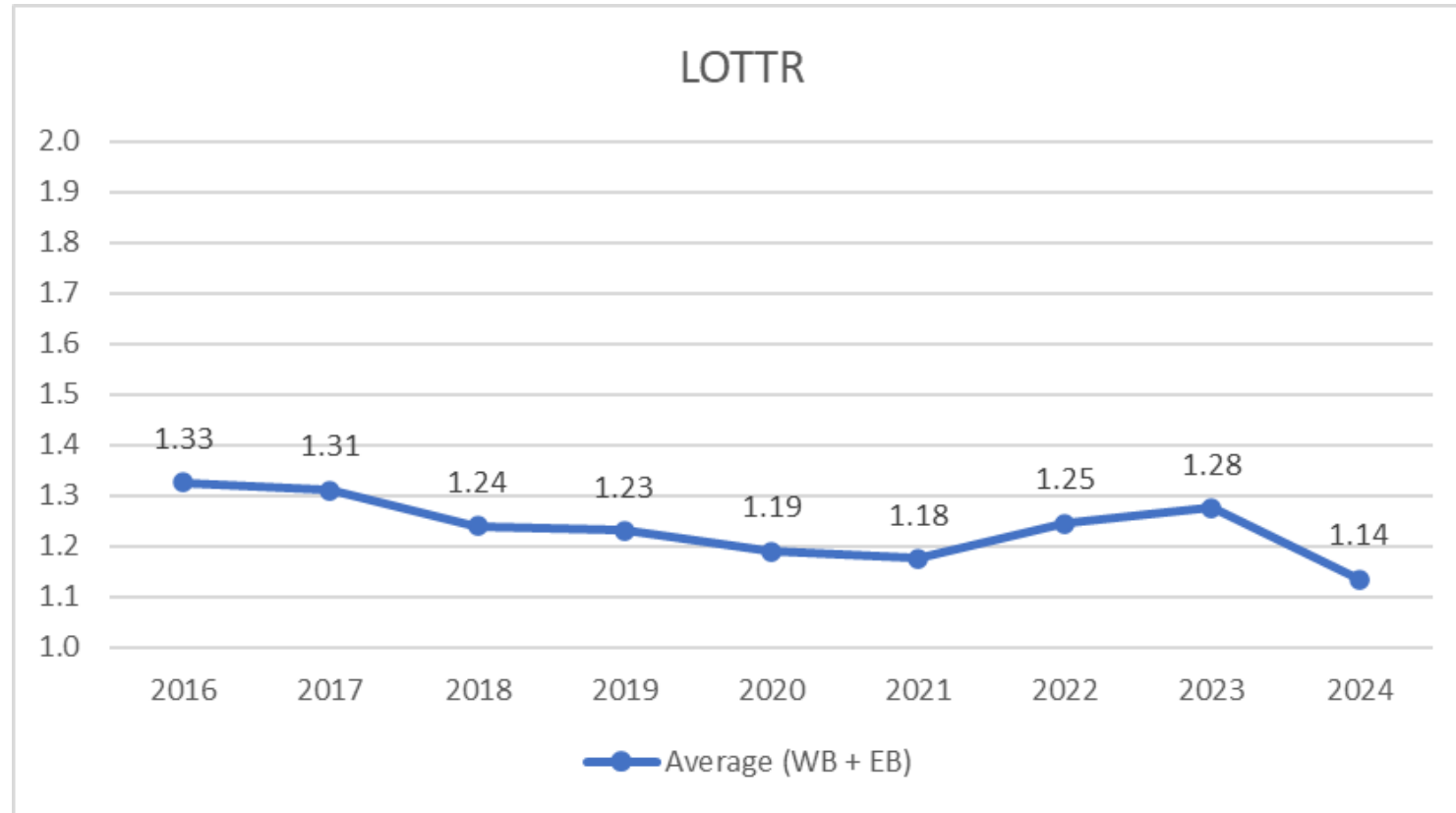


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
WB	LOTTR <1.5	1.2	1.18	1.23	1.2	1.94	2.08	1.2	1.2	1.18
EB	LOTTR <1.5	1.19	1.21	1.2	1.22	1.27	1.34	1.29	1.28	1.18
Total	LOTTR <1.5	1.20	1.20	1.22	1.21	1.61	1.71	1.25	1.24	1.18
Note	* 2020-2022 the Wildcat Creek bridge was being reconstructed									





CHANGES OVER TIME: US-24, FLUSH RD TO WAMEGO

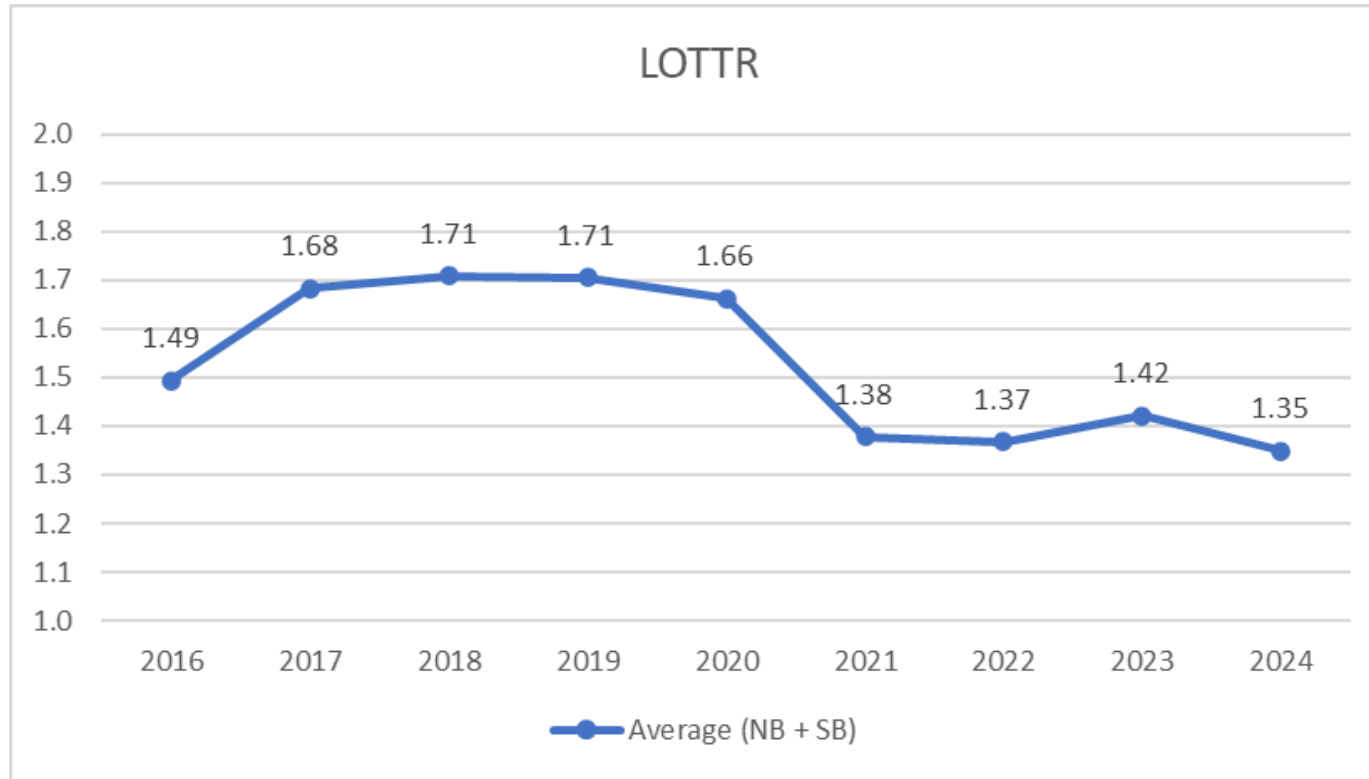


	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
WB	LOTTR <1.5	1.3	1.32	1.27	1.24	1.21	1.2	1.25	1.26	1.14
EB	LOTTR <1.5	1.35	1.3	1.21	1.22	1.17	1.15	1.24	1.29	1.13
Total	LOTTR <1.5	1.33	1.31	1.24	1.23	1.19	1.18	1.25	1.28	1.14
Note										





CHANGES OVER TIME: US-77, ASH TO GE COUNTY LINE



	Target	2016	2017	2018	2019	2020	2021	2022	2023	2024
NB: GE line to I-70	LOTTR <1.5	1.77	1.98	1.93	1.73	1.73	1.26	1.22	1.43	1.49
NB: I-70 Interchange (DDI)		1.42	1.58	1.5	1.55	1.64	1.64	1.6	1.6	1.31
NB: I-70 to K-18		1.37	1.94	2.04	2.07	2	1.4	1.38	1.41	1.30
NB Total		1.52	1.83	1.82	1.78	1.79	1.43	1.40	1.48	1.37
SB: GE line to I-70	LOTTR <1.5	1.61	1.43	1.49	1.63	1.59	1.11	1.11	1.18	1.46
SB: I-70 Interchange (DDI)		1.5	1.64	1.64	1.66	1.65	1.65	1.67	1.64	1.33
SB: I-70 to K-18		1.29	1.53	1.65	1.59	1.37	1.21	1.23	1.27	1.20
SB Total		1.47	1.53	1.59	1.63	1.54	1.32	1.34	1.36	1.33
Total	LOTTR <1.5	1.49	1.68	1.71	1.71	1.66	1.38	1.37	1.42	1.35
Note	* DDI under construction 2017-2018									





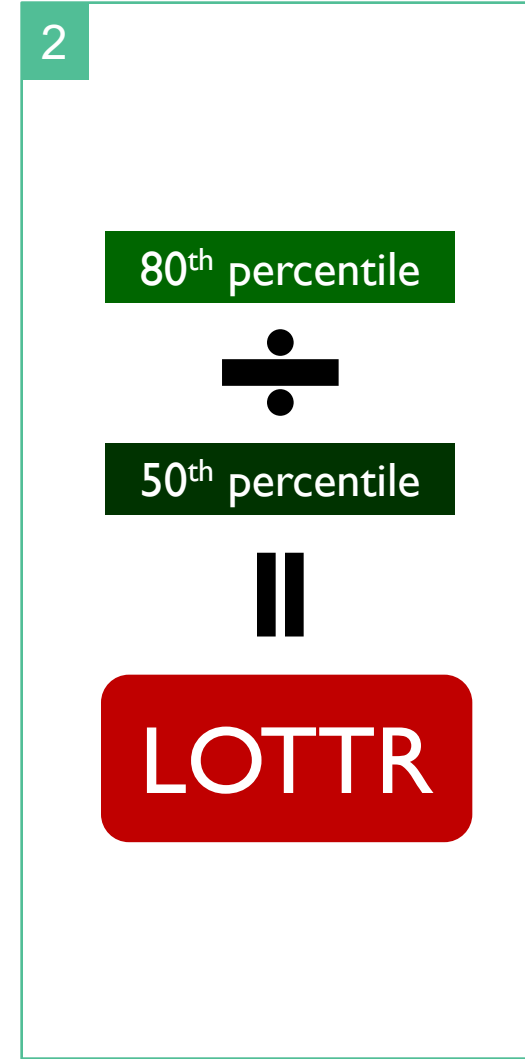
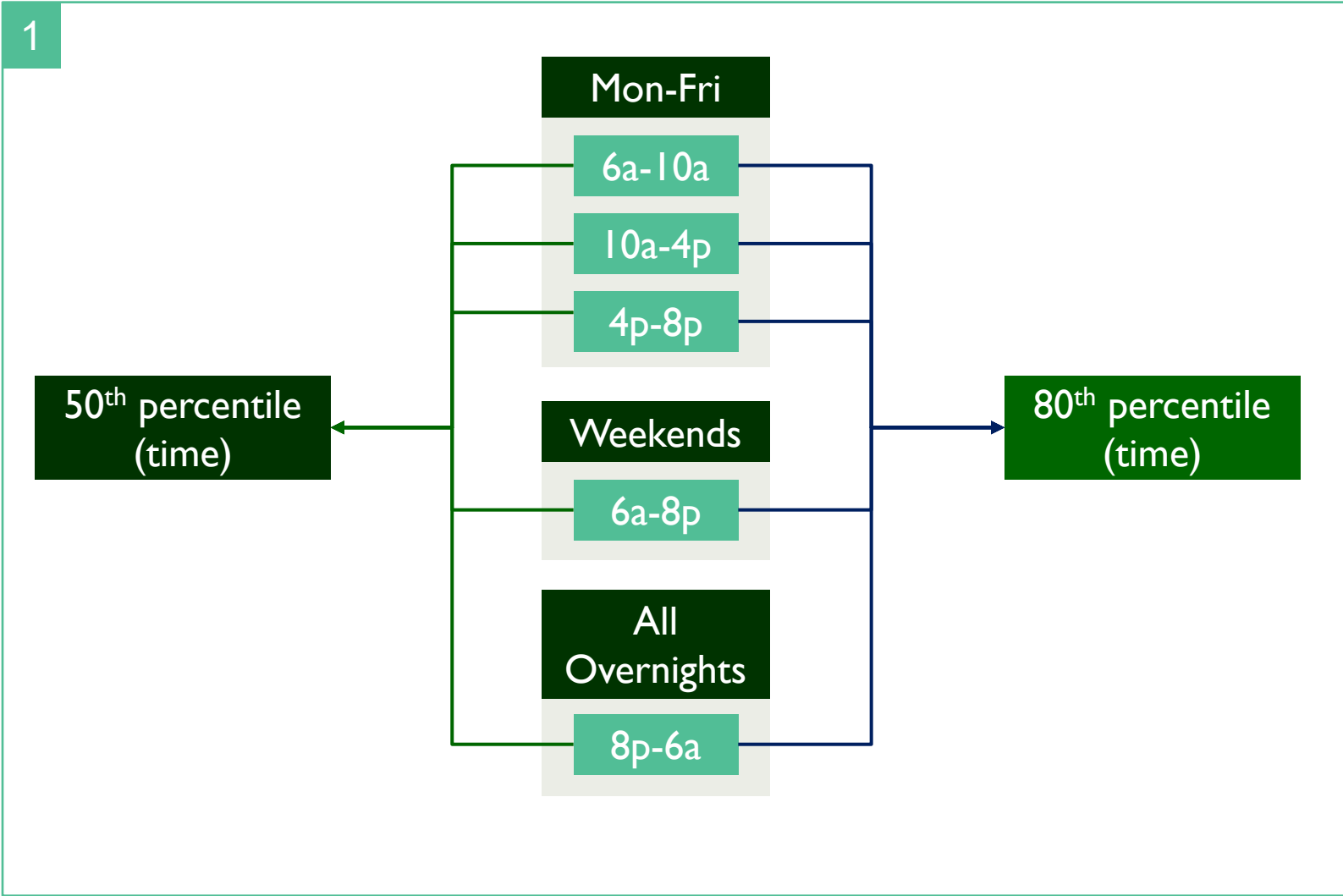
BACKGROUND ON SYSTEM RELIABILITY & FREIGHT MANAGEMENT

- System Reliability & Freight Management data are monitored and aggregated via the Regional Integrated Transportation Information System (RITIS). RITIS is a web-based database with multiple interfaces including graphs and maps.
- FHMPO staff has access to this data and has an account based upon the 2017 FHMPO boundary. RITIS data is monitored on the Interstate and Non-Interstate NHS systems.



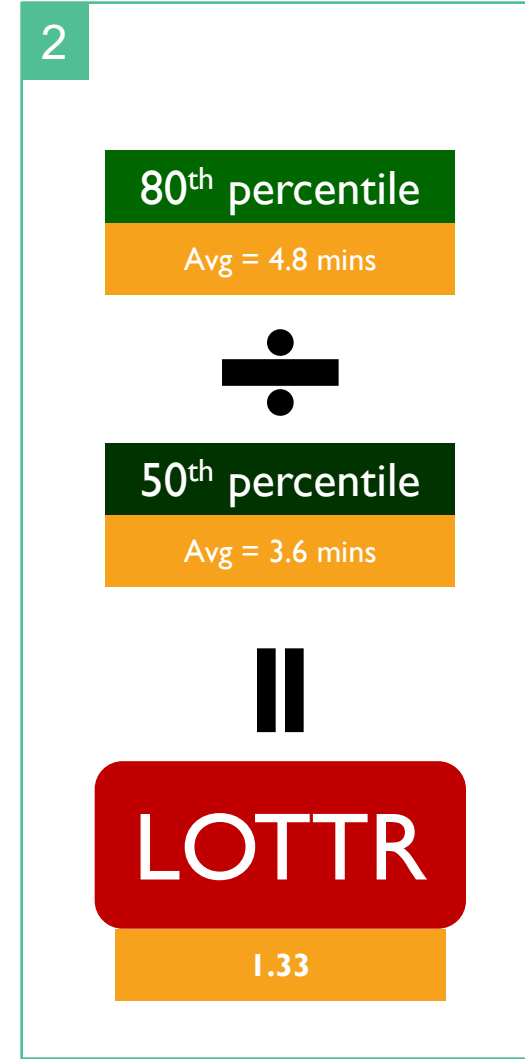
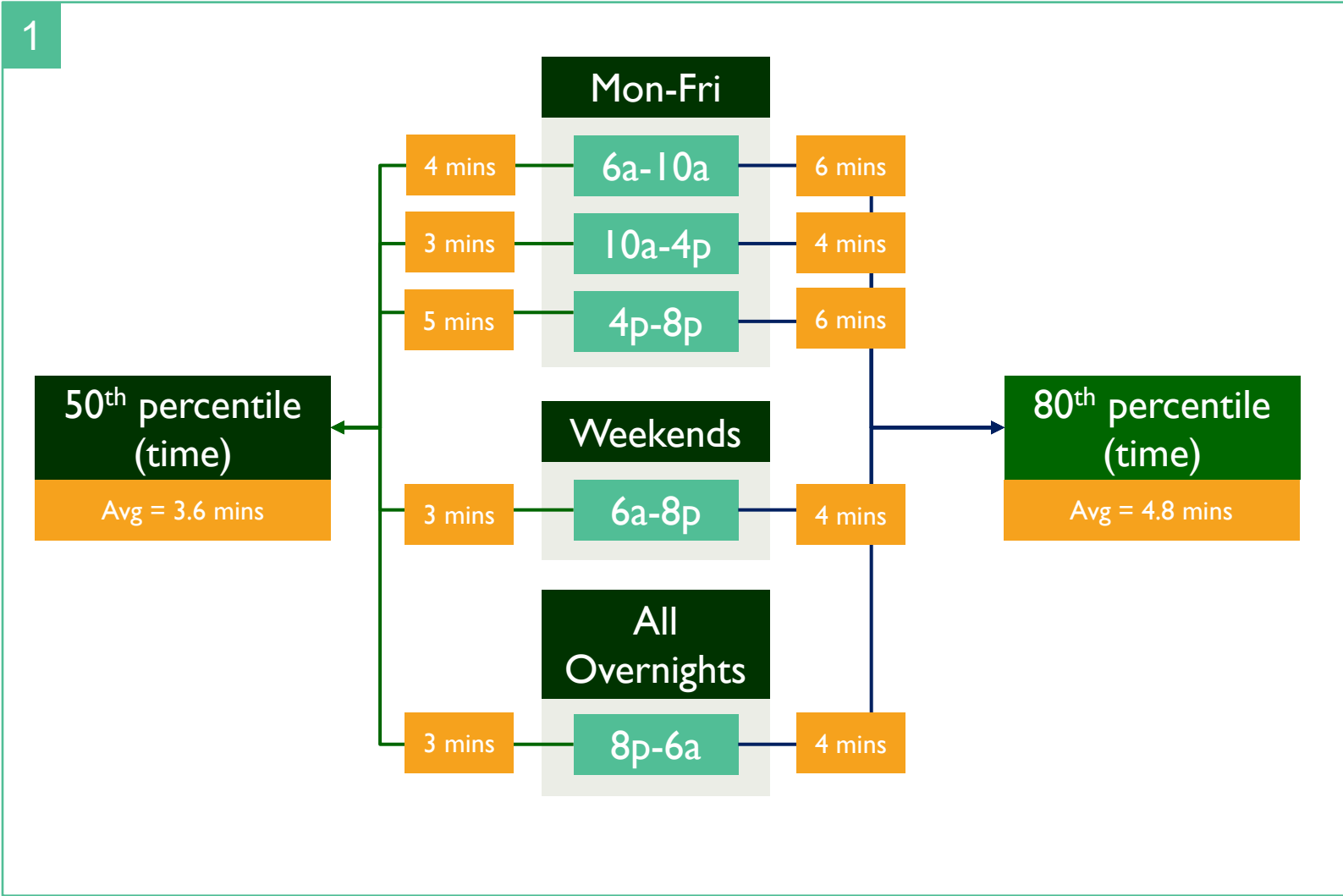


LEVEL OF TRAVEL TIME RELIABILITY (LOTTR)



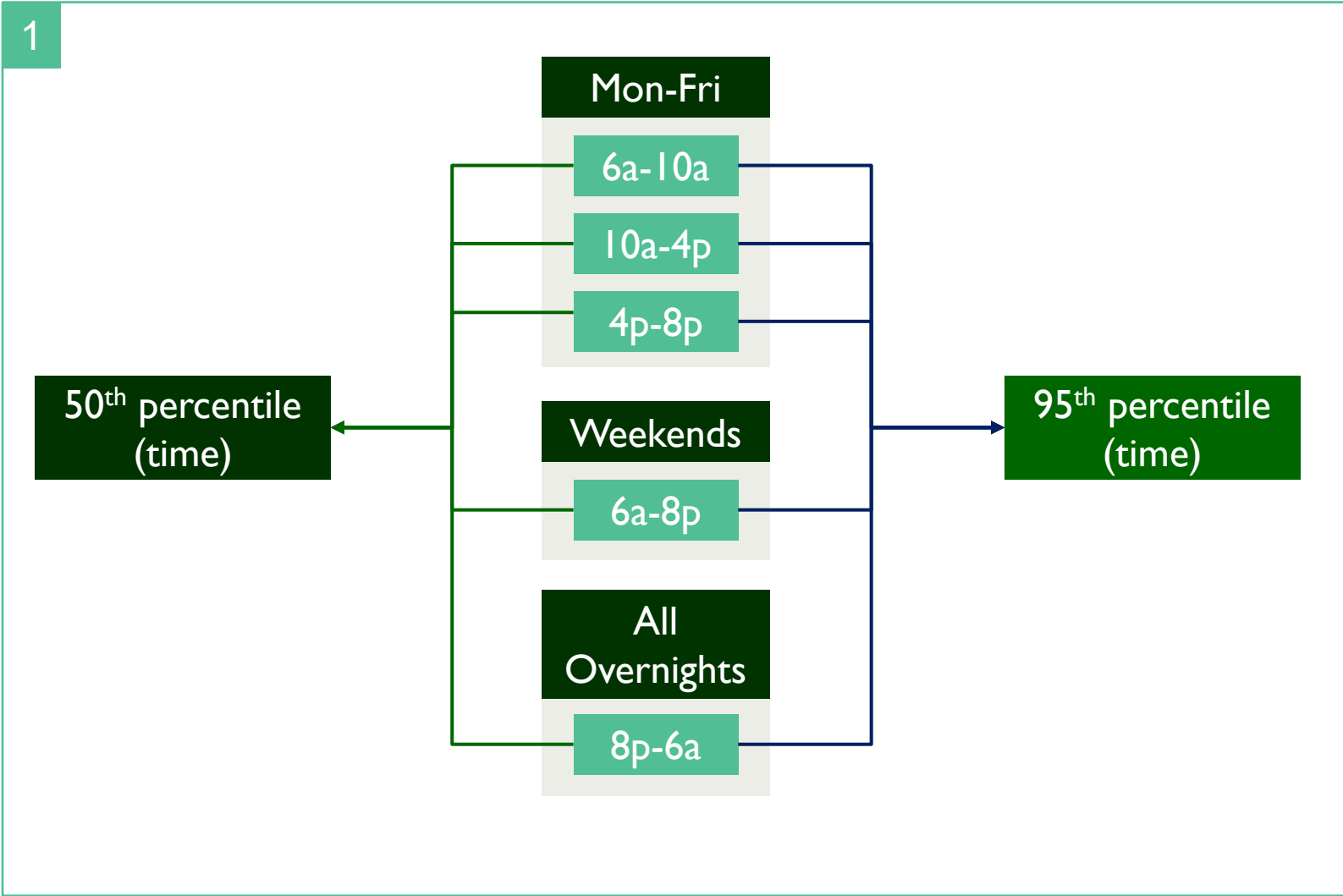


LEVEL OF TRAVEL TIME RELIABILITY (LOTTR)





TRUCK TRAVEL TIME RELIABILITY INDEX (TTTR)



2

$$\frac{95^{\text{th}} \text{ percentile}}{50^{\text{th}} \text{ percentile}} = \text{TTTR}$$

The equation shows the 95th percentile divided by the 50th percentile, with a red rounded rectangle containing the text 'TTTR' below the equals sign.





LEVEL OF TRAVEL TIME RELIABILITY (TTTR)

