Progress Report ● 2018



RRTPO Board – 10/9/2018

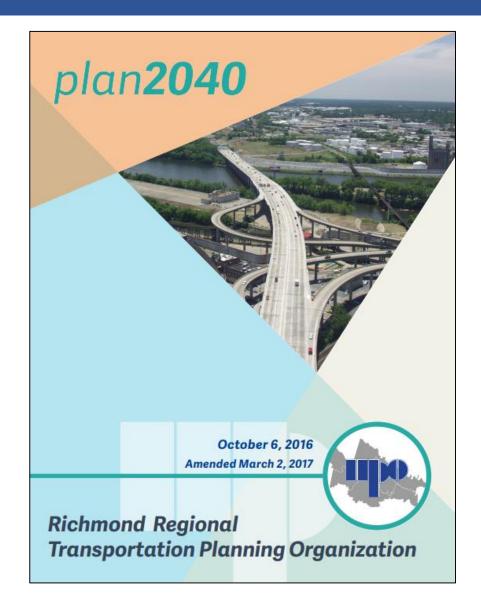
Presentation by:

Phil Riggan, Transportation Planner



2040 Metropolitan Transportation Plan (plan2040)

A regional, multimodal transportation planning document that typically has a 20-year horizon and is updated on a 5-year cycle.





Provide for transportation system connections to areas of employment density and key activity centers, with an emphasis on connecting to areas of high poverty rates.

goals & objectives

Congestion Mitigation

Support transportation system improvements that address existing and expected future traffic congestion.



Freight Mobility

Enhance freight corridors and intermodal connections to facilitate goods movement into, within and out of the region.



Environment & Air Quality

Provide for project alternatives that protect and enhance the region's natural resources.



Safety & Security

Provide for transportation improvements that increase safety and security for system users.



Multimodal Connectivity

Improve accessibility and interconnectivity of various transportation modes for all system users.



System Reliability

Implement technologies and programs to improve travel times and support the ease of travel throughout the region.



Preservation & Maintenance

Ensure that existing transportation infrastructure and facilities achieve a constant state of good repair.



Transportation & Land Use Integration

Support transportation investments that meet the needs of existing and future land use and development patterns.



Goals	Measure	2010	2011	2012	2013	2014	2015	2016	2017	Desired Trend	_	5-year Trend
Congestion	*Delay per peak period commuter ¹ , annual hours	33	33	33	34	34	n.a.	n.a.	n.a.	20	_	₽
Mitigation &	Fuel Loss per peak period commuter ² , gallons	13	13	14	14	14	n.a.	n.a.	n.a.	20	_	₽
System	*Peak period travel time index3	1.12	1.12	1.12	1.13	1.13	n.a.	n.a.	n.a.	20	_	₽
Reliability	Congestion costs ⁴ , annual per peak period commuter	\$ 754	\$733	\$727	\$736	\$729	n.a.	n.a.	n.a.	20		20
	Daily VMT ⁵ , per capita	32.5	32,3	32.1	31.9	33.6	34.0	29.6	n.a.	n.a.		a
	* obs/Housing Ratio ⁶	n.a.	n.a.	1.28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	_	_
Transportation	* obs/Housing Dissimilarity Index ⁷	0.060	0.061	0.056	0.049	0.047	0.067	n.a.	n.a.		2	4
and Land Use	% Workers working in jurisdiction in which they live ⁸	48.8%	49.1%	48.9%	48.6%	48.2%	48.3%	48.0%	n.a.*		~	23
Integration	2 .								n.a. n.a.*		_	40
	Travel Time to Work ⁹	23.6	23.6	23.9	24.0	24.1	24.2	24.5			_	W
	Population Density ¹⁰ , persons per square mile	n.a.	n.a	475	n.a.	n.a.	n.a.	n.a.	n.a.	হ্য		
	*Ozone Exceedances, II											
Environmental		10	11	11	1	1	1	2	1	20	02	-
and Air Quality		25	22	15	1	2	3	4	1	20	20	57
,	Multi-Pollutant Air Quality Index Exceedances ¹²				_	_	_		_		J	VP
	with 2008 EPA Ozone Standard (.075ppm)	10	11	11	1	1	1	2	1	29	20	=
	with 2015 EPA Ozone Standard (.070ppm)	25	22	15	1	2	3	4	1	20	20	EQ .
	Commodity Flow, Freight Mode Share 13, by tons											
	Truck	n.a.	n.a.	67%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	_	_
	Rail	n.a.	n.a.	30%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	_	_
	Commodity Flow, Freight Mode Share 13, by dollar value											
Freight	Truck	n.a.	n.a.	82%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	_	_
Mobility	Rail	n.a.	n.a.	5%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	_	_
	*Richmond Marine Terminal Containers, Outbound 14	n.a.	n.a.	3,241	4,775	7,415	8,309	11,423	13,024	a	an and	a a
	*Richmond Marine Terminal Containers, Inbound ¹⁴	n.a.	n.a.	3,205	4,821	6,699	8,038	11,077	14,602	a	57	a)
	RIC Total Cargo, Outbound/Enplaned, tons ¹⁵ RIC Total Cargo, Inbound/Deplaned, tons ¹⁵	n.a.	18,545 28,062	21,857 30,863	27,108 31,756	29,915 28,369	30,167 29,281	30,380 36,863	29,577 38,081	य य	2	2V
	NC Total Cargo, Inbound/Deplaned, tons	n.a.	28,062	30,863	31,730	20,309	29,201	30,003	30,001	<p< td=""><td>QV.</td><td>OV.</td></p<>	QV.	OV.
	Park and Ride Lots / Spaces 16, number	11 / 1,760	11 / 1,760	11 / 1,760	12 / 1,987	12 / 1,987	12 / 1,987	12 / 1,987	16 / 2,175	a	a	a
	RideFinders Vanpools 17, number	n.a.	117	120	137	138	145	143	143	a	₽	₽.
	Transit Trips 18, per capita	31.6	28.5	22.3	19.5	20.6	20.3	20.9	n.a.*	a	a	23
	Transit Operating Expense per passenger trip ¹⁹	\$3.45	\$3.62	\$4.82	\$5.42	\$5.06	\$4.97	\$4.90	n.a.*		50	ฮ
Multimodal	Transit Passenger Miles ²⁰ , per capita	158.7	139.1	152.0	140.7	145.2	143.2	142.9	n.a.#		20	50
Connectivity	Transit Operating Expense per passenger mile ²¹	\$0.69	\$0.74	\$0.71	\$0.75	\$0.72	\$0.70	\$0.72	n.a.#	-	a	₽
œ.	Transit Revenue Miles ²² , number	11,310,381	11,319,872	11,486,456	11,418,456	11,712,133	11,877,541	11,908,963	n.a.*	EV	a	a
Access to	Transit Revenue Miles ²³ , per capita	25.2	25.2	25.5	25.4	26.1	26.4	26.5	n.a.*		a	a
Employment	Transit Operating Expense, per revenue mile ²⁴	\$4.32	\$4.10	\$4.20	\$4.17	\$4.01	\$3.82	\$3.87	n.a.*		a	20
	*Regional Households served by Transit ²⁵ , percent	n.a.	n.a.	42.83%	n.a.	n.a.	n.a.	n.a.	n.a.	a	ΨV	
				53.47%							_	
	*Regional Employment served by Transit ²⁵ , percent	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	n.a.	a a		-
	Bicycle to Work ²⁶ , percent	0.46%	0.47%	0.51%	0.50%	0.52%	0.48%	0.49%	n.a.	***	a a	₽
	Drove Alone to Work ²⁷ , percent	81.49%	81.51%	81.24%	81.66%	81.59%	81.38%	81.46%	n.a.	20	₹V	50

Goals	Measure	2010	2011	2012	2013	2014	2015	2016	2017	Desired Trend	l-year Trend	5-year Trend
Congestion	*Delay per peak period commuter ¹ , annual hours	33	33	33	34	34	4 n.a.	n.a.	n.a.	20		4
Mitigation &	Fuel Loss per peak period commuter ² , gallons	13	13	14	14	14	1 n.a.	n.a.	n.a.	20	_	₽
System	*Peak period travel time index ³	1.12	1.12	1.12	1.13	1.1	3 n.a.	n.a.	n.a.	20	_	₽
Reliability	Congestion costs ⁴ , annual per peak period commuter	\$754	\$733	\$727	\$736	\$72	9 n.a.	n.a.	n.a.	20		50
	Daily VMT ⁵ , per capita	32.5	32.3	32.1	31.9	33.0	5 34.0	29.6	n.a.	n.a.	_	₹7
Transportation	*Jobs/Housing Ratio ⁶	n.a.	n.a.	1.28	n.a.	n.a		n.a.	n.a.	n.a	_	_
and Land Use	*Jobs/Housing Dissimilarity Index′	0.060	0.061	0.056	0.049	0.04		n.a.	n.a.	<.5	\checkmark	4
Integration	% Workers working in jurisdiction in which they live ⁸	48.8%	49.1%	48.9%	48.6%	48.29		48.0%	n.a.*	EV	_	50
	Travel Time to Work ⁹	23.6	23.6	23.9	24.0	24.:	1 24.2	24.5	n.a.*	41		-
E ar	Commodity Flow,	_		are'*, by	tons							
			Truck				n.a.	n.a.	-			-
			Rail				n.a.	n.a.		_		— <mark> </mark>
	Commodity Flow,	Freight N	1ode Sha	are ¹³ , by	dollar va	alue						
F	reight	· -	Truck				n.a.	n.a.				— H
M	obility		Rail				n.a.	n.a.	_	_	_	- [
	*Richmond Marin	ne Termina	al Conta	iners, O	utbound	114	13,024	EV.	EN		₹N	
	*Richmond Marin	ne Termina	al Conta	iners, Inl	bound ¹⁴		14,602	₹V	EN		€V	
	RIC Total Cargo,	Outbour	nd/Enpla	ned, ton	s ¹⁵		29,577	۶.	50		₩.	h
	RIC Total Cargo,	Inbound	/Deplane	ed, tons ¹	5		38,081	EV	EN		₹	
Connectivity	Transit Operating Expense per passenger mile ²¹	\$0.69	\$0.74	\$0.71	\$0.75	\$0.7	2 \$0.70	\$0.72	n.a.*	80	a a	₽
æ	Transit Revenue Miles ²² , number	11,310,381	11,319,872	11,486,456	11,418,456	11,712,13	3 11,877,541	11,908,963	n.a.*	W	₹	₽.
Access to	Transit Revenue Miles ²³ , per capita	25.2	25.2	25.5	25.4	26.3		26.5	n.a.*	W	a	Ø
Employment	Transit Operating Expense, per revenue mile ²⁴	\$4.32	\$4.10	\$4.20	\$4.17	\$4.0	\$3.82	\$3.87	n.a.*	20	W.	50
	*Regional Households served by Transit ²⁵ , percent	n.a.	n.a.	42.83%	n.a.	n.a		n.a.	n.a.	W	_	-
	*Regional Employment served by Transit ²⁵ , percent	n.a.	n.a.	53.47%	n.a.	n.a		n.a.	n.a.	W	_	_
	*Bicycle to Work ²⁶ , percent	0.46%	0.47%	0.51%	0.50%	0.529		0.49%	n.a.=	ST ON	20	→
	Drove Alone to Work ²⁷ , percent	81.49%	81.51%	81.24%	81.66%	81.599	6 81.38%	81.46%	n.a.	20	ঝ	50



	*Pedestrian to Work ²⁸ , percent	1.57%	1.65%	1.47%	1.56%	1.65%	1.65%	1.77%	n.a.‡	EV	a	a
Multimodal	*Passenger Rail Ridership ²⁹	313,026	375,226	404,700	439,525	427,426	435,199	426,966	451,078	EV	a	57
Connectivity	Commercial Air Boardings ³⁰	1,651,131	1,571,155	1,582,565	1,597,913	1,671,096	1,740,380	1,775,573	1,822,483	W	a	57
& Access to	Commercial Air Available Seat-Miles ³¹ Inbound, thousands	1,072,879	1,066,139	1,014,951	1,035,901	1,038,566	1,062,431	1,086,048	1,152,279	W	a	a
Employment	Commercial Air Available Seat-Miles ³¹ Outbound, thousands	1,043,167	1,045,854	1,007,221	1,026,515	1,025,401	1,042,401	1,065,520	1,127,483	EV	a	20
Linployment	*Commercial Air Non-Stop Destinations ³²	n.a.	n.a.	n.a.	n.a.	16	17	17	17	Ø	⇒	_
	Commence via 11011 deep described.		*****	11101	11101					- VP	-	
	*Highway Crashes, number ³³	17,423	18,460	18,359	18,453	18,234	19,752	20,550	20,329	20	50	ୟ
	Highway Crash Rate, per 100 million VMT ³⁴	157	167	167	169	163	168	173	n.a.*	20	a a	5D
	*Highway Fatalities, number ³³	85	90	70	83	76	92	78	102	20	a a	€D
	Highway Fatality Rate, per 100 million VMT ³⁴	0.77	0.83	0.69	0.83	0.73	0.78	0.66	n.a.#	20	50	হ্য
Safety and	Transit Crashes, number ³⁵	35	35	41	32	27	20	18	14	20	20	80
Security	Transit Crash Rate, per 100 million PMT ³⁶	80.8	101.8	108.8	101.8	88.12	67.2	53.65	41.58	50	20	20
	Transit Fatalities, number ³⁵	0	0	0	0	0	0	0	0	50	4	
	Transit Fatality Rate, per 100 million PMT ³⁶	-	-	-	-	-	-	-	-	50	4	
	Bicycle and Pedestrian Crashes, number ³⁷	344	441	425	386	382	338	367	386	50	ଷ	57
	Bicycle and Pedestrian Fatalities, number ³⁷	9	15	14	12	13	11	14	29	20	a	a
	*Interstate Pavement Condition, % rated fair or better ³⁸	n.a.	n.a.	71.7%	75.1%	75.7%	76.7%	79.4%	83.3%	W	a	a
	*Primary Pavement Condition, % rated fair or better ³⁸	n.a.	n.a.	74.6%	79.4%	74.4%	72.5%	78.5%	83.1%	W	a a	W
	Interstate Bridge Sufficiency Rating ³⁹									A b		
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	345	341	20	20	_
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11	9	20	20	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.19%	2.64%	20	20	<i>I</i> —
	Primary Roads Bridge Sufficiency Rating ³⁹							474	450	20	40	
	Total Bridges Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	474 24	469 20	50	হা হা	_
	Percentage of Structurally Deficient Bridges	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	5.06%	4.26%	50	<i>₹</i> 0	
	Secondary Roads Bridge Sufficiency Rating ²⁹	II.a.	11.0.	II.a.	II.d.	11.0.	11.0.	3.00%	4.20%		4	_
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	492	484	23	20	
Preservation	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	27	20	⇒	_
and	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.49%	5.58%	20	ฮ	_
Maintenance	Urban Roads Bridge Sufficiency Rating 39										V.	•
enunce	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	132	126	20	20	I —
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17	15	20	20	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.88%	11.90%	20	20	_
	Unclassified Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	2	=>	4	I —
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	⇒	⇒	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%	\Rightarrow	∌	l –
	Entire Road System ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,447	1,422	20	20	I —
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	79	71	20	20	I —
	B	n.a.				n.a.	n.a.	5.46%	4.99%	50	20	4
	Percentage of Structurally Deficient Bridges	II.a.	n.a.	n.a.	n.a.	II.a.	II.a.	3,40%	413370		4	

Marke 11	*Pedestrian to Work ²⁸ , percent	1.57%	1.65%	1.47%	1.56%	1.65%	1.65%	1.77%	n.a.#	W	₹ 7	₽.
Multimodal	*Passenger Rail Ridership ²⁹	313,026	375,226	404,700	439,525	427,426	435,199	426,966	451,078	EV	₩.	57
Connectivity &	Commercial Air Boardings ³⁰	1,651,131	1,571,155	1,582,565	1,597,913	1,671,096	1,740,380	1,775,573	1,822,483	EV)	₽ O	57
Access to	Commercial Air Available Seat-Miles ³¹ Inbound, thousands	1,072,879	1,066,139	1,014,951	1,035,901	1,038,566	1,062,431	1,086,048	1,152,279	W	a	₽.
Employment	Commercial Air Available Seat-Miles ³¹ Outbound, thousands	1,043,167	1,045,854	1,007,221	1,026,515	1,025,401	1,042,401	1,065,520	1,127,483	W	a	₽V
	*Commercial Air Non-Stop Destinations ³²	n.a.	n.a.	n.a.	n.a.	16	17	17	17	W	=	_
	·											
	*Highway Crashes, number ³³	17,423	18,460	18,359	18,453	18,234	19,752	20,550	20,329	50	50	Ø.
	Highway Crash Rate, per 100 million VMT ³⁴	157	167	167	169	163	168	173	n.a.*	50	ଷ	W.
	*Highway Fatalities, number ³³	85	90	70	83	76	92	78	102	20	EQ .	a a
_	Highway Fatality Rate per 100 million VMT ³⁴	0.77	0.83	0.69	0.83	0.73	0.78	0.66	n.a.*	27	1/2	54
	Pedestrian to Work	²⁸ , percen	ıt				n.a.	عاد ال	EV	J	EN.	
Mult	timodal *Passenger Rail Rider	ship ²⁹					451,078	EV.	EV	J	EN.	
Conn	nectivity	•				-	022 402	EV)	ฉ		ฮ	
	Commercial Air Boar						,822,483	OV.	OV.		OV	
Acc	cess to Commercial Air Avail	able Seat-	Miles ³¹ Ir	ibound, t	thousand	s 1	,152,279	ফ	きゃ		EN	
									_	1		
	Joyment Commercial Air Avail	able Seat-	Miles ³¹ C	utbound	i, thousar	nds 1	,127,483	W	EN	J.	ZV	
	ioyinene				l, thousar	nds 1					ZV	
	loyment Commercial Air Avail *Commercial Air No				l, thousai	nds 1	,127,483 17	2N 2N	<i>ঝ</i> ⊴∑		21	
	ioyinene				l, thousai	nds 1					ZV	
	*Commercial Air No	n-Stop De	estination	ıs ³²			17				ZV	_
	*Commercial Air No	n-Stop De	estination	n.a.	n.a.	n.a.	. 17	24	₽) 2	\$\partial \text{\partial \text{	_
	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges	n-Stop De	estination	ıs ³²			17	a	€)		হ হ হ	_
	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ²⁹	n-Stop De n.a. n.a.	estination n.a. n.a.	15 ³² n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a.	24 5.06%	20 4.26%	্ প্র	हा हा हा	_
Empl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ²⁹ Total Bridges	n-Stop De n.a. n.a.	n.a. n.a.	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.	24 5.06% 492	20 4.26% 484) න න	\$ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	=
Em-pl Preservation	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	24 5.06% 492 27	20 4.26% 484 27	2 20 20 20 20	€	<u>-</u>
Em-pl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges	n-Stop De n.a. n.a.	n.a. n.a.	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.	24 5.06% 492	20 4.26% 484) න න		
Em-pl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49%	20 4.26% 484 27 5.58%	2 20 20 20 20	₽	
Em-pl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a.	24 5.06% 492 27	20 4.26% 484 27	2 2 2 2 2 2 2	গু থ ক	
Em-pl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49%	20 4.26% 484 27 5.58%) 20 20 20 20 20 20 20 20 20 20 20 20 20	₽	
Em-pl	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17	20 4.26% 484 27 5.58% 126 15) 20 20 20 20 20 20 20 20 20 20 20 20 20	中 公 公 公 公	
Em-pl Preservation	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17	20 4.26% 484 27 5.58% 126 15) 20 20 20 20 20 20 20 20 20 20 20 20 20	中	
Em-pl Preservation	Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88%	20 4.26% 484 27 5.58% 126 15 11.90%) N N N N N N N N N N N N N N N N N N N	中島 知知知 中	
Em-pl Preservation	*Commercial Air No Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88%	20 4.26% 484 27 5.58% 126 15 11.90%	20 20 20 20 20 20 20 20 20 20 20 20 20 2	中	
Em-pl Preservation	Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88%	20 4.26% 484 27 5.58% 126 15 11.90%	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	中 50 20 20 20 40 40 40 40 40 40 40 40 40 40 40 40 40	
Em-pl Preservation	Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88%	20 4.26% 484 27 5.58% 126 15 11.90%	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	中 50 20 20 20 40 40 40 40 40 40 40 40 40 40 40 40 40	
Em-pl Preservation	Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Entire Road System ³⁹ Total Bridges	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88% 4 0	20 4.26% 484 27 5.58% 126 15 11.90% 2 0		ନ୍ୟ ଅଅଅ ନନ୍ନ ଅ	
Em-pl Preservation	Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Secondary Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Urban Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Unclassified Roads Bridge Sufficiency Rating ³⁹ Total Bridges Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Percentage of Structurally Deficient Bridges Entire Road System ³⁹	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	24 5.06% 492 27 5.49% 132 17 12.88% 4 0 0%	20 4.26% 484 27 5.58% 126 15 11.90% 2 0 0%		中安 经 的 的 的 的 的	



Multimodal	*Pedestrian to Work ²⁸ , percent	1.57%	1.65%	1.47%	1.56%	1.65%	1.65%	1.77%	n.a.*	EV)	57	EN .
Connectivity	*Passenger Rail Ridership ²⁹	313,026	375,226	404,700	439,525	427,426	435,199	426,966	451,078	EV)	₹ 7	₹7
&	Commercial Air Boardings ³⁰	1,651,131	1,571,155	1,582,565	1,597,913	1,671,096	1,740,380	1,775,573	1,822,483	EN	57	₹ 7
Access to	Commercial Air Available Seat-Miles ³¹ Inbound, thousands	1,072,879	1,066,139	1,014,951	1,035,901	1,038,566	1,062,431	1,086,048	1,152,279	W	₽	W
Employment	Commercial Air Available Seat-Miles ³¹ Outbound, thousands	1,043,167	1,045,854	1,007,221	1,026,515	1,025,401	1,042,401	1,065,520	1,127,483	W	a	a
Liipioyiiieit	*Commercial Air Non-Stop Destinations ³²	n.a.	n.a.	n.a.	n.a.	16	17	17	17	Ø	4	_
										V/		
	*Highway Crashes, number ³³	17,423	18,460	18,359	18,453	18,234	19,752	20,550	20,329	20	20	ଷ
	Highway Crash Rate, per 100 million VMT ³⁴	157	167	167	169	163	168	173	n.a.*	20	হ্য	₽
	*Highway Fatalities, number ³³	85	90	70	83	76	92	78	102	20	a	a
	Highway Fatality Rate, per 100 million VMT ³⁴	0.77	0.83	0.69	0.83	0.73	0.78	0.66	n.a.*	20	57	Ø.
Safety and	Transit Crashes, number ³⁵	35	35	41	32	27	20	18	14	20	20	20
Security	Transit Crash Rate, per 100 million PMT36	80.8	101.8	108.8	101.8	88.12	67.2	53.65	41.58	50	20	80
	Transit Fatalities, number ³⁵	0	0	0	0	0	0	0	0	20	4	4
	Transit Fatality Rate, per 100 million PMT ³⁶	-	-	-	-	-	-	-	-	20	4	4
1	Bicycle and Pedestrian Crashes, number ³⁷	344	441	425	386	382	338	367	386	50	EV .	20
	Bicycle and Pedestrian Fatalities, number ³⁷	9	15	14	12	13	11	14	29	20	a a	EQ .
	*Interstate Pavement Condition, % rated fair or better ³⁸	n.a.	n.a.	71.7%	75.1%	75.7%	76.7%	79.4%	83.3%	EN.	₽.	W
	*Primary Pavement Condition, % rated fair or better ³⁸	n.a.	n.a.	74.6%	79.4%	74.4%	72.5%	78.5%	83.1%	EV)	₹7	₹ 7
	Interstate Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	345	341	50	80	_
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11	9	50	80	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.19%	2.64%	20	80	—
	Primary Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	474	469	50	50	—
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24	20	50	80	—
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.06%	4.26%	50	20	—
	Secondary Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	492	484	50	50	—
Preservation	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	27	50	⇒	_
and	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.49%	5.58%	50	a a	—
Maintenance	Urban Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	132	126	50	50	_
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17	15	50	50	—
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.88%	11.90%	50	20	—
	Unclassified Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	2	\Rightarrow	=	—
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	\Rightarrow	€)	—
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%	\Rightarrow	=	—
	Entire Road System ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,447	1,422	20	20	—
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	79	71	20	20	—
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.46%	4.99%	20	20	—
	Average Age of GRTC Bus Fleet, years ⁴⁰	7.3	7.8	8.8	8.1	6.2	7.2	7.6	n.a.	20	a a	80
	- 7											

Multimodal	*Pedestrian to Work ²⁴		1.57%	1.65%	1.47%	1.56%	1.65%	1.65%	1.77%	n.a.*	Ø	a a	a
Connectivity	*Passenger Rail Riders	•	313,026	375,226	404,700	439,525	427,426	435,199	426,966	451,078	Ø.	20	a
ď	Commercial Air Board	•	1,651,131	1,571,155	1,582,565	1,597,913	1,671,096	1,740,380	1,775,573	1,822,483	a)	20	a a
Access to		ble Seat-Miles ³¹ Inbound, thousands	1,072,879	1,066,139	1,014,951	1,035,901	1,038,566	1,062,431	1,086,048	1,152,279	W	₹V	a a
Employment		ble Seat-Miles ³¹ Outbound, thousands	1,043,167	1,045,854	1,007,221	1,026,515	1,025,401	1,042,401	1,065,520	1,127,483	Ø	an D	₩.
	*Commercial Air Non-	-Stop Destinations**	n.a.	n.a.	n.a.	n.a.	16	17	17	17	N	9	
	*Highway Crashes, nu	mber ²³	17,423	18,460	18,359	18,453	18,234	19,752	20,550	20,329	<u>성</u>	2	a
													_
		*Highway Crash	es, num	ber ³³			20	,329	50	57		包	
		Highway Crash F	Rate, pe	r 100 m	illion VI	MT34		n.a.*	57	ফ		W	
		*Highway Fataliti	ies, num	ber ³³				102	50	ফ		EN)	
		Highway Fatality	Rate, p	er 100 i	million V	/MT ³⁴	ı	n.a.*	57	20		₹N	l
Saj	fety and	Transit Crashes,	number	35				14	50	80		20	
S	ecurity	Transit Crash Ra	ate, per	l 00 mill	ion PM	T ³⁶	4	1.58	57	20		20	
	-	Transit Fatalities,	_					0	27	1		1	
		Transit Fatality R	late, per	- 100 m	illion PM	1T ³⁶		_	50	1		1	
		Bicycle and Pede	-				- (386	57	হ্য		20	
1		Bicycle and Pede					7	29	22	হ্য		EN.	
1		•										100	
		entage of structurally Delicient bridges	n.a.	n.a.	11.0.	n.a.	n.a.	n.a.	12,0076	11.50%	-	4	
	Unclassified Roads Bri	dge Sufficiency Rating ³⁹ Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	2	4	7	_ l
		Structurally Deficient Bridges	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	n.a. n.a.	0	0	→	⇒)	
	Perc	entage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%	∌	₽	_
	Entire Road System ³⁹	- ,											
		Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,447	1,422	20	50	-
	-	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	79	71	<i>₹</i> 0	50	_
		entage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.46%	4.99%	হয় হয়	53	20
	Average Age of GRTC	, Dus Heet, years	7.3	7.8	8.8	8.1	6.2	7.2	7.6	n.a.	4	W	41



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Multimodal	*Pedestrian to Work ²⁸ , percent	1.57%	1.65%	1.47%	1.56%	1.65%	1.65%	1.77%	n.a.*	EV)	2	3
Connectivity	*Passenger Rail Ridership ²⁹	313,026	375,226	404,700	439,525	427,426	435,199	426,966	451,078	EV	50	₹V
&	Commercial Air Boardings ³⁰	1,651,131	1,571,155	1,582,565	1,597,913	1,671,096	1,740,380	1,775,573	1,822,483	EV	₹ 7	a
Access to	Commercial Air Available Seat-Miles ³¹ Inbound, thousands	1,072,879	1,066,139	1,014,951	1,035,901	1,038,566	1,062,431	1,086,048	1,152,279	EN	₹	a
Employment	Commercial Air Available Seat-Miles ³¹ Outbound, thousands	1,043,167	1,045,854	1,007,221	1,026,515	1,025,401	1,042,401	1,065,520	1,127,483	W	₽V	a
' '	*Commercial Air Non-Stop Destinations ³²	n.a.	n.a.	n.a.	n.a.	16	17	17	17	W	⇒	_
	·											
	*Highway Crashes, number ³³	17,423	18,460	18,359	18,453	18,234	19,752	20,550	20,329	50	50	ଷ
	Highway Crash Rate, per 100 million VMT ³⁴	157	167	167	169	163	168	173	n.a.*	20	€V .	a
	*Highway Fatalities, number ³³	85	90	70	83	76	92	78	102	50	EV .	ୟ
	Highway Fatality Rate, per 100 million VMT ³⁴	0.77	0.83	0.69	0.83	0.73	0.78	0.66	n.a.#	50	20	ୟ
Safety and	Transit Crashes, number ³⁵	35	35	41	32	27	20	18	14	50	50	50
Security	Transit Crash Rate, per 100 million PMT ³⁶	8.08	101.8	108.8	101.8	88.12	67.2	53.65	41.58	50	50	50
	Transit Fatalities, number ³⁵	0	0	0	0	0	0	0	0	50		
	Transit Fatality Rate, per 100 million PMT ³⁶	-	-	-	-	-	-	-	-	20	4	4
	Bicycle and Pedestrian Crashes, number ³⁷	344	441	425	386	382	338	367	386	20	EV .	হ্য
	Bicycle and Pedestrian Fatalities, number ³⁷	9	15	14	12	13	11	14	29	20	EV .	ଷ
											_	
	*Interstate Pavement Condition, % rated fair or better ³⁸	n.a.	n.a.	71.7%	75.1%	75.7%	76.7%	79.4%	83.3%	EV)	EV .	a a
	39			71.00/	70.40/	71.10/	70.50/	70 50/	00.40/		2-1	
	Interstate Bridge Sufficiency Rating ³⁹							245	244	44	Δ1	
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	345	341	87 50	<i>∞</i>	_
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11 3.19%	9 2.64%	হ হ	5 0	_
	Percentage of Structurally Deficient Bridges Primary Roads Bridge Sufficiency Rating ³⁹	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5,19%	2.04%	4	41	_
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	474	469	23	20	
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24	20	20	50	
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.06%	4.26%	20	20	_
	Secondary Roads Bridge Sufficiency Rating ³⁹	11101	11101	*****	*****	***************************************	11101	3,00%	112070	_)	
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	492	484	12	2	_
Preservation	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	27	20	⇒	_
and	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.49%	5.58%	20	a	
Maintenance												
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	132	126	20	20	
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17	15	20	20	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.88%	11.90%	20	20	
	Unclassified Roads Bridge Sufficiency Rating ³⁹											
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	2	=	-	
	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	4	=	_
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%	\Rightarrow	=	I —
	Entire Road System ³⁹											_
	Total Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,447	1,422	20	20	
I	Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	79	71	20	20	'
	Percentage of Structurally Deficient Bridges	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.46%	4.99%	20	50	_
	Average Age of GKTC bus fleet, years	1,3	1.8	8.8	8,1	6,2	1.4	/.6	n.a.	41	ZV	5

imod ectiv	78				_		a
ď.	*Interstate Pavement Condition, % rated fair or better ³⁸	79.4%	83.3%	EV	20	20	₹ 7
ess to oyme	*Primary Pavement Condition, % rated fair or better ³⁸	78.5%	83.1%	W	W	EV .	a
oye	Interstate Bridge Sufficiency Rating ³⁹						=
	Total Bridges	345	341	50	50	-	02
	Structurally Deficient Bridges	11	9	50	50	—	হ্য
	Percentage of Structurally Deficient Bridges	3.19%	2.64%	20	20	- -	(Z)
ty an	Primary Roads Bridge Sufficiency Rating ³⁹						50
curity	Total Bridges	474	469	20	20	—	⊘
	Structurally Deficient Bridges	24	20	50	20	_	V
	Percentage of Structurally Deficient Bridges	5.06%	4.26%	20	20	_	র গ্র
	Secondary Roads Bridge Sufficiency Rating ³⁹						VV
	Total Bridges	492	484	20	29	_	a a
Preservatio		27	27	20	⇒	_	
and	Percentage of Structurally Deficient Bridges	5.49%	5.58%	20	EJ	_	80 80
Maintenand					47		20
Mantenand	Total Bridges	132	126	20	(22		02
	Structurally Deficient Bridges	17	15	20	20		20
	Percentage of Structurally Deficient Bridges	12.88%	11.90%	22	02	_	50
	Unclassified Roads Bridge Sufficiency Rating ³⁹						50
ervati and	Total Bridges	4	2	→	4		5) 20
tenar	Structurally Deficient Bridges	0	0	⇒	₽)		
	,	0%	0%	- ∌	₽)		\$) \$)
	Percentage of Structurally Deficient Bridges	U76	076	2	7	_	20
	Entire Road System ³⁹	1 447	1 422	40	40		4
	Total Bridges	1,447	1,422	প্র	₩ ₩	_	₽
	Structurally Deficient Bridges	79	71	20	(2)	_	=
	Percentage of Structurally Deficient Bridges	5.46%	4.99%	20	50	_	20
	Average Age of GRTC Bus Fleet, years ⁴⁰	7.6	n.a.	20	W.	20	50

Program Highlights & Inside the Numbers

CONGESTION MITIGATION & SYSTEM RELIABILITY

Program Highlight

Congestion Mitigation Process - Bottleneck Analysis

In December 2016, the Congestion Mitigation Process (CMP) Technical Report was approved by the RRTPO board. The CMP is defined by the Federal Highway Administration (FHWA) as a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assess alternative strategies for congestion management that meet state and local needs. The CMP is intended to apply these strategies to capacity increasing projects and improvements and transition them into the funding and implementation stages for major corridors identified in the CMP roadway network.

Congestion is analyzed using tools from the I-95 Corridor Coalition Vehicle Probe Project (VPP) which allows for the analysis over time of most of the areas with congestion. Data on bottlenecks were compiled in order to monitor the trends on the CMP network and monitored the time of day for congestion and non-recurring backups due to construction. Analysis shows two construction projects are creating congestion for the top two bottlenecks on the list; one on I-95 at Lewistown Road in Hanover County and I-64 near Exit 205 in New Kent County. Two sections of VA-288 also made the list.



Top 10 Bottlenecks in the Richmond Region

- 1. I-95 S at Lewistown Road Exit 89
- 2. I-64 W at VA-33-VA-249 Exit 205
- 3. I-64 W at I-95 Exit 190
- 4. VA-288 N at Huguenot Trail-RT711
- 5. I-95 N at US-301 Belvidere St Exit 76
- 6. I-64 E at Laburnum Ave Exit 186
- 7. I-95 N at Lewistown Road Exit 89
- 8. VA-288 S at VA-6 Patterson Ave
- 9. I-95 N at VA-656 Exit 86
- 10. I-95 S at VA-161 Hermitage Rd Exit 80



TRANSPORTATION AND LAND USE INTEGRATION

Program Highlight

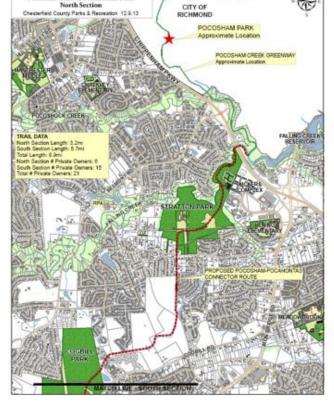
Stratton Park in Chesterfield County

Chesterfield County is planning to improve the safety and connectivity in Stratton Park and along Ridgedale Parkway with a \$1.1 million project to add sidewalk and a paved multiuse path. The RRTPO approved the allocation of FY 2017 Transportation Alternatives Set-Aside funds and a portion of FY 2018 funds for a total of \$880,000 with a match of \$220,000 from Chesterfield to fund this project. The corridor includes the park, a swimming facility, commercial and residential developments, and an elementary school.

This path is supported by the <u>Bikeways & Trails Chapter</u> of Chesterfield County's comprehensive plan. The trail is also expected to be considered for designation as a part of the <u>East Coast Greenway</u>, a national 3,000-mile multiuse path connecting Florida to Maine.



New multiuse path in the Jessup Farms development. Credit: Heather Barrar



PROPOSED GREENWAY ROUTE

Pocosham Park to Pocahontas Park

Red line represents the multiuse path according to the Chesterfield County plan. Credit: Chesterfield County



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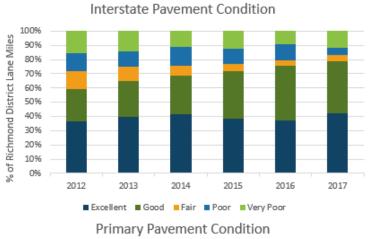
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PRESERVATION & MAINTENANCE

Inside the Numbers

Pavement Condition information for the Richmond area is reported in the annual State of Pavement released by the Virginia Department of Transportation (VDOT). Important to note that Pavement Condition information is released at the geographic scale of the Richmond VDOT district, which extends beyond the RRTPO planning area and includes the Tri-Cities and Southside areas of the state.

VDOT reports pavement condition as an index scale from 1 to 100, grouping the results into five categories: 90 and above - Excellent; 70 to 89 - Good; 60 to 69 - Fair; 50 to 59 - Poor; and 49 and below - Very Poor. In general, pavements rating less than 60 are considered to be deficient and are identified as priorities for maintenance and/or rehabilitation work. As indicated in Figure 10, the Interstate and Primary network pavement conditions have varied considerably year to year from 2012 to 2017. The percentage of very poor condition increased slightly in 2017 reporting on VDOT maintained primary roads in the Richmond District, but approximately 75 percent of the roads were reported to be good and excellent. Interstate pavement conditions continue to be improving overall, with the percentage of very poor pavement condition decreasing since the 2014-2015 reporting periods. At this scale, pavement condition data provides a snapshot of how the overall regional highway network is maintained for safe roadway conditions.



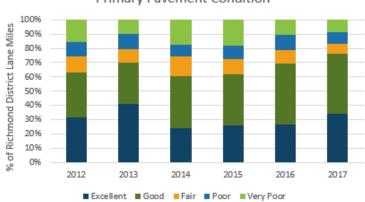


Figure 10: Interstate and Primary Pavement Condition, VDOT State of Pavement (2012-2016)

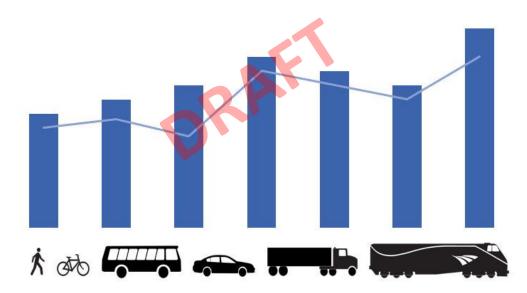


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Next Steps

 Draft report sent to TAC Sept 2018 Oct 4 draft presented to RRTPO Oct 9 TAC action requested (rec to RRTPO) Oct 2018 Oct 31 posted to RRTPO website Dec 6 RRTPO consent agenda **Dec 2018**

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