

HISTORIC TRIANGLE COMPREHENSIVE PLAN TRANSPORTATION STUDY

HRTPO Study Team

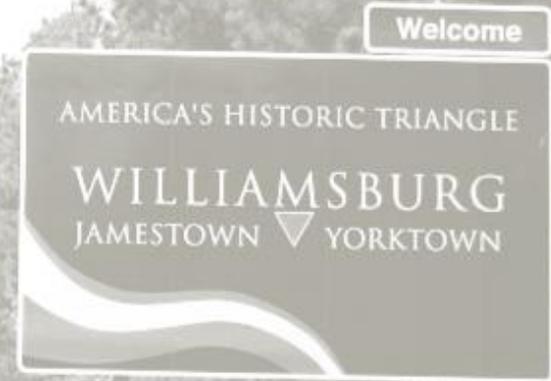
Keith Nichols, PE

Sam Belfield

Uros Jovanovic

York 2040 Steering Committee Meeting

April 8, 2019



INTRODUCTION

- James City County, Williamsburg, and York County are coordinating the timing of their Comprehensive Plan updates because of the strong link between the three communities.
- The purpose of this report is to assist Historic Triangle officials with the transportation sections of their respective Comprehensive Plan updates.



REPORT CONTENTS

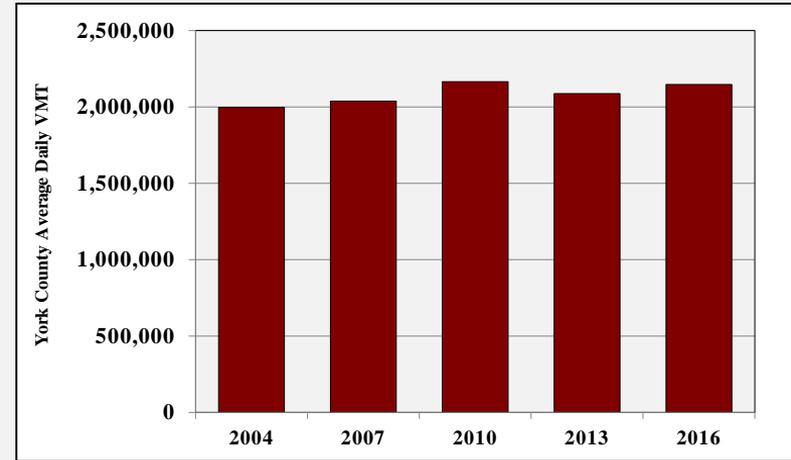
- The study is broken down into the following sections:
 - Highway
 - Roadway Safety
 - Commuting Patterns
 - Rail
 - Active Transportation
 - Public Transportation
 - Bridges
 - Freight
 - Air Travel
 - Resiliency/Sea Level Rise
- Both the **current** and **future** conditions are examined for each of these sections.

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ROADWAY TRAVEL

- Roadway travel has been increasing in York County.

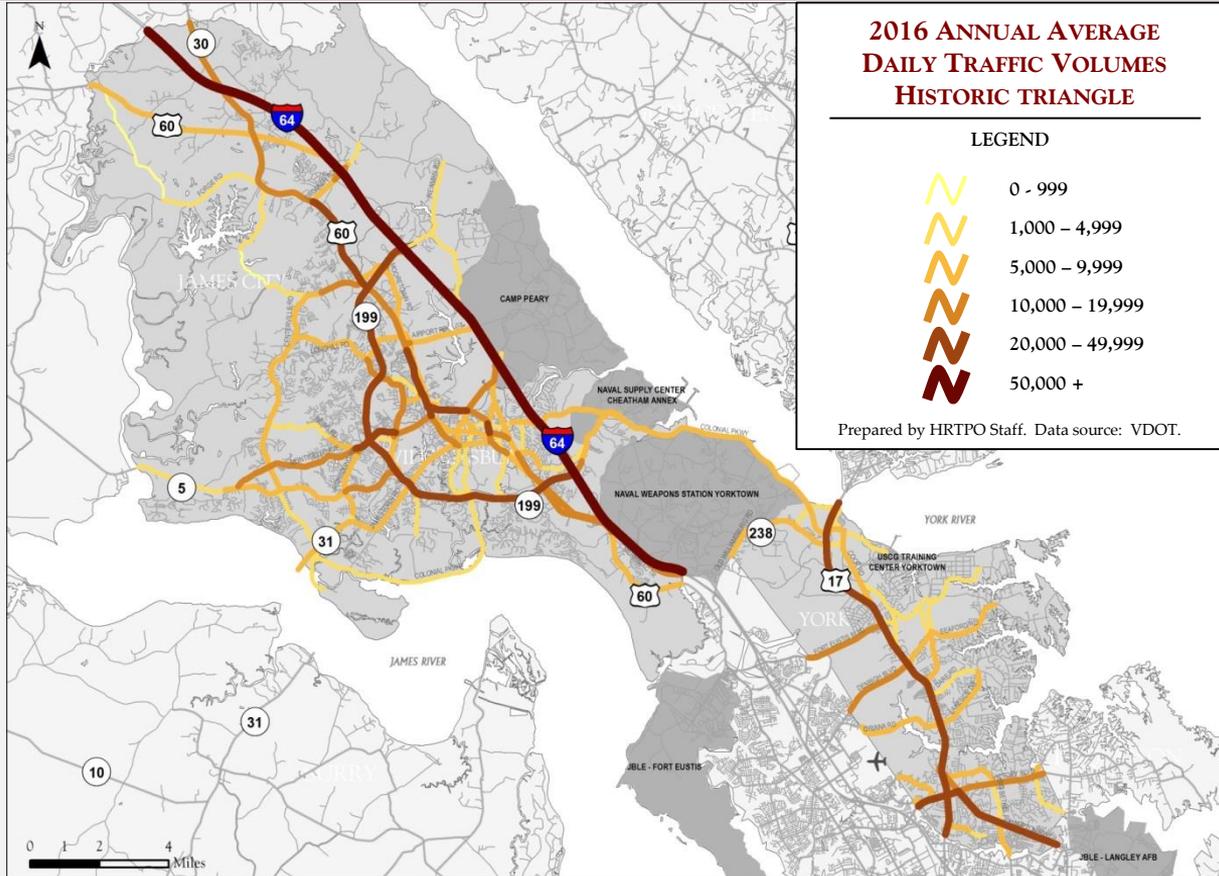


	2004	2007	2010	2013	2016
James City County	1,529,800	1,704,200	1,797,700	1,770,100	1,936,200
Williamsburg	253,900	250,300	265,500	251,400	259,300
York County	1,996,300	2,037,900	2,165,000	2,087,400	2,147,300
HISTORIC TRIANGLE	3,780,000	3,992,400	4,228,200	4,108,900	4,342,800

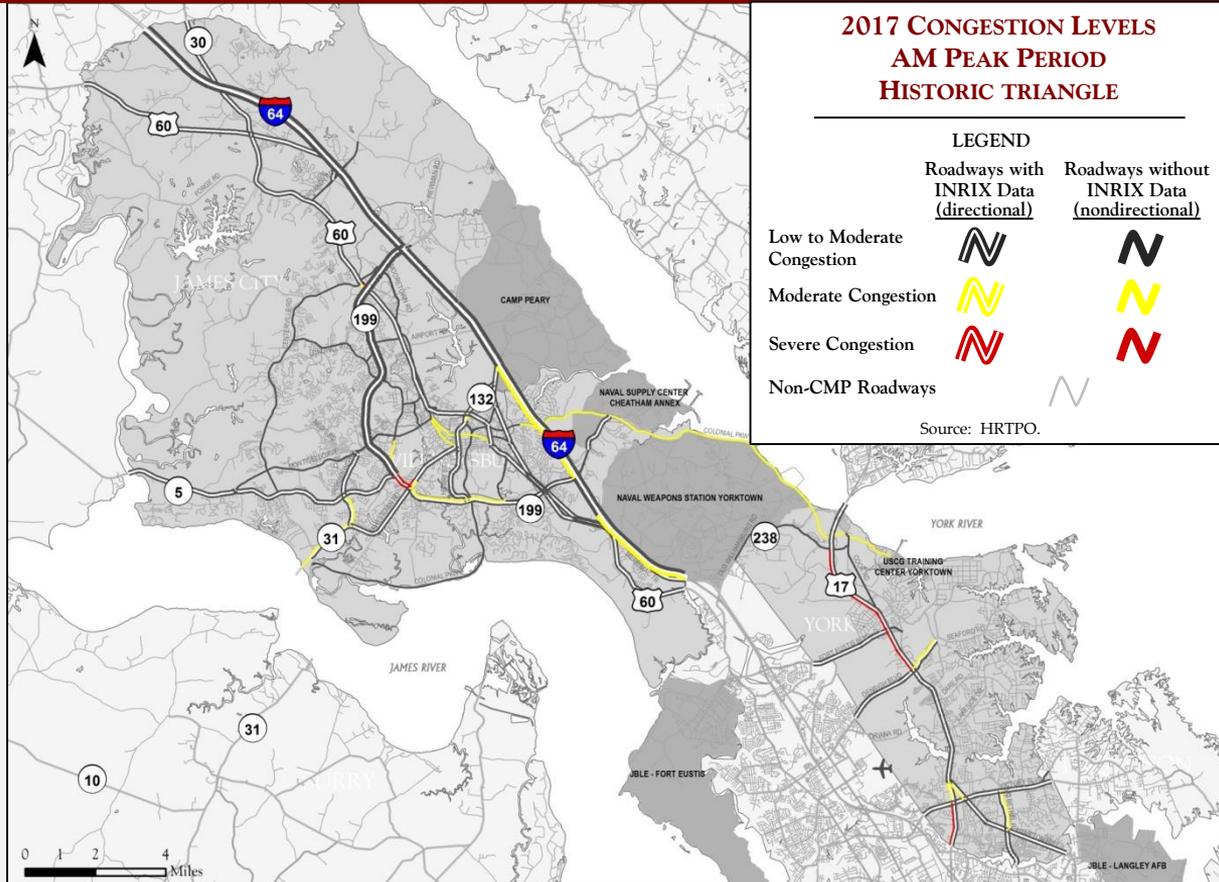
DAILY VEHICLE-MILES OF TRAVEL, 2004 TO 2016

Data Source: VDOT.

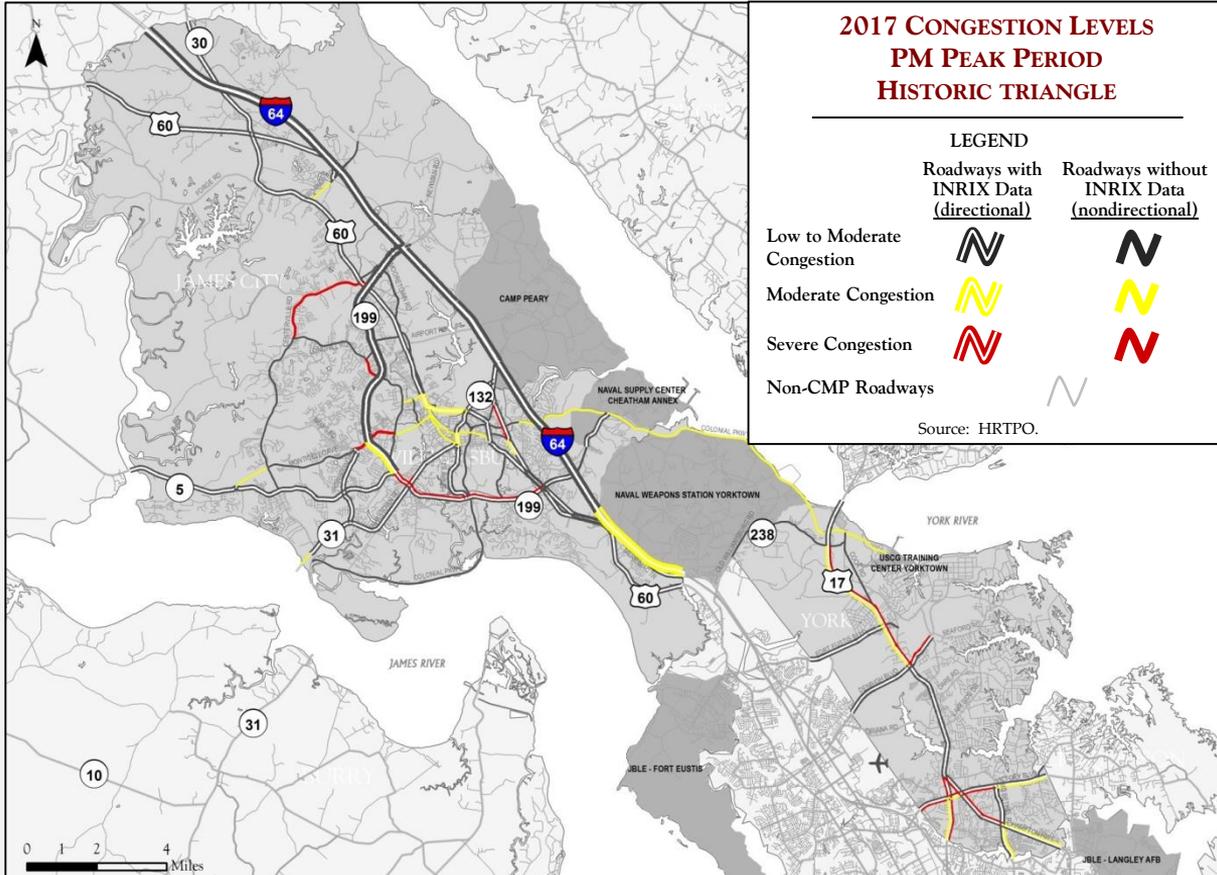
EXISTING DAILY TRAFFIC VOLUMES



EXISTING ROADWAY CONGESTION - AM

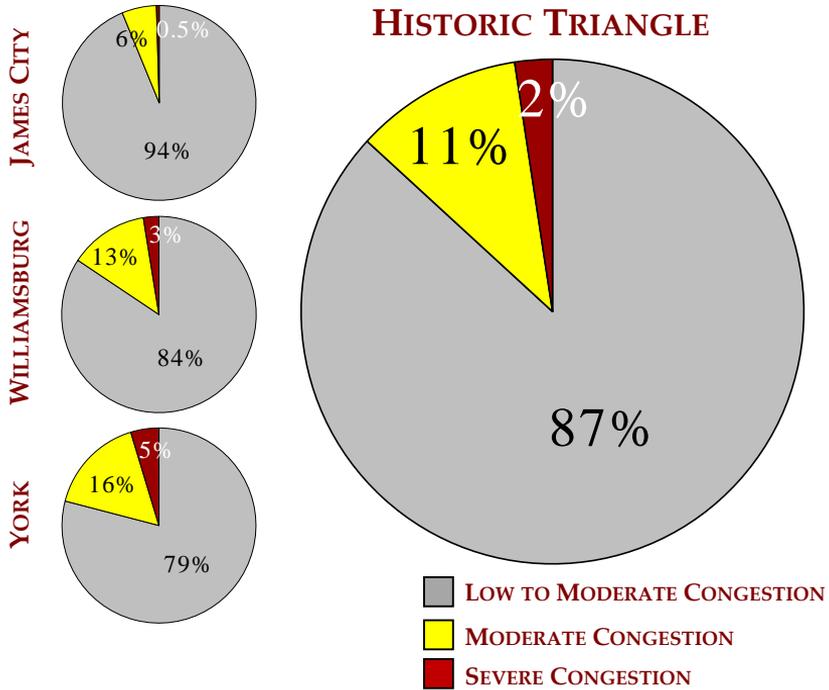


EXISTING ROADWAY CONGESTION - PM

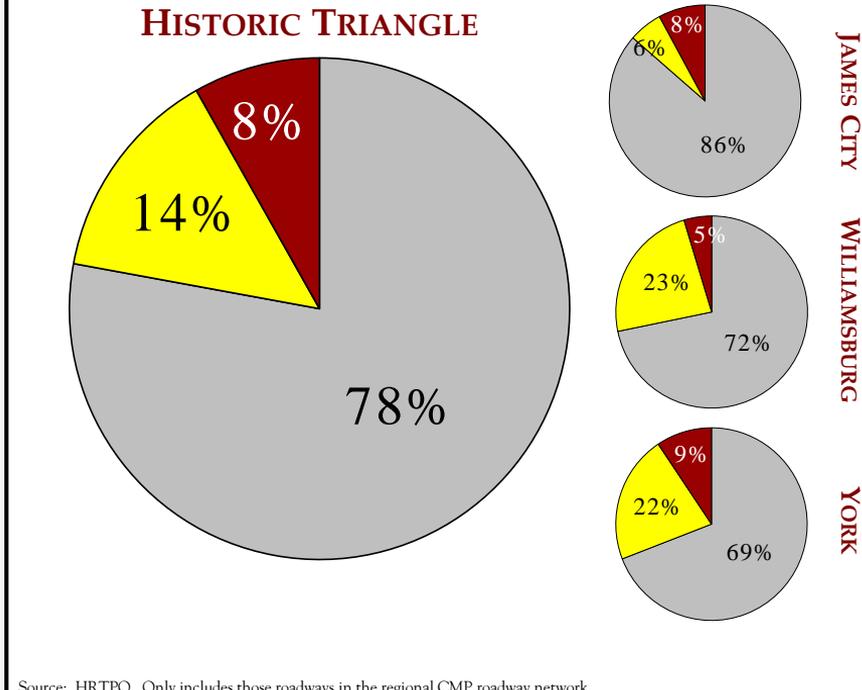


2017 PEAK PERIOD CONGESTION LEVELS (BY LANE-MILE)

AM PEAK PERIOD

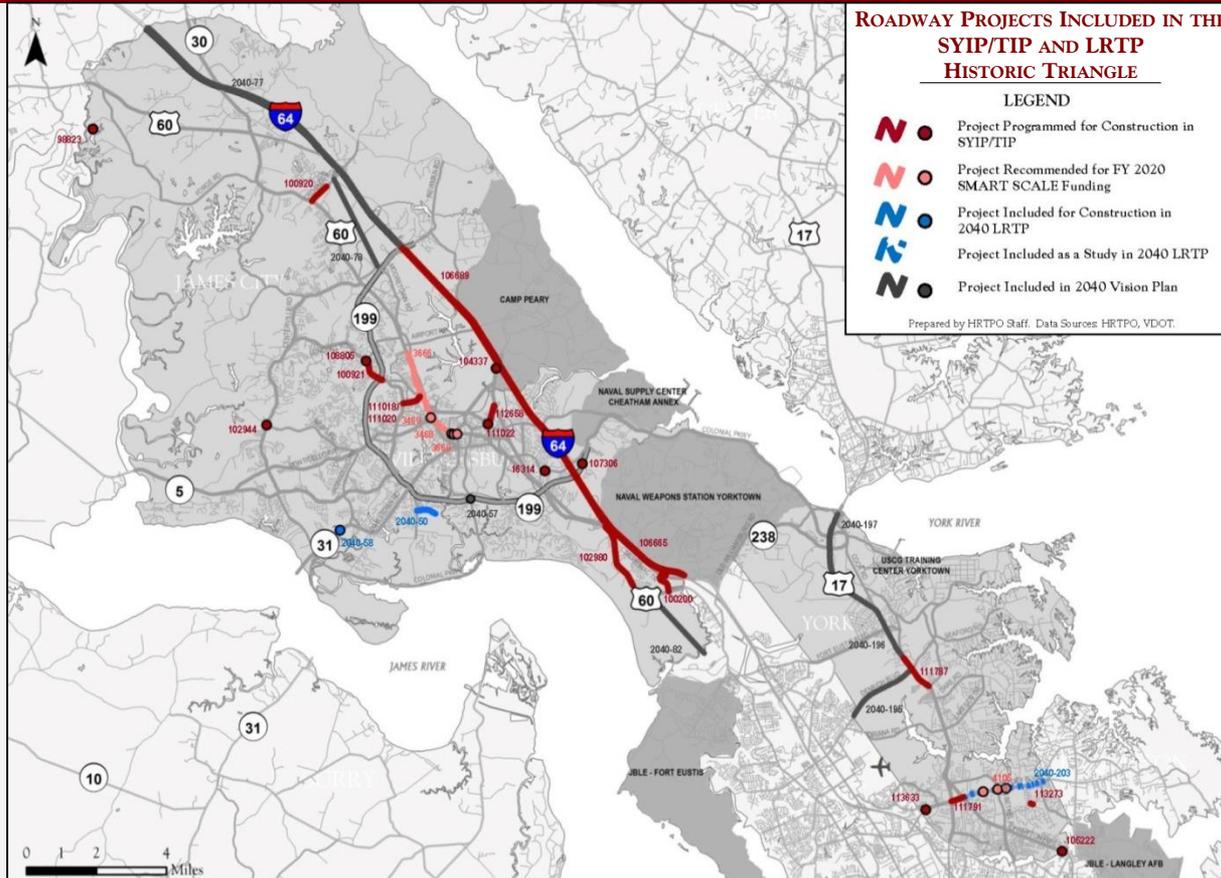


PM PEAK PERIOD



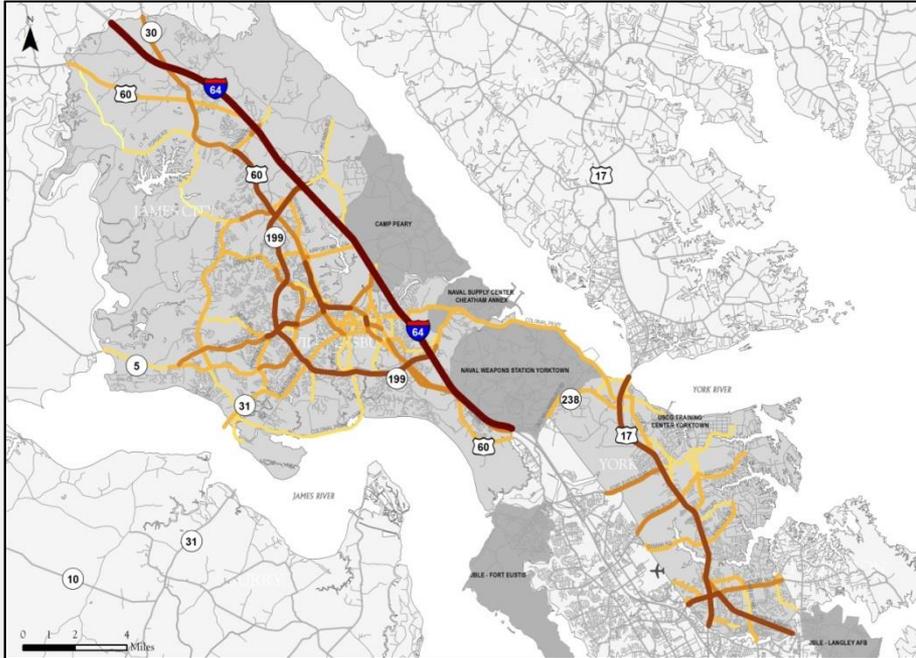
Source: HRTPO. Only includes those roadways in the regional CMP roadway network.

ROADWAY PROJECTS

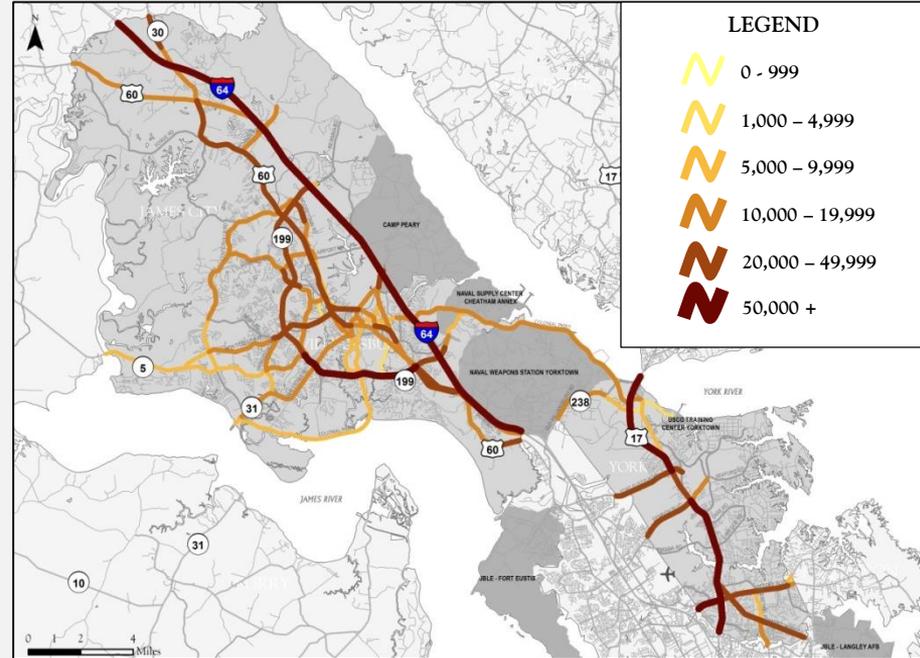


2016 & 2040 DAILY TRAFFIC VOLUMES

2016



2040

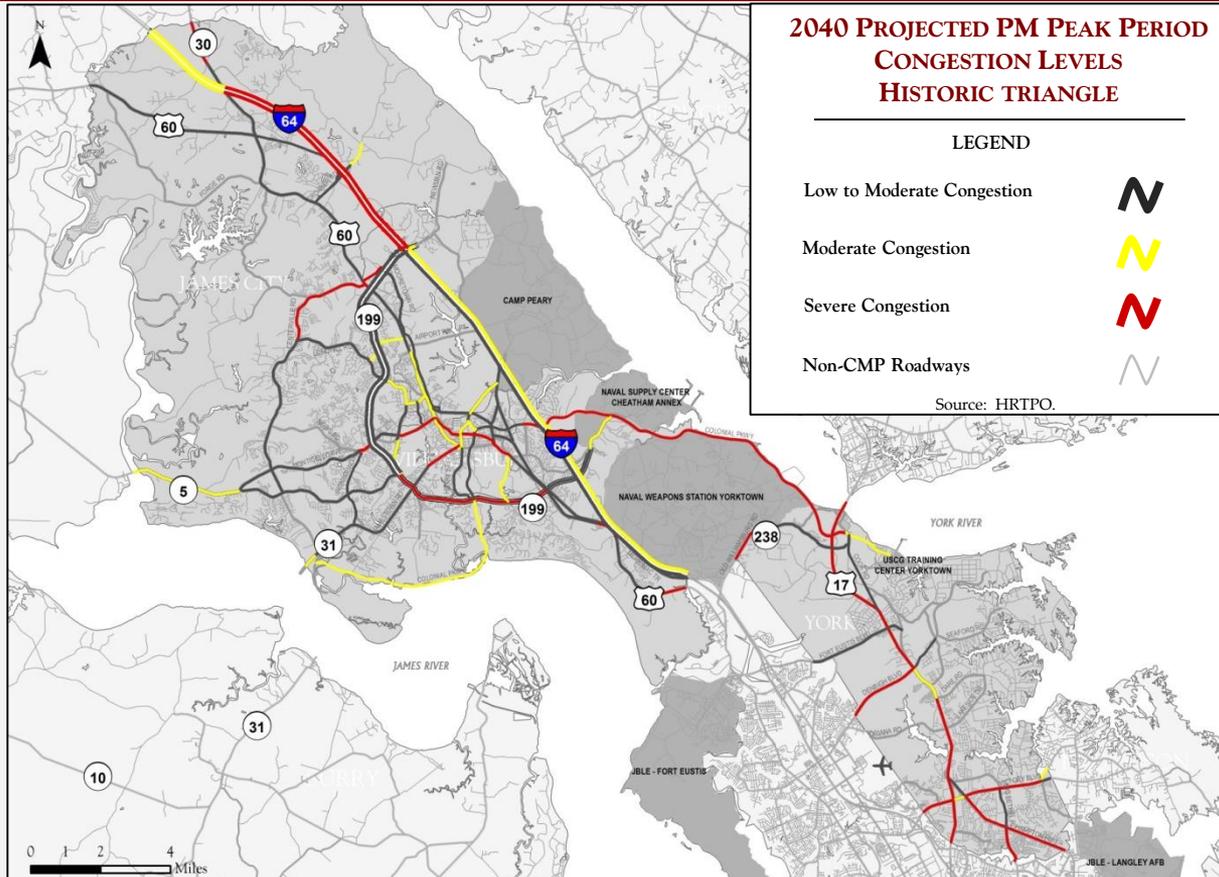


LEGEND

-  0 - 999
-  1,000 - 4,999
-  5,000 - 9,999
-  10,000 - 19,999
-  20,000 - 49,999
-  50,000 +

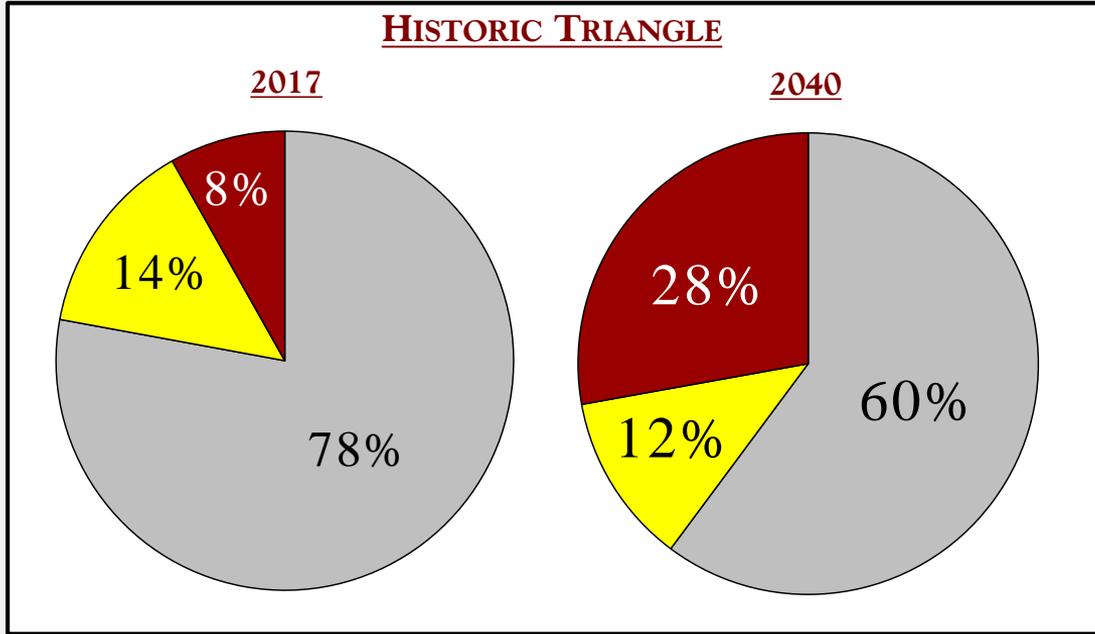
Prepared by HRTPO Staff. Data source: VDOT.

ROADWAY CONGESTION – 2040 PM



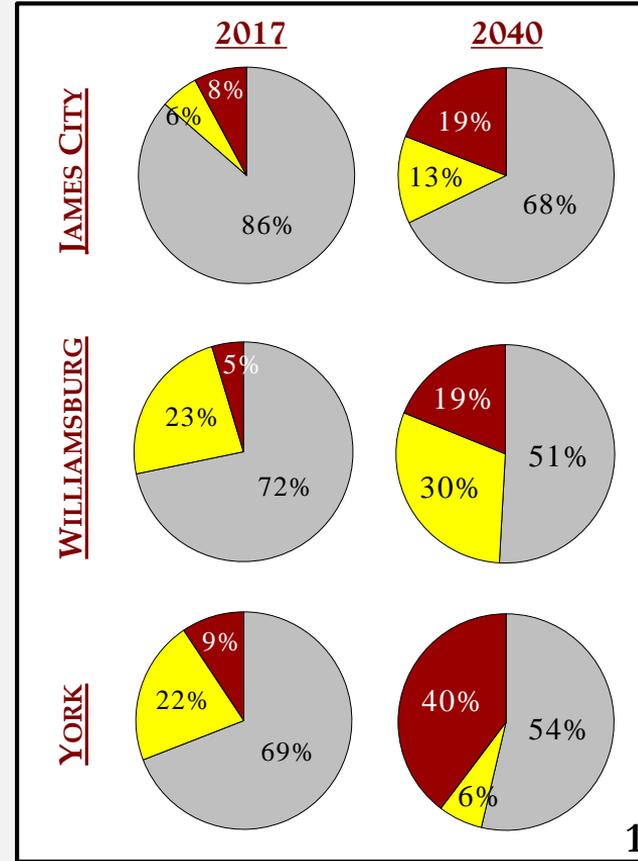
PEAK PERIOD CONGESTION LEVELS

HISTORIC TRIANGLE



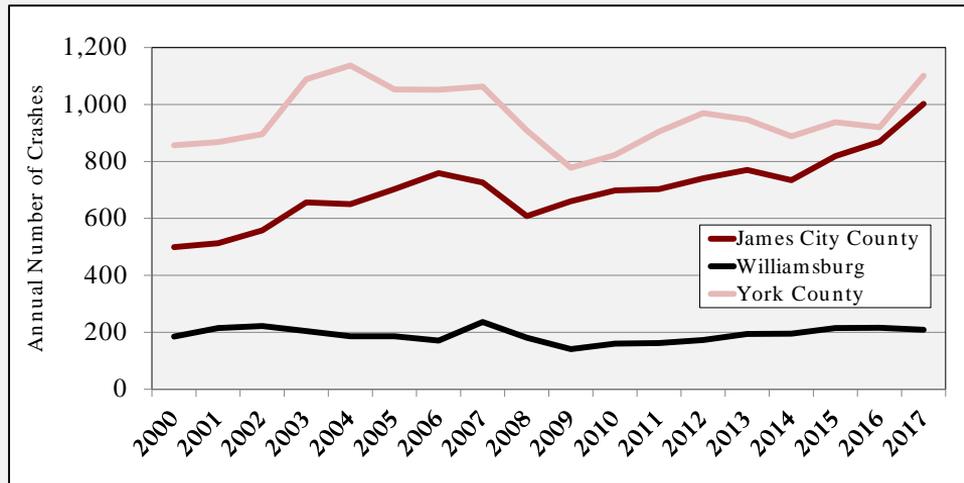
2017 AND 2040 PM PEAK PERIOD CONGESTION LEVELS BY LANE-MILE

Source: HRTPO. Only includes those roadways in the regional CMP roadway network.



ROADWAY SAFETY

- The number of crashes has been increasing in York County since the start of the economic downturn.



NUMBER OF CRASHES IN THE HISTORIC TRIANGLE, 2000-2017

Source: HRTPO analysis of VDOT data.

Year	York County		
	Fatalities	Injuries	Crashes
2000	9	549	857
2001	10	555	868
2002	9	592	896
2003	11	677	1089
2004	5	717	1137
2005	12	672	1053
2006	4	570	1052
2007	8	554	1063
2008	8	538	909
2009	2	479	778
2010	6	476	823
2011	5	539	905
2012	2	600	970
2013	4	523	947
2014	5	472	888
2015	5	515	938
2016	9	442	920
2017	5	504	1101

ROADWAY SAFETY

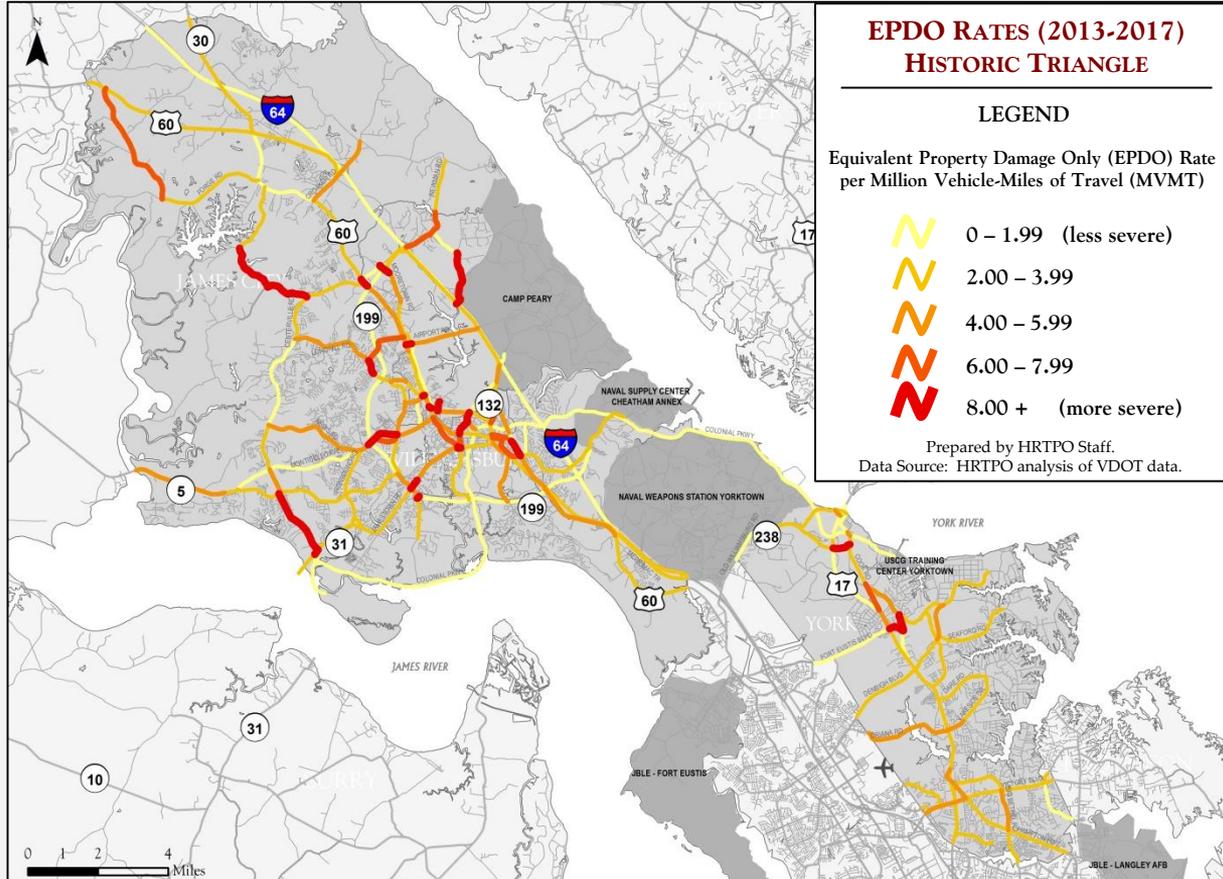
- The leading causes of fatalities in York County crashes are roadway departure, distracted driving, speeding, and unbelted.

CHARACTERISTICS OF CRASHES IN YORK COUNTY, 2013-2017

Source: HRTPO analysis of VDOT data.

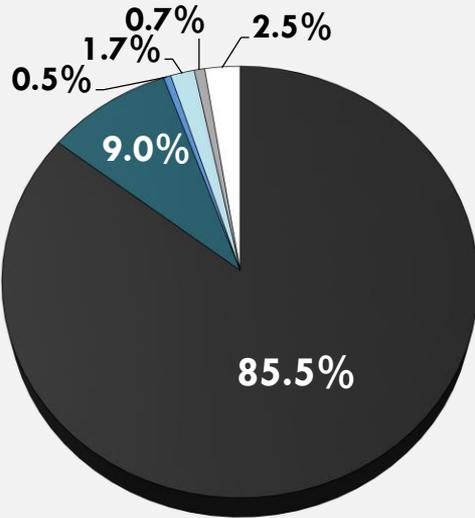
	% OF CRASHES	% OF INJURIES	% OF FATALITIES
 Alcohol	5.4%	6.5%	17.9%
 Bike/Pedestrian	0.8%	1.6%	21.4%
 Distracted Driving	22.6%	23.8%	35.7%
 Intersections	45.1%	46.2%	25.0%
 Road Departure	16.7%	15.6%	60.7%
 Speeding	20.5%	21.1%	35.7%
 Unbelted	2.2%	7.1%	28.6%
 Young Drivers	24.7%	24.7%	17.9%

ROADWAY SAFETY

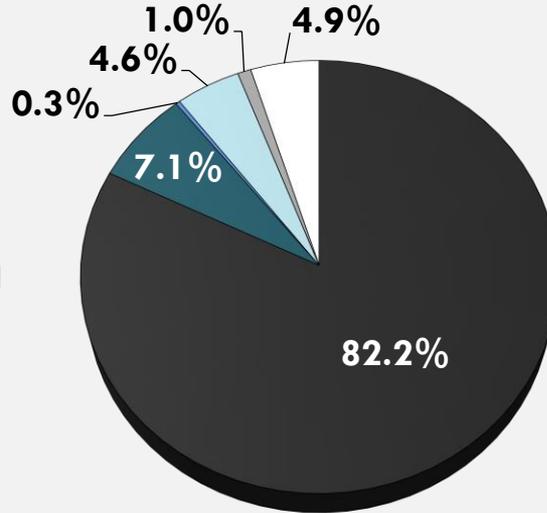


COMMUTING

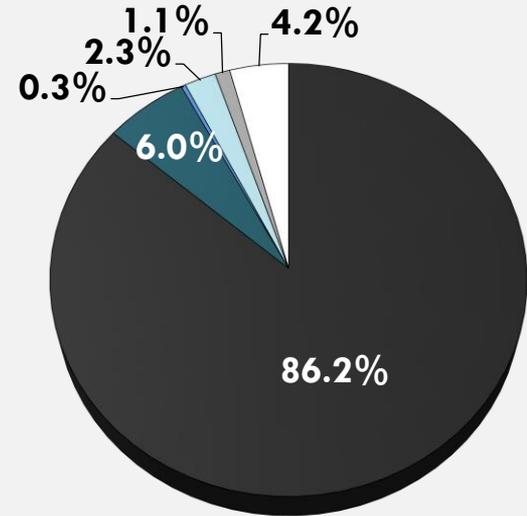
2000



2006-2010



2013-2017



YORK COUNTY COMMUTING METHODS

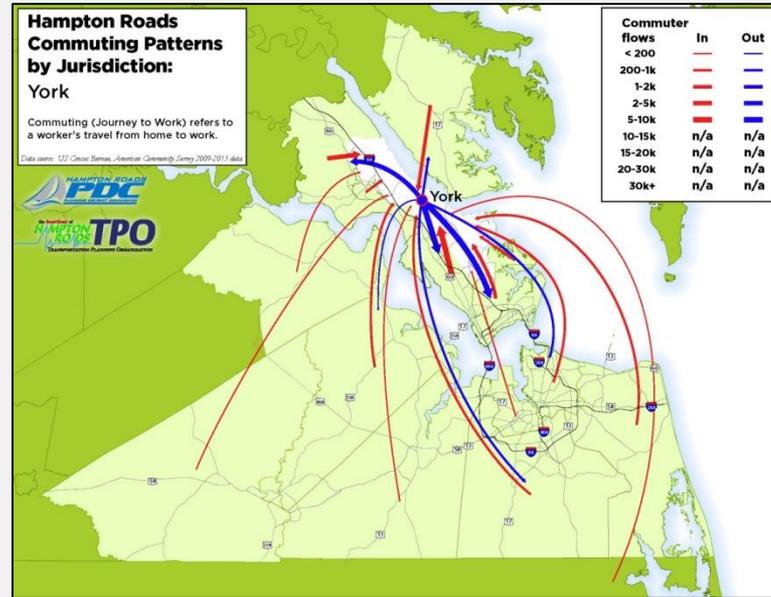
Source: HRTPO analysis of US Census Bureau data.



COMMUTING PATTERNS

York County Residents

- 32,359 residents
 - 27% work in York Co.
 - 28% - Newport News
 - 23% - Hampton
 - 7% - James City Co.
 - 5% - Williamsburg
 - 7% - Southside



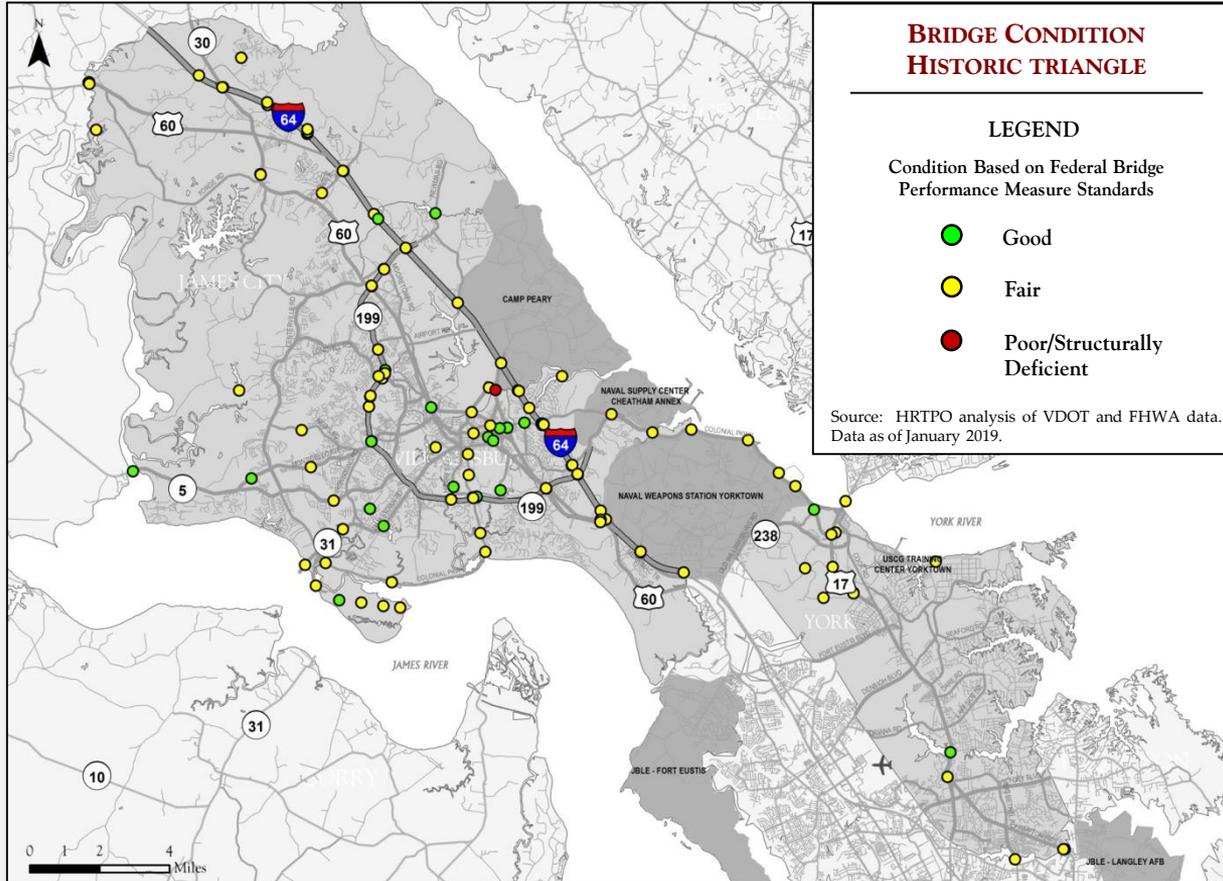
YORK COUNTY COMMUTING PATTERNS, 2009-2013

Source: HRTPO analysis of US Census Bureau data.

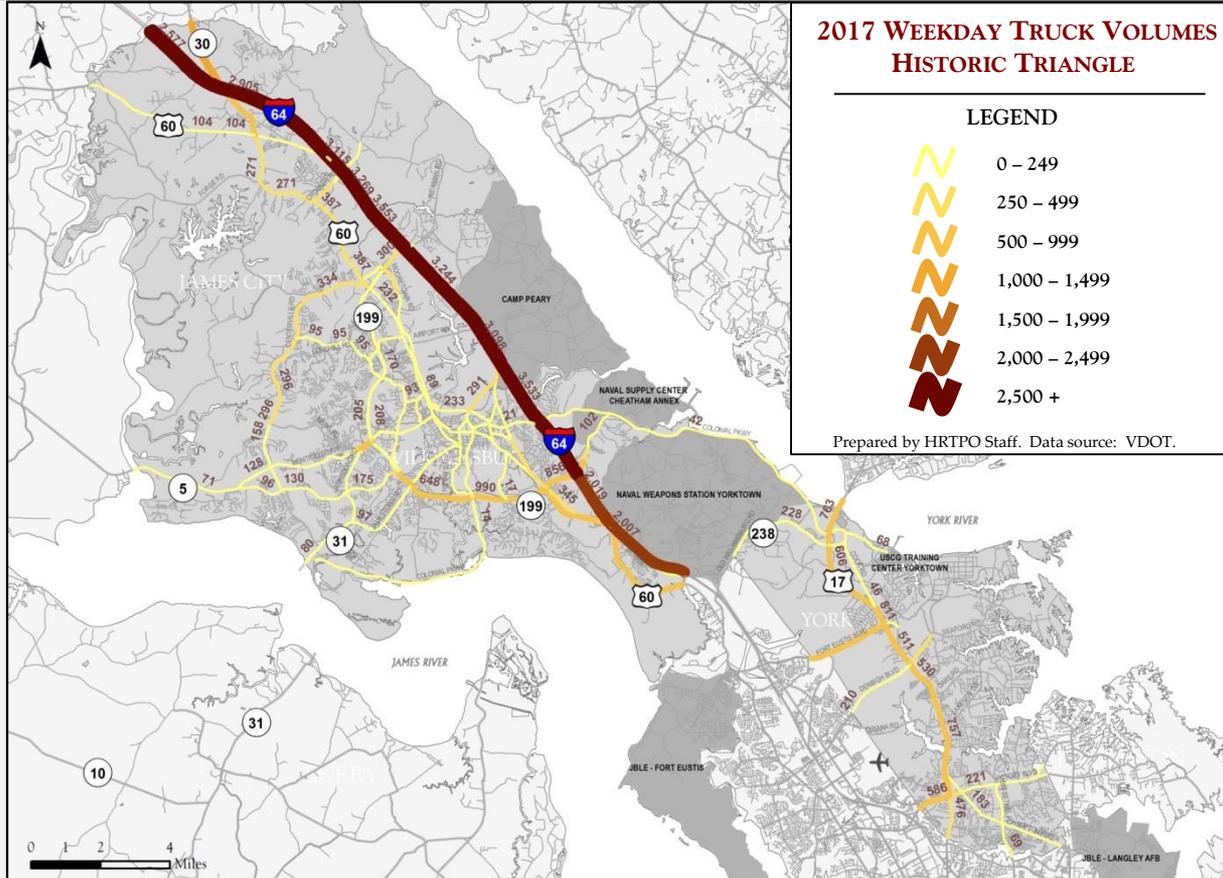
Workers in York County

- 25,039 workers
 - 35% are York residents
 - 22% - Newport News
 - 15% - James City Co.
 - 7% - Hampton
 - 2% - Williamsburg
 - 6% - Southside

BRIDGE CONDITION

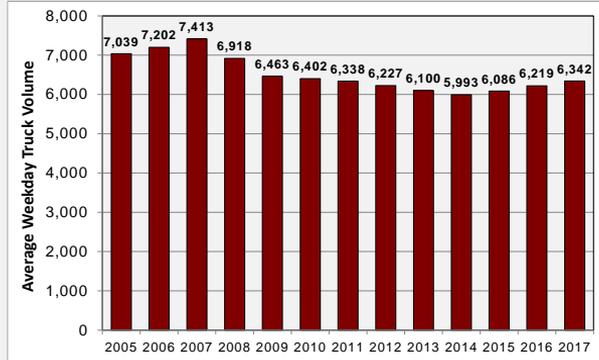


TRUCK VOLUMES

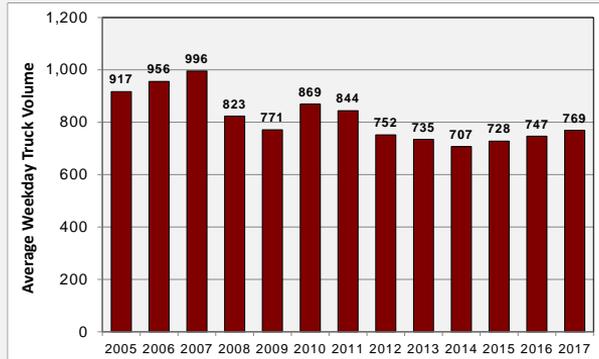


TRUCK VOLUMES - GATEWAYS

I-64 GATEWAY (JAMES CITY COUNTY)

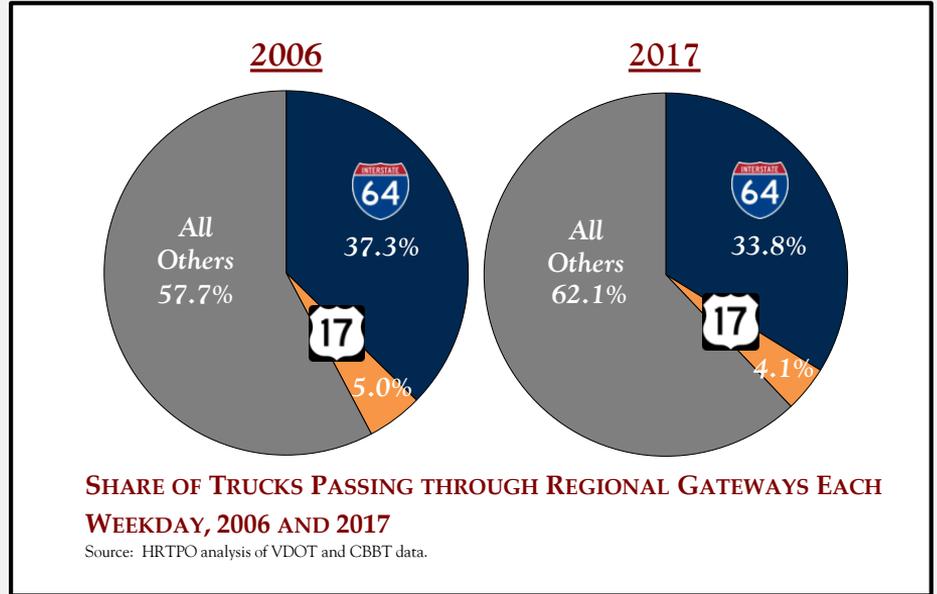


COLEMAN BRIDGE (ROUTE 17)



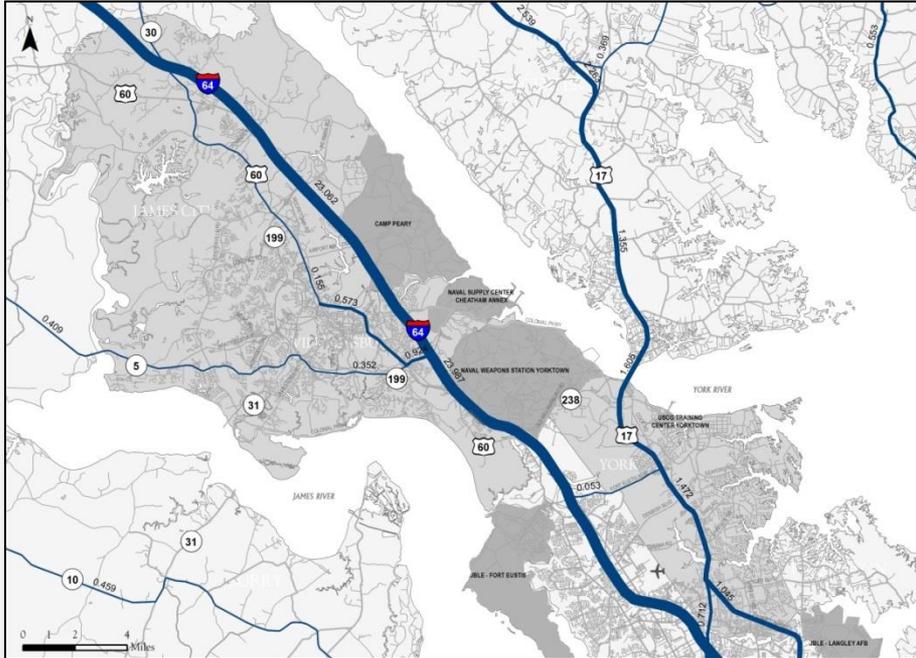
AVERAGE WEEKDAY TRUCK VOLUMES, 2005 – 2017

Source: HRTPO analysis of VDOT data.

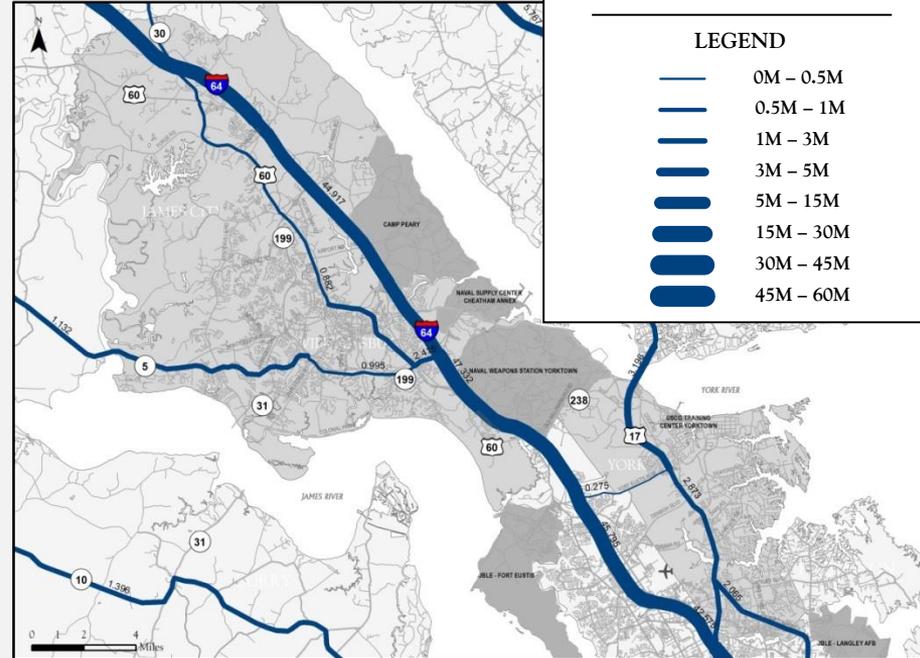


TRUCK TONNAGE

2012

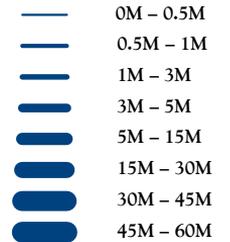


2040



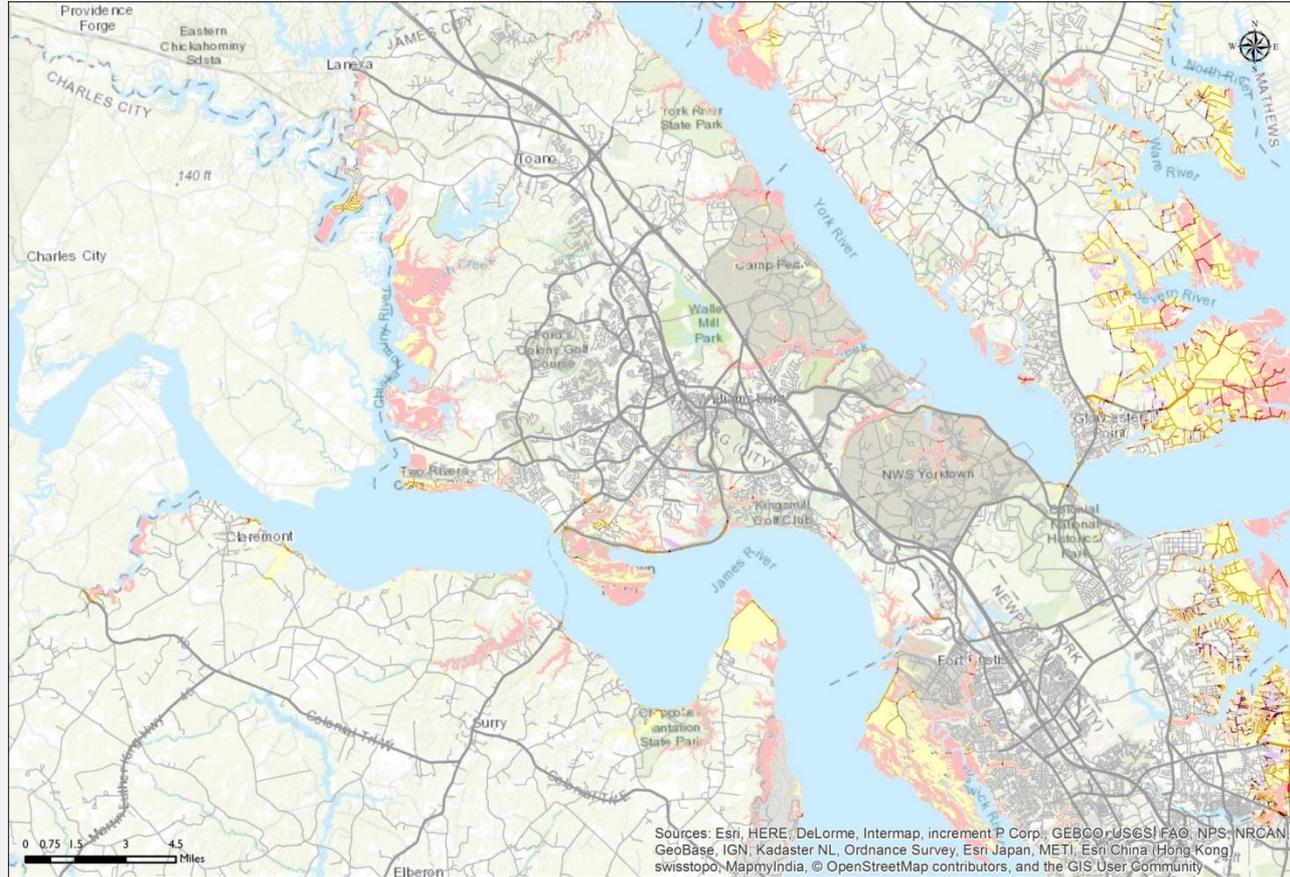
**NET ANNUAL TONNAGE BY TRUCK
HISTORIC TRIANGLE**

LEGEND



Source: HRTPO analysis of IHS Transearch Data. Includes all freight in Virginia – Inbound, Outbound, Through, and Within.

POTENTIAL SUBMERGENCE OF ROADWAYS BY 2045



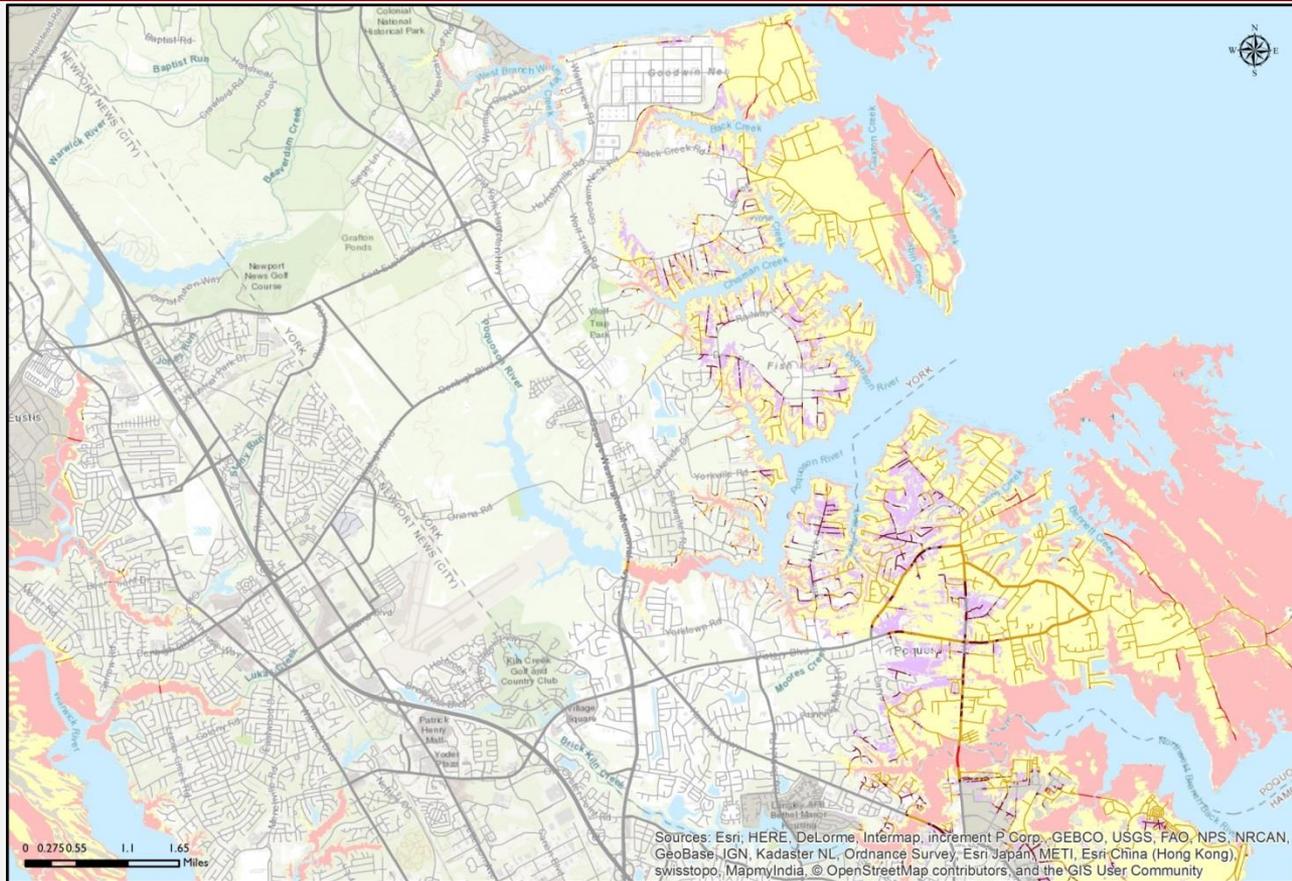
POTENTIAL SUBMERGENCE OF ROADWAYS BY 2045 HISTORIC TRIANGLE

LEGEND*

-  Roadway Submerged by 2.0 foot Relative Sea Level Rise
-  Roadway Submerged by 2.0 feet Relative Sea Level Rise + 25-year Storm Surge
-  Roadway Submerged by 2.0 feet Relative Sea Level Rise + 50-year Storm Surge
-  Roadway – Not impacted
-  2045 Analysis Network
-  Existing Local Roadway
-  Area Submerged by 2.0 feet Relative Sea Level Rise
-  Area Submerged by 2.0 feet Relative Sea Level Rise + 25-year Storm Surge
-  Area Submerged by 2.0 feet Relative Sea Level Rise + 50-year Storm Surge

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

POTENTIAL SUBMERGENCE OF ROADWAYS BY 2045



POTENTIAL SUBMERGENCE OF ROADWAYS BY 2045 SOUTHEAST YORK COUNTY

LEGEND*

-  Roadway Submerged by 2.0 foot Relative Sea Level Rise
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HISTORIC TRIANGLE TRANSPORTATION STUDY

- The draft version of the Current Conditions section of the study was included in today's agenda.
- HRTPO staff is currently finishing the Future Conditions portion of the study.

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