2020
Virginia Department of Transportation
Daily Traffic Volume Estimates
Including Vehicle Classification Estimates

where available

Special Locality Report
112

Town of Front Royal

Information in this report is included in Report

93

(Warren County)

Prepared By

Virginia Department of Transportation
Traffic Engineering Division

In Cooperation With

U.S. Department of Transportation
Federal Highway Administration

The reported 2020 AADTs represent the best estimate of 2020 average daily traffic, however, this year's AADTs do vary from normal traffic in the years prior to 2020 due to COVID-19. The reported AADTs may not represent typical traffic for a given day or period within the year as the drastic seasonal variations were normalized through the factoring process. The 2020 publications are therefore colored to draw users attention to the fact that uses of the 2020 published estimates versus alternative data sources should be determined at users' discretion based on the objectives or nature of the analyses being performed.

The estimated 2020 DVMT for the entire state maintained network total to 208,000,000, which has trended down by 11 percent compared to the 2019 level of 234,000,000. For most traffic links across the state, the estimated 2020 AADTs are also seen to have decreased from their 2019 levels.

Virginia Department of Transportation
Traffic Engineering Division
Traffic Monitoring Section

The Virginia Department of Transportation (VDOT) conducts a program where traffic count data are gathered from sensors in or along streets and highways and other sources. From these data, estimates of the average number of vehicles that traveled each segment of road are calculated. VDOT periodically publishes booklets listing these estimates.

One of these booklets, titled "Average Daily Traffic Volumes with Vehicle Classification Data, on Interstate, Arterial and Primary Routes" includes a list of each Interstate and Primary highway segment with the estimated Annual Average Daily Traffic (AADT) for that segment. AADT is the total annual traffic estimate divided by the number of days in the year. This booklet also includes information such as estimates of the percentage of the AADT made up by 6 different vehicle types, ranging from cars to double trailer trucks; estimated Annual Average Weekday Traffic (AAWDT), which is the number of vehicles estimated to have traveled the segment of highway during a 24 hour weekday averaged over the year; as well as Peak Hour and Peak Direction factors used by planners to formulate design criteria.

In addition to the Primary and Interstate publication, one hundred books are published periodically, one for each of 100 areas across the state defined by VDOT for record-keeping purposes. These books include traffic volume estimates for roads within the county, cities, and towns within the area. These books are titled "Daily Traffic Volumes Including Vehicle Classification Estimates, where available; Jurisdiction Report numbers 00 through 99".

Also available are a number of reports summarizing the average Vehicle Miles Traveled (VMT) in selected jurisdictions and other categories of highways. There are many different ways to present traffic volume summary information. Because the user determines the value of each presentation, the reports have been redesigned based on user requests and feedback. The people of the VDOT Traffic Engineering Division Traffic Monitoring Section who produce these books welcome requests for other helpful ways of presenting the summary information.

A compact disc (CD) is available that includes files in the Adobe® Portable Document Format (PDF) that can be displayed, searched, and printed using common desktop computer equipment. The CD includes the publications described above as well as a number of other reports, including specialized VMT summaries and smaller AADT reports for each city and town separately.

.

Publication Notes

Parallel Roads

For road inventory and management purposes, some roadways are counted separately by direction and have separately published traffic estimates for each direction of travel. Examples of such roadways are the interstate system and routes with separated facilities and (usually) one-way traffic facilities in urban areas. In these publications, they are referred to as parallel roads. As a convenience for the users of the publication, the listing for segments of roads with parallel segments are published with both the traffic estimates for their own direction of travel (e.g. I-95 Northbound) as well as the estimate of the total of all traffic on the same route including parallel roadways (all directions of I-95). The publication will have a "Combined Traffic Estimates for Parallel Roadways on this Route" or "Combined Traffic" identifiers for the combined direction of travel estimates.

Roadways such as I-395 with a North segment, a South segment and a separate Reversible lane segment will have the estimate for more than two parallel roadways included in the entire combined traffic estimate.

Some routes have very complicated paths through cities and towns. These parallel paths may be too complex to allow a relationship between nearby sections of the opposite direction on the same route. In this case, to indicate that the traffic estimates for such a road segment may not include all directions of traffic on that route, the line that would list the combined values will indicate "NA" for not available.

VDOT's traffic monitoring program includes more than 100,000 segments of roads and highways ranging from several mile sections of Interstate highways to very short sections of city streets. Due to problems experienced obtaining some traffic count data, and the level of quality necessary to maintain confidence in the data, no estimate is currently available for some segments of roadway. These segments are included in the publications indicating "NA" for not available. It is the intention of the VDOT Traffic Engineering Division Traffic Monitoring group to obtain the data necessary and to report traffic volume estimates on all road segments included in these publications.

Many of the road segments in this program are local secondary roads. The amount and detail of data collected on these roads are not as great as the data collected on higher volume roads. The vehicle classification, average weekday traffic volumes, and the theoretical design hour traffic volumes are not calculated for these roads. The publications indicate "NA" for the information that is not available.

This publication is based on a traffic monitoring program initiated in 1997. Because the data collection techniques and statistical evaluation processes are different than those used in previous years, comparison with previous publications may be misleading.

Glossary of Terms:

Route: The Route Number assigned to this segment of roadway with the master inventory route number if this is an overlapping route, with official street or highway name if available.

Length: Length of the traffic segment in miles.

AADT: Annual Average Daily Traffic. The estimate of typical daily traffic on a road segment for all days of the week, Sunday through Saturday, over the period of one year.

QA: Quality of AADT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- H Historical Estimate
- M Manual Uncounted Estimate
- N AADT of Similar Neighboring Traffic Link
- O Provided By External Source
- R Raw Traffic Count, Unfactored

4Tire: Percentage of the traffic volume made up of motorcycles, passenger cars, vans and pickup trucks.

Bus: Percentage of the traffic volume made up of buses.

2Axle Truck: Percentage of the traffic volume made up of 2 axle single unit trucks (not including pickups and vans).

3+Axle Truck: Percentage of the traffic volume made up of single unit trucks with three or more axles.

1Trail Truck: Percentage of the traffic volume made up of units with a single trailer.

2Trail Truck: Percentage of the traffic volume made up of units with more than one trailer.

QC: Quality of Classification Data:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- C Short Term Classified Traffic Count Data
- F Factored Short Term Traffic Count Data
- H Historical Estimate
- M Mass Collective Average
- N Classification Estimates of Similar Neighboring Traffic Link

K Factor: The estimate of the portion of the traffic volume traveling during the peak hour or design hour.

QK: Quality of the K Factor estimate:

- A Factor based on 30th Highest Hour Observed During at least 250 days of Continuous Traffic Data
- B Factor based on other Hour Observed During Less than 250 days of Continuous Traffic Data
- F Factor based on Highest Hour Collected at in a 48 Hour Weekday Period
- M Factor based on Manual Estimate of design hour
- N Design Hour Factor (K Factor) of Similar Neighboring Traffic Link
- O Provided by External Source

Dir Factor: The estimate of the portion of the traffic volume traveling in the peak direction during the peak hour..

AAWDT: Average Annual Weekday Traffic. The estimate of typical traffic over the period of one year for the days between Monday through Thursday inclusive.

QW: Quality of AAWDT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- M Manual Uncounted Estimate
- N AAWDT of Similar Neighboring Traffic Link
- O Provided by External Source

Year: Year for which the published values are appropriate. If the Quality of AADT (QA) is "R", the year is the year that the raw traffic count was collected, and if available,

Route Shield Legend

Route Systems

Interstate Route — Traffic volume data for Interstate Routes and some other routes are reported separately by direction, as well as combined.

US Route

Virginia State Route

Frontage Road (F precedes frontage route number)

Secondary Route

Special Routes

Bus - Business Route
Bypas - Bypass Route
Truck - Truck Route

ALT - Alternate Route
Wye - Wye Route connector

P - Parallel Route; Southbound or Westbound direction lanes of a numbered route where they are on a different road facility than the other direction.

The VDOT Maintainenance Jurisdiction number is displayed below the Secondary Route Number if the Maintenance Jurisdiction is different than the jurisdiction in the title of the report.

Virginia Department of Transportation
Traffic Engineering Division
2020
Annual Average Daily Traffic Volume Estimates By Section of Route
Town of Front Royal

Route	Jurisdiction		Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW
55 Strasburg Rd	Warren County	From: WCL Front Royal	0.90	8300	G	98%	0%	1%	1%	0%	0%	C	0.093	F	0.629	8800	G
		To: US 340, US 522 Shenandoah Ave															
55 522 340 Shenandoah Ave	Town of Front Royal	From: CL Front Royal	0.34	26000	G	96%	1%	1%	1%	1%	0%	F	0.091	F	0.523	27000	G
		To: 14 ST															
55 522 340 14th St		From: Shenandoah Ave		21000	F	97%	0%	2%	0%	0%	0%	C	0.083	F	0.504	23000	F
		To: North Royal Ave															
55 522 340 North Royal Ave	Town of Front Royal	From: 14TH ST		19000	F	99%	0%	1%	0%	0%	0%	C	0.085	F	0.505	21000	F
		To: US 522; US 340															
55 340 North Royal Ave	Town of Front Royal	From:	0.25	13000	F	99%	0%	0%	0%	0%	0%	C	0.088	F	0.516	14000	F
		To: 6th St															
55 340 North Royal Ave	Town of Front Royal	From:	0.57	12000	F	98%	0%	1%	0%	0%	0%	C	0.084	F	0.509	13000	F
		To: E Main St															
55 340 South Royal Ave	Town of Front Royal	From:	0.40	14000	F	98%	1%	1%	0%	0%	0%	F	0.086	F	0.564	15000	F
		To: US 340; South St															
55 South St	Town of Front Royal	From: US 340, S Royal Ave	0.54	14000	F	96%	1%	1%	1%	2%	0%	F	0.085	F	0.553	15000	F
		To: US 522, S Commerce Ave															
55 John Marshall Hwy	Town of Front Royal	From:	1.72	13000	F	98%	0%	1%	0%	0%	0%	F	0.099	F	0.615	14000	F
		To: ECL Front Royal															
340 South Royal Ave	Town of Front Royal	From: SCL Front Royal	0.31	15000	F	98%	1%	1%	0%	0%	0%	C	0.088	F	0.638	16000	F
		To: SR 55 South St															
340 55 South Royal Ave	Town of Front Royal	From:	0.40	14000	F	98%	1%	1%	0%	0%	0%	F	0.086	F	0.564	15000	F
		To: E Main St															
340 55 North Royal Ave	Town of Front Royal	From:	0.57	12000	F	98%	0%	1%	0%	0%	0%	C	0.084	F	0.509	13000	F
		To: 6th St															
340 55 North Royal Ave	Town of Front Royal	From:	0.25	13000	F	99%	0%	0%	0%	0%	0%	C	0.088	F	0.516	14000	F
		To: US 522, 8th St															
340 522 55 North Royal Ave	Town of Front Royal	From:		19000	F	99%	0%	1%	0%	0%	0%	C	0.085	F	0.505	21000	F
		To: 14th St															
340 522 55 14th St		From: North Royal Ave		21000	F	97%	0%	2%	0%	0%	0%	C	0.083	F	0.504	23000	F
		To: Shenandoah Ave															
340 522 55 Shenandoah Ave	Town of Front Royal	From: 14th St	0.34	26000	G	96%	1%	1%	1%	1%	0%	F	0.091	F	0.523	27000	G
		To: CL Front Royal															
522 Remount Rd	Town of Front Royal	From: SCL Front Royal	0.60	6800	G	97%	1%	1%	1%	1%	0%	C	0.093	F	0.515	7100	G
		To: Criser Rd															

Virginia Department of Transportation
Traffic Engineering Division
2020
Annual Average Daily Traffic Volume Estimates By Section of Route
Town of Front Royal

Route	Jurisdiction	Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW
	From: Criser Rd															
522 Remount Rd	Town of Front Royal	0.35	**11000**	**F**	98%	0%	1%	1%	1%	0%	F	0.097	F	0.615	11000	F
	To: SR 55 South St; John Marshalll Hwy															
	From:															
522 Commerce Ave	Town of Front Royal	0.47	**14000**	**F**	98%	0%	1%	1%	1%	0%	F	0.094	F	0.504	15000	F
	To: Main St															
	From:															
522 Commerce Ave	Town of Front Royal	0.74	**9200**	**F**	98%	0%	1%	1%	1%	0%	C	0.093	F	0.736	9800	F
	To: Happy Creek Rd															
	From:															
522 Commerce Ave	Town of Front Royal	0.35	**11000**	**F**	97%	1%	1%	1%	1%	0%	F	0.089	F	0.518	11000	F
	To: US 340 North Royal Ave															
	From: Commerce Ave															
522 340 55 North Royal Ave	Town of Front Royal		**19000**	**F**	99%	0%	1%	0%	0%	0%	C	0.085	F	0.505	21000	F
	To: 14th St															
	From: North Royal Ave															
522 340 55 14th St	Town of Front Royal		**21000**	**F**	97%	0%	2%	0%	0%	0%	C	0.083	F	0.504	23000	F
	To: Shenandoah Ave															
	From: 14th St															
522 340 55 Shenandoah Ave	Town of Front Royal	0.34	**26000**	**G**	96%	1%	1%	1%	1%	0%	F	0.091	F	0.523	27000	G
	To: NCL Front Royal															

Virginia Department of Transportation
Traffic Engineering Division
2020
Annual Average Daily Traffic Volume Estimates By Section of Route
Town of Front Royal

Route	Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
Town of Front Royal																
(2) Criser Rd		**2700**	**F**								0.093	F	0.590	2900	F	2020
From: Luray Ave																
To: South Royal Ave																
(2) Criser Rd		**4200**	**F**	96%	1%	1%	1%	1%	0%	C	0.104	F	0.683	4400	F	2020
From: South Royal Ave																
To: Chester Gap Rd																
(4001) Luray Ave		**1100**	**F**	98%	0%	1%	1%	1%	0%	F	0.098	F	0.6	1200	F	2020
From: WCL Front Royal																
To: Stonewall Dr																
(4001) Luray Ave		**1600**	**F**	98%	0%	1%	0%	1%	0%	C	0.095	F	0.641	1700	F	2020
From: Stonewall Dr																
To: W Main St																
(4002) Stonewall Dr		**320**	**F**	98%	0%	1%	0%	0%	0%	C	0.117	F	0.529	340	F	2020
From: Luray Ave																
To: US 340 South Royal Ave																
(4002) Stonewall Dr		**2400**	**F**	98%	0%	1%	0%	0%	0%	C	0.087	F	0.567	2600	F	2020
From: US 522 Commerce Ave																
To: Charles St																
(4004) West Main St		**1400**	**F**	97%	1%	1%	1%	1%	0%	C	0.1	F	0.523	1500	F	2020
From: Kerfoot Ave																
To: Luray Ave																
(4004) West Main St		**2100**	**F**	99%	0%	0%	0%	0%	0%	C	0.095	F	0.702	2300	F	2020
From: Luray Ave																
To: North Royal Ave																
(4004) East Main St		**3300**	**F**	96%	1%	1%	1%	1%	0%	F	0.087	F	0.532	3500	F	2020
From: North Royal Ave																
To: Blue Ridge Ave																
(4004) East Main St		**2000**	**F**	99%	0%	1%	0%	0%	0%	C	0.099	F	0.574	2100	F	2020
From: Blue Ridge Ave																
To: Commerce Ave																
(4005) Happy Creek Rd		**1600**	**F**	99%	0%	1%	0%	0%	0%	F	0.105	F	0.58	1700	F	2020
From: Commerce Ave																
To: 6Th St																
(4006) Kendrick Lane		**6900**	**F**	99%	0%	1%	0%	0%	0%	C	0.091	F	0.588	7400	F	2020
From: Shenandoah Ave																
To: 6Th St																
(4006) 6th St		**6800**	**F**	95%	1%	1%	1%	3%	0%	F	0.089	F	0.606	7200	F	2020
From: Kendrick Lane																
To: US 340 North Royal Ave																
(4006) 6th St		**5100**	**F**	95%	1%	1%	1%	3%	0%	F	0.091	F	0.516	5400	F	2020
From: US 340 North Royal Ave																
To: Commerce Ave																
(4006) 6th St		**7500**	**F**	96%	1%	1%	1%	1%	0%	F	0.092	F	0.509	8000	F	2020
From: Commerce Ave																
To: Happy Creek Rd																
(4006) Happy Creek Rd		**6900**	**F**	98%	0%	1%	0%	0%	0%	C	0.089	F	0.52	7300	F	2020
From: 6Th St																
To: ECL Front Royal																
(4010) Shenandoah Ave		**5900**	**F**	96%	1%	1%	1%	1%	0%	C	0.095	F	0.552	6300	F	2020
From: Kendrick Lane																
To: 14Th St																
11th St		**460**	**F**								0.118	F	0.519	460	F	2020
From: Virginia Ave																
To: North Royal Ave																
13th St		**320**	**F**								0.119	F	0.556	320	F	2020
From: Jefferson Avenue																
To: Monroe Avenue																
Jamestown Rd		**850**	**F**								0.098	F	0.550	850	F	2020
From: Accomac Road																
To: Charles Street																
Kendrick Lane		**2400**	**F**								0.093	F	0.516	2400	F	2020
From: Massanutten Avenue																
To: Shenandoah Avenue																

Virginia Department of Transportation
Traffic Engineering Division
2020
Annual Average Daily Traffic Volume Estimates By Section of Route
Town of Front Royal

Route	Length	AADT	QA	4Tire	Bus	Truck				QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
						2Axle	3+Axle	1Trail	2Trail							
Town of Front Royal																
		From:	Happy Creek Road													
Washington Avenue		**450**	**F**								0.12	F	0.699	450	F	2020
		To:	6th Street													