

Roanoke City Downtown Pedestrian Activity

May 4, 2020

In 2018, Virginia Tech professor Dr. Steve Hankey partnered with RVARC to install four pedestrian counters on 10th Street and on Campbell Avenue¹. One counter is on the south side of Campbell Avenue and the other on the north side between Campbell Court and Jefferson Street. These have collected data continuously since July 19, 2019. As of April 7, 2020, an average 1,674 (\pm 609 standard deviation) people walk past the two counters each day.

Events

Pedestrian traffic may reflect economic activity during special events. Nine single-day events (Table 1) and five multi-day events (Table 2) were held during from July 19 to April 7. All single-day events except the Halloween Costume Contest generated more traffic pedestrian than average for the entire time period and more than average for the month of the event (Table 1). Even though the St. Patrick's Day Parade was canceled, March 14 had almost five times as many pedestrians as the average per day for the month of March.

All multi-day events except Elmwood on Ice generated more traffic pedestrian than average for the entire time period and more than average for the duration of the event (Table 2). Two of the Dickens of a Christmas dates had the highest pedestrian traffic of any day except March 14 (the St. Patrick's Day events). Elmwood on Ice and Party in Elmwood may not influence pedestrian traffic on Campbell Avenue as strongly as other events because Elmwood Park is several blocks away from Campbell Avenue.

Table 1. Pedestrian traffic during downtown single-day events

Event	Date	Count	% Average ^a	% Average Monthly Daily ^b
Movies in the Market	8/9/2019	2366	141%	116%
Scotty McCreery	8/16/2019	2664	159%	131%
Microfestivus	8/10/2019	2679	160%	131%
Festival on India	8/17/2019	2427	145%	119%
Symphony Under the Stars	8/24/2019	2288	137%	112%
Henry Street Heritage Festival	9/21/2019	2583	154%	134%
Foreigner	9/26/2019	2265	135%	118%
Downtown Roanoke Halloween Costume Contest	10/31/2019	1490	89%	80%
St. Patrick's Day (Martins, Corned Beef, Sidewinders)	3/14/2020	6730	402%	472%

^a Count divided by the average of all days from July 19 – April 7.

¹ Although a full year of data is not yet available, day-of-year factors were calculated using six months of data. When a full year is available, day-of-year factors will be recalculated.

^b Count divided by the average of all days of the month of the event.

Table 2 Pedestrian traffic during downtown multi-day events^a

Event	Dates	Average Daily Count	% Average ^b	% average duration daily ^c	Total Count ^d
Elmwood on Ice	11/27/2019 - 2/2/2020	1553	93%	N/A	105617
City Market Saturdays	7/20/2019 - 9/28/2019	2381	142%	122%	26194
Party in Elmwood	7/18/2019 - 9/26/2019	2079	124%	107%	20794
First Friday	7/19/2019 - 10/4/2019	2495	149%	127%	14969
Dickens of a Christmas	12/6/2019 - 12/20/2019	2715	162%	154%	8144

^a Entire daily count data for events provided at the end.

^b Count divided by the average of all days from July 19 – April 7.

^c Count divided by the average of all days of the duration of the event. (Elmwood on Ice occurred every day for its duration, so this is not applicable.)

^d Sum of all days that this event was held.

Trends

Pedestrian traffic counts were available for the entire months of August 2019 through March 2020 (Figure 1). The daily average number of pedestrians declined from over 2,000 in August to 1,427 in March.

The day-of-week pattern shows highest pedestrian activity on Fridays and Saturdays and lowest activity on Sundays (Figure 2). The low Sunday activity relative to weekdays indicates high commuter activity. The high Friday/Saturday activity indicates high retail activity.

The hourly pattern indicates a dominant lunch peak of 160 pedestrians during the noon hour (Figure 3). A typical commuter traffic pattern has a morning and evening peak. The effect of retail shut-downs in response to the pandemic on pedestrian traffic reveal that downtown pedestrian activity is heavily driven by retail. Hourly pedestrian activity at other locations in the Valley with less intense retail density was not affected by shut-downs (data not shown). The hourly activity during the pandemic shut-downs is lower throughout the day. The lunch peak is most suppressed and shows that there is a morning and evening peak. Before the shut-down, pedestrian activity declined gradually through the evening with significant activity persisting at 1:00 am (40 pedestrians, almost as many as 7:00 am with 45 pedestrians). During the shut-down, pedestrian activity virtually ends by 8:00 pm (19 pedestrians).

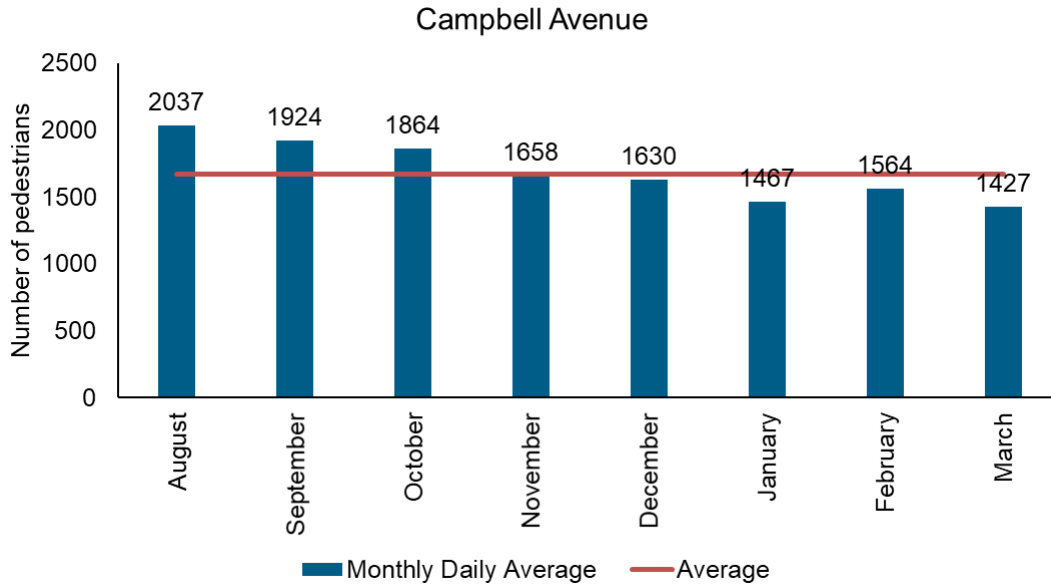


Figure 1. Average daily pedestrian traffic per month

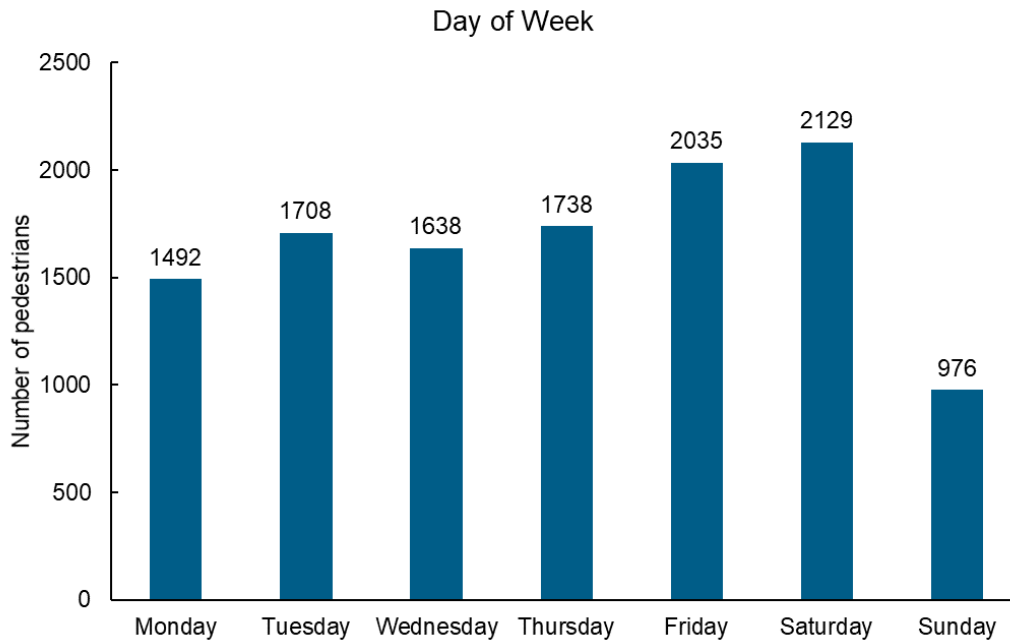


Figure 2. Average day-of-week pedestrian traffic on Campbell Avenue



Campbell Ave - Pandemic

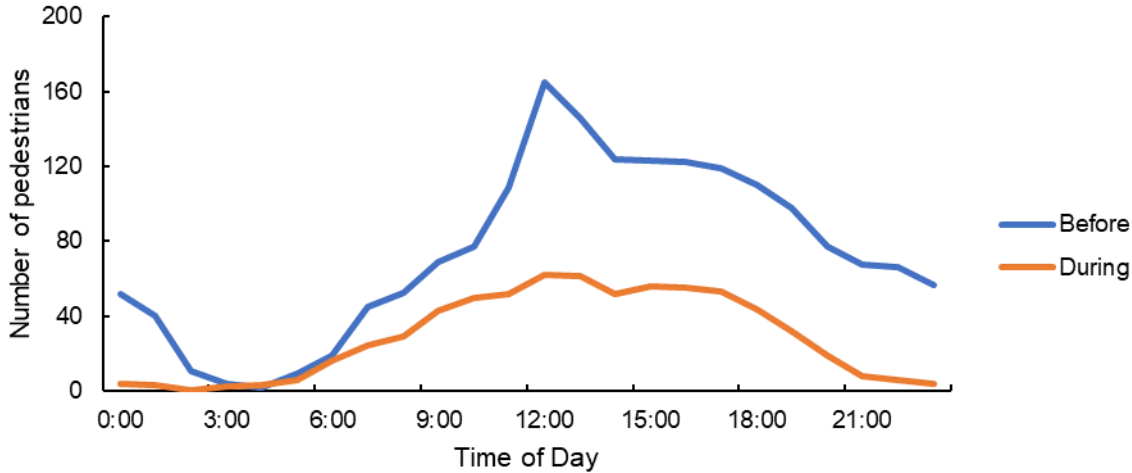


Figure 3. Average hourly pedestrian traffic before (February 15 – March 15) and during (April 1 – April 7) the pandemic shut-down.

In addition to generating data about Campbell Avenue, day-of-year factors are derived from data from these semi-permanent counters and applied to raw data collected from temporary counters elsewhere in the valley to calculate Average Annual Daily Traffic.



Elmwood on Ice	
Date	Count
11/27/2019	1871
11/28/2019	1496
11/29/2019	1847
11/30/2019	1505
12/1/2019	673
12/2/2019	1355
12/3/2019	1741
12/4/2019	1589
12/5/2019	1613
12/6/2019	3244
12/7/2019	1931
12/8/2019	793
12/9/2019	1146
12/10/2019	1499
12/11/2019	1450
12/12/2019	1741
12/13/2019	1712
12/14/2019	2229
12/15/2019	1152
12/16/2019	1537
12/17/2019	1639
12/18/2019	1633
12/19/2019	1602
12/20/2019	3188
12/21/2019	1981
12/22/2019	980
12/23/2019	1710
12/24/2019	1334
12/25/2019	363
12/26/2019	1690
12/27/2019	2055
12/28/2019	2180
12/29/2019	829
12/30/2019	1642
12/31/2019	2313
1/1/2020	1279
1/2/2020	1570
1/3/2020	1710
1/4/2020	1481
1/5/2020	664
1/6/2020	1537
1/7/2020	1378
1/8/2020	1502

City Market Saturdays	
Date	Count
7/20/2019	1786
7/27/2019	1959
8/3/2019	2310
8/10/2019	2679
8/17/2019	2427
8/24/2019	2288
8/31/2019	2588
9/7/2019	2412
9/14/2019	2281
9/21/2019	2583
9/28/2019	2881

Party in Elmwood	
Date	Count
7/25/2019	2028
8/1/2019	2357
8/8/2019	2045
8/15/2019	1922
8/22/2019	2174
8/29/2019	2181
9/5/2019	1906
9/12/2019	1929
9/19/2019	1987
9/26/2019	2265

First Friday	
Date	Count
7/19/2019	2012
8/2/2019	2752
8/16/2019	2664
9/6/2019	2376
9/20/2019	2459
10/4/2019	2706

Dickens of a Christmas	
Date	Count
12/6/2019	3244
12/13/2019	1712
12/20/2019	3188



Roanoke Valley Transportation
PLANNING ORGANIZATION
Staffed by the
REGIONAL commission

313 Luck Avenue, SW
Roanoke, Virginia 24016
P: 540.343.4417 / F: 540.343.4416
rvtpo.org

1/9/2020	1670
1/10/2020	1747
1/11/2020	1578
1/12/2020	1093
1/13/2020	1472
1/14/2020	1762
1/15/2020	1944
1/16/2020	1597
1/17/2020	1754
1/18/2020	1499
1/19/2020	732
1/20/2020	1156
1/21/2020	1435
1/22/2020	1592
1/23/2020	1612
1/24/2020	1342
1/25/2020	1898
1/26/2020	755
1/27/2020	1402
1/28/2020	1493
1/29/2020	1491
1/30/2020	1526
1/31/2020	1792
2/1/2020	1879
2/2/2020	1012