

2020 Camden CBD Cordon Data

Vehicle, Transit, Bicycle, and Pedestrian Counts



NOVEMBER 2021



The Delaware Valley Regional Planning Commission

is the federally designated Metropolitan Planning Organization for the Greater Philadelphia region, established by an interstate Compact between the Commonwealth of Pennsylvania and the State of New Jersey. Members include Bucks, Chester, Delaware, Montgomery and Philadelphia counties, plus the City of Chester, in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties, plus the cities of Camden and Trenton, in New Jersey.

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The Delaware Valley Regional Planning Commission (DVRPC) collects travel data at cordons and screenlines located throughout the Philadelphia urban area on a regular basis. A cordon is an imaginary line drawn around a geographic area that is used for transportation planning purposes. All of the trips crossing the cordon line, in both directions over the course of a weekday are counted. Counting trips at the exact same location, at different points in time enables planners to see how travel behavior is changing over time. For example, the data shows where traffic volumes and transit ridership are increasing or decreasing, and the magnitude of the change.

This report summarizes vehicle, transit passenger, bicycle, and pedestrian trips crossing the cordon around the Camden Central Business District (CBD). This is the first time that DVRPC has collected data for the Camden CBD. The Camden CBD is essentially a peninsula, similar to San Francisco, surrounded on three sides by water. The boundaries of the Camden CBD cordon are the Delaware River on the west and north, the Cooper River on the east, and Royden Street on the south. The dashed red line in Figure 1 shows the cordon. The red arrows show the streets, bridges, and rail lines that cross the cordon, and the approximate locations where counts were taken.

Table 1 shows the daily vehicle trips crossing the cordon. All but one of the vehicle counts were taken during 2021. The exception being traffic on the Ben Franklin Bridge (I-676) as it crosses the Delaware River. Data for this location is from 2020 and was provided by the Delaware River Port Authority (DRPA)¹. All of the vehicle trip data was collected during the COVID pandemic (March 2020 to present), and the counts reflect this. For example, annual traffic on the Ben Franklin Bridge has declined by 22 percent compared to pre-pandemic levels. But the bridge (I-676) is still one of the highest volume facilities crossing the Camden CBD cordon, along with I-676 where it crosses Haddon Avenue and Admiral Wilson Boulevard (US 30) where it crosses the Cooper River.

Table 2 shows the daily ridership on the public transit (rail and bus) lines crossing the cordon. Unlike the vehicle, bicycle, and pedestrian counts, the transit ridership data is from the Fall of 2019, and reflects pre-COVID conditions. PATCO trains cross the Camden CBD cordon in two locations. Daily ridership crossing the Delaware River on the Ben Franklin Bridge, between Camden and Philadelphia, was 24,940 in 2019. Daily ridership crossing the southern edge of the Camden CBD near Royden Street (between the Ferry Ave and Broadway stations) was 24,346.

New Jersey Transit's Riverline Light Rail (LRT) crosses the Camden CBD at the Cooper River. There are 2,318 passengers per day traveling from the stations east of the Cooper River to Camden (Walter Rand, Cooper Street, Aquarium, or the E Center), and there are 2,380 passengers per day traveling in the reverse direction, from Camden to 36th Street, Pennsauken, Route 73, and the other stations located east of the Cooper River, between Camden and the Trenton Transit Center. Therefore, the two-way daily Riverline ridership crossing the cordon is 4,698 passengers.

Passenger ridership data was also collected for New Jersey Transit's bus routes crossing the Ben Franklin Bridge between Camden and Philadelphia. The total number of bus passengers crossing the cordon at this location every day is 2,808. The highest ridership routes are Route 400 with 480 daily passengers and Route 551 with 446 passengers.

Although current ridership data for the bus routes that cross the Camden cordon along its eastern and southern edges was not available, we do have data on the average weekday bus boardings and alightings by route at

¹ Delaware River Port Authority (DRPA). *2020 Comprehensive Annual Financial Report*. Pages 119 and 123. <http://www.drpa.org/pdfs/ar2020.pdf>

the Walter Rand Transportation Center in the Fall of 2019, shown in Table 3. New Jersey Transit (NJT) bus routes 317, 404, 405, 406, 407, 409, 413, 419, and 452 travel east from Camden across the Cooper River, and based on the daily ons and offs for these routes at Walter Rand, it is estimated that approximately 3,000 bus passengers cross the eastern boundary of the Camden CBD every day. Similarly, NJT bus routes 313, 315, 400, 401, 402, 403, 408, 410, 412, 450, 451, 453, 457, and 551 cross the southern edge of the Camden CBD carrying an estimated 4,000 passengers per day.

Table 4 shows the number of bike riders crossing the Camden CBD cordon on an average weekday. Most of the streets crossing the cordon have fewer than 80 bicyclists per day. However, four streets have much higher numbers of bike riders, which pulls the average number of bicyclists per street up to 95. The four streets and bridges with high counts are Broadway (664), Federal Street (229), the Ben Franklin Bridge (199), and South 7th Street (162). The total number of bicyclists crossing the cordon every day is 1,612.

Table 5 shows the pedestrians crossing the cordon. The average number of pedestrians on each street is 398 per day. However, four roads have much higher numbers. Haddon Avenue has an average of 1,939 pedestrians per day. South 7th Street has a daily average of 461 pedestrians on the northbound and southbound sidewalks between Clinton and Royden streets, and an additional 787 pedestrians per day walking on the tree lined median shown in Figure 2, for a total of 1,248 pedestrians. Broadway has approximately 1,000 pedestrians per day, and approximately 600 pedestrians cross the Ben Franklin Bridge each day. The total number of pedestrians crossing the Camden CBD cordon every day is 7,164.

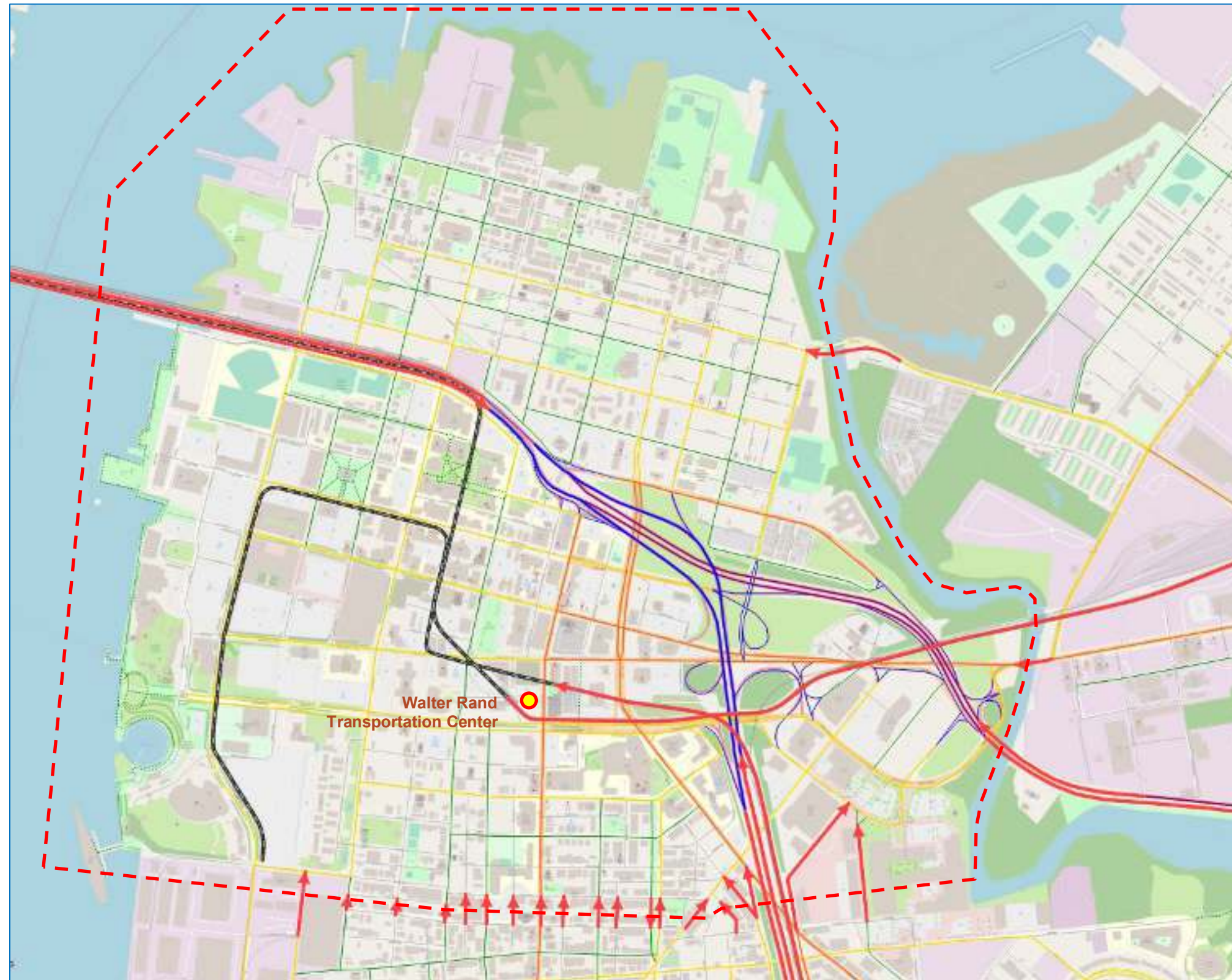
Tables 6, 7, 8 and 9 show the percentage of traffic by vehicle type for the four bridges (Ben Franklin, State Street, Federal Street, and Admiral Wilson Boulevard) crossing the Camden cordon. Vehicle types are defined by the Federal Highway Administration's classification scheme shown in Figure 3. Autos and light trucks (FHWA Classes 2 and 3) are the overwhelming majority of vehicles on the bridges, ranging from a low of 89.0 percent on the State Street Bridge to a high of 98.6 percent on the Admiral Wilson Bridge.

Figure 4 shows the total vehicle traffic on all of the roads and bridges (except the Ben Franklin Bridge²) crossing the cordon by hour of day. The graph shows the typical morning and afternoon peaks at 8:00 AM and 4:00 PM, and a mid-day "trough" between the AM and PM peaks. Also typical is for the AM peak to be more compressed or compact, than the PM peak, which tends to be more drawn out. But unlike the usual graph, the Camden data shows an AM peak which is considerably lower than the PM peak. The graph may be distorted due to the absence of data for the Ben Franklin Bridge, or due to changes in travel behavior as a result of the COVID pandemic.

Finally, Table 10 and Figure 5 show the mode split for the trips crossing the Camden CBD cordon. The total number of person trips crossing the Camden CBD cordon each day is 321,980. The majority of these trips (77.5 percent) are made by vehicles such as autos, SUVs, pickups, and heavy trucks. Close to twenty percent of the trips are made by public transit such as PATCO, the Riverline LRT, and New Jersey Transit bus. Pedestrians account for 2.2 percent of the trips, and bicyclists account for 0.5 percent.

² Hourly data was not available for the Ben Franklin Bridge

Figure 1: Camden CBD Cordon



Source: Delaware Valley Regional Planning Commission (DVRPC), 2021

Figure 2: South 7th Street Median



Source: Delaware Valley Regional Planning Commission (DVRPC), 2021

Table 1: Daily Vehicle Trips Crossing the Camden Cordon

Count Location #	Street	Average Daily Traffic Volume	Date Collected
1	I-676 / Ben Franklin Bridge	81,450	2020
2	State Street	8,904	Jan 2021
3	Federal Street	12,503	Jan 2021
4	Adm Wilson Blvd (US 30)	53,232	Feb 2021
6	Mt Ephraim Ave	1,382	Jan 2021
7	Haddon Ave	4,488	Feb 2021
8	I-676	55,374	Feb 2021
9	South 9 th Street	2,000	Jan 2021
10	Trenton Ave	441	Jan 2021
11	South 8 th Street	298	Jan 2021
12	Newton Ave	3,935	Jan 2021
13	South 7 th Street	1,436	Feb 2021
15	South 6 th Street	921	Jan 2021
17	Broadway	3,961	Jan 2021
18	Williams Street	182	Jan 2021
19	South 5 th Street	491	Jan 2021
20	Henry Street	143	Jan 2021
22	South 4 th Street	797	Jan 2021
23	South 3 rd Street	1,531	Jan 2021
24	South 2 nd Street	1,966	Jan 2021
TOTAL		235,435	

Source: DVRPC 2021, Delaware River Port Authority (DRPA) 2020

Table 2: Daily Public Transit Trips Crossing the Camden Cordon

Bus or Rail	Transit Route	Count Location	Passenger Count	Date Collected
Rail Routes	PATCO	Between Ferry Ave and Broadway	24,346	Nov 2019
	PATCO	Ben Franklin Bridge	24,940	Nov 2019
	NJ Transit Riverline	Cooper River	4,698	Fall 2019
	Rail Subtotal		53,984	
Bus Routes	NJ Transit 313	Ben Franklin Bridge	15	Fall 2019
	NJ Transit 315	Ben Franklin Bridge	13	Fall 2019
	NJ Transit 317	Ben Franklin Bridge	86	Fall 2019
	NJ Transit 400	Ben Franklin Bridge	480	Fall 2019
	NJ Transit 401	Ben Franklin Bridge	66	Fall 2019
	NJ Transit 402	Ben Franklin Bridge	153	Fall 2019
	NJ Transit 404	Ben Franklin Bridge	232	Fall 2019
	NJ Transit 406	Ben Franklin Bridge	288	Fall 2019
	NJ Transit 408	Ben Franklin Bridge	160	Fall 2019
	NJ Transit 409	Ben Franklin Bridge	231	Fall 2019
	NJ Transit 410	Ben Franklin Bridge	201	Fall 2019
	NJ Transit 412	Ben Franklin Bridge	169	Fall 2019
	NJ Transit 414	Ben Franklin Bridge	60	Fall 2019
	NJ Transit 417	Ben Franklin Bridge	71	Fall 2019
	NJ Transit 551	Ben Franklin Bridge	446	Fall 2019
	NJ Transit 555	Ben Franklin Bridge	137	Fall 2019
	Bus Subtotal		2,808	
TOTAL			56,792	

Source: New Jersey Transit 2019, PATCO 2019

Table 3: Daily Bus Ridership at Walter Rand Transportation Center

Bus Route	Average Weekday Boarding	Average Weekday Alighting	Date Collected
NJT 313	37	23	Fall 2019
NJT 315	11	14	Fall 2019
NJT 317	107	91	Fall 2019
NJT 400	811	639	Fall 2019
NJT 401	140	117	Fall 2019
NJT 402	94	74	Fall 2019
NJT 403	306	313	Fall 2019
NJT 404	317	228	Fall 2019
NJT 405	168	137	Fall 2019
NJT 406	374	280	Fall 2019
NJT 407	214	168	Fall 2019
NJT 408	240	230	Fall 2019
NJT 409	290	207	Fall 2019
NJT 410	149	109	Fall 2019
NJT 412	189	136	Fall 2019
NJT 413	174	210	Fall 2019
NJT 418	4	2	Fall 2019
NJT 419	79	71	Fall 2019
NJT 450	102	278	Fall 2019
NJT 451	26	60	Fall 2019
NJT 452	332	200	Fall 2019
NJT 453	81	76	Fall 2019
NJT 457	44	79	Fall 2019
NJT 551	395	306	Fall 2019
TOTAL	4,684	4,048	

Source: New Jersey Transit, 2019

Table 4: Daily Bicycle Trips Crossing the Camden Cordon

Count	Location #	Street	Bicyclists	Date Collected
1		Ben Franklin Bridge	199	June 2021
2		State Street	77	May 2021
3		Federal Street	229	May 2021
4		Adm Wilson Blvd (US 30)	12	May 2021
6		Mt. Ephraim Ave	10	May 2021
7		Haddon Ave	13	May 2021
9		South 9 th Street	15	May 2021
10		Trenton Ave	15	May 2021
12		Newton Ave	13	May 2021
13		South 7 th Street	162	May 2021
17		Broadway	664	May 2021
18		Williams Street	20	May 2021
19		South 5 th Street	15	June 2021
21		West Street	21	May 2021
22		South 4 th Street	28	May 2021
23		South 3 rd Street	60	May 2021
24		South 2 nd Street	59	October 2021
TOTAL			1,612	

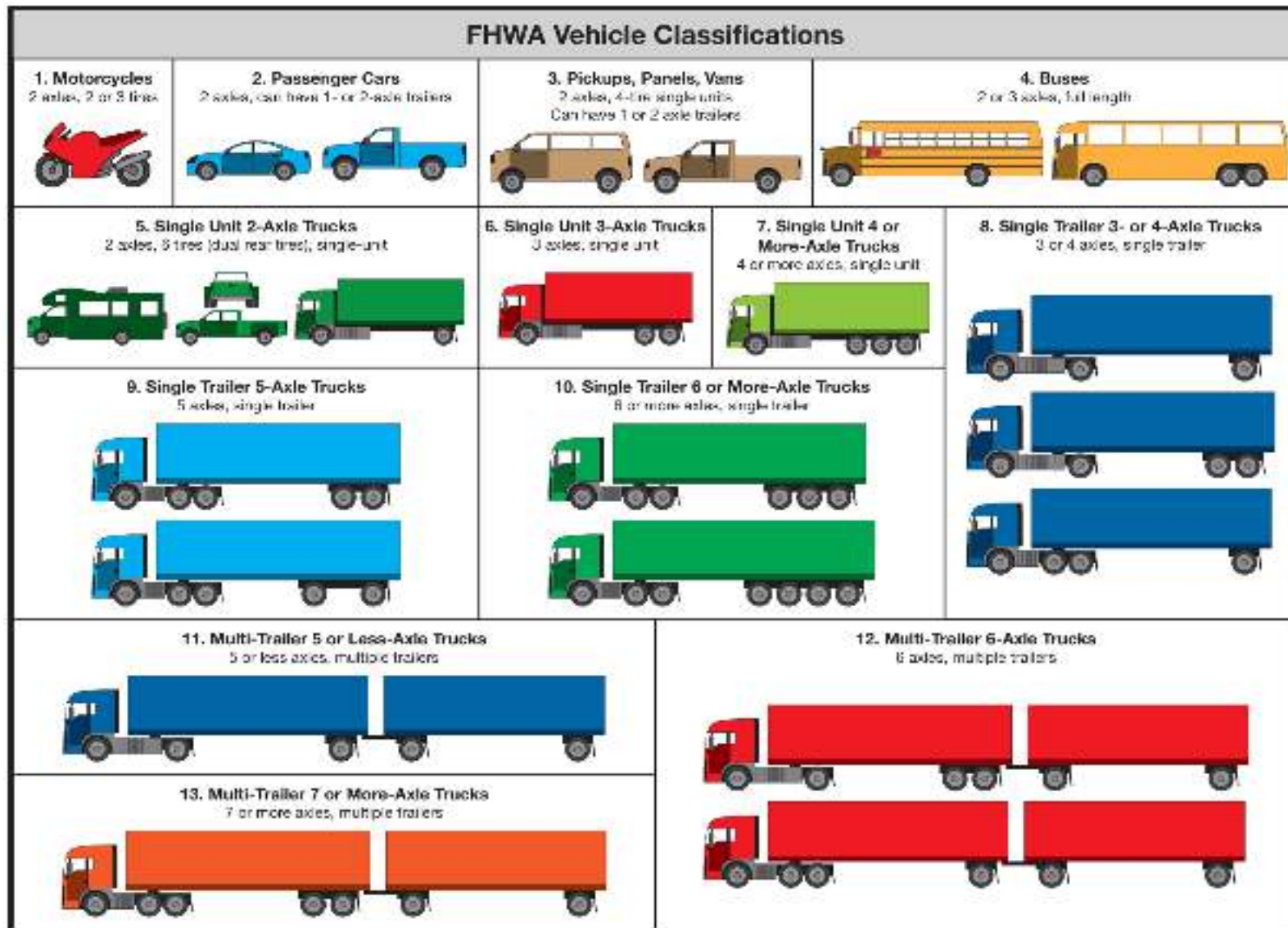
Source: DVRPC, 2021

Table 5: Daily Pedestrian Trips Crossing the Camden Cordon

Count Location #	Street	Pedestrians	Date Collected
1	Ben Franklin Bridge	598	June 2021
2	State Street	188	May 2021
3	Federal Street	266	May 2021
4	Adm Wilson Blvd (US 30)	26	May 2021
6	Mt Ephraim Ave	20	May 2021
7	Haddon Ave	1,939	May 2021
9	South 9 th Street	100	May 2021
10	Trenton Ave	161	May 2021
12	Newton Ave	332	May 2021
13	South 7 th Street	1,248	May 2021
15	South 6 th Street	289	May 2021
17	Broadway	999	May 2021
18	Williams Street	123	May 2021
19	South 5 th Street	136	June 2021
21	West Street	207	May 2021
22	South 4 th Street	402	May 2021
23	South 3 rd Street	92	May 2021
24	South 2 nd Street	38	May 2021
TOTAL		7,164	

Source: DVRPC 2021

Figure 3: FHWA Vehicle Classifications



Source: Federal Highway Administration, 2020

Table 6: Ben Franklin Bridge - Percent of Traffic by Vehicle Type

FHWA Class #	Vehicle Type	Percent
2, 3	Autos & Light Trucks	91.3%
5, 6, 7, 8, 9, 10, 11, 12, 13	Trucks	8.4%
4	Buses	0.4%
1	Other	0.0%
	TOTAL	100.0%

Source: DRPA, 2020

Table 7: State Street Bridge - Percent of Traffic by Vehicle Type

FHWA Class #	Vehicle Type	Percent
1	Motorcycle	0.2%
2	Passenger Cars	36.5%
3	Pickups, Panels, Vans	52.5%
4	Buses	1.8%
5	Single Unit 2-Axle Trucks	8.0%
6	Single Unit 3-Axle Trucks	0.4%
7	Single Unit 4 or More-Axle Trucks	0.1%
8	Single Trailer 3- or 4-Axle Trucks	0.5%
9	Single Trailer 5-Axle Trucks	0.1%
10	Single Trailer 6 or More-Axle Trucks	0.0%
11	Multi-Trailer 5 or Less-Axle Trucks	0.0%
12	Multi-Trailer 6-Axle Trucks	0.0%
13	Multi-Trailer 7 or More-Axle Trucks	0.0%
	TOTAL	100.0%

Source: DVRPC, 2021

Table 8: Federal Street Bridge - Percent of Traffic by Vehicle Type

FHWA Class #	Vehicle Type	Percent
1	Motorcycle	1.1%
2	Passenger Cars	75.4%
3	Pickups, Panels, Vans	14.5%
4	Buses	2.6%
5	Single Unit 2-Axle Trucks	3.9%
6	Single Unit 3-Axle Trucks	1.3%
7	Single Unit 4 or More-Axle Trucks	0.1%
8	Single Trailer 3- or 4- Axle Trucks	0.4%
9	Single Trailer 5-Axle Trucks	0.6%
10	Single Trailer 6 or More-Axle Trucks	0.0%
11	Multi-Trailer 5 or Less-Axle Trucks	0.0%
12	Multi- Trailer 6-Axle Trucks	0.0%
13	Multi- Trailer 7 or More-Axle Trucks	0.0%
	TOTAL	100.0%

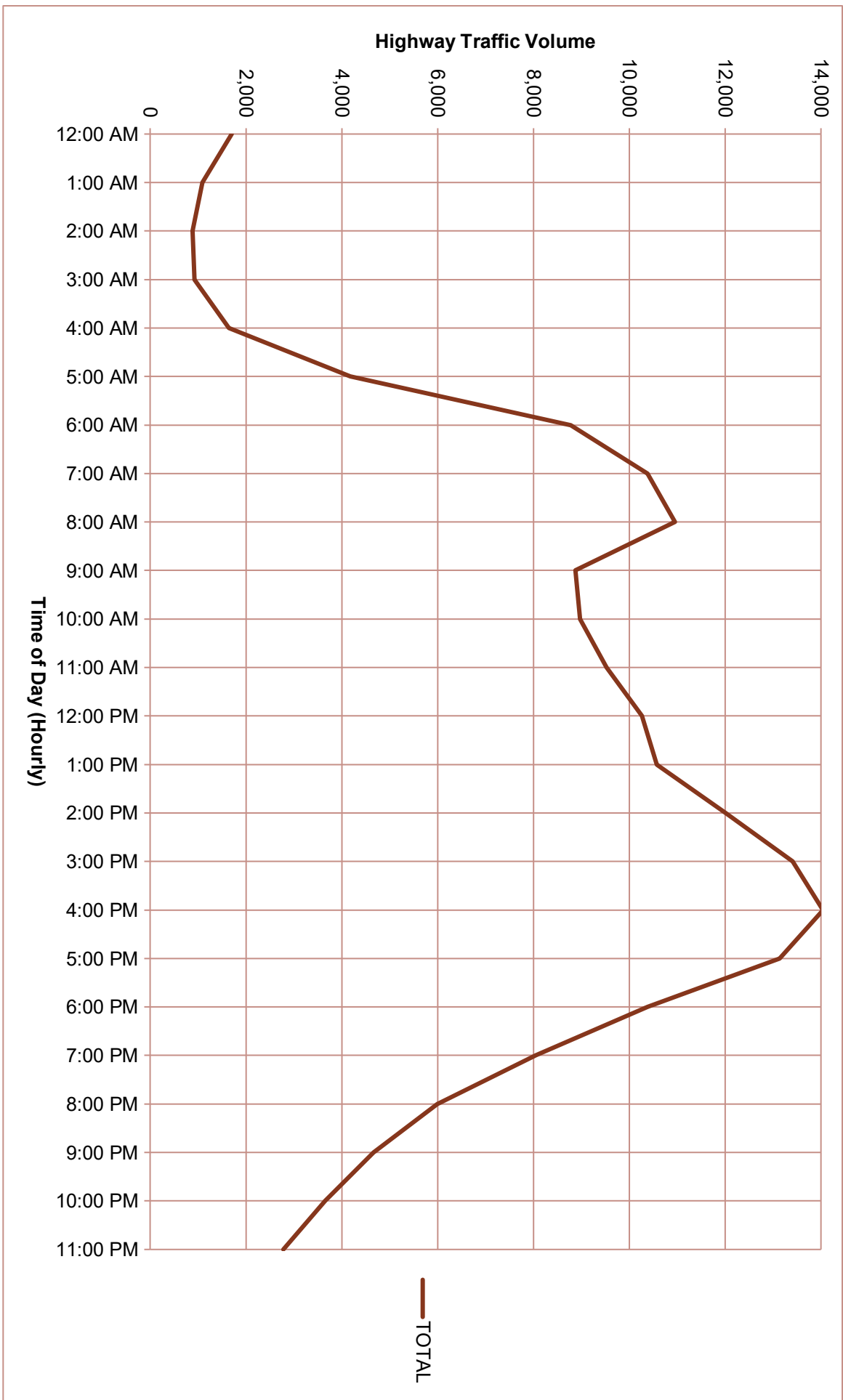
Source: DVRPC, 2021

Table 9: Admiral Wilson Boulevard (US 30) Bridge - Percent of Traffic by Vehicle Type

FHWA Class #	Vehicle Type	Percent
1	Motorcycle	0.0%
2	Passenger Cars	92.7%
3	Pickups, Panels, Vans	5.9%
4	Buses	0.3%
5	Single Unit 2-Axle Trucks	0.8%
6	Single Unit 3-Axle Trucks	0.0%
7	Single Unit 4 or More-Axle Trucks	0.0%
8	Single Trailer 3- or 4-Axle Trucks	0.0%
9	Single Trailer 5-Axle Trucks	0.2%
10	Single Trailer 6 or More-Axle Trucks	0.0%
11	Multi- Trailer 5 or Less-Axle Trucks	0.0%
12	Multi- Trailer 6-Axle Trucks	0.0%
13	Multi- Trailer 7 or More-Axle Trucks	0.0%
	TOTAL	100.0%

Source: DVRPC, 2021

Figure 4: Hourly Variation in Highway Vehicle Trips



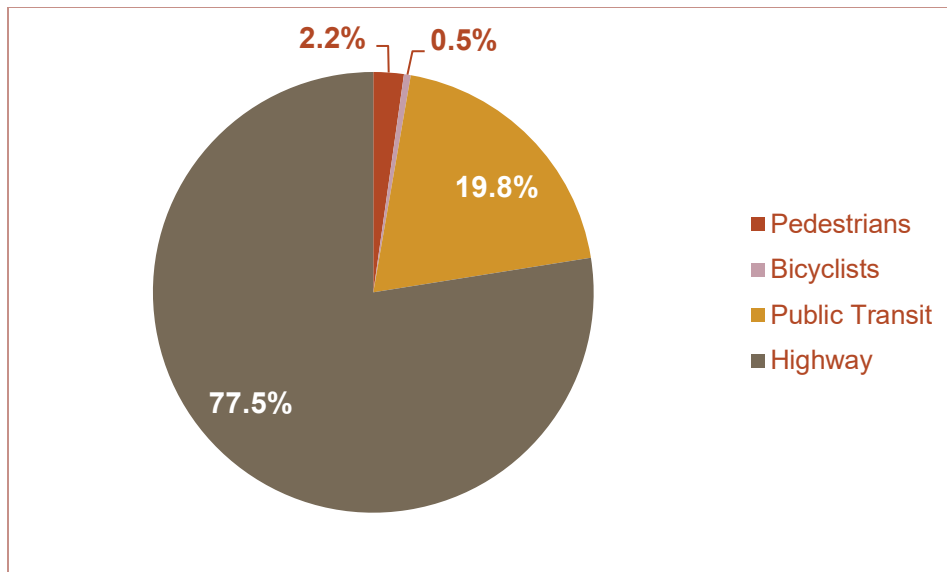
Source: DVRPC, 2021

Table 10: Mode Split

Travel Mode	Person Trips	Percent
Pedestrians	7,164	2.2%
Bicyclists	1,612	0.5%
Public Transit	63,643	19.8%
Highway	249,561 ³	77.5%
TOTAL	321,980	100.0%

Source: DVRPC, 2021

Figure 5: Mode Split



Source: DVRPC, 2021

³ Assumes an average vehicle occupancy of 1.06. US Census Bureau. 2019 ACS 1-Year Estimates, Commuting Characteristics by Sex, for the Philadelphia-Camden-Wilmington Metro Area.

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Abstract:

This report presents the average number of vehicle trips, bike trips, and pedestrian trips crossing the Camden CBD cordon during the COVID pandemic. Vehicle trips were counted during 2020 and 2021 and bicycle and pedestrian trips were counted during May and June of 2021.

The report also presents the average number of public transit passenger trips crossing the Camden CBD cordon in the Fall of 2019, before the onset of the COVID pandemic.

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