Capitol Region Council of Governments
Bike/Ped Count Project

2016 REPORT

CAPITOL REGION COUNCIL OF GOVERNMENTS Bike / Pedestrian Count Project

2016 Count

Introduction

This report presents an analysis of the results of the 2016 Bicycle and Pedestrian Count conducted by the Capitol Region Council of Governments and a team of volunteers. The count is performed annually at dozens of locations throughout the region, collecting data on pedestrian and cyclist demographics and activities. Basic count information is presented along with an analysis that compares this year's results to previous counts. The report and underlying data present a snapshot of bicycling and walking in this region that helps to inform CRCOG's planning efforts.

Since the beginning of the Capitol Region count program, CRCOG has depended upon volunteers to carry out counts and as a result the number of count locations has varied from year to year. The 2009 count was limited in scope, and in 2010 even fewer locations were counted. In 2011, the program expanded to include dozens of counters and locations. The extended count was undertaken again in 2012. The counting project was put on hold in 2013 but resumed again in 2014. In all years, the count has taken place in September during the designated national count period.

CRCOG is grateful to its many volunteers for the hard work they put into this project.

Background

In 2008, the Capitol Region Council of Governments (CRCOG) updated its Regional Bike/Ped Plan, "The CRCOG Commitment to a Walkable and Bikeable Region". The plan highlights the positive impacts that walking and bicycling can have on local and state economies as well as on our overall health, air quality, and mobility. The plan also lists a set of recommended action steps that CRCOG will carry out in an effort to support the communities in our region in their Bike/Ped planning. Collecting bicycling and pedestrian data falls under recommendations 2.3 and 3.3 in the plan.

The 2008 plan provided a snapshot of the walking and bicycling patterns in our region, however, much of the data represented commuters traveling to and from work. At that time, there was no data source that allowed us to truly understand what mode choices people use for recreation or everyday activities in our region. Whereas vehicle counts are typically conducted as part of standard traffic studies, and bus ridership figures are collected to study ridership, there was not a comparable effort to collect data on bicycle and pedestrian volumes. The 2008 plan recommended starting a data collection effort that would fill this gap.

In September 2009, CRCOG participated for the first time in the National Bike/Ped Documentation Project (NBPD), a project sponsored by the Institute of Transportation Engineers and co-sponsored by Alta Planning + Design. The nationwide effort provides a consistent model of data collection and

ongoing data for use by planners, governments, and bicycle and pedestrian professionals. The purpose of the project is to encourage agencies nationwide to start conducting bicycle/pedestrian counts and surveys in a consistent manner similar to motor vehicle counts. Working in conjunction with the NBPD, we modified the count and instruction forms to represent our region. The purpose of participating in the NBPD was to initiate a bicyclist/pedestrian data collection program for the Capitol Region.

Changes in the 2016 Count

Following the 2015 count, CRCOG began the process of reevaluating its counting methodology. While the count program had proven successful in providing snapshot data at specific locations, staff determined that broader analysis was problematic. The primary issue was that each year the count was conducted by volunteers who chose which locations to count, so each year, a different set of locations was counted. Each location could also be counted at different times of the day, to better fit the schedules of volunteers. CRCOG staff attempted to fill any gaps, but as the number of locations increased, it became increasingly hard to do so. This issue was exacerbated in 2014 when the region expanded by an additional eight municipalities.

The result was that each year the count was performed at a different set of locations, sometimes at different times of the day, frustrating attempts at analysis. The differences in the number and location of the count sites made it impossible to compare the total count result from one year to the next. Differences in the time of day a particular site was counted also made it difficult to perform year-to-year comparisons at individual sites as a morning count is not directly comparable to an evening count. General trends, such as the split between males and females, or the use of helmets, were still performed, but no reliable overall trend could be discerned.

Another issue was that it was increasingly difficult to balance the region's priority count sites. More and more municipalities are interested in having locations counted, requiring more staff time or more volunteers. With limited resources available, it was difficult to balance the desire to form a snapshot of bicycle and pedestrian activity throughout the region, with other priorities such as consistently counting locations near transit stations.

To address these concerns, a number of reforms were implemented for the 2016 count. The first was to restrict the count to the afternoon commute timeslot from 4-6pm. This would add some consistency as to when individual sites were counted. It would also make the count more of a "snapshot" in time. This change was only implemented for weekday counts; weekend counts took place mostly from 11am-1pm. The second, more significant change, was to divide the list of count locations into three groups that would be counted on a three-year cycle. This has a few benefits. One is that it reduces the number of locations that we need to count in a given year. If volunteers are unable to count all of the sites, it is easier for staff to fill the void. Another benefit is that it mirrors the methodology used by the Connecticut Department of Transportation (CTDOT) for their vehicular traffic counts. With the exception of continuous count sites, each vehicle count by CTDOT

is done on a three-year cycle. Finally, this change will make it possible to compare results for a given group every three years.

Another difference in the 2016 count is that CRCOG received a significant amount of data from automated counting systems. While this is not a change in our methodology, as the data is not directly comparable to the manual counts we perform, it is included in this report as a separate analysis. CRCOG staff have been investigating the potential of automated counting solutions, such as traffic tubes and video detection, and are eager to test these increasingly affordable technologies. The most promising technology is video detection, which uses software algorithms to detect bicyclists and pedestrians from a video feed. At this time, such solutions can provide basic count data, such as a raw count of bicycles and pedestrians, but they are not yet effective at gathering demographic data, such as gender and age. As this technology matures, it may offer an attractive alternative to manual counts.

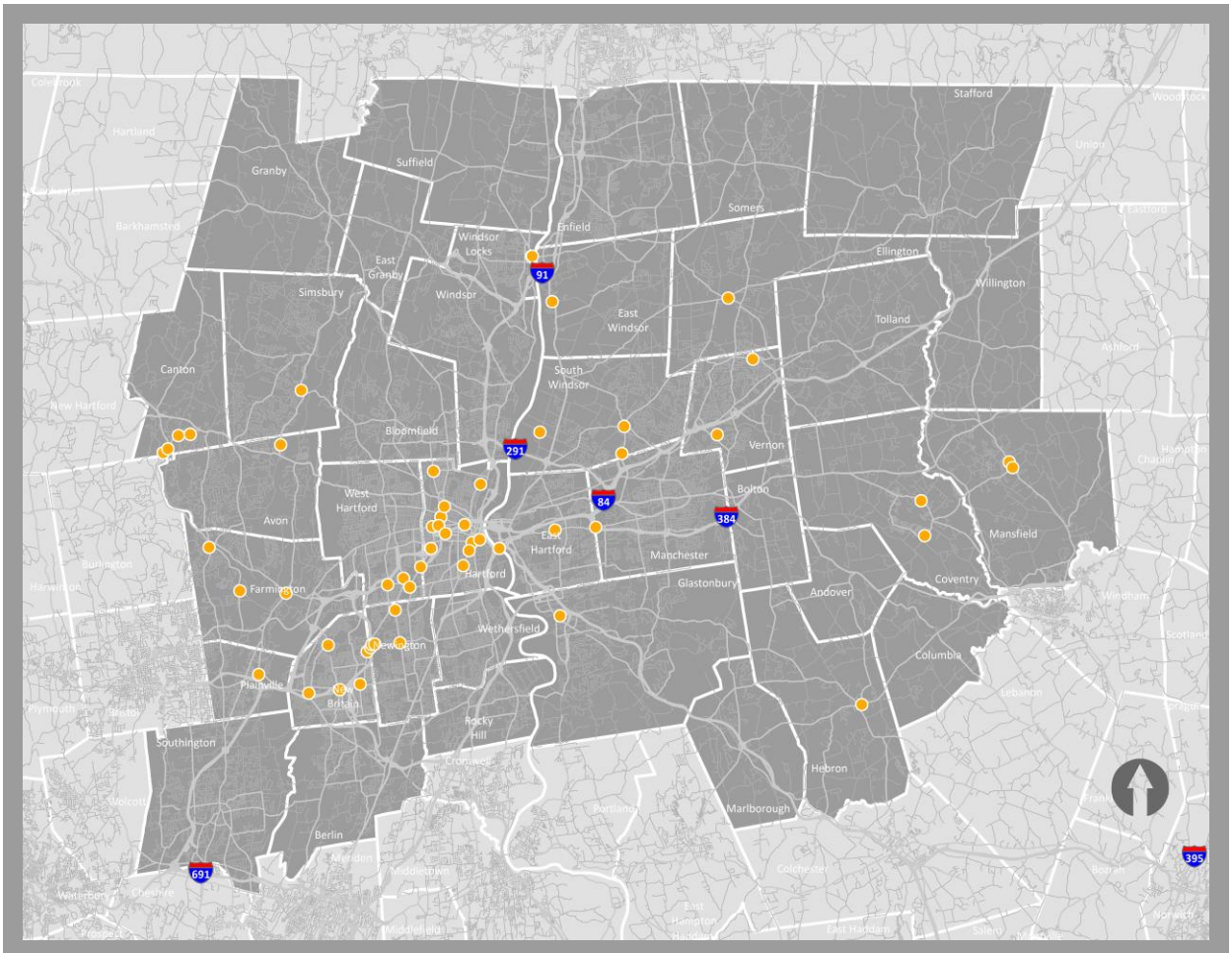


Figure 1. Map of 2016 count locations

Count Methodology/Implementation

After reviewing guidance issued by the NBPD, CRCOG staff determined that two kinds of counts would be performed, based on the location: intersection counts (including where paths/trails crossed) and screen line counts. Volunteers stationed at each location counted both pedestrians and bicyclists, rather than separating the two modes.

The NBPD recommended that counts take place the second week of September, 5:00 to 7:00 PM during the weekday and 12:00 to 2:00 PM during the weekend. Most of CRCOG's counts took place between 4pm and 6pm, corresponding to observed peak hours. In previous years, in certain locations in Hartford counts were performed in the morning from 7am to 9am. Weekend counts took place between 11am and 1pm. Due to volunteer availability, not all desired locations and times were counted.

For intersection counts, CRCOG developed forms and detailed instructions that were given to volunteer counters. Both bicyclists and pedestrians were counted and recorded on an intersection diagram. Bicyclists were recorded by the direction they approached the intersection and their destination (turning right, going straight, and turning left.) Counters also recorded if a bicyclist was travelling the wrong way or riding on the sidewalk. Helmet use by cyclists was recorded as well. Pedestrians were counted as they crossed the intersection and recorded for the appropriate crosswalk. Diagonal crossings by pedestrians were also recorded. Counters also recorded basic demographic data such as sex and age (adult or child). Counters were also asked to record whether or not pedestrians used an assistive device such as a cane or a wheelchair.

Screenline counters counted bicyclists and pedestrians who passed an imaginary line across the trail or roadway being counted. These counters used different forms, but recorded the same information (except for turning data).

The count forms used in 2016 can be found in the appendix.

Locations

As noted above, CRCOG has instituted a new system for choosing count locations each year. Count sites are divided into three groups and counted on a three-year cycle. CRCOG still chooses count locations for each of the three groups in consultation with bike/ped advocates and its member municipalities. Each year the number and location of count sites varies, though going forward, there will be consistency between three-year cycles. It should be noted, however, that, at this point, direct comparisons between years are not advisable.

Priorities for the count have changed over the years. Originally an emphasis was placed on commuting corridors. More recently, an emphasis on transit stations and town/village centers has been added. In 2015, CRCOG counted 42 locations and continued to concentrate on locations near transit stations. In 2016 CRCOG and its volunteers did 61 counts at 55 locations. A map of count locations from 2016 is provided above in Figure 1.

Count Summaries and Findings

Table 1 shows a summary of the total bicyclist/pedestrian counts for the seven years of counting. In 2009, we counted 5,555 pedestrians and cyclists at 25 locations. By 2016 we had increased our program to 55 locations and counted 5,699 bicyclists and pedestrians (following an increase to 71 locations and 15,223 cyclists and pedestrians in 2014). It should be noted, however, that results from individual years should not be compared. Not only did the number of count sites vary from year to year, but the actual locations did as well. In some years, for example, a greater percentage of count sites were multi-use trails, while in other years, more on-road counts were done. As will be shown later, this can significantly skew the results.

The results from a single year should also be scrutinized carefully prior to making any conclusions due to the possibility of double counting. As will be discussed in more detail in the Spatial Distribution section, some of the locations are well within biking or walking distance of other locations. Any attempt to compare the total number of users from one year to the next will be influenced by this double counting.

	2009	2010	2011	2012	2014	2015	2016	Total
Total Bicyclists	1,299	492	3,598	3,120	2,996	2,370	1,704	15,579
Percent of Bicyclists	23%	19%	41%	34%	20%	26%	30%	28%
Total Pedestrians	4,256	2,034	5,247	6,187	12,227	6,871	3,995	40,817
Percent of Pedestrians	77%	81%	59%	66%	80%	74%	70%	72%
Total users	5,555	2,526	8,845	9,307	15,223	9,241	5,699	56,396
Total count sites	25	6	42	48	71	42	55	289

Table 1. Bicycle and pedestrian counts by year (2009-2016)

During most of the bike/ped counts, the majority of counts have taken place on weekdays. In 2016, 50 counts (not sites, as a single site may be counted more than once) were performed on weekdays (see Table 2). Just 11 were weekend counts. As will be noted below, this impacts the number and type of users who get counted. 2016 was much more heavily weighted towards weekday counts than previous years, with 82% occurring on weekdays and just 18% on weekends. The average split for all seven years is 72% weekdays and 28% weekends.

	2009	2010	2011	2012	2014	2015	2016	Total
Weekday Counts	29	6	50	57	86	43	50	321
Weekend Counts	13	6	26	21	27	13	11	117
Weekday Percentage	69%	50%	66%	73%	76%	77%	82%	73%
Weekend Percentage	31%	50%	34%	27%	24%	23%	18%	27%

Table 2. Bicycle and pedestrian counts by year (2009-2016)

Table 3 provides a percentage breakdown of counted cyclists and pedestrians by weekend or weekday (it excludes locations where automatic machine counters were used). In general, cyclists are more evenly split between weekdays and weekends than pedestrians are (2010 was an exception). This is

despite the fact that the actual counts are heavily weighted toward weekdays. For example, in 2016, just 18% of counts were performed on weekends. While pedestrians were relatively evenly distributed with 17% of them being counted on weekends, cyclists were weighted in the other direction with 56% on weekends. These numbers have fluctuated over the years, but the overall pattern of cyclists being more prevalent on weekends than pedestrians has not changed. The only exception was 2010, during which 50% of the counts were done on weekends. The differences between weekday and weekend counts may indicate that cycling is more likely to be a recreational activity in the region.

	2009	2010	2011	2012	2014	2015	2016	Total
Bicycles	1,299	492	3,598	3,120	2,996	2,370	1,704	15,579
Weekdays	57%	39%	38%	48%	58%	48%	44%	48%
Weekend	43%	61%	62%	52%	42%	52%	56%	52%
Pedestrians	4,256	2,034	5,247	6,187	12,227	6,871	3,995	40,817
Weekdays	61%	22%	57%	87%	91%	80%	83%	77%
Weekend	39%	78%	43%	13%	9%	20%	17%	23%
Total of All Users	5,555	2,526	8,845	9,307	15,223	9,241	5,699	56,396

Table 3. Bicycle and pedestrian counts by year (2009-2016) and weekend/weekday percentages

Figure 2. shows the gender of pedestrians by year. As the chart shows, pedestrians tend to be evenly split between male and female. In 2015, the count was split in half between male and female users. In 2016, the count was a little more lopsided, with 53% of pedestrians being male and 47% being female.

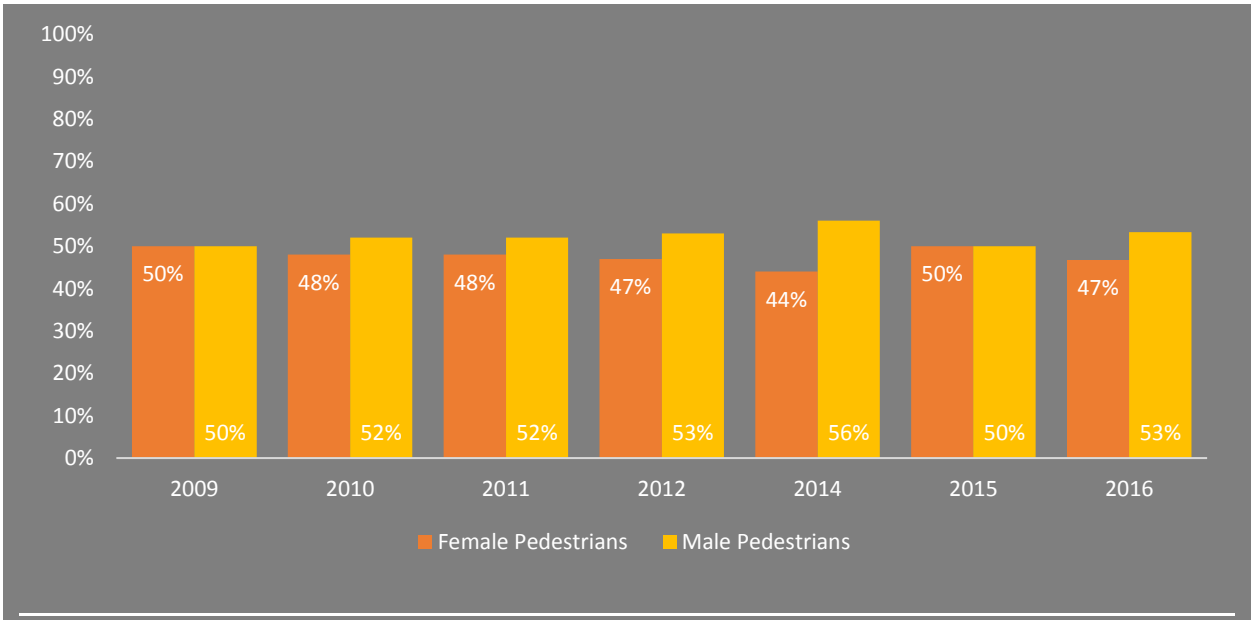


Figure 2. Pedestrians counted by gender. 2009-2016.

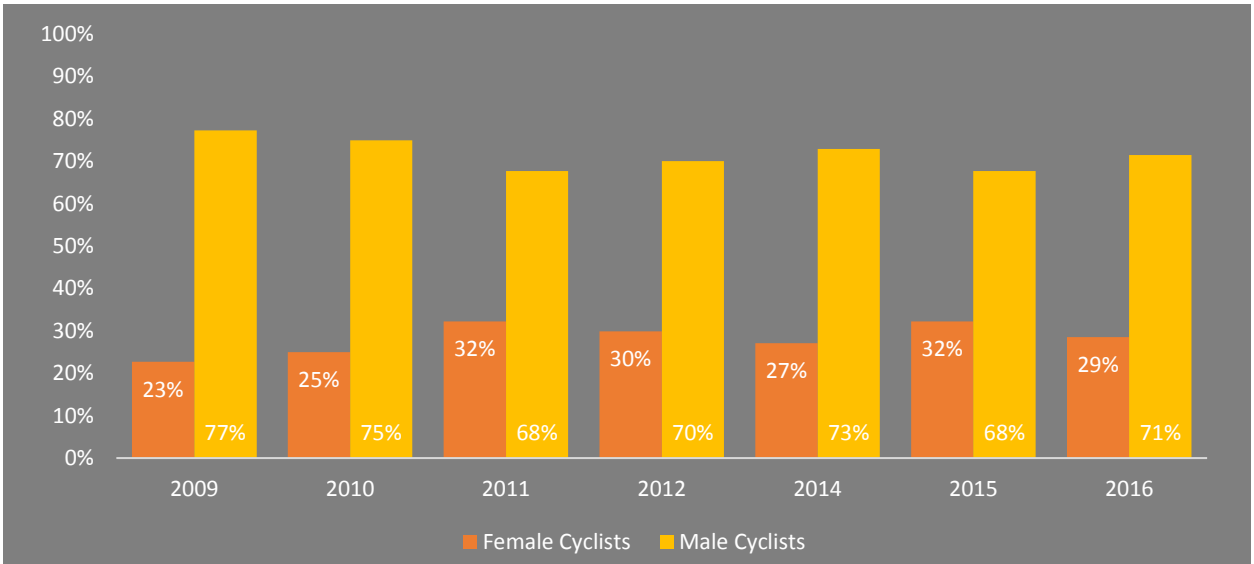
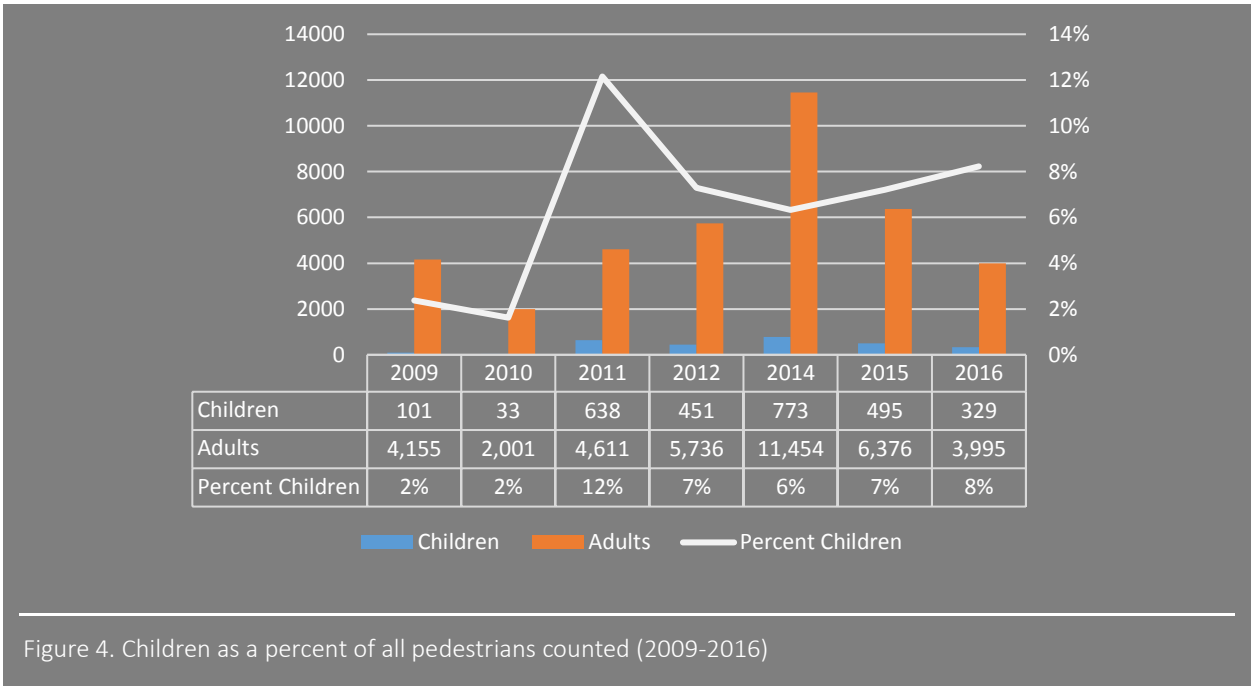


Figure 3. Cyclists counted by gender. 2009-2016.

For cyclists, the distribution is much more skewed toward males (see Figure 3). In 2016 the split was 71% male and 29% female. This is a slight decrease for the female percentage, which was 32% in 2015. The overall trend in the count has been an increase in the female percentage. Just 23% of cyclists counted in 2009 were women. It is difficult to say at this point whether this increase is a result of behavioral changes or of the differences between count locations. It does show that cycling still tends to be a male-dominated activity. As our count methodology becomes more rigorous, we will be better equipped to track this trend.



	2009	2010	2011	2012	2014	2015	2016
Children	101	33	638	451	773	495	329
Adults	4,155	2,001	4,611	5,736	11,454	6,376	3,995
Percent Children	2%	2%	12%	7%	6%	7%	8%

Figure 4. Children as a percent of all pedestrians counted (2009-2016)

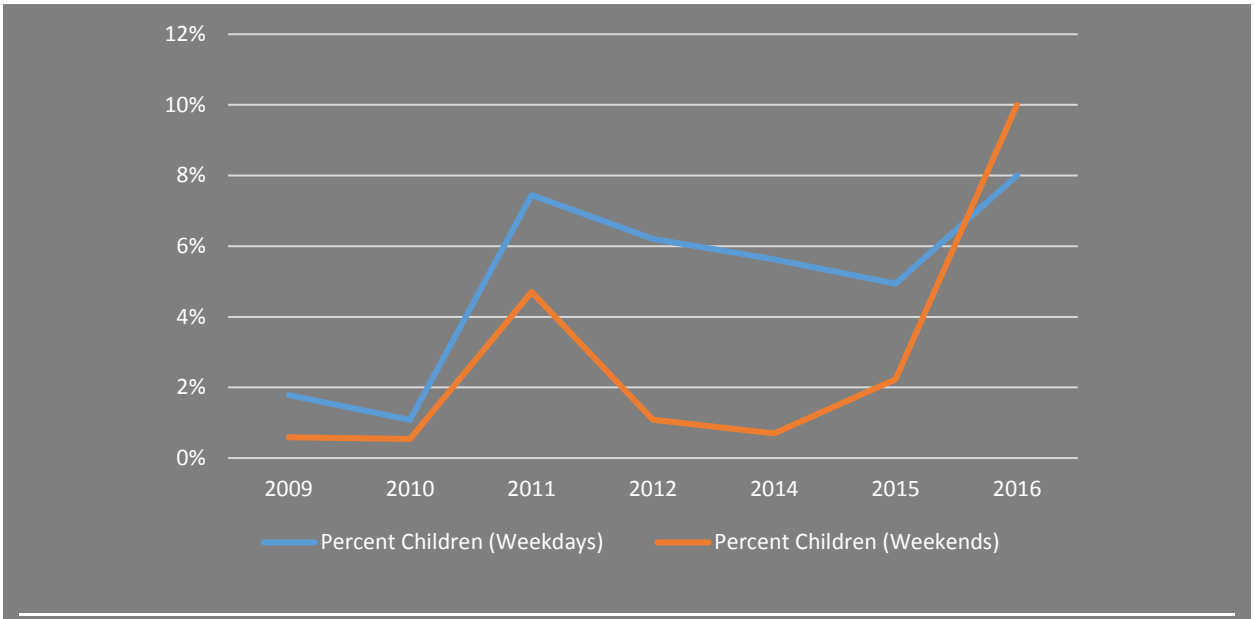


Figure 5. Children as a percent of all pedestrians counted, by weekend/weekday (2009-2016).

Volunteers were also asked to identify children (including children in strollers) when counting. On average, children accounted for 8% of pedestrians in 2016. As shown in Figure 4, the total number of children counted in 2016 was much larger than in 2009. Overall though, the perentage of pedestrians counted who are children has been unstable. Notably, in 2011 it reached a peak of 12%, while the previous year just 2% of pedestrians were children. The past three years have been relatively steady between 6% and 7%.

Figure 5 breaks down the percentage of children depending on whether or not the count occurred on a weekend or a weekday. One might expect to see children more consistently represented on weekends than on weekdays, due to the presence of families on multi-use trails. The opposite seems to be the case. With the exception of 2016, children represented a higher percentage of counted pedestrians on weekdays than on weekends. The weekend counts also seemed to fluctuate to a much greater degree. In 2015, just over 2% of weekend pedestrians were children, while 10% of them were in 2016. The fluctuations may just be a timing issue, or they may indicate that additional volunteer training is warranted.

Figure 6 shows how bicyclists were operating on the roads at the count locations. In 2015, just 7% of cyclists were observed riding against traffic. Of the riders for whom this information was gathered, 43% were riding with traffic while 50% were on the sidewalk. Over the years there had been little change in these percentages until 2016. In 2016, "on sidewalk" dropped to 28% while "with traffic" shot up to 66%. The highest "against traffic" percentage was recorded in 2009 at 10%, but has stayed below that level ever since. The percentage of cyclists riding on the sidewalk has been relatively steady, with a small dip in 2010 and 2011 to 46% and 47% respectively. There is too little data to make any conclusions, but it does appear that cyclists in the region prefer to ride on the sidewalk. Follow up studies should be done to determine if this is a result of insufficient on-road infrastructure, or if

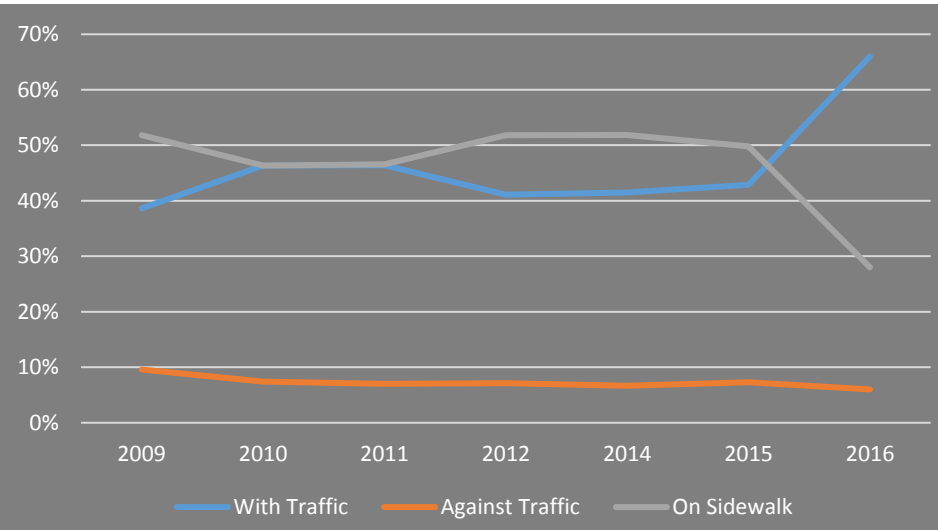


Figure 6. Cyclists riding with and against traffic, 2009-2016.

there is another cause. As the program continues and the same locations are counted each year, we will be able to evaluate trends for riding behavior.

Information on whether cyclists are riding on sidewalks, with traffic, or against traffic, is also useful at the individual location level. This data, especially when backed up with multiple years of counts, can be helpful for identifying deficiencies in the network. Locations where most cyclists ride on the sidewalk could indicate that on-road conditions are inhospitable, or that another factor is in play. Cyclists riding against traffic could indicate that there are access issues. This data will be looked at when CRCOG updates its regional bicycle and pedestrian plan.

Figure 7 shows the difference in female bicyclist and male bicyclist behavior relative to the type of facility used. To a much greater degree than men, women choose to ride on trails rather than roads. Just 47% of the female cyclists in the count were on-road riders, while 65% of male cyclists were on the road. The numbers have varied considerably depending on how many on-road versus trail counts were done in a given year. As CRCOG continues to count the same locations over the coming years, we hope to be able to identify trends.

Figure 8 presents similar results in a different way. It shows that 72% of the cyclists counted by CRCOG were men in 2016 while just 28% were female. When looking at just trail users though, we see that 35% of trail riders are female. Conversely, we see that 78% of on-road riders are male, even though just 72% of total riders were male. This trend has been consistent throughout the years and shows that, at least in this region, female cyclists favor trails over on-road facilities.

Spatial Distribution

Looking at the spatial distribution for the counts (see Appendix 1 for maps), we see a few patterns. For the most part, high count locations are concentrated in urban centers, such as Hartford and New

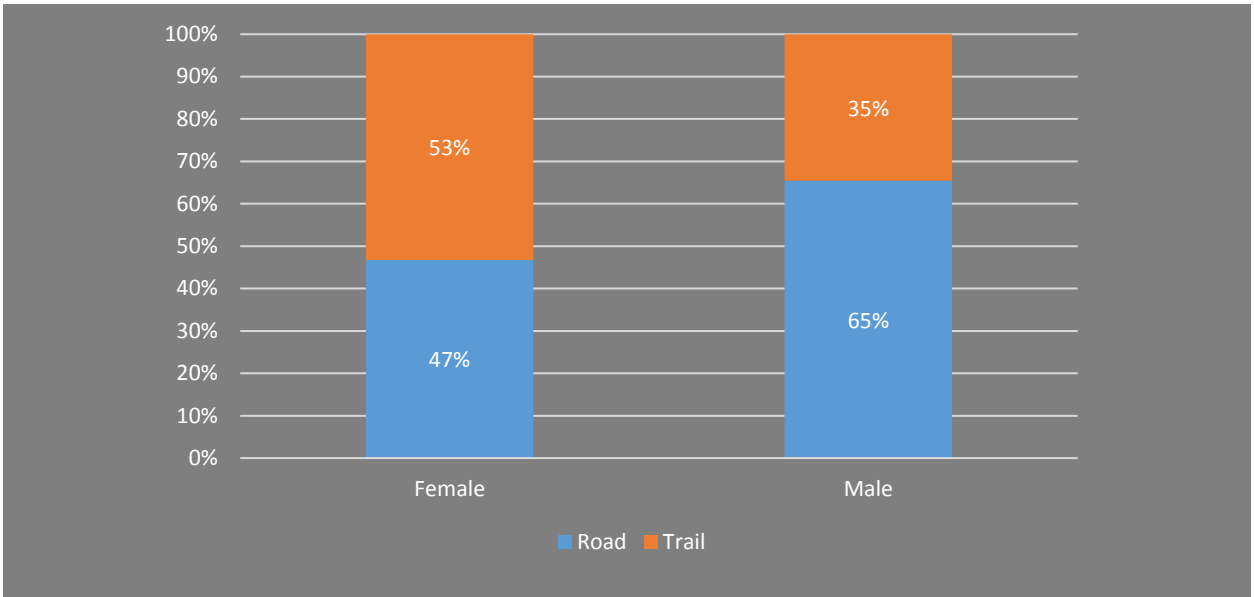


Figure 7. Male and female cyclist facility use in 2016

Britain. Two exceptions to this rule appear. One is that trail locations also exhibit high levels of activities, such as Canton, Farmington, and Simsbury. The other is that Storrs Center, near the University of Connecticut, also experiences a high level of activity.

When looking at just the pedestrian counts, we see some variations in spatial distribution. Locations along multi-use trails still see high levels of activity, but those levels are somewhat diminished. For example, locations in Canton near the trail head still show high levels of activity, but they taper off as the trail moves northeast. Urban centers such as Hartford and New Britain still show high levels of activity.

A different picture emerges when looking at the bike counts. Hartford and New Britain still show higher than average levels of activity, but trail locations emerge more clearly as the dominant bicycle activity centers. Canton, Simsbury, Avon, Farmington, and Vernon all show high levels of activity. Storrs Center remains a popular location as well. It should be noted as well that the location in Downtown New Britain is the terminus of both the CT***fastrak*** transit line and the CT***fastrak*** multi-use trail.

We also see that there is probably some double and triple counting going on. For example, in Hartford, there are three counts along Maple Ave and two counts along Farmington Ave. While some of the Maple Ave counts are spaced far enough apart to somewhat diminish the likelihood of double counting pedestrians, they are easily within biking distance. Similarly, in Canton, there are four locations along the Farmington River Trail. There is likely to be some overlap between the counts.

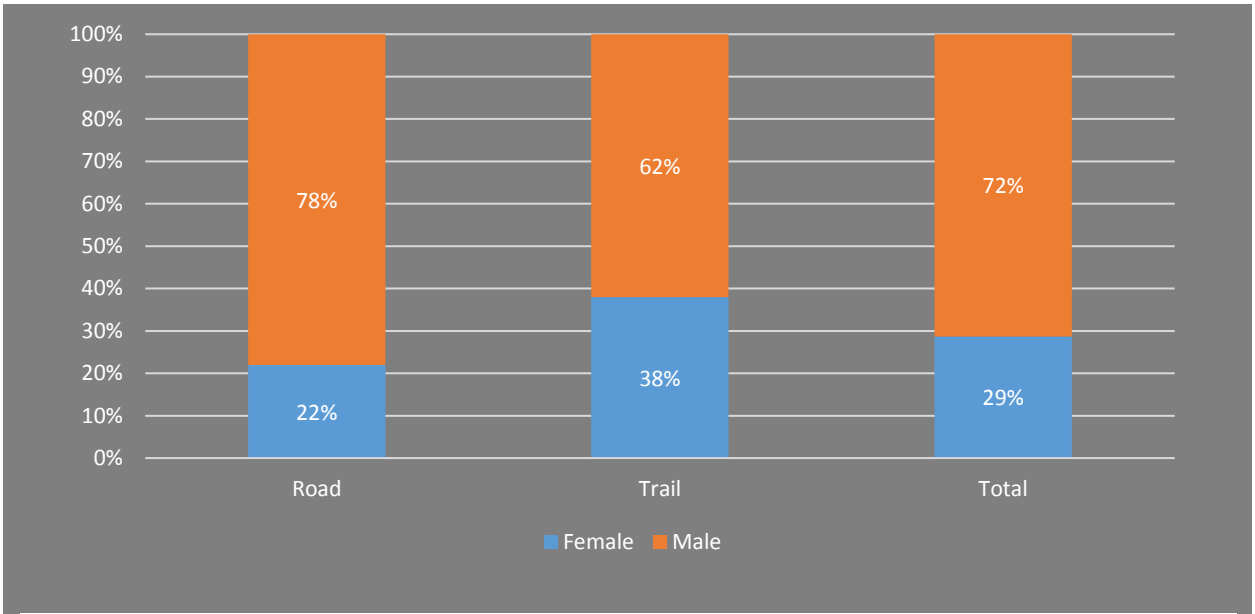


Figure 8. Facility type by gender of cyclist (2016)

Automatic Counts

This year, in Hartford and East Hartford, CRCOG was given access to machine counts performed using video detection technology. These counts were done as part of the Interstate 84 Viaduct Project. They are reviewed separately as they do not collect the same level of detail as the manual counts do. CRCOG is still evaluating how to use such count technology in the future.

CRCOG received data for sixty two locations in the Downtown Hartford and East Hartford areas. Each count was performed at both 6:00 AM and at 3:00 PM for a three-hour period. To better match the manual count data, CRCOG limited them to a two-hour period from 4:00 PM to 6:00 PM.

Data was collected through video cameras and automatic computer-based image recognition. The data on bicycles and pedestrians was collected concurrently with car data, allowing for a richer analysis of traffic patterns. While no demographic data was collected, bicycle count data does include turning movements. Pedestrian count data only includes directional information (eastbound versus westbound, for example).

The Hartford locations were closely spaced in the downtown area resulting in overlap between locations. When added up, counts at these 62 locations resulted in 7,768 uses in the afternoon. Of these, 327 were bicycles while 7,441 were pedestrians. The AM count was slightly higher with 8,104 uses, 234 of which were bicycles while 7,870 were pedestrians. Again, the "total" figures are very misleading as they are the result of significant overlap.

As noted above, each count had a wealth of data for the location, allowing for some interesting analyses. For example, it would be possible to compare vehicle, truck, and non-motorized counts at each location. Such an analysis may reveal patterns regarding the preferences of pedestrians and cyclists. Do cyclists avoid roads with larger percentages of trucks? Will cyclists avoid corridors with

heavy traffic? Do bike lanes help counter the negative influence of heavy traffic? This sort of analysis will be useful as CRCOG updates its Bicycle and Pedestrian Plan this year.

For the afternoon period, the most popular location was Babcock St and Park St. The total count was 431 users, 9 of which were bicyclists while 422 were pedestrians. Park St was also home to the fifth busiest location, Putnam St and Park St. These intersections are next to each other, so they are likely double counted. The second highest traffic area was Ann Uccello St & Church St, with 393 users (5 bicycles and 388 pedestrians). Ann Uccello St and Allyn St was the fourth busiest location, though, as with the locations on Park St, these two intersections are next to each other. The third busiest location was at Vine St/Burton St and Albany Ave with 361 users (four bicyclists and 357 pedestrians).

The least busy location in Hartford (the least busy overall was in East Hartford) was the intersection of Brookfield St and Hamilton St. While a complete analysis of all travel patterns is beyond the scope of this report, this intersection does bring up some interesting questions. Just 12 bicyclists and pedestrians were counted at this intersection. One intersection to the east, at Hillside Ave, there were 176 users counted. One intersection to the west, at Pope Park Highway, there were just 20 users. Two intersections to the west, at Bartholomew, there were 102 users counted. A more detailed analysis could show that Pope Park Highway (which terminates at Hamilton St), Interstate 84 (which travels above Hamilton St), or the Park River (between Wellington St and Brookfield St) are acting as barriers between the neighborhoods.

Conclusions and Next steps

The count data and database used to summarize the data are a very rich source of information, limited only by the manpower available to analyze and evaluate the data. As it currently stands, data from the count program is most useful as a snapshot of individual locations. Comparisons over time on a regional level are hampered by inconsistencies in count locations. CRCOG has taken steps to address this issue and will continue to do so going forward.

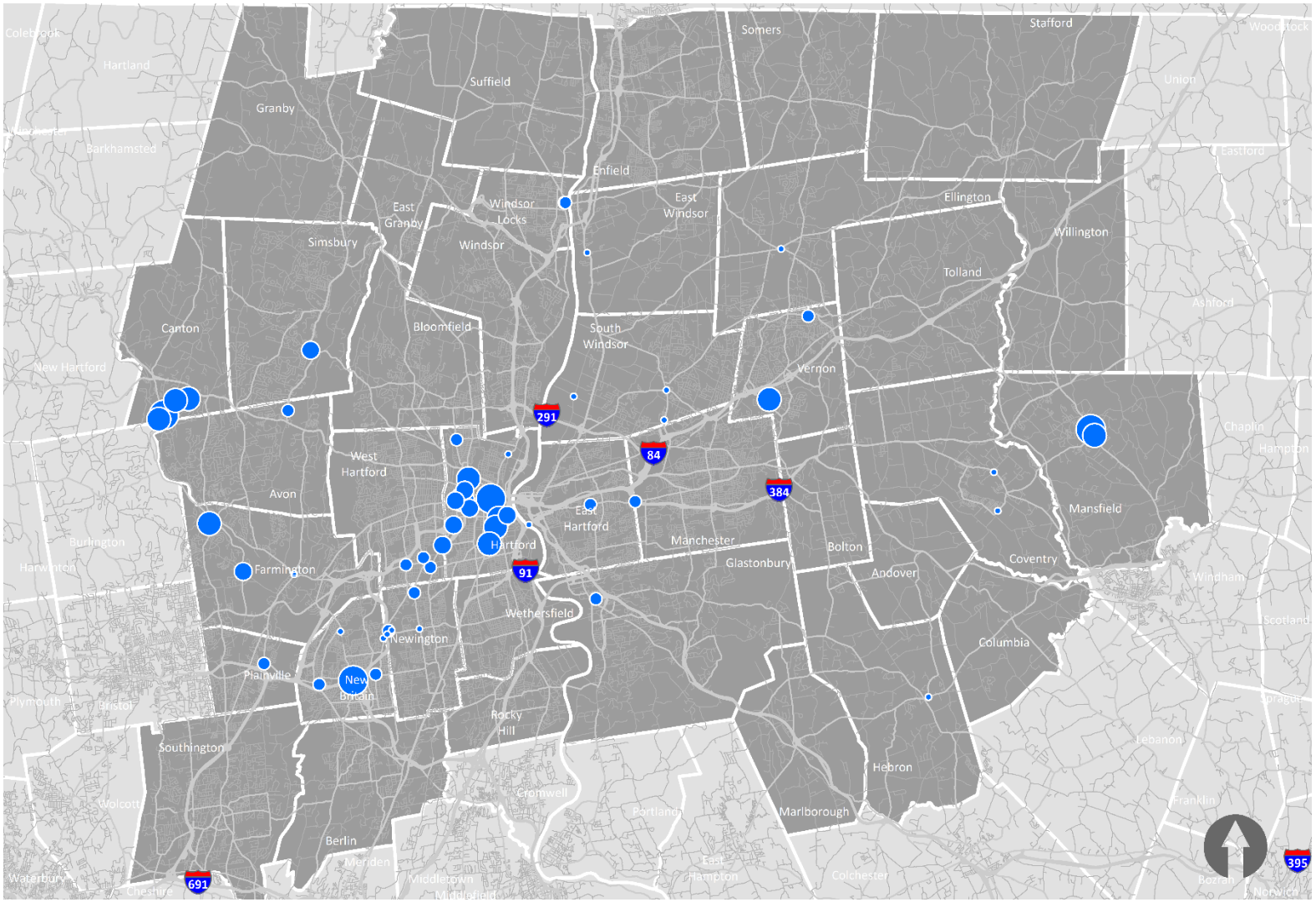
CRCOG also experimented with automated video count technology. Though it is more expensive than volunteers, this technology does allow for highly accurate counts to take place with minimal labor involved. Not only does it capture pedestrian and bicyclist information, but it also concurrently captures car and truck data, which can be useful for providing context. This information could be especially useful for identifying potential locations for bicycle and pedestrian infrastructure.

In 2017 CRCOG will be updating its Bicycle and Pedestrian Plan, and transforming it into a Complete Streets Plan. Part of this update will be the identification of a regional bicycle and pedestrian network. The count data will be an essential component of this exercise, allowing us to see where pedestrians and cyclists currently choose to travel. When combined with other data, such as Strava (which is collected from a fitness tracking smartphone app) and automobile counts, the bike/ped count data can be very useful for analyzing travel patterns and identifying gaps.

Over the years, CRCOG's count data has proven useful on a number of occasions. Towns have requested the data at specific locations to provide data for grant applications. CRCOG itself used the

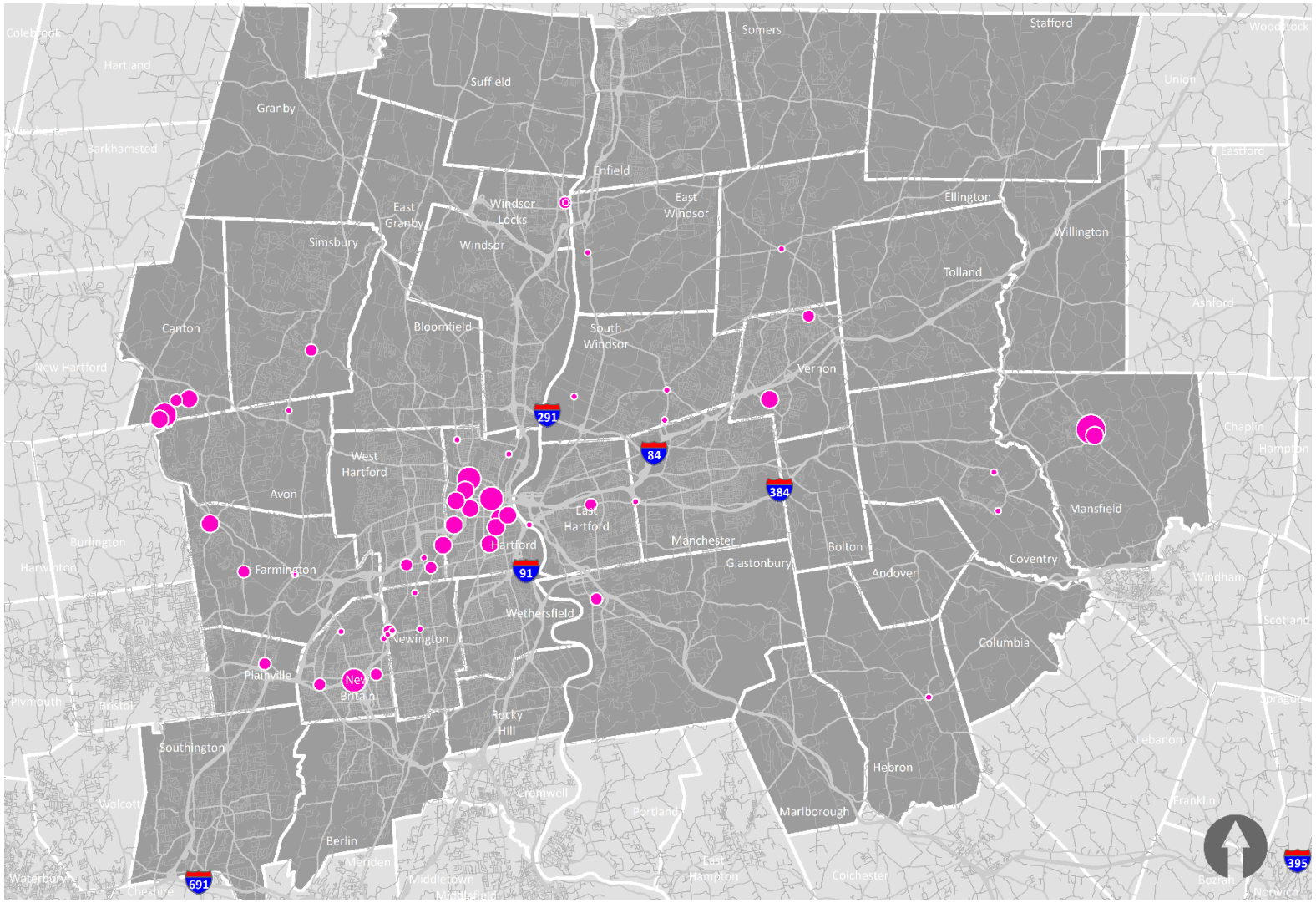
data to help estimate non-motorized vehicle traffic in a corridor being considered for a TIGER grant application. The data has also been requested for studies. Through continued refinement, the data will become more useful to regional and local planners.

Appendix 1: Maps



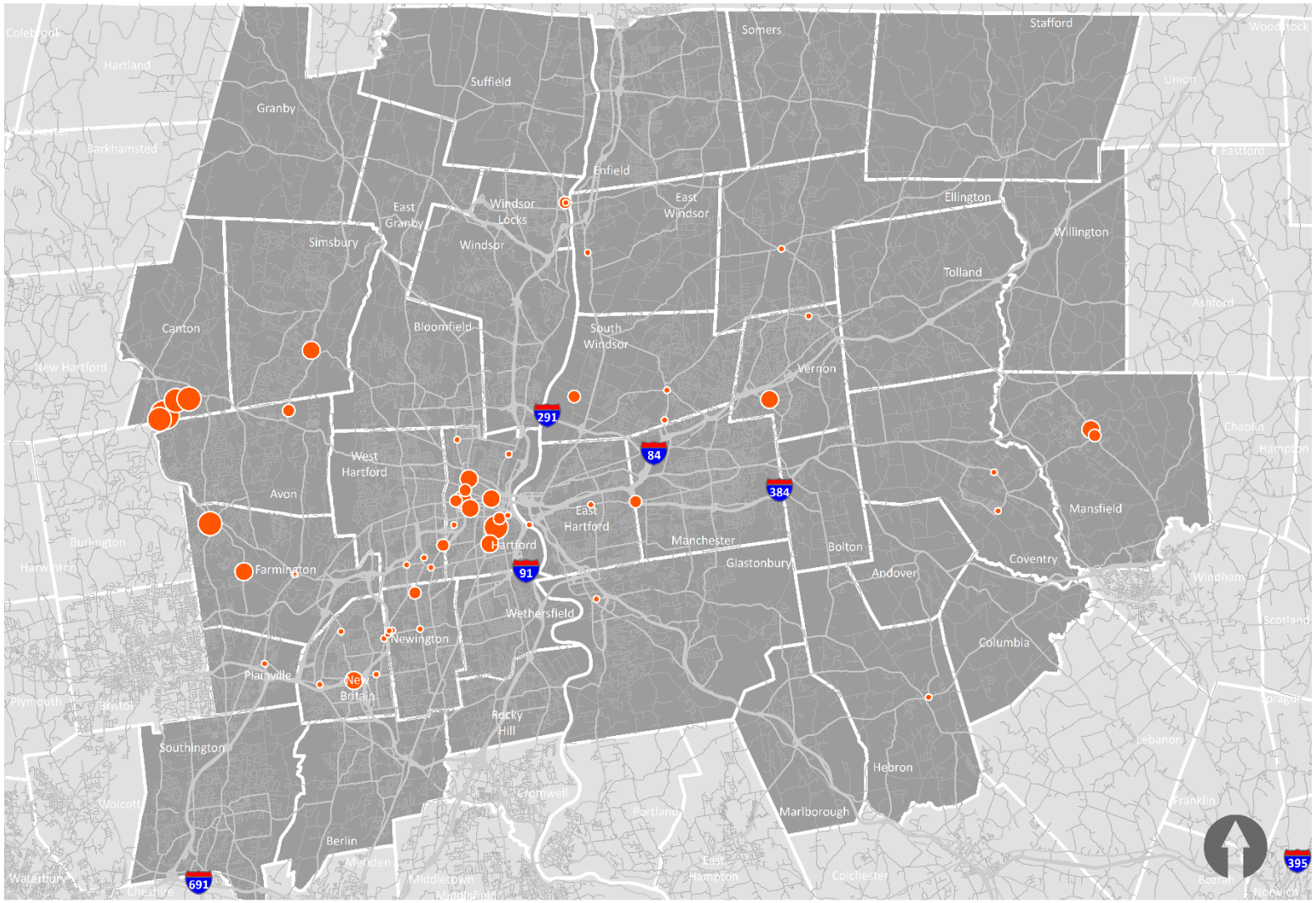
Total Count By Location

Total Count	2 - 17	18 - 46	47 - 125	126 - 267	268 - 700



Total Pedestrians By Location

Pedestrians 1 - 20 | 21 - 46 | 47 - 187 | 188 - 384 | 385 - 661

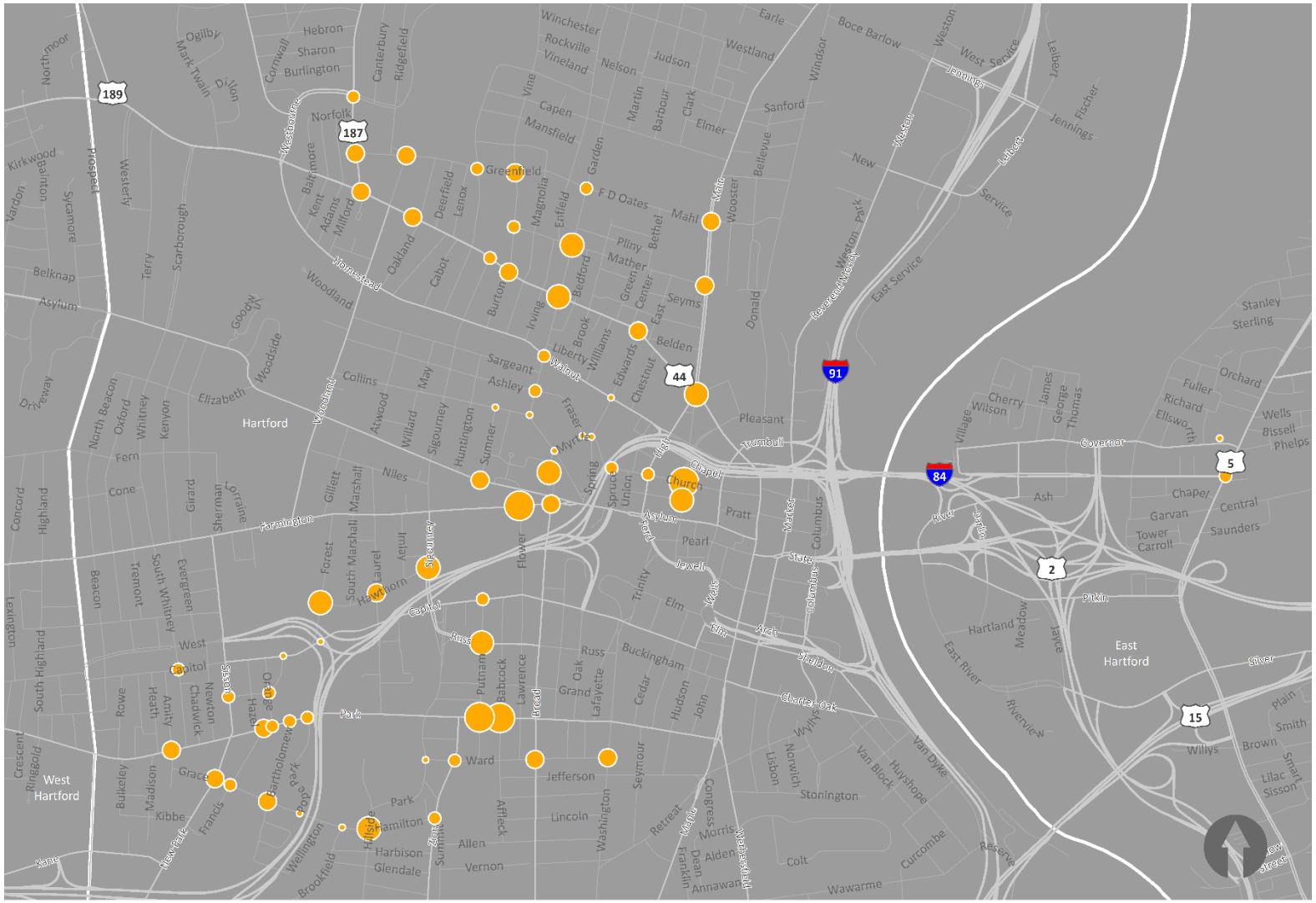


Total Bicyclists By Location

BikeCount 0 - 12 | 13 - 33 | 34 - 78 | 79 - 175 | 176 - 241

Total PM Count By Location

Machine Counts



Total AM Count By Location

Machine Counts

Appendix 2: Data Tables

Data Table 1: Detailed Counts									
CRCOG ID	Intersection/St	Municipality	Count Type	Time	Total Count	Cyclists	Pedestrians	Female	Male
AV1	Farmington Canal Heritage Trail at Fisher Drive & Route 10/Route 202	Avon	Screenline	Weekday (4 - 6 PM)	44	27	17	17	27
CA1	River Rd and Old River Rd	Canton	Intersection	Weekend (11AM - 1 PM)	158	119	39	66	92
CA1	River Rd and Old River Rd	Canton	Intersection	Weekday (4 - 6 PM)	50	16	34	25	25
CA10	Farmington River Trail and Atwater Rd	Canton	Intersection	Weekend (11AM - 1 PM)	142	110	32	68	74
CA10	Farmington River Trail and Atwater Rd	Canton	Intersection	Weekday (4 - 6 PM)	20	8	12	7	13
CA2	Bridge St and Main St	Canton	Intersection	Weekend (11AM - 1 PM)	466	211	255	245	221
CA2	Bridge St and Main St	Canton	Intersection	Weekday (4 - 6 PM)	52	30	22	25	27
CA9	Farmington River Trail and Commerce	Canton	Intersection	Weekend (11AM - 1 PM)	146	103	43	70	76
CA9	Farmington River Trail and Commerce	Canton	Intersection	Weekday (4 - 6 PM)	37	11	26	8	29
CV1	Main Street & Ripley Hill Road	Coventry	Intersection	Weekday (4 - 6 PM)	2	1	1	0	2
CV2	Cross Street & Orcutt Street	Coventry	Intersection	Weekday (4 - 6 PM)	8	3	5	3	5
EH1	Silver Lane & Applegate Lane	East Hartford	Intersection	Weekday (4 - 6 PM)	45	4	41	19	26
EL4	Route 140 & Main Street	Ellington	Intersection	Weekday (4 - 6 PM)	17	8	9	4	13
EW1	Route 5 and Tromley Road	East Windsor	Intersection	Weekday (2PM - 4PM)	9	2	7	4	5
FA1	Farmington Canal Heritage Trail at Red Oak Hill Road	Farmington	Screenline	Weekend (11:15AM - 1:15PM)	116	70	46	50	66
FA2	Farmington River Trail at Route 177	Farmington	Screenline	Weekend (11:45AM - 1:45PM)	267	175	92	134	133
FA6	Route 4 & Route 10	Farmington	Intersection	Weekday (4 - 6 PM)	14	1	13	12	2
GL2	Hebron Avenue & New London Turnpike	Glastonbury	Intersection	Weekday (4 - 6 PM)	35	3	32	16	19
HE1	Main Street & Wall Street	Hebron	Intersection	Weekday (4 - 6 PM)	4	0	4	3	1
HF10	Main Street & North of Park	Hartford	Screenline	Weekday (4 - 6 PM)	219	32	187	66	153
HF12	Capitol Avenue & Laurel Street	Hartford	Intersection	Weekday (4 - 6 PM)	121	37	84	30	91
HF22	Asylum Avenue & Woodland Street	Hartford	Intersection	Weekday (4 - 6 PM)	125	17	108	54	71
HF23	Asylum Avenue & Union Place	Hartford	Intersection	Weekday (4 - 6 PM)	377	35	342	121	256
HF26	New Park Avenue & Kibbe Street	Hartford	Intersection	Weekday (4 - 6 PM)	91	11	80	46	45

Data Table 1: Detailed Counts									
CRCOG ID	Intersection/St	Municipality	Count Type	Time	Total Count	Cyclists	Pedestrians	Female	Male
HF37	Main Street & Windsor Street	Hartford	Intersection	Weekday (4 - 6 PM)	9	6	3	0	9
HF38	Granby Street & Tower Avenue	Hartford	Intersection	Weekday (4 - 6 PM)	23	6	17	13	10
HF4	Charter Oak Bridge	Hartford	Screenline	Weekday (4 - 6 PM)	13	3	10	6	7
HF40	Homestead Avenue & Woodland Street	Hartford	Intersection	Weekday (4 - 6 PM)	263	38	225	118	145
HF42	Maple Avenue & Campfield Avenue	Hartford	Intersection	Weekday (4 - 6 PM)	151	38	113	49	102
HF44	Franklin Avenue & Maple Avenue	Hartford	Intersection	Weekday (4 - 6 PM)	163	92	71	21	142
HF45	Charter Oak Avenue & Wyllis Street	Hartford	Intersection	Weekday (4 - 6 PM)	77	12	65	35	42
HF6	Farmington Ave & Sisson Ave	Hartford	Intersection	Weekday (5 - 6 PM)	81	14	67	24	57
HF9	Farmington Avenue & Woodland Street	Hartford	Intersection	Weekday (4 - 6 PM)	206	41	165	84	122
MA1	Bolton Road & Route 195	Mansfield	Intersection	Weekday (4 - 6 PM)	700	39	661	382	318
MA4	Route 195 & Route 275	Mansfield	Intersection	Weekday (4 - 6 PM)	169	33	136	86	83
MC5	Charter Oak Greenway at Spencer Street	Manchester	Screenline	Weekday (4 - 6 PM)	15	3	12	6	9
MC5	Charter Oak Greenway at Spencer Street	Manchester	Screenline	Weekday (4 - 6 PM)	19	13	6	0	19
NB1	West Main Street & Corbin Avenue	New Britain	Intersection	Weekend (11AM - 1 PM)	35	6	29	11	24
NB2	Farmington Avenue & Corbin Avenue	New Britain	Intersection	Weekday (4 - 6 PM)	9	2	7	4	5
NB4	East Street & Paul Manafort Drive	New Britain	Intersection	Weekday (4 - 6 PM)	15	4	11	3	12
NB5	East Main Street & Harvard Street	New Britain	Intersection	Weekday (4 - 6 PM)	39	5	34	10	29
NB8	Main Street & Columbus Street	New Britain	Intersection	Weekday (4 - 6 PM)	422	38	384	151	271
NE2	Cedar Street & Willard Avenue	Newington	Intersection	Weekday (4 - 6 PM)	9	5	4	1	8
NE3	Cedar Street and Fenn Road	Newington	Intersection	Weekday (4 - 6 PM)	6	3	3	1	5
NE4	Willard Avenue and West Hill Road	Newington	Intersection	Weekday (4 - 6 PM)	34	14	20	5	29
NE5	Myra Cohen Boulevard	Newington	Screenline	Weekday (4 - 6 PM)	24	2	22	7	17
NE6	Ctfastrak Multi-Use Trail (Cedar Street Ctfastrak Station)	Newington	Screenline	Weekday (4 - 6 PM)	10	8	2	0	10
PL2	Cooke Street and New Britain Avenue	Plainville	Intersection	Weekday (4 - 6 PM)	38	5	33	10	28
SI1	Farmington Canal Heritage Trail at Canal Street	Simsbury	Screenline	Weekend (11AM - 1 PM)	95	70	25	37	58

Data Table 1: Detailed Counts									
CRCOG ID	Intersection/St	Municipality	Count Type	Time	Total Count	Cyclists	Pedestrians	Female	Male
SW2	Tamarack Avenue and Buckland Road	South Windsor	Intersection	Weekday (4 - 6 PM)	17	1	16	6	11
SW3	Ellington Road, Sullivan Avenue, Buckland Road, Oakland Avenue	South Windsor	Intersection	Weekday (4 - 6 PM)	2	0	2	1	1
SW4	Main Street and Pleasant Street	South Windsor	Intersection	Weekday (4 - 6 PM)	17	13	4	8	9
VE1	Hop River Trail at Phoenix Street	Vernon	Screenline	Weekend (11AM - 1 PM)	173	78	95	84	89
VE2	Route 74 and West Main Street / Elm Street	Vernon	Intersection	Weekday (4 - 6 PM)	44	6	38	14	30
WH11	New Park Avenue & Flatbush Avenue	West Hartford	Intersection	Weekday (4 - 6 PM)	100	29	71	24	76
WH12	New Britain Avenue & New Park Avenue	West Hartford	Intersection	Weekday (4 - 6 PM)	31	8	23	9	22
WH8	Route 71 & Route 173	West Hartford	Intersection	Weekday (4 - 6 PM)	31	4	27	11	20
WH9	Trout Brook Trail at Quaker Lane	West Hartford	Screenline	Weekend (11AM - 1 PM)	24	4	20	11	13
WL1	Main Street and Bridge Street	Windsor Locks	Intersection	1 - Weekday (7-9AM)	15	5	10	6	9
WL1	Main Street and Bridge Street	Windsor Locks	Intersection	Weekday (4 - 6 PM)	31	13	18	10	21
WL2	Windsor Locks Canal Trail at Main Street / Bridge Street	Windsor Locks	Screenline	Weekend (11AM - 1 PM)	24	9	15	11	13

Data Table 2: Detailed Counts - Males									
CRCOG ID	Male - Bicyclists - No Helmet	Male - Bicyclists - With Traffic	Male - Bicyclists - Against Traffic	Male - Bicyclists - On Sidewalk/Trail	Male - Peds - Adult on Foot	Male - Peds - Recreational User	Male - Peds - Children (Inc Stroller)	Male - Peds - Assisted	Male - Peds - Other
AV1	1	0	1	20	5	0	0	1	0
CA1	6	72	1	0	19	0	0	0	0
CA1	1	3	0	9	11	0	2	0	0
CA10	8	60	0	0	14	0	0	0	0
CA10	6	0	0	11	5	0	0	0	0
CA2	20	114	2	0	99	0	6	0	0
CA2	3	18	0	0	2	3	4	0	0
CA9	8	56	0	0	20	0	0	0	0
CA9	1	1	0	10	4	14	0	0	0
CV1	0	1	0	0	1	0	0	0	0
CV2	2	3	0	0	2	0	0	0	0
EH1	3	3	1	0	22	0	0	0	0
EL4	0	4	0	3	6	0	0	0	0
EW1	1	1	0	0	3	0	1	0	0
FA1	9	0	0	43	15	7	1	0	0
FA2	21	0	0	100	25	0	7	1	0
FA6	0	1	0	0	1	0	0	0	0
GL2	1	1	0	2	12	0	4	0	0
HE1	0	0	0	0	0	0	1	0	0
HF10	30	7	2	23	109	1	9	2	0
HF12	22	23	5	7	50	1	5	0	0
HF22	8	7	1	6	34	0	2	0	21
HF23	20	7	1	26	217	0	4	1	0
HF26	8	9	1	0	27	0	6	2	0
HF37	5	0	0	6	3	0	0	0	0
HF38	5	3	2	1	2	0	2	0	0
HF4	1	0	0	2	3	2	0	0	0

Data Table 2: Detailed Counts - Males									
CRCOG ID	Male - Bicyclists - No Helmet	Male - Bicyclists - With Traffic	Male - Bicyclists - Against Traffic	Male - Bicyclists - On Sidewalk/Trail	Male - Peds - Adult on Foot	Male - Peds - Recreational User	Male - Peds - Children (Inc Stroller)	Male - Peds - Assisted	Male - Peds - Other
HF40	29	34	0	1	81	0	27	2	0
HF42	35	15	6	14	56	0	11	0	0
HF44	85	47	13	30	45	2	5	0	0
HF45	3	6	0	4	32	0	0	0	0
HF6	11	12	0	2	40	2	0	1	0
HF9	27	13	1	20	74	0	8	6	0
MA1	23	8	0	19	260	21	8	0	2
MA4	13	3	1	12	55	10	2	0	0
MC5	1	0	0	3	6	0	0	0	0
MC5	6	2	2	9	3	3	0	0	0
NB1	5	2	1	3	18	0	0	0	0
NB2	1	2	0	0	3	0	0	0	0
NB4	2	1	0	2	8	0	0	0	1
NB5	5	1	0	4	23	0	0	1	0
NB8	32	13	11	13	222	2	9	1	0
NE2	5	2	0	3	1	2	0	0	0
NE3	1	0	0	2	3	0	0	0	0
NE4	7	6	1	7	12	0	2	1	0
NE5	2	2	0	0	15	0	0	0	0
NE6	4	0	0	8	2	0	0	0	0
PL2	1	3	2	0	22	0	1	0	0
SI1	13	0	0	44	13	0	1	0	0
SW2	0	0	0	1	6	4	0	0	0
SW3	0	0	0	0	1	0	0	0	0
SW4	4	9	0	0	0	0	0	0	0
VE1	22	1	0	50	37	0	1	0	0
VE2	6	3	0	3	12	0	12	0	0

Data Table 2: Detailed Counts - Males									
CRCOG ID	Male - Bicyclists - No Helmet	Male - Bicyclists - With Traffic	Male - Bicyclists - Against Traffic	Male - Bicyclists - On Sidewalk/Trail	Male - Peds - Adult on Foot	Male - Peds - Recreational User	Male - Peds - Children (Inc Stroller)	Male - Peds - Assisted	Male - Peds - Other
WH11	27	5	0	24	45	0	0	2	0
WH12	7	2	1	4	13	0	2	0	0
WH8	4	1	1	2	12	1	3	0	0
WH9	2	0	0	3	9	0	1	0	0
WL1	3	4	0	0	4	0	0	0	1
WL1	3	7	0	2	7	3	0	0	2
WL2	8	6	2	0	4	0	1	0	0

Data Table 3: Detailed Counts - Females									
CRCOG ID	Female - Bicyclists - No Helmet	Female - Bicyclists - With Traffic	Female - Bicyclists - Against Traffic	Female - Bicyclists - On Sidewalk/Trail	Female - Peds - Adult on Foot	Female - Peds - Recreational User	Female - Peds - Children (Inc Stroller)	Female - Peds - Assisted	Female - Peds - Other
AV1	0	0	0	6	10	0	1	0	0
CA1	5	46	0	0	20	0	0	0	0
CA1	1	2	1	1	21	0	0	0	0
CA10	8	50	0	0	18	0	0	0	0
CA10	0	0	0	0	7	0	0	0	0
CA2	12	93	2	0	119	0	27	0	4
CA2	3	12	0	0	10	3	0	0	0
CA9	7	47	0	0	23	0	0	0	0
CA9	0	0	0	0	5	3	0	0	0
CV1	0	0	0	0	0	0	0	0	0
CV2	0	0	0	0	3	0	0	0	0
EH1	0	0	0	0	16	0	3	0	0
EL4	0	1	0	0	3	0	0	0	0
EW1	1	0	1	0	0	0	3	0	0
FA1	11	0	0	27	16	5	2	0	0
FA2	21	0	0	75	41	2	15	1	0
FA6	0	0	0	0	12	0	0	0	0
GL2	0	0	0	0	11	0	5	0	0
HE1	0	0	0	0	0	0	3	0	0
HF10	0	0	0	0	59	0	4	3	0
HF12	0	2	0	0	18	0	10	0	0
HF22	0	2	0	1	42	0	2	0	7
HF23	1	0	0	1	120	0	0	0	0
HF26	1	1	0	0	25	0	20	0	0
HF37	0	0	0	0	0	0	0	0	0
HF38	0	0	0	0	11	0	2	0	0
HF4	0	0	0	1	5	0	0	0	0

Data Table 3: Detailed Counts - Females									
CRCOG ID	Female - Bicyclists - No Helmet	Female - Bicyclists - With Traffic	Female - Bicyclists - Against Traffic	Female - Bicyclists - On Sidewalk/Trail	Female - Peds - Adult on Foot	Female - Peds - Recreational User	Female - Peds - Children (Inc Stroller)	Female - Peds - Assisted	Female - Peds - Other
HF40	0	3	0	0	88	0	27	0	0
HF42	3	1	0	2	32	0	14	0	0
HF44	2	2	0	0	17	0	2	0	0
HF45	0	2	0	0	32	1	0	0	0
HF6	0	0	0	0	24	0	0	0	0
HF9	3	2	0	5	62	0	12	3	0
MA1	10	3	1	8	358	8	4	0	0
MA4	12	5	0	12	46	20	3	0	0
MC5	0	0	0	0	6	0	0	0	0
MC5	0	0	0	0	0	0	0	0	0
NB1	0	0	0	0	10	0	0	1	0
NB2	0	0	0	0	4	0	0	0	0
NB4	1	1	0	0	2	0	0	0	0
NB5	0	0	0	0	10	0	0	0	0
NB8	1	1	0	0	138	0	10	2	0
NE2	0	0	0	0	1	0	0	0	0
NE3	0	0	0	1	0	0	0	0	0
NE4	0	0	0	0	5	0	0	0	0
NE5	0	0	0	0	7	0	0	0	0
NE6	0	0	0	0	0	0	0	0	0
PL2	0	0	0	0	9	0	1	0	0
SI1	5	0	0	26	9	1	1	0	0
SW2	0	0	0	0	6	0	0	0	0
SW3	0	0	0	0	1	0	0	0	0
SW4	0	4	0	0	4	0	0	0	0
VE1	16	0	0	27	57	0	0	0	0
VE2	0	0	0	0	8	0	6	0	0

Data Table 3: Detailed Counts - Females									
CRCOG ID	Female - Bicyclists - No Helmet	Female - Bicyclists - With Traffic	Female - Bicyclists - Against Traffic	Female - Bicyclists - On Sidewalk/Trail	Female - Peds - Adult on Foot	Female - Peds - Recreational User	Female - Peds - Children (Inc Stroller)	Female - Peds - Assisted	Female - Peds - Other
WH11	0	0	0	0	24	0	0	0	0
WH12	1	1	0	0	8	0	0	0	0
WH8	0	0	0	0	9	1	1	0	0
WH9	0	0	0	1	9	0	1	0	0
WL1	0	0	0	1	5	0	0	0	0
WL1	3	3	1	0	4	2	0	0	0
WL2	1	1	0	0	7	0	2	1	0

Data Table 4: Detailed Counts – All Users													
CRCOG ID	Bicyclists - No Helmet	Bicyclists - With Traffic	Bicyclists - Against Traffic	Bicyclists - On Sidewalk/Trail	Peds - Adults on Foot	Peds - Recreational User	Peds - Children (Inc Stroller)	Peds - Assisted	Peds - Other	Peds - Female	Peds - Male	Bicyclists - Female	Bicyclists - Male
AV1	1	0	1	26	15	0	1	1	0	11	6	6	21
CA1	11	118	1	0	39	0	0	0	0	20	19	46	73
CA1	2	5	1	10	32	0	2	0	0	21	13	4	12
CA10	16	110	0	0	32	0	0	0	0	18	14	50	60
CA10	6	0	0	11	12	0	0	0	0	7	5	0	8
CA2	32	207	4	0	218	0	33	0	4	150	105	95	116
CA2	6	30	0	0	12	6	4	0	0	13	9	12	18
CA9	15	103	0	0	43	0	0	0	0	23	20	47	56
CA9	1	1	0	10	9	17	0	0	0	8	18	0	11
CV1	0	1	0	0	1	0	0	0	0	0	1	0	1
CV2	2	3	0	0	5	0	0	0	0	3	2	0	3
EH1	3	3	1	0	38	0	3	0	0	19	22	0	4
EL4	0	5	0	3	9	0	0	0	0	3	6	1	7
EW1	2	1	1	0	3	0	4	0	0	3	4	1	1
FA1	20	0	0	70	31	12	3	0	0	23	23	27	43
FA2	42	0	0	175	66	2	22	2	0	59	33	75	100
FA6	0	1	0	0	13	0	0	0	0	12	1	0	1
GL2	1	1	0	2	23	0	9	0	0	16	16	0	3
HE1	0	0	0	0	0	0	4	0	0	3	1	0	0
HF10	30	7	2	23	168	1	13	5	0	66	121	0	32
HF12	22	25	5	7	68	1	15	0	0	28	56	2	35
HF22	8	9	1	7	76	0	4	0	28	51	57	3	14
HF23	21	7	1	27	337	0	4	1	0	120	222	1	34
HF26	9	10	1	0	52	0	26	2	0	45	35	1	10
HF37	5	0	0	6	3	0	0	0	0	0	3	0	6
HF38	5	3	2	1	13	0	4	0	0	13	4	0	6
HF4	1	0	0	3	8	2	0	0	0	5	5	1	2

HF40	29	37	0	1	169	0	54	2	0	115	110	3	35
HF42	38	16	6	16	88	0	25	0	0	46	67	3	35
HF44	87	49	13	30	62	2	7	0	0	19	52	2	90
HF45	3	8	0	4	64	1	0	0	0	33	32	2	10
HF6	11	12	0	2	64	2	0	1	0	24	43	0	14
HF9	30	15	1	25	136	0	20	9	0	77	88	7	34
MA1	33	11	1	27	618	29	12	0	2	370	291	12	27
MA4	25	8	1	24	101	30	5	0	0	69	67	17	16
MC5	1	0	0	3	12	0	0	0	0	6	6	0	3
MC5	6	2	2	9	3	3	0	0	0	0	6	0	13
NB1	5	2	1	3	28	0	0	1	0	11	18	0	6
NB2	1	2	0	0	7	0	0	0	0	4	3	0	2
NB4	3	2	0	2	10	0	0	0	1	2	9	1	3
NB5	5	1	0	4	33	0	0	1	0	10	24	0	5
NB8	33	14	11	13	360	2	19	3	0	150	234	1	37
NE2	5	2	0	3	2	2	0	0	0	1	3	0	5
NE3	1	0	0	3	3	0	0	0	0	0	3	1	2
NE4	7	6	1	7	17	0	2	1	0	5	15	0	14
NE5	2	2	0	0	22	0	0	0	0	7	15	0	2
NE6	4	0	0	8	2	0	0	0	0	0	2	0	8
PL2	1	3	2	0	31	0	2	0	0	10	23	0	5
SI1	18	0	0	70	22	1	2	0	0	11	14	26	44
SW2	0	0	0	1	12	4	0	0	0	6	10	0	1
SW3	0	0	0	0	2	0	0	0	0	1	1	0	0
SW4	4	13	0	0	4	0	0	0	0	4	0	4	9
VE1	38	1	0	77	94	0	1	0	0	57	38	27	51
VE2	6	3	0	3	20	0	18	0	0	14	24	0	6
WH11	27	5	0	24	69	0	0	2	0	24	47	0	29
WH12	8	3	1	4	21	0	2	0	0	8	15	1	7
WH8	4	1	1	2	21	2	4	0	0	11	16	0	4

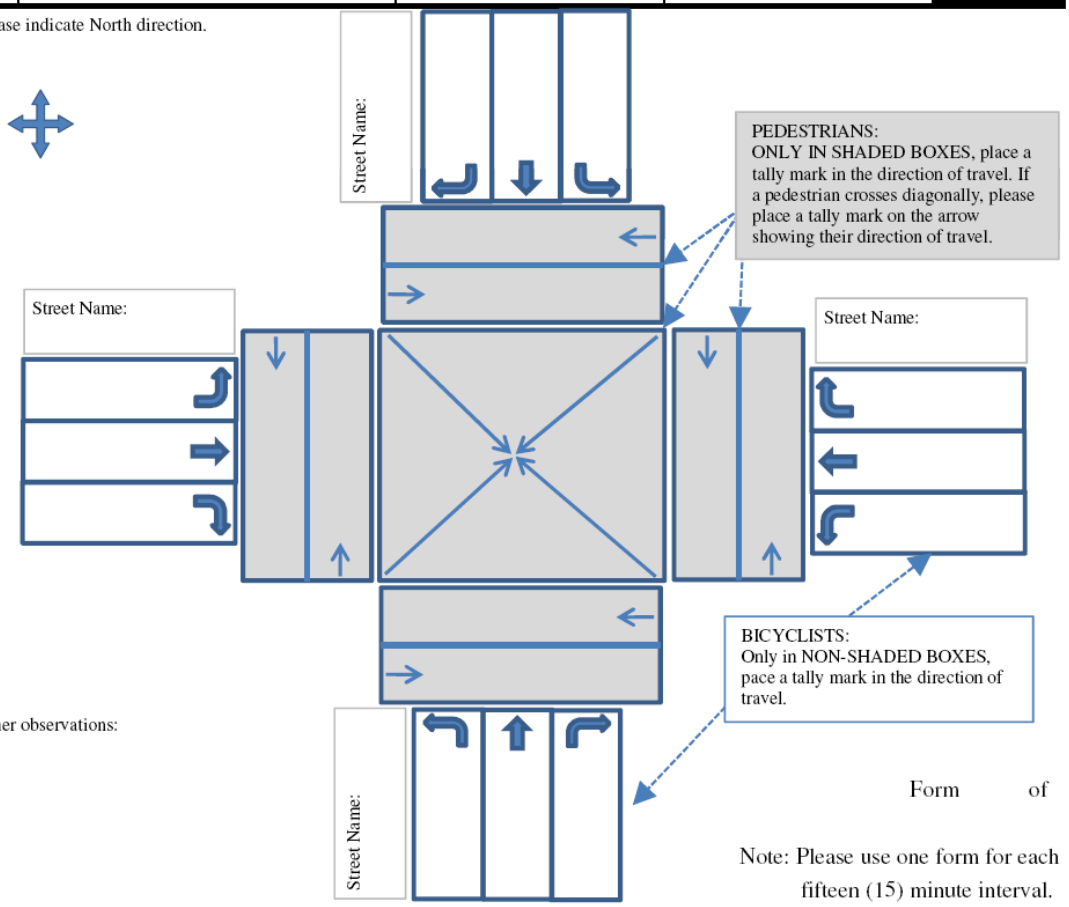
WH9	2	0	0	4	18	0	2	0	0	10	10	1	3
WL1	3	4	0	1	9	0	0	0	1	5	5	1	4
WL1	6	10	1	2	11	5	0	0	2	6	12	4	9
WL2	9	7	2	0	11	0	3	1	0	10	5	1	8

CRCOG Bicycle - Pedestrian Count Program
Data Collection - Intersection Count Form

Intersection: Date:
Municipality: Weather Conditions:
Counter Name: Interval Number: of
Start Time: Time Period:

		Female	Male	Total
Bike	No Helmet			
	With Traffic			
	Against Traffic			
	On Sidewalk			
	Total Bicyclists:			
Pedestrian	Adult on foot			
	Recreational User			
	Children (Incl. Stroller)			
	Assisted			
	Other			
	Total Pedestrians:			

Please indicate North direction.



Other observations:

Form of

Note: Please use one form for each fifteen (15) minute interval.

CRCOG Bicycle - Pedestrian Count Form
Data Collection - Screenline Count

Location: _____ E N S W of _____ Date:
Municipality: Weather Conditions:
Counter Name: Time Period:

Interval (Write in actual time)		Bicyclists				Pedestrians				
		No Helmet	On Road		On Sidewalk / Trail	Adults on Foot	Recreational User	Children (Incl. Stroller)	Assisted	Total
			With Traffic	Against Traffic						
1	Male									
	Female									
2	Male									
	Female									
3	Male									
	Female									
4	Male									
	Female									
5	Male									
	Female									
6	Male									
	Female									
7	Male									
	Female									
8	Male									
	Female									
	Total (Male):									
	Total (Female):									