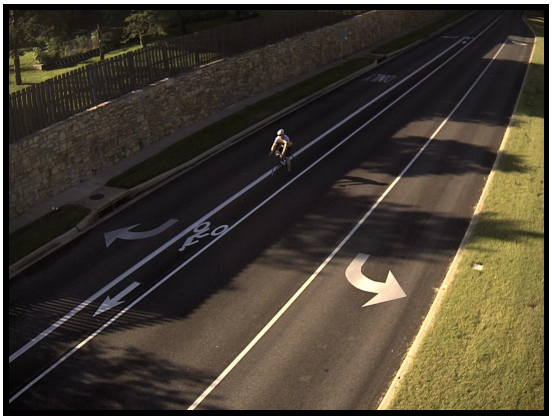
Bicycle Master Plan Update

(October 2016)



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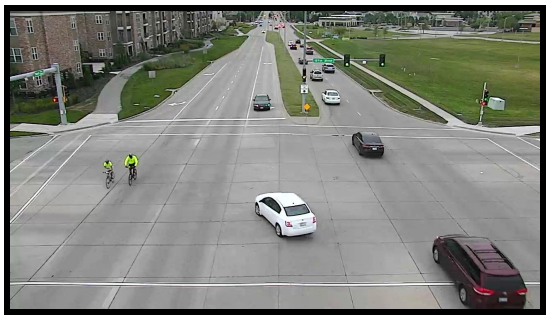

Background

On Monday, April 13, 2015, the City Council adopted the Overland Park Safe Bicycle Use Outreach Project (now known as the Bicycle Master Plan) by a vote of 10-1 (Goodman - No; Thompson - Excused Absence). During discussion that evening, the Council directed that an annual report be prepared to focus on various metrics. Most importantly, staff was to determine some objective way to measure the amount of bicycle usage across the city and review annually crash patterns involving cyclists and vehicular traffic. This document represents our first such report to the Governing Body.

2015 Implementation Plan

After the bicycle master plan was adopted, staff developed four possible implementation plans that built on one another. The Public Works Committee vetted the four options and eventually settled on what became known as Option 4. This option provided for the striping of approximately 20 miles of streets at a cost not to exceed $250,000. The full Council heard the details of the plan on June 15, 2015 and approved it by a vote of 8-4 (Goodman, Janson, Skubal, White - No).

The Option 4 plan focused the vast majority of work in the southern portion of Overland Park since there is federal funding already in place for a 2017 project that focuses on northern Overland Park. Bike lane striping and shared lane markings were added to various street maintenance contracts (chip seal and UBAS) to fulfill part of the Option 4 plan. The street maintenance work left some areas of disjointment so city forces filled in missing segments of streets by using the city paint machine.

Contractor stripes first bike lanes ever in Overland Park on Roe, south of 159th Street

By the end of summer 2015, all of the work had been completed for Option 4 except for the following:

- Nieman, 119th to 127th (2016 chip seal)
- 123rd Street, Nieman to Switzer (2016 chip seal)
- Lamar, 127th to the 12900 block (2016 chip seal)
- 159th Street, Metcalf to Nall (construction underway with striping in 2016/17)

The first three streets were selected for the 2016 chip seal program after Option 4 was approved. The striping would have consisted of shared lane markings (or sharrows) and no dedicated bike lanes. Staff

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chose not to proceed with them at the time in order to better utilize city resources. No decision has been made as to when these streets (which have been approved) will be striped.

The fourth location on 159th Street was partially completed in 2016 and was recently striped from the Blue Valley High School west driveway to Nall, but the remaining section to the west (towards Metcalf) is still under construction and will likely not be striped until spring 2017.

In total, 10.4 centerline miles of bike lanes and 5.2 miles of shared lane markings (sharrows) were striped at a cost of $154,259 ($137,407 by contractor and $16,852 by city forces).

In addition to the work approved in the Option 4 plan, staff was also in the process of designing various street improvement projects for construction in 2017 or later. Thus, three different projects were presented to the Governing Body in the last year to determine the proposed street cross-section for design purposes. These projects include:

- 143rd Street, Pflumm to Quivira (construction in 2017)
- 159th Street, Nall to Mission (construction in 2016/17)
- Metcalf, 159th to 167th (construction in 2018)

The first project on 143rd Street is a joint project with Olathe (and Olathe is administering the project). The cross section approved by both city councils (OP by a vote of 7-3-1; Goodman, Thompson, White - No; Skubal - Abstain; Lyons - Excused Absence) will provide a three-lane street (one lane each direction with a center lane for turns) and include 5’ bike lanes in each direction.

The second project on 159th Street includes the necessary width for bike lanes, but a determination on actually striping them is pending. At this time the street width will provide an 11’ inside lane and a 15’ outside lane in each direction. Should the Council decide to move ahead with additional bike lane striping, the 15’ lane will be striped as an 11’ travel lane and a 4’ bike lane. This proposed cross-section with the bike lanes would match the existing project to the west between Metcalf and Nall (11’ travel lanes and a 4’ bike lane each direction). *Since this project is currently under construction, a decision on striping the bike lanes would be appropriate at this time.*

The third project on Metcalf, 159th Street to 167th Street, is the same as the 159th Street project. It is being designed for the necessary width to include bike lanes, but a decision on striping the bike lanes is still pending. The decision on striping the bike lanes can be made now or delayed until next year.

One final item to note concerns markings that city crews placed on 133rd Street between Antioch and Metcalf. This segment was included in the Option 4 plan to connect 133rd Street to the Tomahawk Creek Trail system at Metcalf and not leave a system gap in the first year implementation. Unfortunately, shortly after the segment was striped, the list of chip seal streets for 2016 was released and staff determined this segment would undergo street maintenance. The chip seal was applied in 2016 and no remarking of this segment has yet occurred.

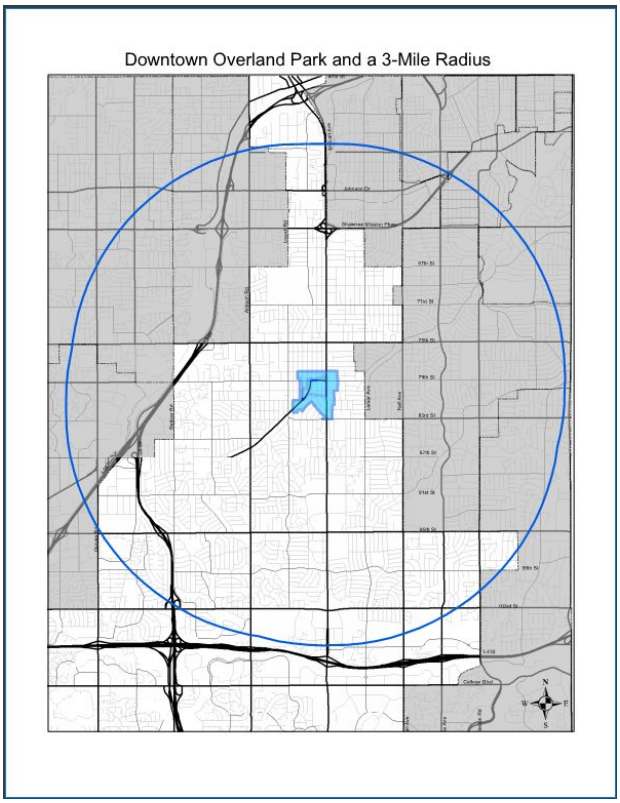
2016 Implementation Plan

During the development of the bicycle master plan, staff discovered that the wider outside lanes (13’) that had been striped on thoroughfares for many years to provide some additional width for bicycles was actually under the required AASHTO minimum (14’). Starting with projects in 2016, the outside

lane striping was adjusted on four-lane streets identified in the bicycle master plan as future bike routes in order to accommodate the AASHTO minimum. No additional projects to stripe bike lanes or add sharrows were proposed or approved for 2016.

2017 Implementation Plan

Staff had previously applied for federal funds and was awarded Congestion Mitigation Air Quality (CMAQ) funds for a project that would focus on providing bicycle improvements in downtown Overland Park and within a three mile radius (see graphic below).



This CIP project (ST-1661) is funded at $325,000 ($85,000 PAYG and $240,000 CMAQ) and will allow for approximately 30 centerline miles of bicycle markings in northern Overland Park. Plans are currently being prepared by staff and reviewed by KDOT. Work will likely commence during the summer of 2017. A separate agenda item will be presented at the October PWC meeting to approve the city-state agreement with KDOT for this project.

Five proposed chip seal streets in 2017 are also on current or proposed bike routes. The first four, all in northern Overland Park, are as follows:

- Lamar from 95th Street to 103rd Street
- Lowell from 79th Street to 87th Street
- Grant from 87th Street to 91st Street
- 99th Terrace from Carter to Antioch

The chip seal contractor will be required to stripe any existing centerline or lane lines and special markings on these streets. It would be best from a contractual viewpoint to have this same contractor stripe any bike lane markings that are needed (sharrows in this case). The cost to do this work would

be approximately $26,000 and would be included as part of the overall chip seal contract pavement markings.

The other location is on 133rd Street between Nieman and Switzer. Bike lanes were striped on this street in 2015 using city resources (using paint as a cheaper alternative to the more durable markings typically used on a street maintenance project), knowing that a chip seal project would be needed in the near future. If the replacement of these city painted bike lanes are not included with the 2017 chip seal project, two separate gaps will exist when the project is complete … one gap from Nieman to Goddard and another gap from Melrose to Switzer. The cost to do this work would be approximately $5,000 and would be included as part of the overall chip seal contract pavement markings.

One additional CIP project is under design to be constructed in 2017 which will impact a proposed bike route. This project is the complete reconstruction of Grant from 79th Street to 87th Street. Since this street is a proposed bike route, staff is considering adding sharrows as part of the overall pavement markings to be installed with the reconstruction. The cost to do this work as part of the reconstruction project will be approximately $10,000.

Future Implementation Plans

Each fall staff will report on the progress to date of implementing the bicycle master plan and list proposed projects for the following year. With this in mind, staff has applied for federal funds in 2019 to stripe bike lanes in southern Overland Park. The funding of this proposed project will be part of our upcoming CIP discussions this fall. The 2019 federal funding amount requested through MARC is $400,000, and the city would be required to match that with an additional $100,000 (the typical 80-20 split). This would allow for approximately 50 centerline miles to be striped.

Bicycle Plan Metrics

Crash Analysis

When the bicycle master plan was crafted, one of the areas of emphasis was creating a safer bicycling environment in Overland Park. A number of strategies can help foster that safer environment including marking various streets as bike routes (thereby giving cyclists a place to ride and giving drivers better information that they may encounter cyclists on a particular route), encouraging riders to ride more safely (i.e., using helmets) and stressing the need to bicyclists and drivers to obey existing laws and always ride/drive defensively.

With the initial implementation of the bicycle master plan in the summer of 2015, approximately 16 miles of bike lanes and shared lane markings were created on streets in southern Overland Park. Lane widths varied between 10’ and 11’ for vehicles and 4’ to 5’ for bicycles. In one four-lane street location (Santa Fe between 83rd and 87th), the street was striped such that a future project would be able to stripe a 4’ bike lane where a 14’ dual-use lane exists today (thus creating 4-10’ travel lanes and 2-4’ bike lanes in the future).

Santa Fe Drive with 4-12' lanes

Santa Fe Drive with 10' inside lanes and 14' outside lanes

In order to look at various safety related issues with our first year implementation, staff reviewed vehicular crashes on streets recently striped with bike lanes or sharrows as well as citywide bicycle crashes over the last 12 months (October 1, 2015 to September 30, 2016). A review of crash records from 2014 (before implementation) was also completed as a comparison for before and after impacts.

A concern was raised early on that reducing lane widths could lead to more crashes (whether between vehicles or between vehicles and bicycles). However, the crash records did not show any negative trend to that effect. There were no random head-on crashes or sideswipe crashes between vehicles in the bicycle corridors implemented last year. For a typical street with a traffic load of 10,000 vehicles per day, over the course of a year the street would have approximately three million vehicle trips. With that level of activity in the last 12-months, there was ample time and opportunity to see if reductions in lane widths were truly creating safety issues.

As for bike crashes overall, the following table outlines the total number of annual crashes which the Overland Park Police responded to in our city since 2000:

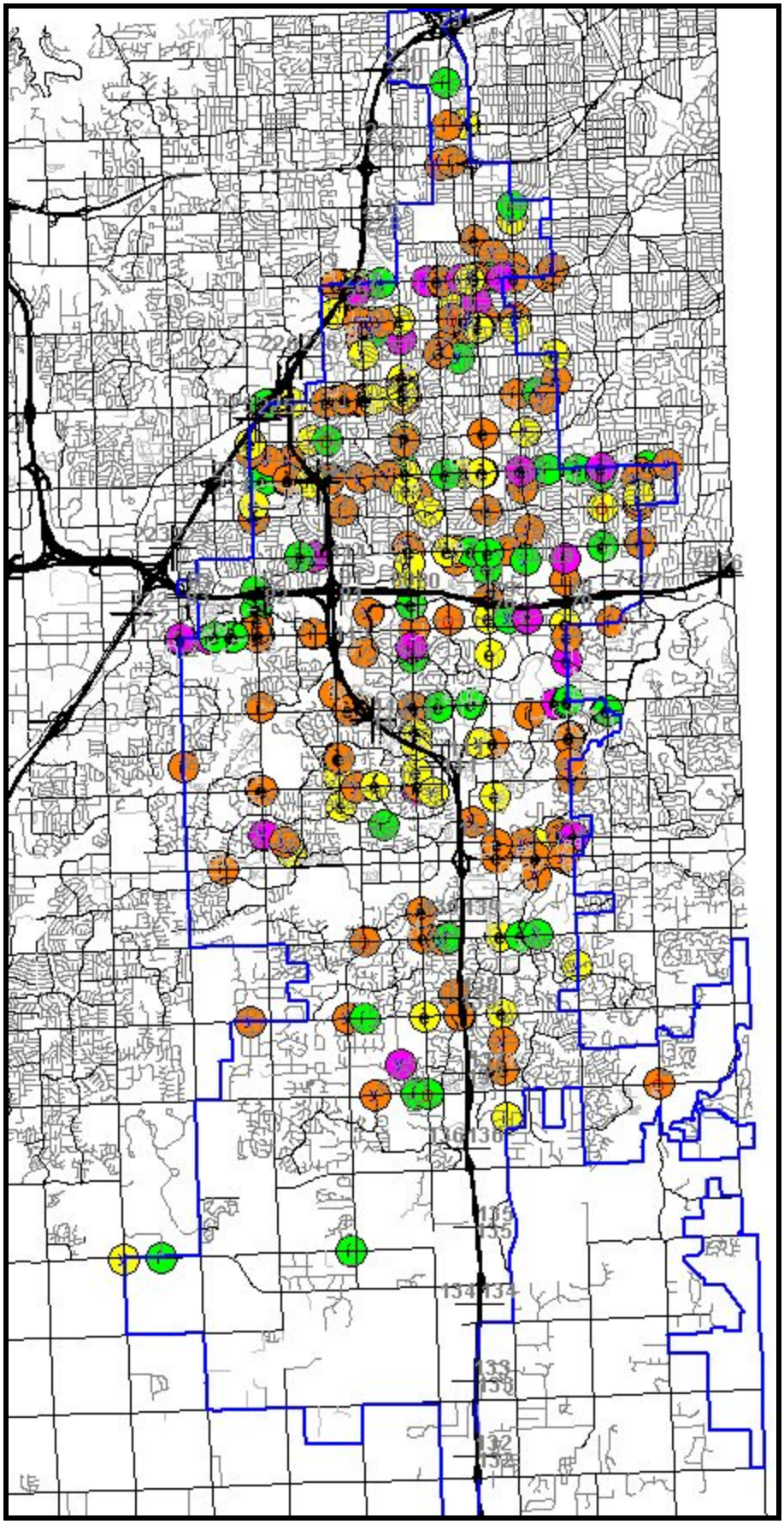
Year	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16*
Freq	13	11	16	22	19	13	26	19	17	20	19	19	19	17	15	22	13

Note: * (through September 30, 2016)

The average annual number of bicycle crashes between 2000 and 2015 is 17.9 crashes per year (287 crashes over 16 years). Estimating the total number of bike crashes for 2016 based on the number of bike crashes through the first three quarters of this year suggests that we will have similar results as in prior years (13 in nine months would be about 17 or 18 by year's end).

Looking further at all of the bike crashes since 2000, the following map depicts the location and severity of each crash. Various observations can be made from this crash map:

- Crashes happen throughout the city … which means bicycles are being ridden throughout the city.
- More often than not, a bicycle crash results in some type of injury to the rider (i.e., there are not as many green dots on the map).
- There are a large number of bicycle crashes on thoroughfares or at streets crossing thoroughfares (so bikes are already on some of our busiest streets).
- There is a concentration of bicycle crashes in and around the downtown area (the city has a federally funded CIP project to stripe many of the streets in northern OP in 2017).



Note: Green (Non-injury); Yellow (Possible injury); Orange (Injury); Magenta (Disabling injury); Red (Fatality)

The following table gives a short summary for each bike crash during the last 12 months:

Case No.	Date	Day	Time	Location	Severity	Age	Sex	Bike Route? Marked?	Description
2015-020869	10/20/15	T	1455	87th & Switzer	I	16	M	Y N	Bike WB in x-walk hit by SB driver (H&R)
2015-021895	11/04/15	W	1720	75th & Santa Fe	D	10	F	Y N	Bike SB on Santa Fe hit by EB vehicle
2015-022165	11/08/15	S	1155	79th & Grandview	I	34	M	Y N	Bike WB on 79th hit by EBLT vehicle
2015-022525	11/13/16	F	1126	7200 block of 75th	P	30	M	N N	Bike EB in x-walk struck SB vehicle waiting to turn
2015-023138	11/21/15	A	1554	87th & Farley	I	16	M	Y N	Bike EB in x-walk struck SBRT vehicle
2015-023852	12/02/15	W	0726	9200 block of 87th	P	16	M	Y N	Bike NB midblock struck by SBLT vehicle
2016-001944	01/27/16	W	0705	87th & Grant	P	15	M	Y N	Bike NB in x-walk hit by NBLT (H&R)
2016-004685	03/02/16	W	1650	155th Ct & England	D	9	M	Y N	Bike hit making a LT in front of vehicle.
2016-009048	04/29/16	F	1159	135th & Outlook	I	23	F	N N	Bike EB on 135th hit by NB driver
2016-009206	05/01/16	S	1730	97th & Quivira	P	16	M	N N	Bike SB in x-walk struck WB vehicle waiting to turn
2016-009528	05/05/16	R	1503	123rd & Nall	I	15	M	Y Y	Bike EB in x-walk struck EBRT vehicle
2016-013701	06/28/16	T	1615	124th & Nall	I	29	M	Y N	Bike NB in x-walk struck by EBRT vehicle
2016-014258	07/06/16	W	1250	127th & Grant	P	23	M	Y N	Bike WB in x-walk struck side of SB vehicle
2016-017121	08/13/16	A	2206	75th & Lowell	I	18	M	Y N	Bike WB on 75th struck side of NB vehicle
2016-018453	08/30/16	T	1740	143rd & Dearborn	N	28	M	Y N	Bike EB in x-walk struck by SBRT vehicle
2016-018555	09/02/16	F	1010	I-435 WB off-ramp & Quivira	I	18	M	N N	Bike SB in x-walk struck by WBRT vehicle (H&R)
2016-018993	09/08/16	R	1300	99th & Metcalf	I	22	F	N N	Bike SB in x-walk struck by WBRT vehicle
2016-019835	09/20/16	T	0640	7000 block of 79th St	I	56	M	Y N	Bike WB on 79th hit from behind
2016-019889	09/20/16	T	1753	103rd & Goddard	D	51	M	Y N	Bike WB in x-walk struck by NBRT vehicle

Note: Crash records cover October 1, 2015 to September 30, 2016

Day: **M** - Monday, **T** - Tuesday, **W** - Wednesday, **R** - Thursday, **F** - Friday, **A** - Saturday, **S** - Sunday

Severity: **N** - Non-injury, **P** - Possible injury, **I** - Injury, **D** - Disabling injury, **F** - Fatality

Other: **NB** - Northbound, **NBLT** - Northbound left turn, **NBRT** - Northbound right turn, **H&R** - Hit & run

Of these 19 crashes, only one was a non-injury crash. This is consistent with the overall view of bicycle crashes citywide as shown in the prior map. Rider ages is also something worth noting as 10 of the 19 crashes involved people 18 years old or younger. This would certainly be a demographic to reach out to for future safety initiatives whether through the city or through other local groups (such as BikeWalkKC or bike clubs such as Cycling Kansas City). However, the most glaring issue to note is the location of a vast majority of the crashes. Twelve of the 19 crashes occurred in crosswalks, places where riders and others may feel should be safe areas. Both bicyclists and vehicular drivers were at fault in these crashes. For cyclists, they need to do a better job of obeying the law, stopping before entering crosswalks and using the push buttons to activate the crossing signals. For drivers, they need to pay closer attention to their surrounding environment, especially when making turns. Here are some quick stats for the last 12 months:

95 - Percent of injury bicycle crashes (18 out of 19)
56 - Age of oldest rider in a bicycle crash
19 - Total number of bicycle crashes
14 - Number of bicycle crashes that occurred on a bike route (74%)
12 - Number of bicycle crashes occurring in a crosswalk (63%)
9 - Age of youngest rider in a bicycle crash
3 - Number of females involved in a bicycle crash (16%)
1 - Number of crashes that occurred on a bike route that is already marked (5%) (in a crosswalk)

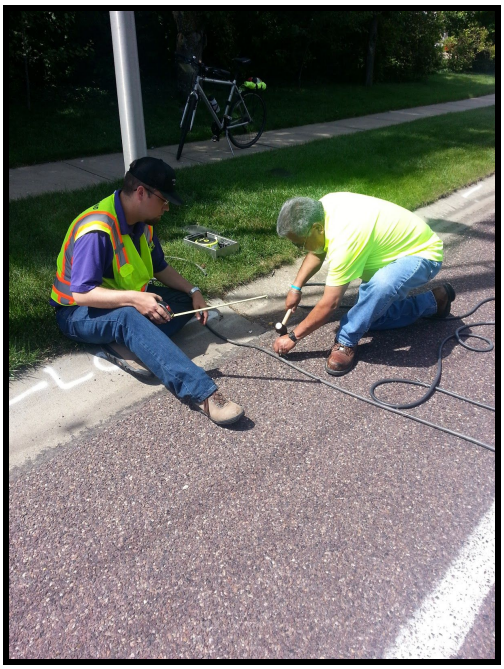
Number of Crashes by Day of Week			**Number of Crashes by Time Period**	
Monday	0		6 am - 9 am	3
Tuesday	5		9 am - 11 am	1
Wednesday	5		11 am - 1 pm	5
Thursday	2		1 pm - 3 pm	1
Friday	3		3 pm - 6 pm	8
Saturday	2		6 pm - 10 pm	0
Sunday	2		10 pm - 6 am	1

Bicycle Count Program

One of the most important metrics for the city's bike plan is usage. In order to conduct bike counts across the city, staff researched various bike counting options. Eventually, specialized, bike-only counting equipment was purchased similar to equipment that the regional MPO (MARC) also owns. The counters are portable and use special rubber tubes which are sensitive enough to count bikes but not cars.

Four portable counters were acquired in early June 2016 at a total cost of $13,420. When the counters were initially set, verification counts were conducted using a staff member's bicycle to ensure that bikes were being detected correctly and other vehicles were not being detected. Staff also used the city's traffic monitoring cameras to focus on the counters and review recorded video to verify the counters'

accuracy. A week-long series of reverification counts followed approximately midway through the counting season. This allowed the manufacturer to suggest various minor adjustments to the counting equipment to improve their performance.



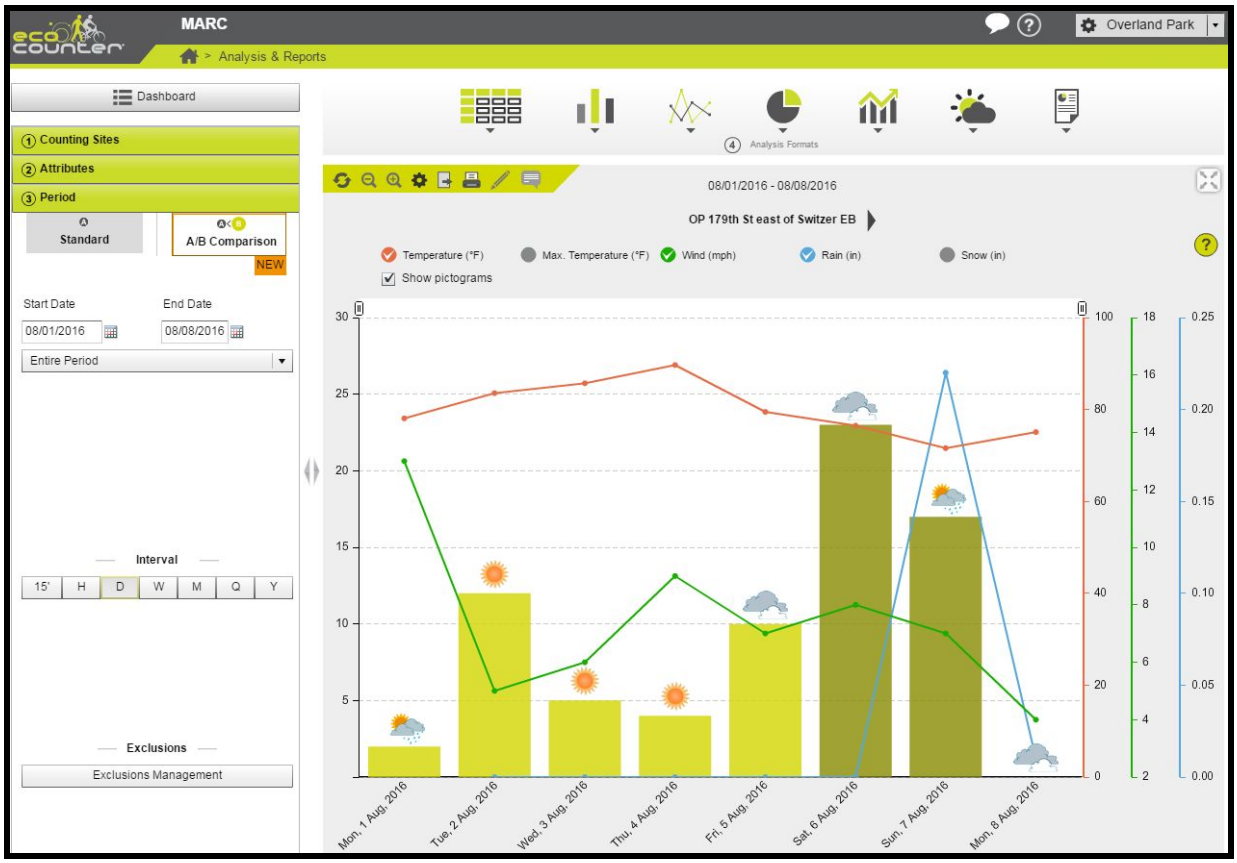
Staff installs tubes for Eco-Counters

Inside of bicycle counter

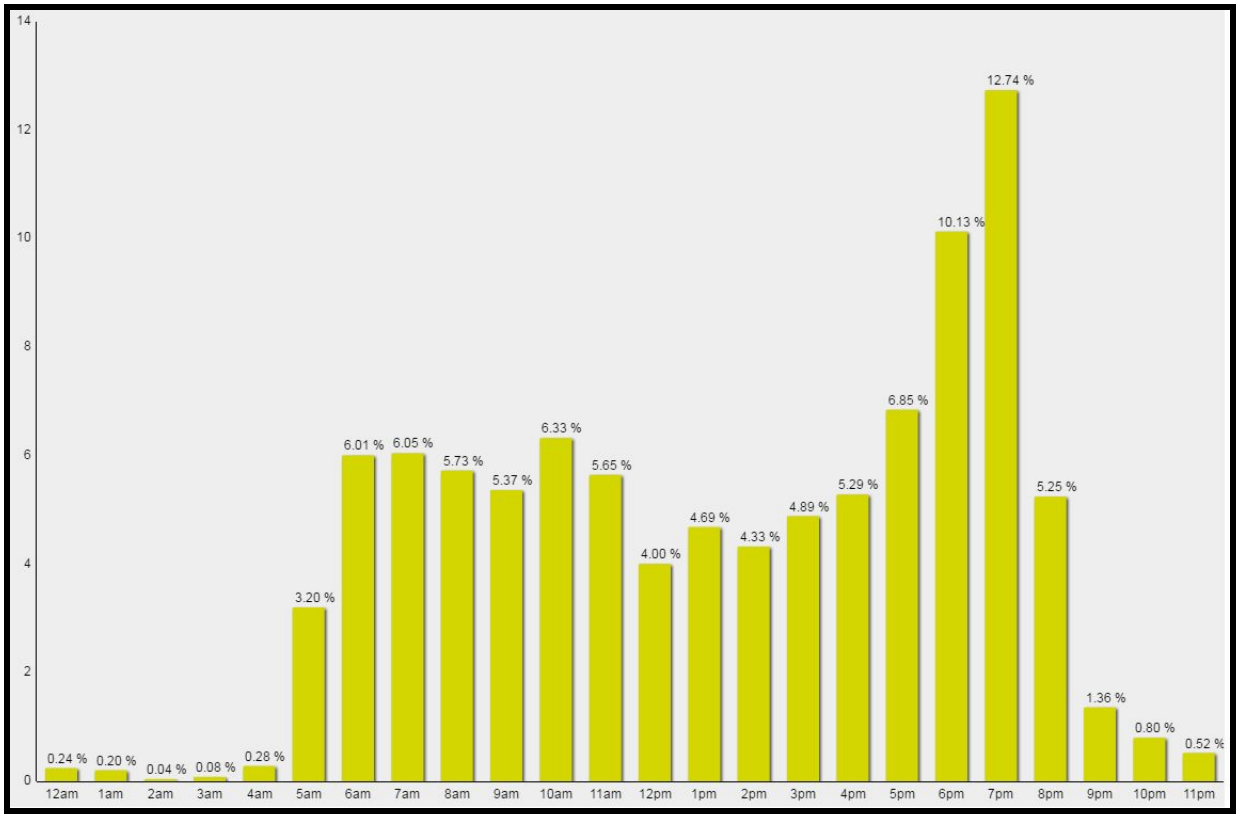
The seal of approval for the first installation!

Staff also worked with MARC to develop a regional approach to the data collection effort. In fact, MARC owned two counters similar to those purchased by Overland Park and agreed to loan them to the city if they were not being used elsewhere in the region. This required the city and MARC to develop a Memorandum of Understanding (MOU) to share the MARC-owned equipment and also cooperate regionally with data sharing needs.

The manufacturer of the equipment (Eco-Counter) hosts a website where an individual agency's data is uploaded and stored to allow for better analyzation. By participating jointly with MARC, the city and MARC (and any other metrowide agencies in the future with similar equipment) can see any bicycle counts done in the area and analyze the data in any number of different ways (i.e., different time periods, seasons, locations, weather conditions, etc.).



Eco-Counter web page showing bicycle count data (EB 179th east of Switzer) with the weather data overlay



Percent of Total Bicycle Riders Monday through Friday by Hour

For our count program, the counters were placed at specific locations on the city's bicycle master plan. A total of 50 counts were desired for the first year across the city, and as of October 17, 2016, 40 of the 50 locations have been counted. These locations included streets that were already striped with bike lanes, streets with only shared lane markings, and streets without any bike markings. Typically, the counters were set in place on Monday mornings and moved to new locations the following Monday morning. This gave us a week's worth of data that would include weekday and weekend usage.

Based on guidance provided by the National Cooperative Highway Research Program (NCHRP) on setting up a bike counting program, the total weekly bicycle volume at each location was summarized, and the results from the studies completed to date are shown in the following table and graphic.

Location	Street Type	Weekday Count	Weekend Count	Total Count	Cumulative Total
Mission Rd n/o 175th	Unimp 2-ln thoroughfare	130	151	281	281
Lamar s/o 79th	2-ln collector	157	60	217	498
Santa Fe s/o 67th	2-ln collector	118	69	187	685
Switzer n/o 156th	4-ln thoroughfare	105	72	177	862
Pflumm s/o 141st	4-ln thoroughfare	125	51	176	1038
123rd w/o Nall	2-ln collector	117	49	166	1204
71st e/o Lamar	2-ln collector	112	35	147	1351
Lamar n/o 99th	2-ln collector	86	57	143	1494
133rd e/o Nieman	2-ln collector	119	22	141	1635
Switzer n/o 119th	4-ln thoroughfare	86	54	140	1775
179th e/o Switzer	Unimp 2-ln thoroughfare	65	72	137	1912
Edgewater w/o Nall	2-ln collector	87	32	119	2031
Nieman n/o 133rd	2-ln collector	56	61	117	2148
Mission Rd s/o 97th	4-ln thoroughfare	52	62	114	2262
163rd Terr e/o Nall	2-ln collector	56	40	96	2358
127th e/o Nall	Unimp 2-ln thoroughfare	56	32	88	2446
139th w/o Metcalf	2-ln collector	59	27	86	2532
143rd w/o Nall	4-ln thoroughfare	47	36	83	2615
127th w/o Quivira	4-ln thoroughfare	48	28	76	2691
79th w/o Lowell	2-ln collector	61	15	76	2767
123rd w/o Switzer	2-ln collector	34	36	70	2837
ICP w/o Antioch	4-ln collector	35	33	68	2905
Switzer n/o 99th	2-ln collector	55	10	65	2970
83rd w/o Nall	2-ln collector	45	17	62	3032
Lamar n/o 127th	2-ln collector	30	31	61	3093
Quivira n/o 159th	Unimp 2-ln thoroughfare	31	30	61	3154

Grant, n/o 119th	2-ln collector	35	24	59	3213
147th w/o Antioch	2-ln collector	48	10	58	3271
Lowell n/o 155th	2-ln collector	38	17	55	3326
Antioch n/o 139th	4-ln thoroughfare	36	15	51	3377
Grant n/o 85th	2-ln collector	26	18	44	3421
129th e/o Pflumm	2-ln collector	25	19	44	3465
Metcalf s/o 161st	Unimp 2-ln thoroughfare	29	13	42	3507
165th w/o Antioch	2-ln collector	21	18	39	3546
115th e/o Antioch	2-ln collector	27	11	38	3584
115th w/o Lamar	4-ln super collector	20	11	31	3615
Nall n/o 131st	4-ln thoroughfare	16	13	29	3644
Grant s/o 127th	2-ln collector	22	5	27	3671
103rd e/o Lowell	4-ln thoroughfare	16	6	22	3693
123rd w/o Lowell	2-ln collector	16	5	21	3714
Merriam Dr e/o Antioch	Unimp 2-ln thoroughfare				
Foster n/o Johnson Dr	2-ln collector				
80th e/o Metcalf	2-ln residential	(under const)			
87th e/o Antioch	2-ln collector	(under const)			
91st w/o Switzer	2-ln collector				
91st w/o Nall	2-ln collector				
Lowell n/o 95th	2-ln collector				
99th w/o Antioch	2-ln collector	(under const)			
Nieman s/o College Blvd	2-ln collector				
Foster s/o 129th	2-ln collector				
159th e/o Metcalf	4-ln thoroughfare	(under const)			
	Avg Bicycles per Day	**11.7**	**17.1**	**13.3**	

NOTE: Counts highlighted in blue were on routes approved by the GB and striped for bike lanes or shared lane markings in 2015.

Best practices for bicycle count programs indicate that an appropriate way to measure the growth in bicycle usage over time is to take a sampling approach as we have initiated this year and then sum the total counts for a subset of those counts. For instance, each year take the top 25 locations across the city and see what the total weekly bicycle count is as an aggregate. Some locations may change from year to year and drop out of the top 25 being replaced by other locations with higher counts. However, using this approach will provide better trend analysis over the course of several years.

Using our Top 25 locations, our first year total weekly bicycle volume is 3,040 cyclists. As we get more data points in the coming years, we will begin to get a better sense of how the implementation of the bicycle master plan is encouraging overall usage throughout the community.

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The 2017 bike count program and future years will begin in April and continue through the end of October, giving us approximately 30 weeks of count time. Since we can count two locations each week using our four counters, our count capacity would be 60 counts per year. Assuming some recounts are needed (tubes that fail or come loose) and allowing for a mid-season, reverification count period, we should be able to continue to get 50 counts annually. If we are able to borrow the MARC counters occasionally, that number would be greater.

One other count related program is something the Parks Department started this summer. They purchased three permanent count stations to be set on the trails in Overland Park to measure not only cycling activity but pedestrian activity as well. These counters collect data year-round so they will help the city (and the region) develop seasonal count factors and trail usage statistics. The three permanent counters were placed on the Tomahawk Creek Trail (one east of Nall) and the Indian Creek Trail (one east of Roe and one west of Quivira). Next year we will be able to share a year's worth of usage statistics to highlight how the trail system is being used.

Indian Creek Trail permanent count station (near 119th and Quivira)

Speed Study Results

One final metric involved monitoring the locations where bike lanes were added within the existing street cross-section to ensure that the speed of vehicular traffic would not be adversely impacted. Staff conducted before and after studies at a number of locations as well as made field observations throughout the approved corridors. None of the speed surveys suggest any adverse impact on vehicular speeds. For example, speeds on Nieman (127th to 133rd) prior to the installation of bike lanes showed an 85th percentile speed of 40.7 mph (posted speed limit of 35 mph). The follow-up study a year after the 5' bike lanes had been added by reducing the lane widths from 16' to 11' showed an 85th percentile speed of 41.0 mph, nearly identical to the before speeds. Another example is on 133rd Street east of Switzer. Prior to striping bike lanes, speed studies measured the 85th percentile speeds at 35.8 mph (posted speed limit of 30 mph). The recent follow-up studies showed an 85th percentile speed of 35.0 mph. When staff drove all of the implemented bike lane routes as a floating car going with the speed of traffic, drivers were always driving at or above the posted speed limits.

Other Bicycle Related Activities

During the last year there have been other areas in which staff has been engaged related to bicycling. The bicycle master plan contemplated an approach based on the following E's:

- Engineering
- Evaluation
- Enforcement
- Education
- Encouragement

The *engineering* and *evaluation* efforts are obviously well under way as highlighted in this report.

A review of *enforcement* efforts revealed that three citations were written citywide between October 1, 2015 and September 30, 2016 related to bicycles. One was for a motorized bicycle being ridden the wrong way on a street, and the other two were related to bicycles that were involved in crashes (where the cyclist was at fault). Additional work in the area of enforcement could help reduce some of the crashes bicyclists are experiencing. That could include enforcement (for both bicycles and vehicles) of existing traffic control devices (such as STOP signs), enforcement of the 3' minimum passing law, and spot enforcement at traffic signals for drivers turning right on red (watching for the right-of-way needs of those in crosswalks). Staff is also reviewing signage used by KDOT (regarding the 3' passing law) to determine if it would be appropriate for both enforcement and education. A few locations may be selected in 2017 to install such signs to guage their effectiveness.

Another area of enforcement efforts involves the state legislature. During the development of the bicycle master plan, a review of state and local laws identified one particular law which staff felt should be changed. Currently, there is a provision in the Kansas Statutes known as the usable path law. K.S.A. 8-1590(d) currently states that, "[w]herever a usable path for bicycles has been provided adjacent to the roadway, bicycle riders shall use such path and not use the roadway." This creates a number of issues for the city, and in 2015 staff testified before the House Transportation Committee along with others across the state to amend or remove this language as only a handful of states still have this particular law on the books. That effort was unsuccessful, but we hope to be able to approach the legislature again in 2017 to look at this particular provision.

The city did host an *educational* event last fall in the city hall parking lot. A bike rodeo was held to teach children (and accompanying adults) about safe bicycle riding and to provide them a free bicycle helmet if they did not already have one. The event was well attended and staffed by members from Public

Works, Community Services, and the Police. We hope to team up with the local bicycle club in the near future to help continue promoting safe cycling to a broad cross-section of the community.

In addition to hosting a bike rodeo, one of our staff members also went through the necessary steps to become a League Cycling Instructor. This required attendance at a nine hour smart cycling class (about 60% classroom and 40% on a bike) and then a 21 hour instructor course (all classes were held on weekends or in the evenings). The employee completed both courses and became certified and able to teach the Smart Cycling Class. Our intent was to offer this class to city employees and, later, members of the community. Unfortunately, this employee relocated to another state before we could take advantage of the training.

Staff member directs rider at last second to go left or right at bike rodeo

The last area is *encouragement*. Each year the city participates in the national Bike to Work Week in May by hosting a series of bicycle breakfast stops at various locations across the city. Staff receives donations from area bike shops (REI, Turners and Velo+) and grocers (Whole Foods) to offset the expense of providing juice, coffee, fruit and energy bars to riders that stop by while on their way to work or just out for a recreational ride. This outreach opportunity allows staff to hear from cyclists about their concerns and at the same time be in a position to provide them with information on a variety of city programs. Local news stations typically cover some of the activities which provides a wide audience of regional viewers that are able to see the city as it reaches out to other modes of transportation.

KMBC interviews a local cyclist

City employees get ready to ride to lunch in downtown OP

Staff has also been working with developers as they have brought forward plans in various areas of the city to encourage a more walkable and bike friendly community in their final products. An example of this is the addition of bicycle parking as shown below at Rock and Brews in Prairie Fire. Similar efforts will be made in the various redevelopment projects under design and construction in downtown Overland Park.

Bicycle chained to gas meter at 135th and Metcalf

Bicycle racks at Prairie Fire

Encouragement also starts with the youth. By encouraging children and young adults to ride as they are growing up, hopefully they will make bicycle riding a lifetime habit. A review of various schools around the city shows promise in this area. Many of the bike racks are overflowing with the bicycles that students have used to get to school. However, there are a few schools where the principals actively discourage students from riding bicycles to school, citing a perceived issue with it being a safe form of transportation. This would appear to be an area where the city can help guide and better inform these educators.

70 bicycles in the bike racks at Harmony Middle School (141st and Switzer)

Finally, staff spent time one weekend volunteering at a local bike ride sponsored by BikeWalkKC that started northeast of downtown Kansas City. The event drew several hundred riders from across the region and allowed us to discuss some of the things Overland Park was doing to improve cycling to an audience that might not be attuned to what's happening in Johnson County.

Tour de Bier Bike Ride, Kansas City, MO (May 15, 2016)

Summary

With the adoption in 2015 of the city's first bicycle master plan, progress has started on implementing various recommendations included in the plan. The main emphasis initially was to stripe a number of streets to start bringing attention to the commitment the city was placing on the program. During the first year, almost 16 centerline miles of streets were striped with bike lanes or sharrows at a total cost of less than $155,000, below the approved $250,000 limit set by Council.

The bicycle master plan contemplated a network of bike lanes and shared lane markings that spanned almost 200 miles over the next 10 to 15 years as street maintenance projects allowed. When the initial 16 miles are combined with the already approved 30 miles in northern Overland Park in 2017 and the possibility of 50 more miles in southern Overland Park in 2019, the city could have close to half the network complete (96 miles out of 200 proposed) by 2020.

The first year metrics were also eye-opening as no systematic collection of bicycle count data had ever been conducted in the city. The initial count data shows that our Top 25 count locations saw a combined weekly total count of almost 3100 bicycles. The data also clearly shows a citywide culture of on-street biking is already occurring. Staff believes that as the bike network becomes fully developed, we will see our mode share of bicycle commuting rise from it's current level of 0.28% to perhaps 1.00% (KS is currently at 0.36% and the national average is 0.53%).

Unfortunately, we still need to do more to make the streets safer for those that do ride. Regarding bicycle safety, the total number of crashes over the last 12 months is in line with our experience from prior years. There were a total of 19 bicycle-vehicle crashes, most of which involved injuries to the riders (18 out of 19). However, there was no increase in bicycle crashes as a result of the first year implementation plan nor an increase in vehicle to vehicle crashes as a result of more narrow travel lanes. Staff's professional opinion is that over time we will see a decrease in bicycle crashes as a more defined bike network is developed and additional emphasis is placed on enforcement, education and encouragement efforts in Overland Park and across the region.

Staff is proposing the following implementation plan for 2017:

- Approve the following locations:

Location	Strategy	Estimated Cost	Funding Source
159th, Nall to Mission	Bike Lanes	$ 10,000	CIP (TH-0872)
Metcalf, 159th to 167th	Bike Lanes	$ 10,000	CIP (TH-1027)
Various Northern OP Locations	Bike Lanes and Sharrows	$325,000	CIP (ST-1661)
Grant, 79th to 87th	Sharrows	$ 10,000	CIP (SR-1440)
Grant, 87th to 91st	Sharrows	$ 5,000	CIP (MR-1764)
Lamar, 95th to 103rd	Sharrows	$ 8,500	CIP (MR-1764)
Lowell, 79th to 87th	Sharrows	$ 8,000	CIP (MR-1764)
99th Terrace, Carter to Antioch	Sharrows	$ 4,500	CIP (MR-1764)
133rd, Nieman to Switzer	Bike Lanes	$ 5,000	CIP (MR-1765)

- Approve the city-state agreement for the 2017 CIP project in northern Overland Park (separate agenda item for October 26, 2016 PWC meeting)

Future PWC or Council meetings:

- Approve as part of the City's 2017 legislative agenda the clarification of the usable path law in the Kansas Statutes

This concludes a review of our most recent activities related to the implementation of the bicycle master plan.

Someday!