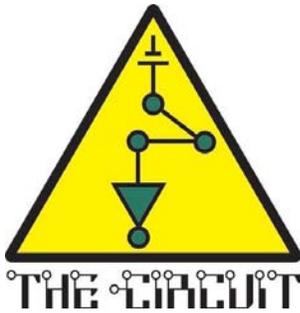


# The Circuit

*Building a better bike route in Humboldt Park, Logan Square, and Avondale*

By: Cynthia Lopez, Kim Ambelis, Jamal Turner, Coby Akins and Juan Luna

Advised By: Emily Leidenfrost



## Introduction

West Town Bikes convened the *Safe Passages: Amplifying the Voices and Stories of Teen Skaters and Bikers* in July and August 2015 to teach urban planning skills to its students so they could devise an innovative way to route youth bicyclists between neighborhood attractions. The class was led by West Town Bikes youth instructor Emily Leidenfrost, assisted by urban planner Steven Vance, and overseen by Alex Wilson and Leebster Pabon. The students were Cynthia Lopez, Kim Ambelis, Jamal Turner, Coby Akins, and Juan Luna.

## Goals and Objectives

Our goal is to ensure a connected, comfortable route to expand the number of youth bicyclists in Humboldt Park, Logan Square, and Avondale.

We will do this by:

- improving the safety of infrastructure between our community's fun places: The 606, Logan Square Skate Park, and The Garden
- engaging local artists to beautify the breezy route
- empowering a community to take ownership of the route and these places

## Purpose

West Town Bikes is a community bicycle learning center located in Humboldt Park. Our mission is to promote cycling in order to build healthier, stronger, and more sustainable communities. We are very fortunate to have several fun bike facilities within Humboldt Park, Logan Square, and Avondale: The 606, Logan Skate Park and The Garden. All are within biking distance of our community shop, yet it is frustrating that young cyclists do not have a safe route to and from these attractions. With this route, we hope to build better access for the new generation of young bikers emerging from West Town Bikes, Clemente High School, and its nearby neighborhoods. It would be beneficial for the City of Chicago to support the construction of our proposed route in order to encourage people of all ages to bike and be more physically active.

## Results

After six weeks of fieldwork, data collection, and interviews with young people, neighbors and experts, we have developed an innovative route called "The Circuit". It will increase cycling safety by connecting multiple bike and youth-oriented venues, attracting new cyclists, as well as repairing and beautifying the streets.

# Methodology

We collected data through several means to gather the best information for convincing recommendations. We used existing data sources about bicycle-motorist crashes, gathered new data about motorist speed, and conducted multiple inspections to understand existing physical conditions of those streets that will become part of The Circuit.

## **Qualitative Interviews**

We interviewed cyclists, planners, and community leaders on the purpose, constituency, and accessibility of these venues. We used this information to help identify what prevents youth from cycling and ways to overcome these obstacles. With the Free Spirit Media crew, we filmed people on the Bloomingdale Trail (July 21st) as well as the Logan Square Skate Park and The Garden (July 24th). We also interviewed the Lead Instructor, Steven Vance, at the Logan Boulevard and Western Avenue intersection (July 27). On August 3rd, we interviewed Alderman Deb Mell, youth skaters at Clemente High School, Garden trail builder Matt Van Acker, 606 Program Director Jamie Simone and West Town Bikes Executive Director Alex Wilson.

We asked teens and people on the street about their bike commute, whether they feel safe, if there are any obstacles in their commute and how they would feel about establishing a new route that connects these locations.

### Common findings of community/youth interviews:

- Teens are more interested in bikes as an alternative transportation, because biking is easier, more fun, and more affordable
- Some teens ride along dangerous streets because it's more convenient, or they aren't aware of a better way
- Teens do not bike in certain areas because they're not allowed to or feel unsafe.
- Young people seem frustration with lack of bike infrastructure and street maintenance.

We asked experts about the intended use of the facilities, whether they feel teens can travel safely to and from these places, the barriers cyclists face, and about the importance of creating bike infrastructure.

### Common findings of expert interviews:



-It is important to include youth voice in urban planning, because this will attract more families and young people to the cycling community.

-The city built all of these facilities for young people, but did not design a way to get there.

-The Garden and the Logan Skate Park are ideal places for young people to participate in healthy, productive activities outside of school

## **Field Data**

### **South Section - Division to Armitage**

The majority of the problems with the south section involve poor maintenance of the streets. At Rockwell and Potomac Street, the pavement is not ideal for biking or skating due to large cracks, potholes, and patchy pavement. Another issue we identified is that there are no bike lanes on the street, which deters a lot of cyclists because they are forced to ride directly alongside cars. Additionally, near Rockwell and Hirsh there is a massive pothole which could result in serious injury to a cyclist. At the intersection of Rockwell and North, there are a lot of speeding motorists and a long wait for the light to cross the main street. Near the access point to the Bloomingdale Trail on Rockwell, the stop sign is hidden behind the columns of the underpass, which means motorists may not be able to stop in time for people walking or biking down the access ramp. There are no crosswalk markings or signs to alert motorists of people entering and exiting the trail. Near the Lucy Flower Park on Rockwell--where a lot of local families play--the crosswalk markings and stop sign markings are faded.

### **Middle Section - Armitage to Logan Square Skate Park**

At the beginning of the middle section, where Rockwell meets Armitage, it's difficult for cyclists to cross the street to turn left onto Stave. On Stave, a small diagonal street, there are many exposed garages directly on the street, and there are no signs to alert cyclists of cars backing out onto the street. Although Stave is a small neighborhood street there are a fair number of trucks and buses passing through to avoid other high-traffic streets.

At Milwaukee and Atrill there is no stop sign or light on the main street, which makes it very difficult to cross and make a left turn onto Rockwell. Rockwell is a street that changes to Southbound between Fullerton and Milwaukee. On Rockwell and Lyndale, outside of Goethe Elementary School, the street widens to accommodate for parked and idling cars. People tend to drive faster here, especially on non-school days, and it is especially dangerous when motorists back out of the diagonal parking spots. At Fullerton, Rockwell Street is offset and there is no light for contraflow travel, so cyclists traveling in the contraflow direction would use the pedestrian signal. When approaching the skate park pathways, there is a large curb on Logan service drive.

### **North Section - Logan Square Skate Park to The Garden on Belmont**

On California under the 90/94 underpass, the street widens and there are no bike lanes or markings. Motorists drive very fast and it is difficult to see cyclists traveling through the underpass. On George, Wellington, and Rockwell, it takes a long time to cross the complicated intersection. On Rockwell between Wellington and Belmont, the street is wide, which causes motorists to travel very fast. Where Rockwell meets Belmont, there are no stop lights or signs so it is challenging to cross and make a left onto the access ramp for Clark Park. The curb on Belmont near the access ramp is very high, and cyclists have to stop on the street to lift their bike up.

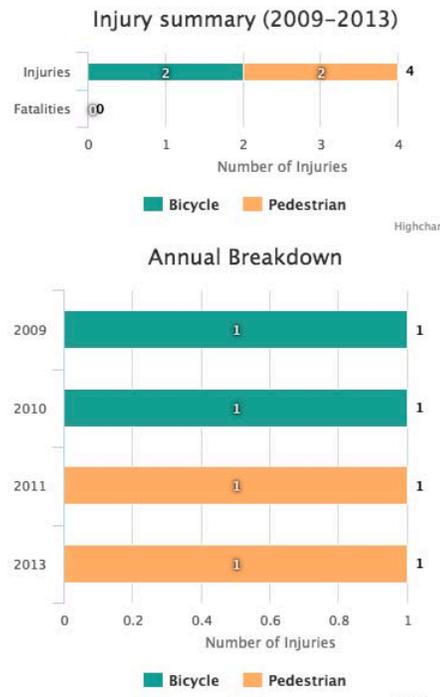
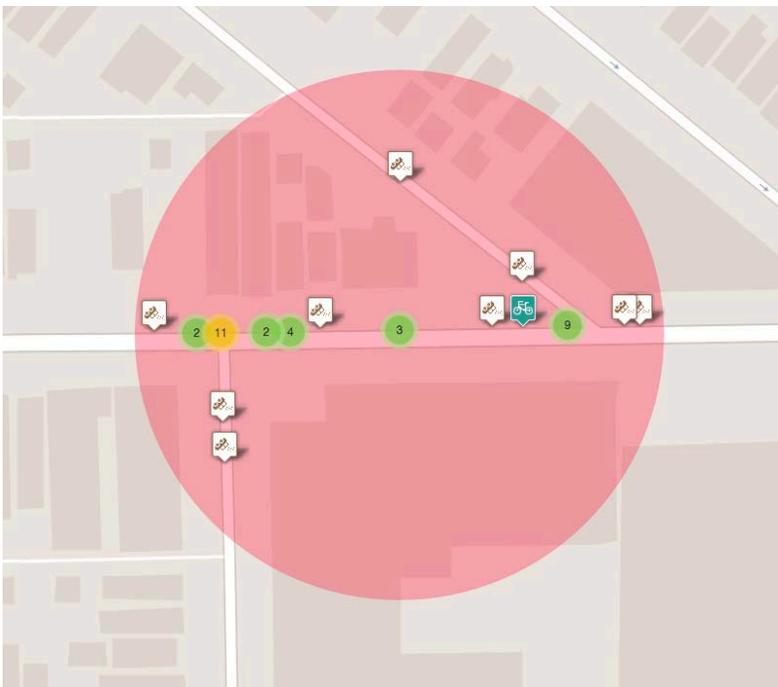
## Wicker Park Avenue

A newly developed contraflow bike lane on Wicker Park Avenue, in Wicker Park, provides a basis for our proposed route. Comprised of two lanes, one going North and another heading South, the contraflow bike lane encourages motorists to slow down, provides bikers with more options for desired routes, and creates a shared lane among bikers and motorists. The refurbished Wood Street, a one-way street for motor vehicles, also features speed humps aimed to reduce car speeds, extra signs giving directions to the contraflow, super sparrows that have green borders, and a few "Do Not Enter" signs for motor vehicles with the exception of bikes.

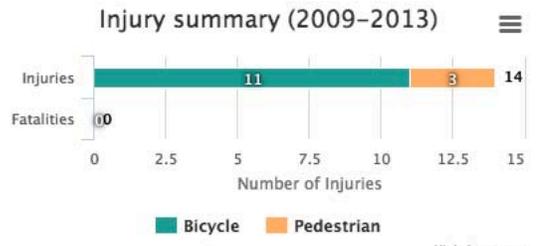
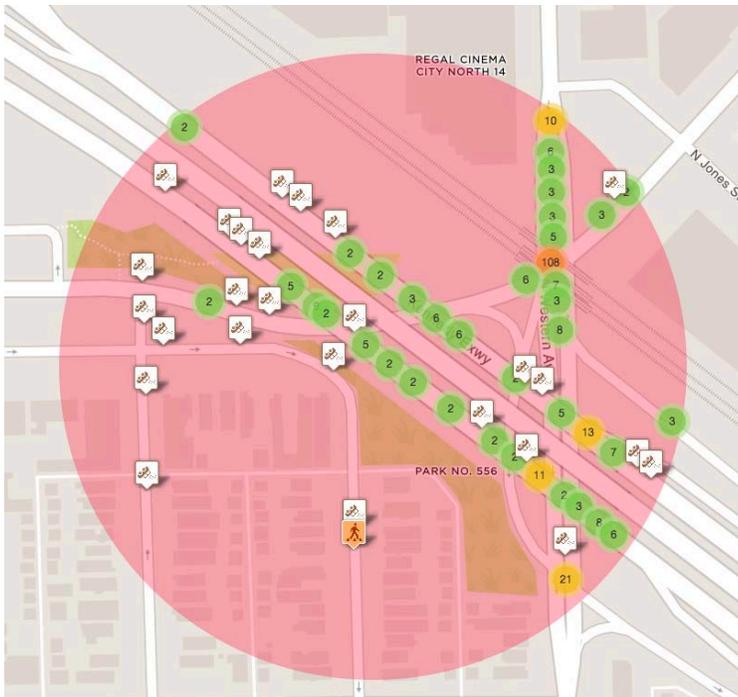
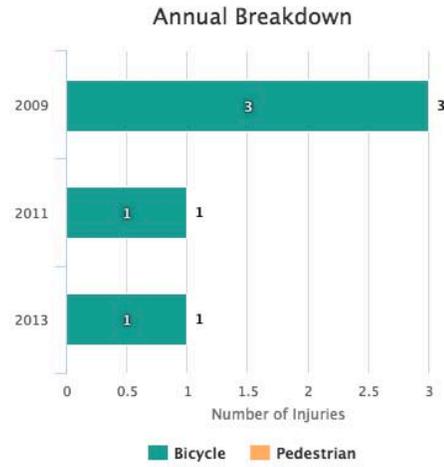
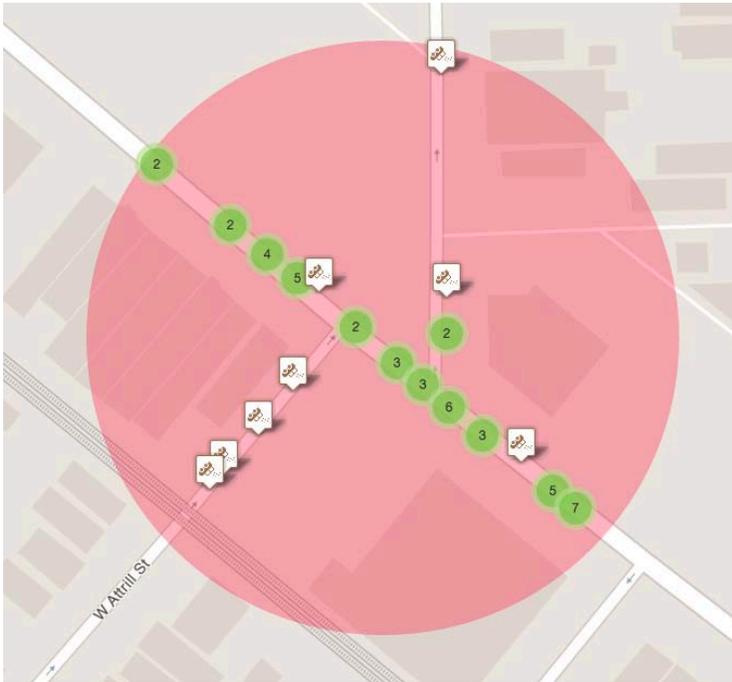
## Crash Data

We found our crash data from Chicago Crash Browser (Chicagocrashes.org). This data is from 2009-2013, as collected by responding law enforcement and maintained by the Illinois Department of Transportation. Because data is not recorded on the browser after 2013, there are likely crashes in these intersections that are not reflected in the maps below. This also does not include crashes that are not reported to the local police department.

## Rockwell/Armitage/Stave Intersection



## Atrill/Milwaukee/Rockwell Intersection



**Logan/Western Intersection (Near Logan Skate Park)**

## **South Section**

The southern section of the route had a total of 19 cyclist injuries and 24 pedestrian injuries. This section is comprised of main streets such as Division, Rockwell, and Armitage. The majority of cyclist injuries are concentrated within the intersection of Division and Campbell with a total of 7 injuries. In turn, the portion consisting of the most pedestrian injuries is the intersection of North Ave and Rockwell St with a total of 7 injuries. Similarly, the intersection of Division and Rockwell contained the second most pedestrian injuries with a total of 6. These injuries may large amount have been a result of speeding motorists. This creates an obstacle for both cyclist and pedestrians. However, compared with the other data collected in the northern and middle section of the route, this isn't a significantly large amount. An explanation for this occurrence can be that the majority of the streets on the southern section are much narrow thereby forcing motorists to drive slower and with much more vigilance.

## **Middle Section**

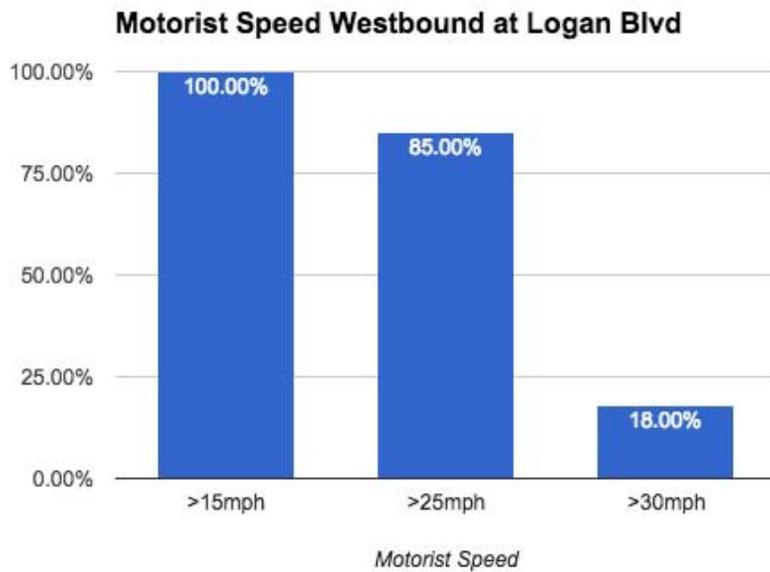
The middle section of the route had a massive total of 80 bike injuries with one death and 17 pedestrian injuries. The route is comprised of multiple main streets such as Logan, Milwaukee, Western, and Armitage, where heavy traffic is present. This may explain the large number of accidents. On the intersection of Western and Logan there are multiple lanes heading in several directions alongside congested car traffic, which poses a threat to bikers and creates the possibility of getting hit by a motorists at any turn. The intersection alone contained 13 bike injuries, 2 pedestrian injuries, and one death. Another point of concern is at Milwaukee and Armitage, with 15 bike injuries and 4 pedestrian injuries.

## **North Section**

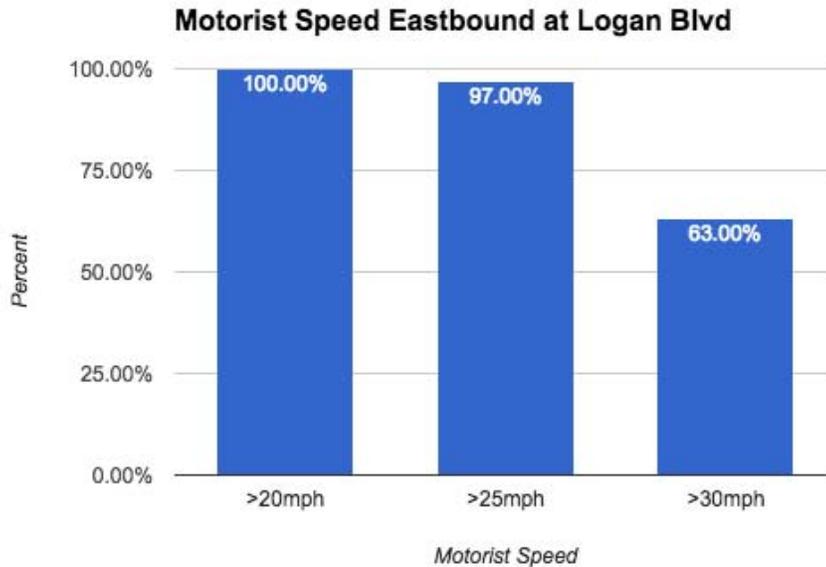
The North section crash numbers are significantly high with 24 bike injuries and 20 pedestrian injuries. The intersection consisting the most injuries was on California and Diversey with 10 cyclist injuries and 8 pedestrian injuries. Here there appears to be heavy traffic since both California and Diversey are main streets, which explains the large amount of injuries in the data. Conversely, intersections on Wellington, for example, presented a low count for cyclist and pedestrian injuries because the little traffic that occurs on Wellington. Alternatively, if cyclist were to take a route that involves riding on Western towards The Garden, they would be more susceptible to dangers from motorist. This is apparent in the large amounts of injuries that occurred on Western Ave. For example, on the intersection of Western and Diversey & Elston there appears to be 14 bike related injuries and 12 pedestrian injuries. Similarly, on Western and Belmont there appears to be 9 cyclist injuries and 10 pedestrian injuries, thereby making evident the dangers present on Western Ave. This goes to show that the city of Chicago must do something about being able to control the traffic of cars and the speed motorists are going.

## **Speed Data**

Using a speed gun and a measuring wheel, we collected motorist speed at what we considered the most dangerous intersection along the Western corridor: Western Ave and Logan Boulevard. We collected three sets of 10 minute increments.

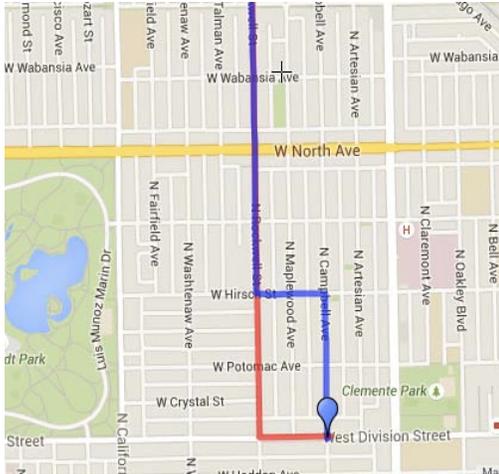


This graph demonstrates how many motorists travel above the recommended speed of 15mph on the curve coming WB on Logan Boulevard from Western Ave. 100% of motorists drive above the



recommended speed, causing danger to cyclists travelling along the blind spot of the road curve. This speed graph shows how significantly more motorists are traveling eastbound at higher speeds compared to motorist speed from the opposite direction. As motorists are driving towards Western Ave, 63% of people behind the wheel are traveling at speeds greater than 30mph, making cycling along this road a serious hazard.





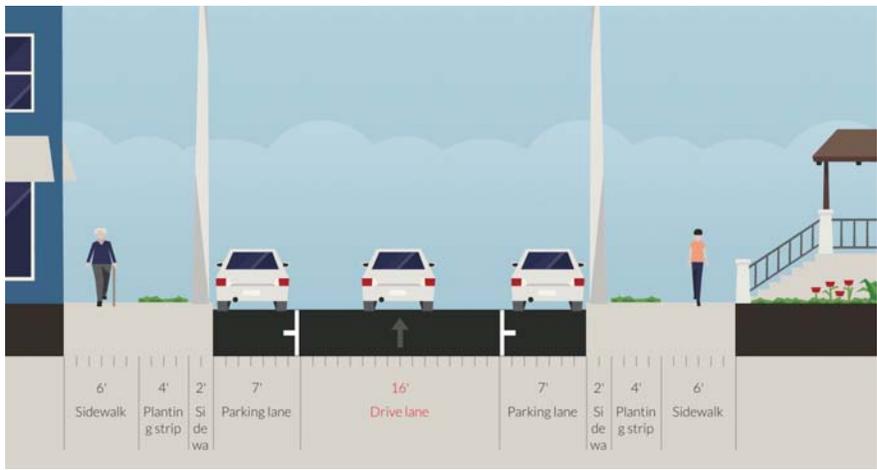
**South Section**

Northbound We start of at West Town Bikes or Clemente High School, where you head west on Division Street. Turn right on Rockwell St. Continue heading north on Rockwell until you've reached the first destination, the Bloomingdale Trail. Continue on Rockwell until Armitage if you wish to head to the Logan Skate Park.

Southbound: instead of continuing straight on Campbell, take a left on Hirsch and a right on Campbell to reach Division.

**Streetmix Designs**

Location	Renderings
<p><b>Logan Boulevard</b> On the northern service drive, we've added a sharrow.</p>	<p>After</p>

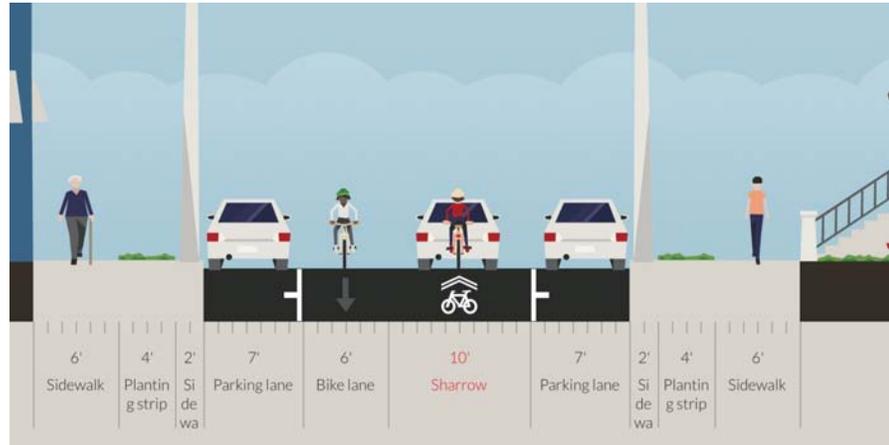


<p><b>Rockwell Street</b></p>	<p>Before</p>
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### Rockwell Street

We changed Rockwell street from the image you see above by adding a shared bike lane with the car that's going the same direction. We also downsized the driving lane to 10 feet and added a contraflow lane going the opposite way.

### After



### Belmont Avenue

We added a protected bike lane in each direction as well as a turning lane. These lane changes will slow motorists down so they can see bicyclists who are trying to turn onto and off of Rockwell.

### Before



### After



## **South Section - West Town Bikes on Division to Armitage**

The south section is the simplest and straightest part of the route and requires the fewest infrastructure changes and additions.

On Rockwell Street from Hirsch Street to North Avenue we propose installing a contraflow bike lane to allow cycling in both directions on this northbound, one-way portion of Rockwell. Southbound cyclists will go east on Hirsch Street to connect to southbound, one-way Campbell Street.

At North Avenue the signal timing would be adjusted to reduce waiting time for cyclists, and pedestrians, going north and south on Rockwell in The Circuit. When people have to wait a long time at traffic signals they are more likely to disobey them. Additionally, a pedestrian island would be installed on the east side of the intersection to generally slow motorists on North Avenue.

## **Middle Section - Armitage to Logan Skate Park**

At Armitage and Rockwell the crosswalk markings and stop bars would be repainted to better indicate where motorists and bicyclists should stop for pedestrians. Special pavement markings and symbols would be installed here and on Armitage to Stave a Street to identify The Circuit and highlight the slightly complicated left turn for northbound cyclists.

On Stave Street the pavement would be repaired in multiple places for long stretches to make it comfortable to cycle and to prevent the swerving that motorists and bicyclists do to avoid the massive potholes. Stave is used as an alternative, for both directions of the route, to cycling on busy Milwaukee Avenue. Using Stave also means we don't have to force cyclists to make a difficult left turn at Armitage and Milwaukee.

To get back onto Rockwell from Stave, cyclists going north would turn onto northeast, one-way Francis Place and then southeast on Milwaukee towards Rockwell.

To get onto Stave from Rockwell, cyclists going south also use the pedestrian signal and turn northwest on Milwaukee and immediately left onto southeast, one-way Atrill Street towards Stave Street.

An alternative to using Francis Place for that one block, and to keep Circuit riders in both directions on the same streets, one side of car parking on Atrill could be removed in order to implement a contraflow bike lane. There are few residences on this block so the conversion of parking to a safe bicycling route should see less opposition on the account of less free parking being available to the residents.

Because Rockwell is a southbound street, a contraflow bike lane would be built. Since this is an atypical maneuver some infrastructure would be changed.

Where Rockwell meets Milwaukee, there would be a raised crosswalk over Rockwell that would prevent motorists from crossing over and into Milwaukee at a high speed because in the same traffic signal phase, Circuit riders are making the turns across Milwaukee. A bike box and "crossbike" would be created for northbound riders to wait and ride north across Milwaukee into the contraflow bike lane during the pedestrian signal.

To safely enter the contraflow bike lane on Rockwell, a small island would be built on the east side of the roadway which creates a "filtered permeability" infrastructure and prevents turning, southbound motorists from intersecting paths with northbound cyclists.

Where Rockwell meets Fullerton new Circuit-style pavement markings and symbols would guide cyclists through the offset intersection jog here. North of here Rockwell is a one way street going northbound so a contraflow lane would be built for cyclists going southbound.

At Logan and Rockwell, where the North Section begins, there are two diverging paths. One goes east to the skate park along the northern, westbound service drive, and the other goes west to meet California Avenue, where the route continues.

### **North Section - Logan Square Skate Park to The Garden on Belmont**

Starting from the Logan Square skate park a new curb cut is created on the westbound, northern service drive which allows cyclists to get onto the park path from Rockwell and avoid bicycling on the sidewalk at the next block west of here. Between Rockwell Street and this curb cut, a distance of 540 feet, cyclists would be allowed to ride in both directions on a street that sees minimal one-way car traffic.

Continuing north from the skate park, Circuit riders would ride west on the westbound, northern service drive of Logan Boulevard to California Avenue, where they would turn north. Those who going south on California towards the skate park would turn east onto the eastbound, southern service drive of Logan Boulevard to Rockwell Street.

At Rockwell they would turn north across the main drive of Logan Boulevard – where there's a traffic signal – and onto the northern service drive to the skate park.

Those who aren't headed to the skate park would turn south onto a contraflow bike lane on the one-way, northbound street Rockwell Street.

## Conclusion

The Circuit will provide a connected and comfortable route for young people to commute from Humboldt Park, Logan Square and Avondale. In order to achieve this, we will encourage the community to become involved in the maintenance and further planning of the project, engage local artists to make the route majestic, and alter the infrastructure of the roads. This route will not only benefit existing cyclists and park users, but will expand the cycling community to include more families and young bikers.

Because we are part of the growing youth cycling community, we are experts on this issue of providing safe passages to youth attractions. Teens are looking for reliable and affordable alternatives to driving, and our city needs to keep up with this growing demand. By building a route like The Circuit, we are helping cultivate a new generation of active transportation commuters. It is important to include the voices of youth and minorities in urban planning in order to realize a more accurate and fair representation of a community's exigencies. We gathered enough data to accomplish a way to satisfy the

need of the people by creating the best route. With all this in mind, we hope to create a route that benefits a diverse and underrepresented group of people.

## Appendix A

Traffic Crash Data

Main Street	Intersecting Street	Total bike	Total	Total bike	Total pedestrian
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		<b>injuries</b>	<b>pedestrian injuries</b>	<b>fatalities</b>	<b>fatalities</b>
Division	Campbell St.	7	3	0	0
Division	Rockwell	2	6	0	0
Rockwell	Crystal St.	0	1	0	0
Rockwell	Potomac	0	1	0	0
Rockwell	Evergreen	0	2	0	0
Rockwell	Hirsch	2	0	0	0
Hirsch	Maplewood	1	0	0	0
Hirsch	Campbell	0	0	0	0
Potomac	Campbell	0	1	0	0
Rockwell	Le Moyne	3	1	0	0
Rockwell	North Ave.	3	7	0	1
Rockwell	Wabansia	1	0	0	0
Rockwell	Bloomingdale Trail	0	0	0	0
Rockwell	Cortland St.	1	0	0	0
Rockwell	Moffat	0	0	0	0
Rockwell	Homer	0	0	0	0
Rockwell	Armitage	0	3	0	0
Total		20	25	0	1

<b>Main Street</b>	<b>Intersecting Street</b>	<b>Total bike injuries</b>	<b>Total pedestrian injuries</b>	<b>Total bike fatalities</b>	<b>Total pedestrian fatalities</b>
Rockwell	Armitage	0	3	0	0
Armitage	Stave	2	0	0	0
Stave	Francis	0	0	0	0
Stave	St. Helen	0	0	0	0
Stave	Attrill	0	0	0	0
Milwaukee	Attrill	5	1	0	0
Milwaukee	Francis	8	2	0	0
Milwaukee	Rockwell	7	0	0	0
Rockwell	Lyndale	0	0	0	0
Rockwell	Fullerton	4	0	0	0
Rockwell	Altgeld	0	0	0	0

Rockwell	Logan	0	0	0	0
Total		26	6	0	0

Main Street	Intersecting Street	Total bike injuries	Total pedestrian injuries	Total bike fatalities	Total pedestrian fatalities
Logan Boulevard	Washtenaw	0	1	0	0
Logan Boulevard	Talman	1	0	0	0
Logan Boulevard	Fairfield	1	1	0	0
California	Logan Boulevard	1	5	0	0
California	Schubert	0	1	0	0
California	Diversey	11	9	0	0
California	George	3	1	0	0
George	Fairfield	0	0	0	0
Rockwell	George	0	0	0	0
Rockwell	Elston	2	0	0	0
Rockwell	Wellington	2	0	0	0
Rockwell	Nelson	0	0	0	0
Rockwell	Barry	1	0	0	0
Rockwell	Fletcher	0	0	0	0
Belmont	access trail	0	0	0	0
Talman	Wellington	2	1	0	0
Washtenaw	Wellington	0	0	0	0
Fairfield	Wellington	0	0	0	0
California	Wellington	0	1	0	0
Total		24	20	0	0