

FOUNDATION

PRIMARY FACTORS THAT ENCOURAGE WALKABLE NEIGHBORHOODS

- Block sizes
- Land use patterns and decisions / Enclosure
- Street patterns

BUILDING A FOUNDATION

Land Use Patterns

Block Sizes Networks	x
Block Size	x
Pedestrian Network	x
Public Transit Network	x
Bike Network	x
Vehicular Traffic	x

Creating the Foundation for TOD: Block Size

BLOCK SIZES

WALKABLE BLOCKS

Within a neighborhood, different sidewalk conditions work together to create a comprehensive pedestrian network, with paths and routes connecting different destinations.

The pedestrian network is the foundation of all other networks in the neighborhood (public transit, bike and automobile).

Walkability, access to neighborhood amenities and to transit is impacted by the size of blocks. Large blocks limit opportunities for direct walking routes and create large segments of roadway that can be difficult to cross for pedestrians.

Cleveland block sizes vary widely by neighborhood. Though standard block size varies by community, block sizes in neighborhood settings like Circle North in Glenville served by transit should not exceed 600' in length, as shown in Figure 48.

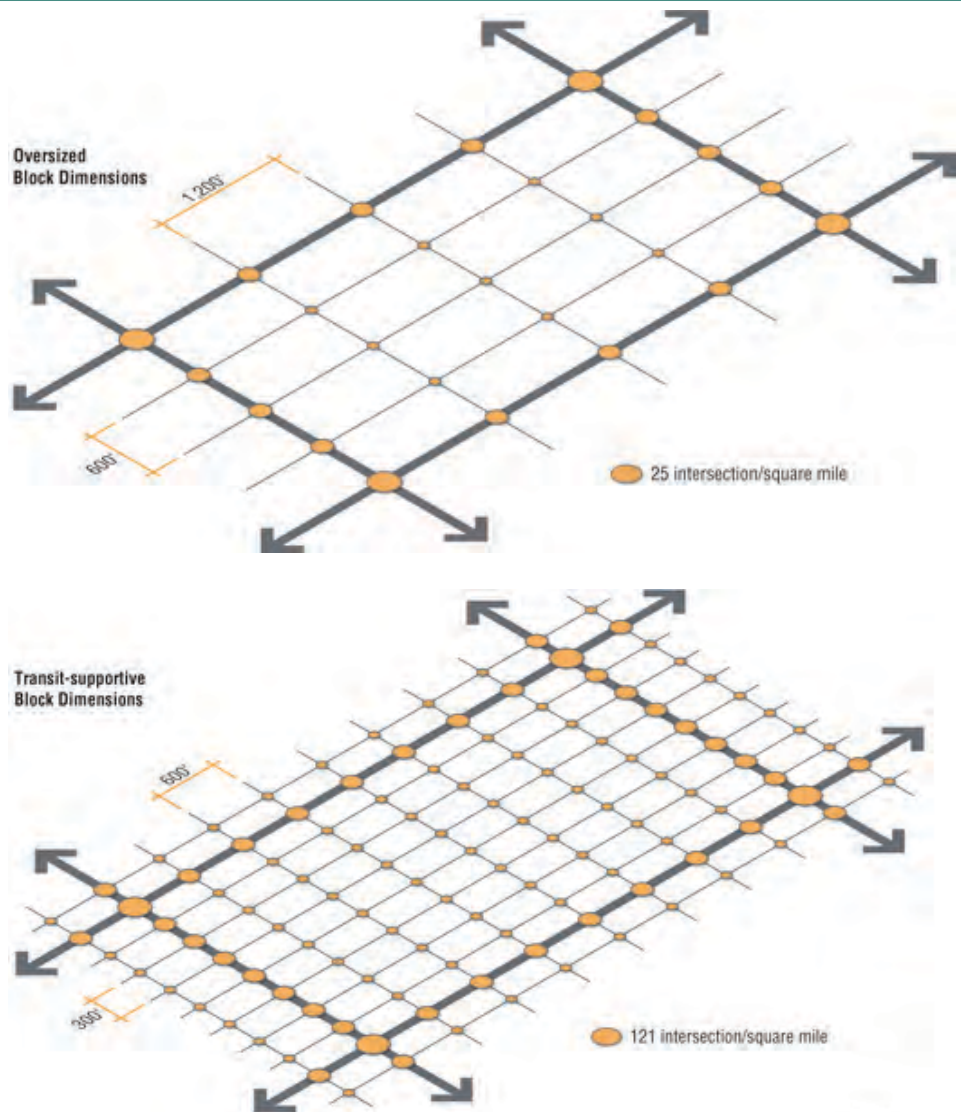


Figure 48: Transit Supportive Block Dimensions.
Data sourced from Pacebus.



Figure 49: Block Dimensions
Map by RDL Architects (block measurements approximated from Google Earth)

ASSUMPTIONS

2.5 mph walk speed = 1,100' / 5min

3 mph = 1320' / 5min

300'x600' = ideal block

1000' is maximum allowable length for a block.

BLOCK SIZES

PARCEL STATUS

DK GREEN_WALKABLE

These blocks are within the 300' x 600' ideal for walkable neighborhoods.

LT GREEN MOSTLY WALKABLE

Light green blocks are ideal in one length but within 1+1/3rd of ideal in the other.

PINK_NOT SO WALKABLE

Pink blocks are either:

- ideal in one length with the other length being greater than 1+1/3 rd the ideal, or...
- both lengths are greater than the ideal, but both sides are also less than 1+1/3 rd the ideal.
(1 length < 400' + 1 length < 800')

RED_BARRIER BLOCKS

Red blocks are barriers to movement through the neighborhood. They are either:

- less than 1+1/3rd ideal in one length and greater than 1 1/3rd in the other, or...
- both sides are greater than 1+1/3rd the ideal
(1 length > 400' + 1 length > 800')

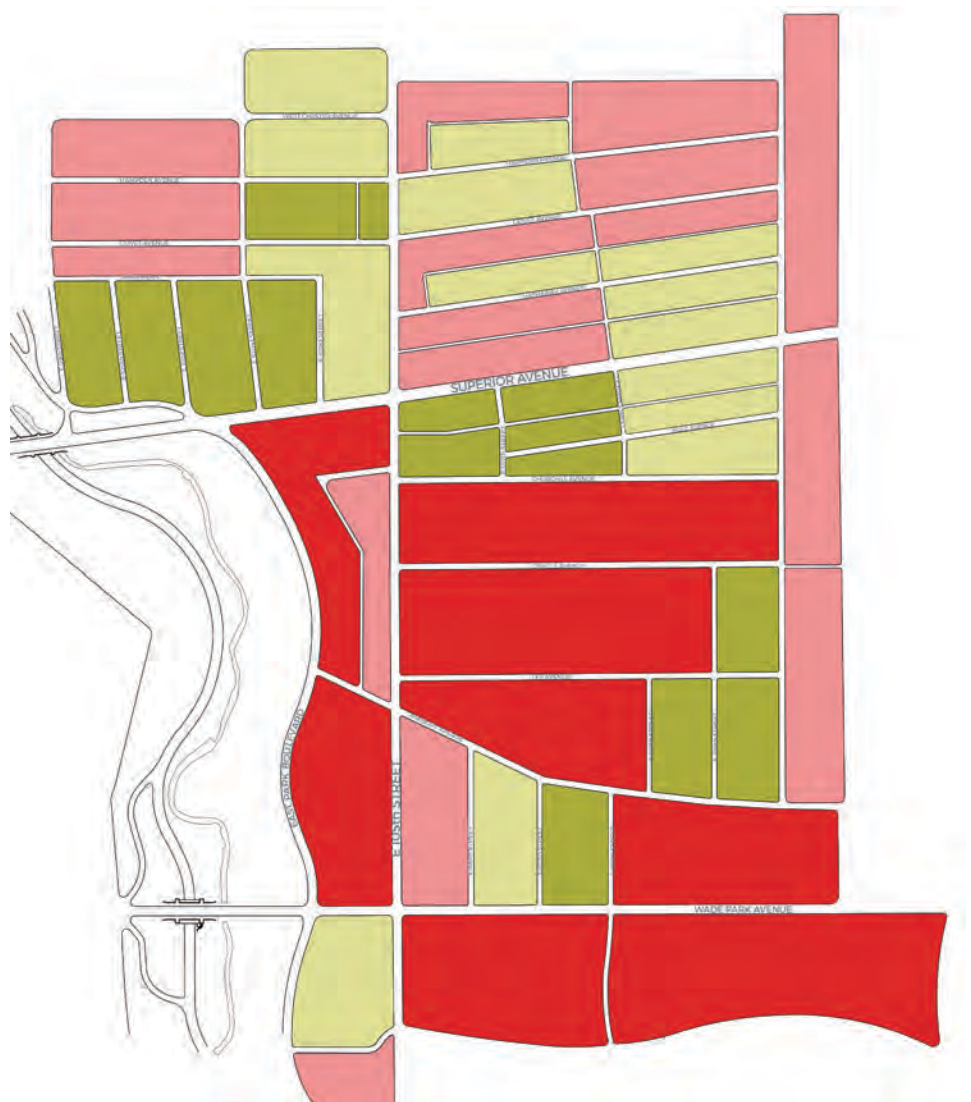


Figure 50: Walkable Blocks vs Barrier Blocks
Map by RDL Architects



Figure 51: Intersections
Map by RDL Architects

BLOCK SIZES

CREATING CONNECTIVITY

Breaking up the existing blocks to create greater connectivity can be achieved through three primary avenues:

1. Reviving existing alleyways
2. Connecting vacant parcels that cross blocks
3. utilizing the rear of commercial street parcels for additional alleyway and parking field connections.

VACANT LAND OVERLAY

GREY_VACANT PARCELS

In the map to the right, vacant parcels are shown in grey, proposed and existing street connectivity is shown in dark teal and proposed and existing pedestrian pathways are shown in light teal.

ADDITIONAL CONNECTIONS

Additional street connections can be made:

DK TEAL_STREETS + ALLEYS

1. Extend E 103rd St accross Superior Ave to E 103rd Ct. Extend E 103rd Ct to Wade Park.
2. Additional connections from E 103rd Court to E 105th St
3. Extend E 107th accross Superior Ave to Tecumseh Ct
4. Extend E 108th St accross Churchill Ave and Orville Ave to Lee Ave
5. Create parallel alleys to E 105th St to service apartments and shops

LT GREEN_PEDESTRIAN PATHS

6. Revive exiting connection from MLK to East Blvd
7. Follow countours of ridge in Rockefeller Park for pathways
8. Create additional pedestrian pathways from E 105th to Rockefeller Park
9. Create additional pathways from Superior Ave south



Figure 52: Street and sidewalk proposed connectivity map
Map by RDL Architects

Creating the Foundation for TOD: Enclosure of Urban Space / Land Use

ENCLOSURE OF URBAN SPACE

BUILDINGS ENCLOSE STREETS + SQUARES

Buildings, one of the four main elements of a city, are unfortunately less resilient than streets and parcel patterns. Circle North shows this in the vacant spaces that characterize the neighborhood. Fortunately, some building types, like religious structures and other institutional buildings last longer due to greater initial investment in their design and construction. Many of the buildings that do remain are of these types. Buildings arranged in concert with urban blocks, and given structure by the street grid, define and enclose urban space, a critical component in creating walkable neighborhoods with vibrancy. Commercial, mixed-use, and multifamily buildings should in general be designed to be built to the line of the sidewalk. The existing figure ground map showing building footprints can be seen in Figure 53 with the planned map creating enclosure of urban space in Figure 54.



Figure 53: Existing Building Footprints
Map by RDL Architects

LAND USE

Land use: A dense mixed use core radiating outward to single family streets.

FORM BASED

Urban Infill that follows proven urban design principles like the City is applying in its new Form Based codes, will form the foundation of development in Circle North. All new development will be designed with a mix of users from all income and age ranges in mind. At its core will be an urban shopping street with an anchor tenant like an Aldi's Grocer that appeals to all income levels. That said, housing will be the backbone of Circle North's success. A comfortable density in a walkable community that speaks to people in all stages of life is the basis of a successful neighborhood that can support retail and services.

4 RINGS OF DENSITY

The First Ring and Core is very dense and mixed Use: Mixed use buildings will form the core of Circle North. Retail shops will line the streets with 4 floors of apartments at varying price points above.

The Second Ring is very dense: 4 story apartment buildings with walk up units facing the street and 2 levels of flats above.

The Third Ring is dense: Town-houses, some with English basements below and carriage house rentals in back.

The Fourth Ring is less dense: Single family home renovations and infill.

Creating the Foundation for TOD: Street Patterns / Networks for Connectivity

GRIDS + PATHS

The relationship between a finely meshed grid and paths is paramount to a neighborhood that allows for the flow of people within and through it no matter their mode of transport. A grid provides for the network through which people access places. Paths provide direction to and from a point of origin and a destination. When planning any path, whether it be pedestrian, bike, public transit, or automobile, points of origin and destination must be taken into account. More specifically; while pedestrians and automobiles can access the grid anywhere there is a street or a sidewalk and design their journeys accordingly; lines of travel for buses and bikes need to be thought even more so in terms of the destinations at each end of the line. Each path should start and end somewhere that is of importance. This gives more prominence and function to each path laid out.

PEDESTRIAN NETWORK

CONNECTING PEOPLE TO PLACE

Reinforcing Circle North's pedestrian network with additional linkages and reviving old alleyways that have been neglected is the foundation for the plan to rebuild Circle North. The average pedestrian can cover a half of a mile in 10 minutes and that walkable distance defines the boundaries of the plan. All the basic neighborhood amenities should be provided within that walkable distance. The existing pedestrian path network and proposed pedestrian networks can be seen in Figures 56 and 57.



Figure 56: Existing Pedestrian Networks
Map by RDL Architects



Figure 57: Proposed Pedestrian Networks
Map by RDL Architects

PEDESTRIAN NETWORKS

EAST WEST CONNECTIVITY

Most north-south dimension between streets that intersect East 105th Street from the east are within the 600' maximum dimension allowable for walkable neighborhoods. However, the blocks on the west side of East 105th street are too long and do not allow for direct and easy connections for pedestrians to one of the neighborhood's greatest assets, Rockefeller Park.

Three pedestrian cut throughs are proposed at the midpoints of the two long blocks south of Superior and one through the block north of Superior.

East 103rd Street is proposed to continue from north of Superior, south as a continuous alley running through the north-south axis of the middle and southern blocks.

Where the paths meet the park they terminate at a plaza that announces the entry to the park, and from there paths flow to follow the ridges along the glen.

The path bisecting the northern block aligns with Orville Avenue, allowing for continuous east-west travel through the entirety of the neighborhood. The path allows for automobiles to access the north-south alleyway from East 105th Street and then continues on through an alleyway between two of the apartment buildings as pedestrian only.

Bisecting the southern of the two blocks is a similar type path that starts as a combination for vehicular and pedestrian, meets a roundabout that creates a place in the middle of the block, and continues through the apartment blocks as pedestrian only. This path sits on a block with five structures designed by Ohio's first African-American architect, Robert P. Madison. We propose that this block be designated as an historic district and that this pathway be named in honor of him. The center of the block should be redesigned to bring the residents of the block together in a semi-public, grand courtyard that is designed for people and not cars.



Figure 58: East West Connectivity Map by RDL Architects

PEDESTRIAN NETWORKS

NORTH SOUTH CONNECTIVITY

The streets that intersect Superior Avenue occur at walkable intervals west of East 105th Street, north of Superior Avenue. In all other places, they exceed recommended distances between intersections.

The plan proposes to break up these distances through the extension of East 103rd and East 107th Streets across Superior Avenue. The addition of pedestrian pathways at midpoints between East 105th and East 107th Streets, and East 107th and East 108th Streets refine the blocks further.

East 103rd Street will continue on past the Library and connect to the existing alley in the middle of the block that runs between East 105th Street and East Boulevard. The pedestrian pathway between East 105th and East 107th Streets will continue south past Churchill Avenue, and run along an alleyway designed to hide cars on the rear of buildings facing East 105th Street. The alleyway terminates at a park between Lee and Ashbury Avenues.

East 107th Street will be extended by way of existing vacant parcels north through to Hathaway Avenue. To the south it will extend through a renovated Wade Park/ Harry E. Davis School to arrive at a hardscaped plaza and through to Orville Avenue.

East 108th Street will be extended using land from what is currently the school's old track field, and vacant parcels to connect to Lee Avenue.



Figure 59: North South Connectivity Map by RDL Architects



PUBLIC TRANSIT RECOMMENDATIONS

The two major spines of the neighborhood are currently served by the 10 (north-south) and 3 (east-west) bus lines. These lines run much slower than the US average for city buses and can be made more efficient. The transit plan seeks to keep these lines and to upgrade them by:

1. reducing the number of stops to reduce travel time.
2. adding bus bulbs that save time by not forcing the bus to pull in and out of traffic and add to pedestrian safety.
3. giving priority to buses where East 105th is wide enough for a dedicated bus lane. In general these are the areas south of the Louis Stokes Veterans Administration Medical Center.
4. adding meaningful destinations at both ends of each line.

PUBLIC TRANSIT NETWORK

CONNECTING PEOPLE TO PLACE

The maps shown in Figures 60 and 61 show existing and proposed transit lines with bus stop relocations. For both maps, the diamond shapes indicate the geography a pedestrian walking at a casual pace can cover in 5 minutes, the accepted maximum length of time the average person will tolerate when walking to a bus stop. Solid circles are stops with no shelter and solid circles with circle halos around them are bus stops with shelters. GCRTA provides shelters at stops where there are 50 or more boardings a day. As can be seen in the existing conditions map, there is a great deal of overlap in the walksheds for stations which indicates inefficiency and adds time to travel time. The proposed realignment calls for three stations for the 3 bus line running east-west through Circle North; and four stations for the 10 line running north-south. As seen below, the stations at the center of the neighborhood in concert with clearly defined paths for easy connections, environmental graphics, the addition of an urban square, and mixed-use development to create a transit stop that is integrated into the fabric of the neighborhood.



Figure 60: Existing Transit Networks
Map by RDL Architects

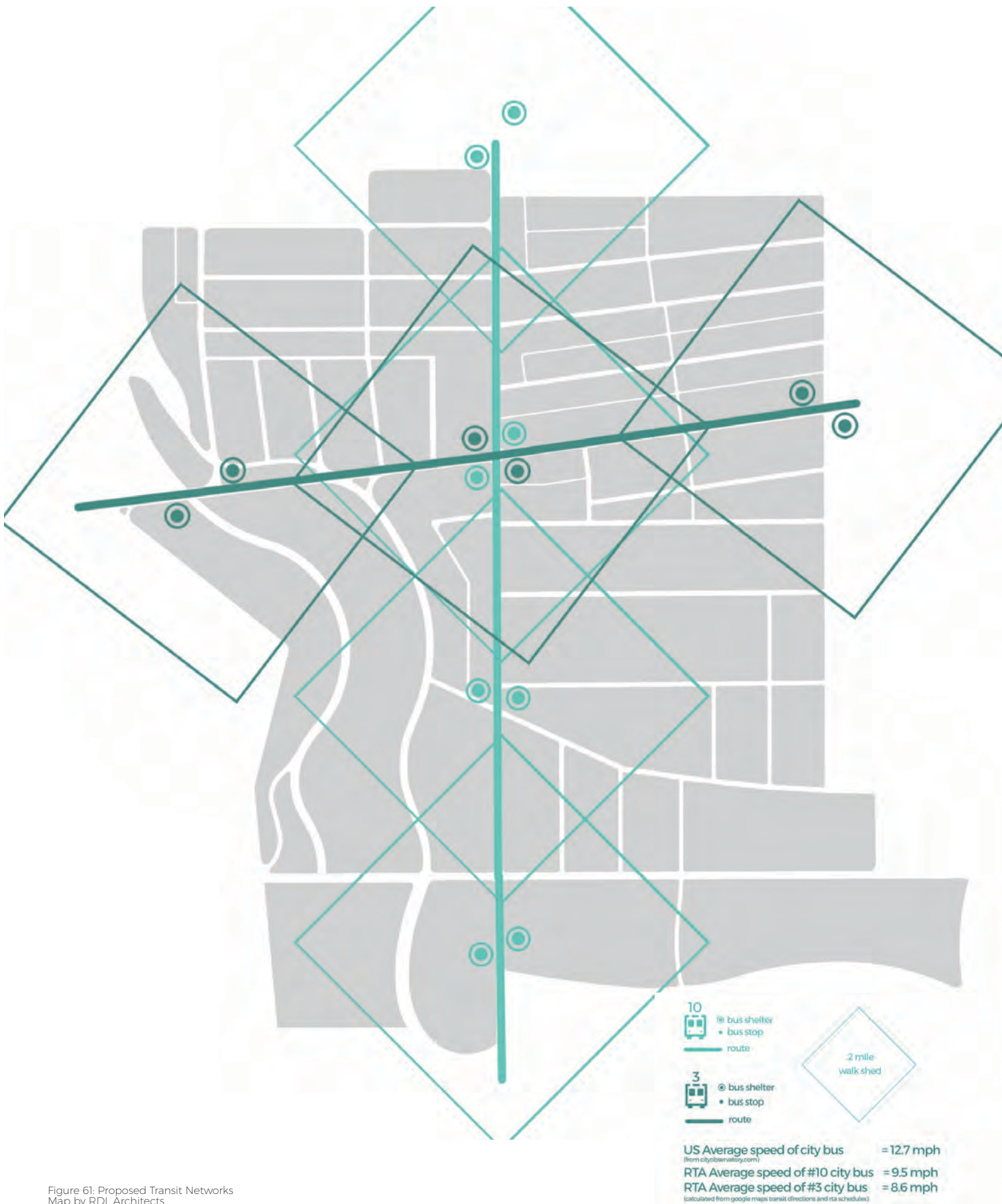


Figure 61: Proposed Transit Networks
 Map by RDL Architects

PUBLIC TRANSIT NETWORK

CONNECTING PEOPLE TO OTHER PLACES

As seen in Figure 62, the stations at the center of the neighborhood in concert with clearly defined paths for easy connections, environmental graphics, the addition of an urban square, and mixed-use development to create a transit stop that is integrated into the fabric of the neighborhood.



Figure 62: The Intersection as the Transit Stop
Map by RDL Architects

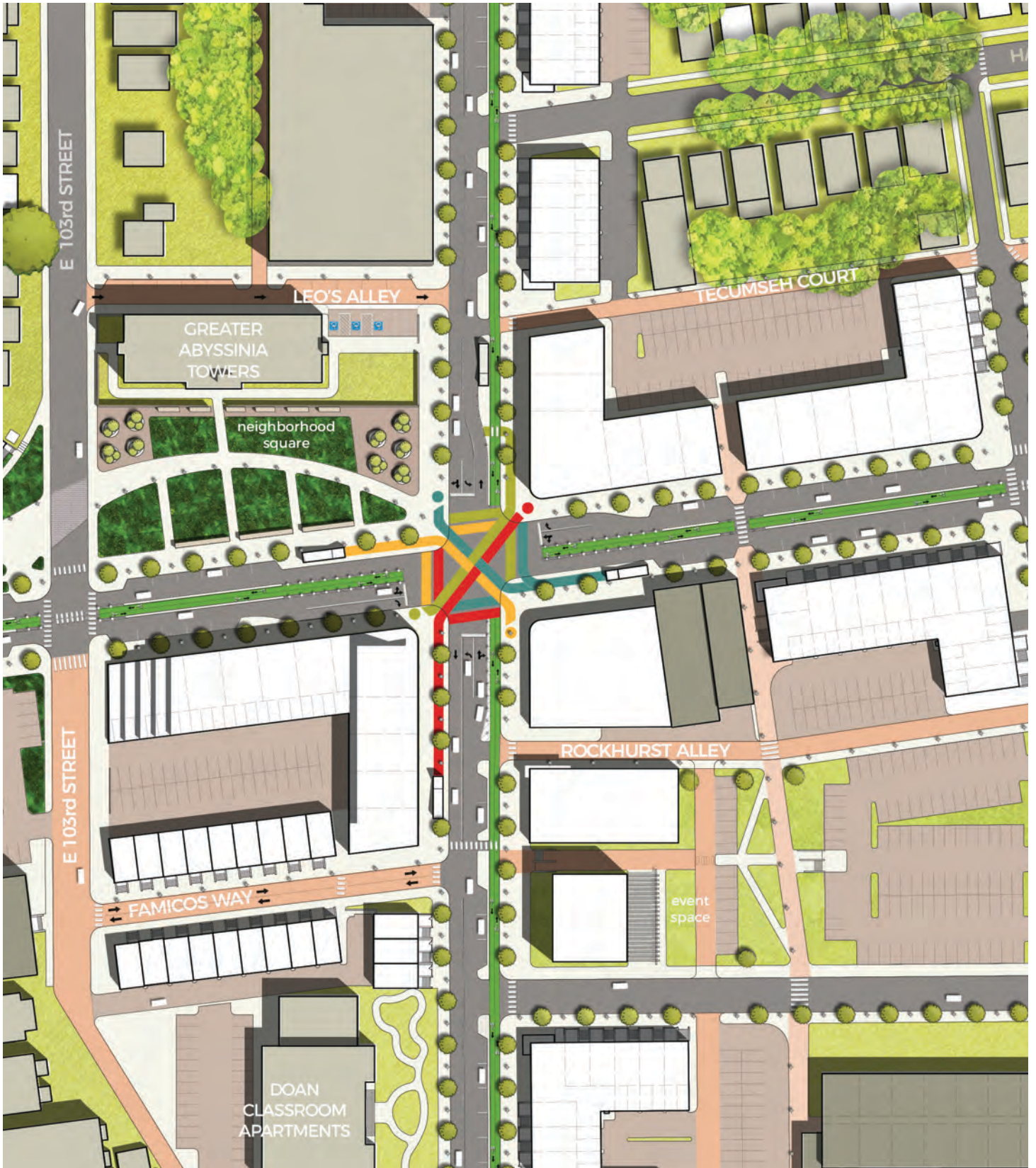


Figure 63: The Neighborhood as the Transit Stop
Map by RDL Architects

BIKES

Studies show four levels of bicyclists and participation rates go up as the pathway designated for bicycling becomes more protected: Former Portland bike chief Roger Geller originally identified these four types of cyclists a decade ago. An updated study by Jennifer Dill and Nathan McNeil of Portland State University further refined the numbers and updated them for 2016. The four types of bicyclists and their levels of participation are as follows:

- Strong and fearless: those who will ride anywhere and use sharrows 7%
- Enthused and confident: those who will share the street with traffic in marked bike lanes 6%
- Interested but concerned: those who will ride in protected bike lanes: 48%
- No way no how: those who will only ride in completely separated pathways. 37%

There are also two different types of bike paths, recreational and commuter. Recreation paths are usually in parks and have completely different paths than streets. Commuter bike paths happen along the same routes as streets and vary in their level of separation of traffic.

BIKE NETWORK

2 GOALS

The goal for Circle North is twofold:

1. Connect the neighborhood to the recreational path, the Lakes to Lake Trail in Rockefeller Park
2. Create commuter paths in multimodal streets that appeal to Glenville residents and make biking a realistic option for the majority.

DEMOGRAPHICS

The urban, African-American bicyclist tends to view bicycling differently and has a different way of viewing the where and how of bicycling. They, as well as older cyclists tend to follow the old rule of riding against traffic. Current bicycling thinking is that bicycles are just another form of traffic in the street and have just as much right to it as cars. In addition, bicyclists are expected to follow all the same traffic rules as cars do. Bicycling is also seen as an inferior mode of transportation, whereas it is increasing in popularity in other demographics.



Figure 64: Existing Bike Networks
Map by RDL Architects



Figure 65: Proposed Bike Networks
Map by RDL Architects

AUTOMOBILE NETWORK

MINIMIZING IMPACT

The major consideration given to vehicular traffic in Circle North was in minimizing the automobile's impact on the environment while accommodating their movement and storage. This is achieved by re-viving alleyways to serve as service corridors to handle intraneighborhood traffic, waste management services and car storage. Breaking blocks up for increased pedestrian connectivity has also resulted in greater vehicular connectivity along East 103rd, East 107th and East 108th Streets.



Figure 66: Existing Automobile Networks
Map by RDL Architects



Average traveling speed of car in Cleveland = 35.4 mph (+/- 9.7mph)
(calculated from google maps traffic)

Figure 67: Proposed Automobile Networks
Map by RDL Architects

PEDESTRIAN NETWORKS

SECONDARY CIRCULATION

The enlarged plan for East 105th Place alleyway to the left illustrates the concept of secondary circulation for cars in alleys that line the major corridors in the neighborhood. Alleys should be revived where they already exist and implemented where they do not all along East 105th Street and Superior Avenue as it becomes possible over time. Due to the large number of vacant parcels and parking lots, removing buildings is not an issue on most blocks. This arrangement allows for buildings to front the street and be built up to the property line, secondary paths of travel off the main corridors for intraneighborhood travel, plenty of parking to accommodate increased density as the neighborhood grows, and city services and deliveries to be made out of the line of through traffic along major routes.

Most of Superior Avenue already has alleyways running parallel to it on both sides, while East 105th Street has them to a lesser degree.



Figure 68: Secondary Circulation
Map by RDL Architects