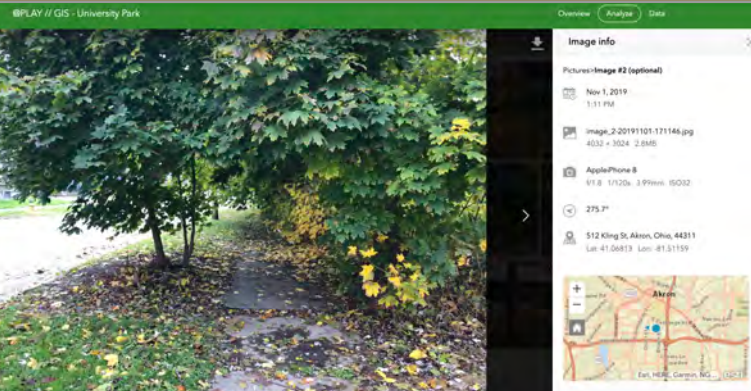


PLAY GIS Mapping

UNIVERSITY PARK

Walkability Assessment



Introduction

In June of 2017, Art x Love kicked off an expansive interactive art project called @PLAY, which explored every street in Akron's 24 neighborhoods and mapped strategic assets to evaluate and improve resident's quality of life. As the project came to a close in 2018, Art x Love began to collaborate with the City of Akron's GIS & Cartography team on a GIS system to catalog past, present, and future neighborhood insights. In 2019, a team of engineers from the University of Akron decided to expand and build on this system with strategic walkability assessment of the University Park neighborhood.

The goal of our @PLAY GIS Mapping project was to conduct a daytime and nighttime assessment of the University Park neighborhood by evaluating seven key criteria at every intersection within the neighborhood. This report represents a comprehensive summary of our findings, and has been developed to help City, County, and Community leaders identify opportunities to improve the neighborhood using comprehensive real-world data.

We believe this project is a model for community engagement, and offers a novel approach to leverage resident insight to improve civic services. It has been a privilege to collaborate with the City of Akron and The University of Akron, and we look forward to building on this study to further benefit our community, neighborhoods, and connected future.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mac Love', with a long, sweeping underline.

Mac Love

Chief Catalyst & Project Lead, Art x Love LLC

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University of Akron Engineering Service Design Team (ESDT)



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Overview

Location: University Park, Akron, Ohio.

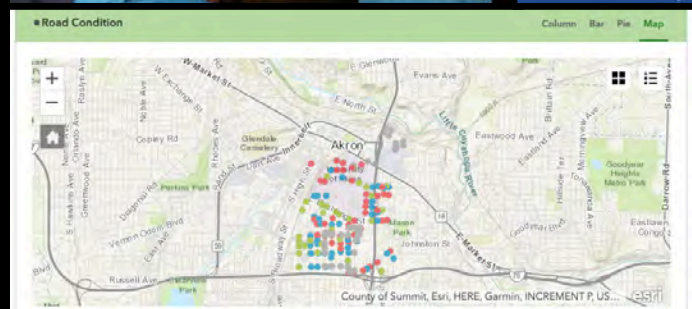
Timing: November 2019 – February 2020.

Task: Conduct a daytime and nighttime walkability assessment of every intersection in Akron's University Park neighborhood.

Method: Walk to at least two corners of every intersection in Akron's University Park neighborhood and conduct a walkability evaluation with consideration from multiple vantage points.

Approach: Every assessment was conducted by at least two (2) people to discuss the specific criteria at each location and find consensus.

Tool: Using our personal mobile phones and the *Survey123* mobile application, data was logged and geotagged at each intersection with photos and additional comments.



Features for assessment



ROADWAYS



SIDEWALKS



LITTER



GREENERY



STRUCTURES



VISIBILITY

DAYTIME/NIGHTTIME



SAFETY

DAYTIME/NIGHTTIME

The experience



As students, we hear about how the University Park neighborhood isn't so good. But our survey showed it to be much better than we expected.

- Amanda O'Reilly



This project changed my perception of Akron. It previously seemed like an unknown area that I didn't exactly want to explore, but after this project I have learned my way around the neighborhood. It made me much more confident in walking the neighborhood.

- Clark Bates



I really enjoyed walking the streets and becoming more familiar with the surrounding area. As a commuting student, I usually just stuck to campus. But working on this survey gave me a greater sense of pride and attachment to the Akron area.

- Scott Salerno



Roadways

Looking from the perspective of crossing the street on foot.
Less so from what the road is like to drive on.

Overall levelness of pavement

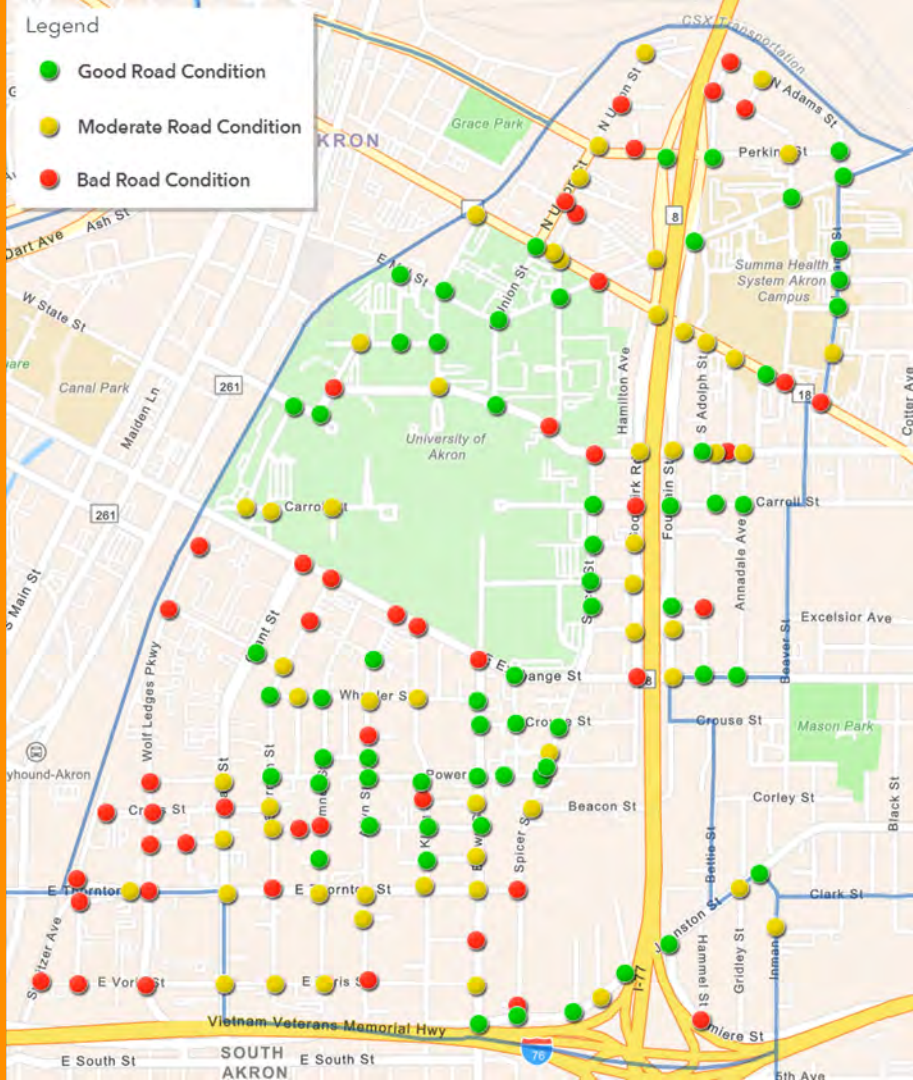
- Cracks
- Bumps
- Transitions
- Potholes
- Sunken in utilities
- Exposed brick layer

Sewer grates

- Are they busted out?

Crosswalks

- Brightness of existing crosswalk
- No penalty for absence





Roadways

38% Good

- Even or newly re-done pavement
Spicer St & Harvey Ct
- Minimal cracks and bumps
Good St & Perkins St
- No potholes or exposed brick
Power St & Emmet Ct

33% Moderate

- Not overly uneven or outstandingly smooth
E. Market St & Goodkirk Rd
- Some cracks and bumps from everyday usage
King St & Wheeler St
- Only one or two small potholes
N. Adams St & Hazel St

29% Bad

- Uneven pavement
E. Exchange & Sherman St
- Many cracks and bumps
Wolf Ledges & Wheeler St
- Potholes and exposed bricks
Cross Street & Sumner St



Spicer St & Harvey Ct



E. Market St & Goodkirk Rd



E. Exchange & Sherman St



Power St & Emmet Ct



N. Adams St & Hazel St



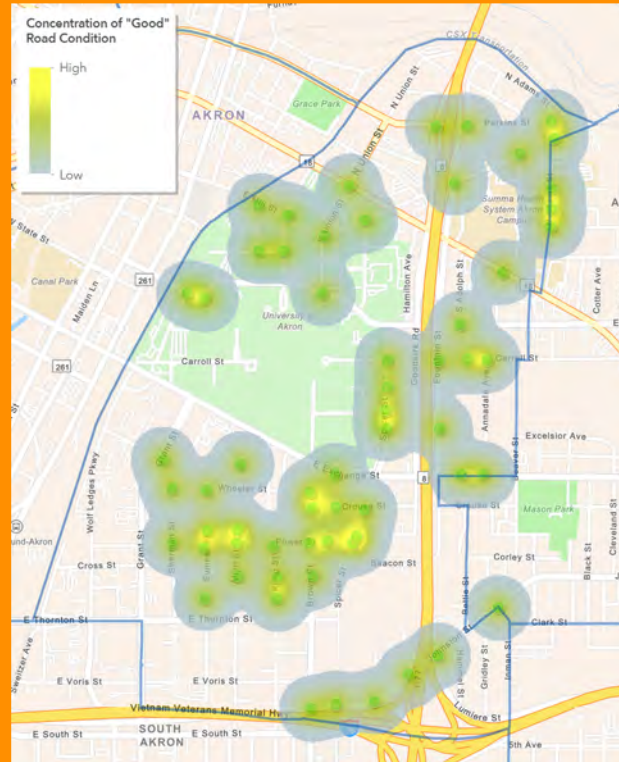
Cross Street & Sumner St



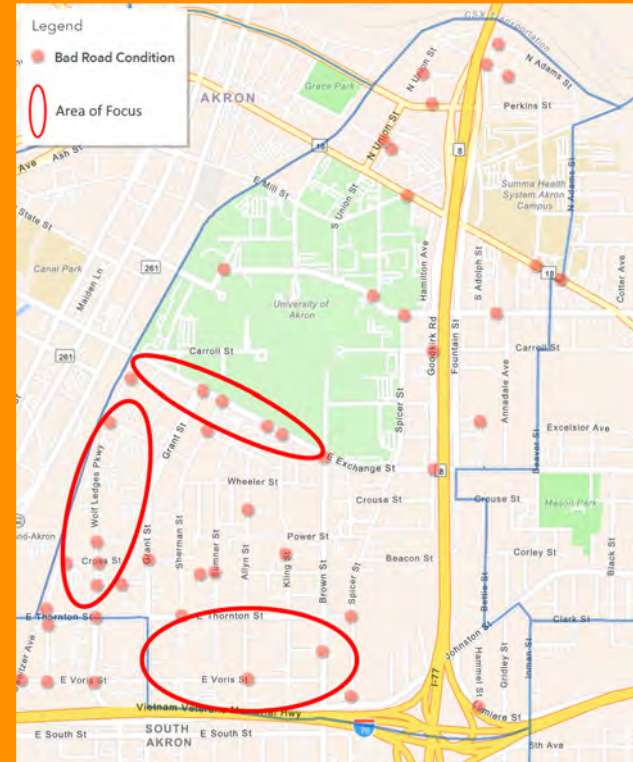
Roadways

Strategic recommendations

- Heat map of “Good” intersections highlight large sections of the neighborhood that are lacking in road condition.
- E. Exchange and Wolf Ledges are both in need of improvement.
- However, E. Exchange is higher traffic.



Good Road Conditions



Bad Road Conditions + Areas of Focus



Roadways

Novel solutions

- Transform "Moderate" intersections into "Good" with crosswalks.
- High traffic roads like E. Exchange street have existing crosswalks, but are very faded.
- Could the date crosswalks are painted be something that can be added to an existing database?

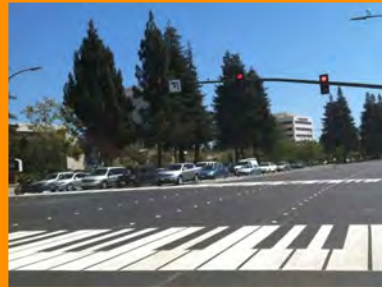
Before



After



Crosswalk patterns



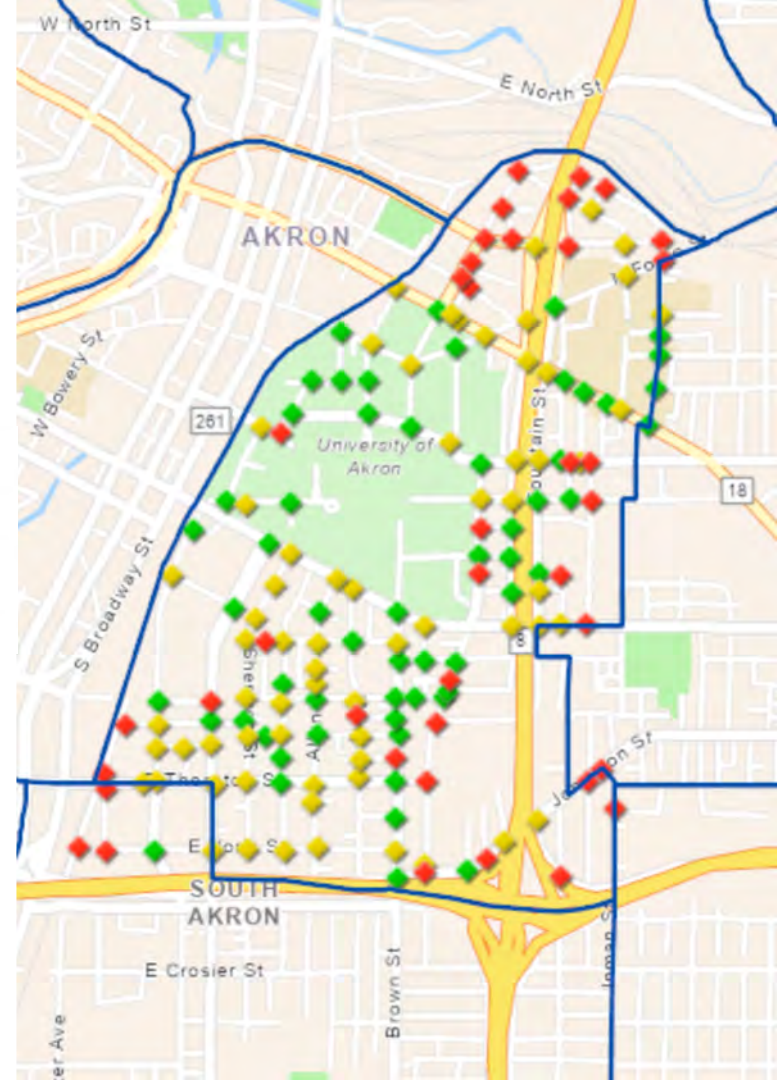
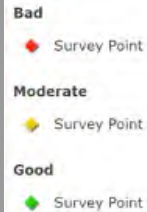


Sidewalks

Look down each direction of the intersection and inspect the walkability of the sidewalk surfaces.

We considered the sidewalk to be the area from the curb of the street to any yard or building.

- We evaluated the smoothness of the path and how clear it was to walk.
- We took special care to look for wheelchair accessibility and smooth street to sidewalk transitions.
- A sidewalk deserving our “Good” rank would be level and smooth, with no bulges or breaks.
- A sidewalk would receive a “Bad” rank if it was impassable, bumpy, or broken.





Sidewalks

35% Good

- Smooth wheelchair access
- Lined with crosswalk and barriers
- Uniform pavement and coloration

41% Moderate

- Contains wheelchair ramps and is accessible, but needs repair and slightly overgrown
- Good surface on most corners, but not smooth on one
- Corner in need of repair, but sidewalks in good condition

24% Bad

- Broken concrete
- Missing, covered, and overgrown sidewalks
- Separated segments and trip hazards



Wheeler St and Kling St



Allyn St and Wheeler St



Kling and Rankin



Carrol St



S Union St and E Mill St



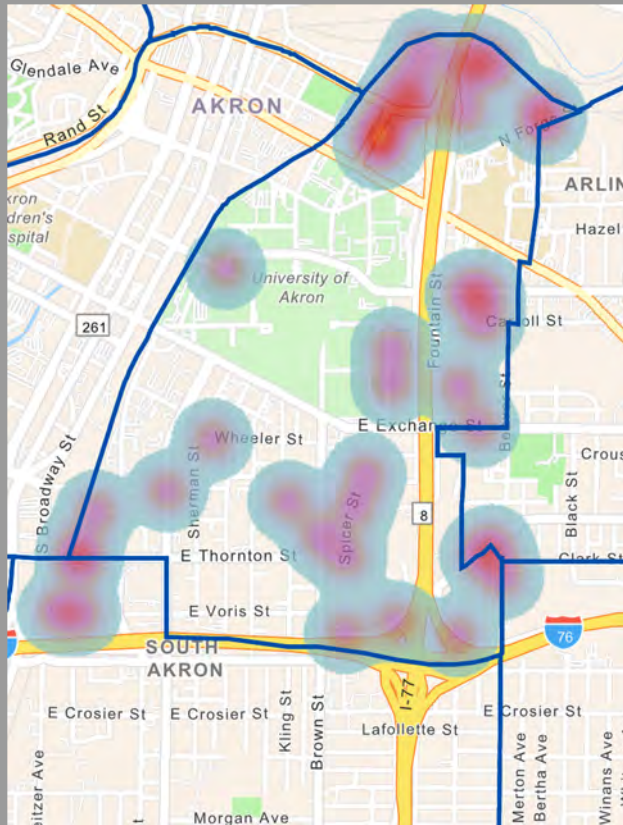
Grant and McCoy



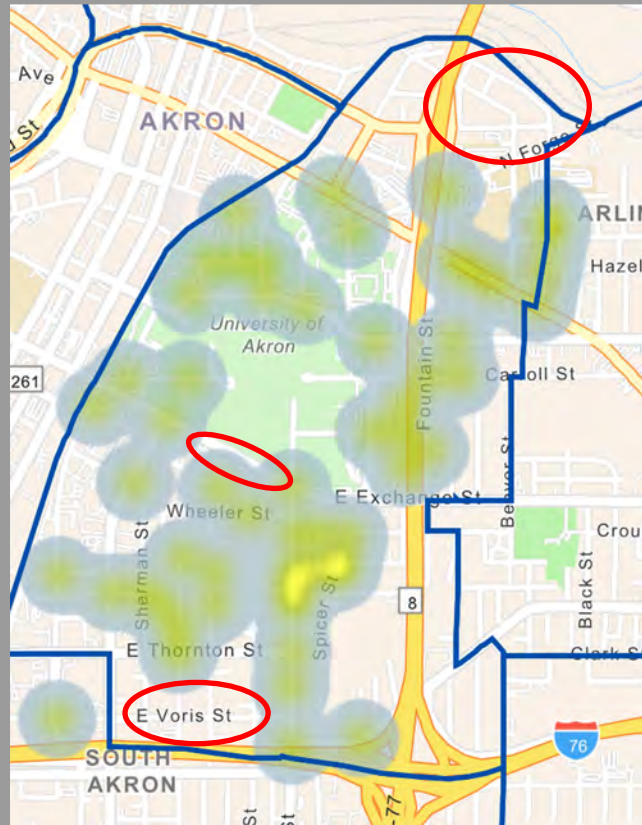
Sidewalks

Strategic recommendations

- Exchange street at the South edge of the University is in need of improvement due to the large amount of foot traffic it receives.
- Area north of Forge Street lacks good sidewalks.
- Southwest corner near Voris Street is in need of repair and does not have any good sidewalks.



Bad



Good



Sidewalks

Novel solutions

- Wheelchair accessible ramps on street corners.
- Brightly painted curb edges and sidewalks for added visibility and safety.
- Cosmetic bricking on the edges of the sidewalk.
- Increased footprint of the sidewalk on the corners of the street.
- Clear overgrown foliage on sidewalks in need.
- Decorative trim, such as rocks or bricks.



Carroll Street, Akron





Litter

We assessed the litter of an intersection by looking across all corners, from buildings and greenery to the street.

- A “Low” score was given to intersections with a notable absence of litter. They did not have to be completely litter free, but if there was litter it was either small or very hard to notice.
- A “High” score was given to intersections that contained either a notably high density of litter on one corner, or clearly visible litter on more than 50% of the corners of the intersection.

Bad

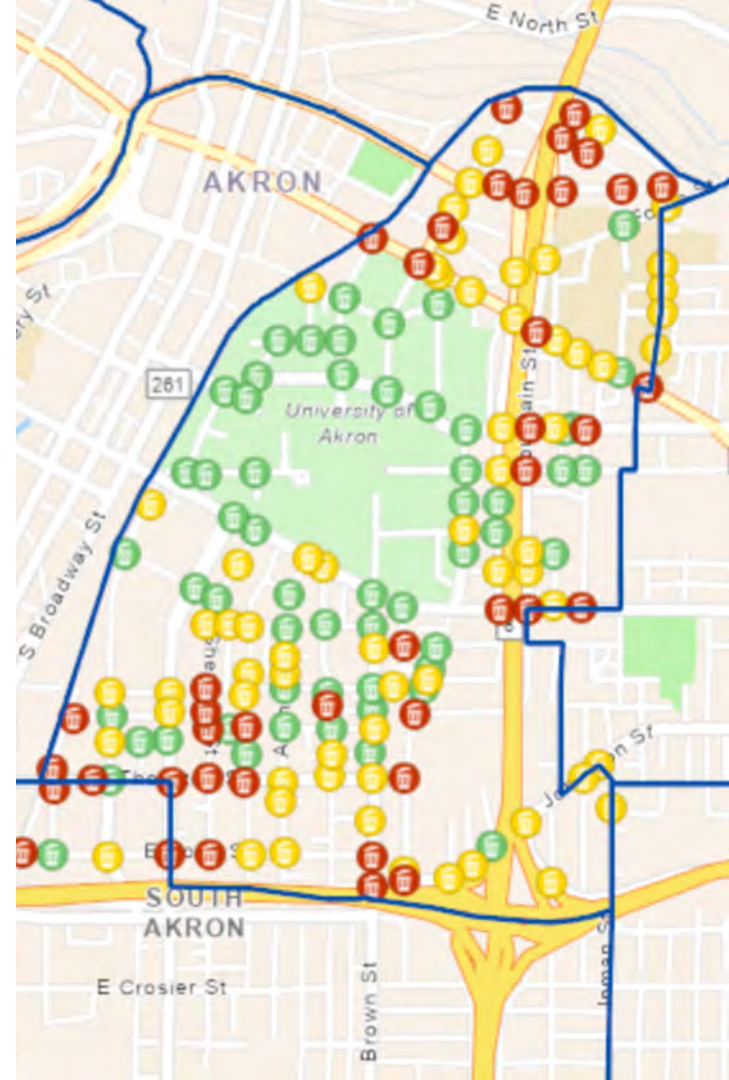
 Survey Point

Moderate

 Survey Point

Good

 Survey Point





Litter

35% Low

- Large open areas free of litter.
- Lacks litter on all corners.
- Clear sidewalks and greenspaces .

40% Moderate

- A few pieces of litter on one side of the street.
- Some litter present in the field.
- Litter present on one street corner (and not present on others).

25% High

- Empty lot that has collected litter.
- Sidewalk covered in litter.
- Foliage that has collected litter .



Grant St and Wheeler St



Brown St and Crouse St



Annadale Ave and E Exchange St



Lincoln St and S Forge St



Inman St and Johnston St



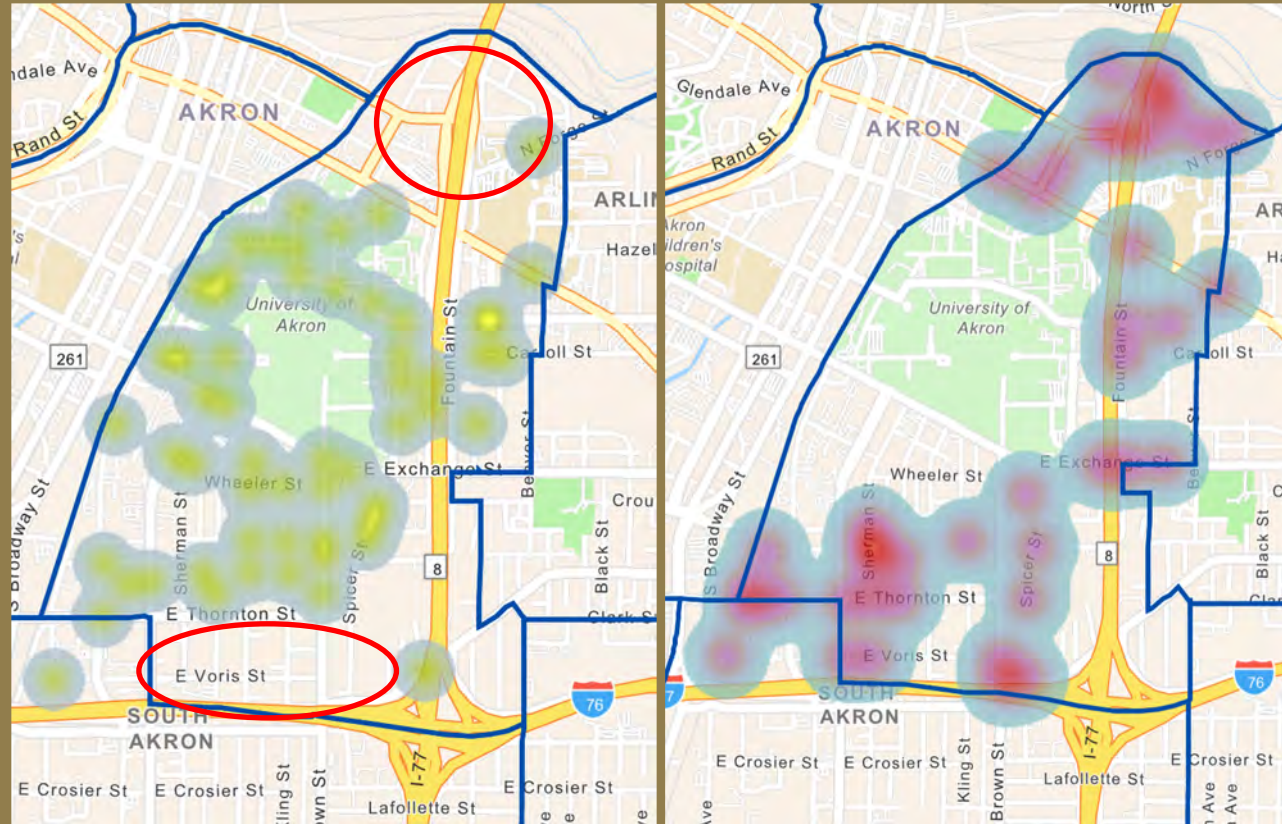
Adolph St and Perkins St



Litter

Strategic recommendations

- The North and South edges of the neighborhood are in need of the most attention.



Low Litter

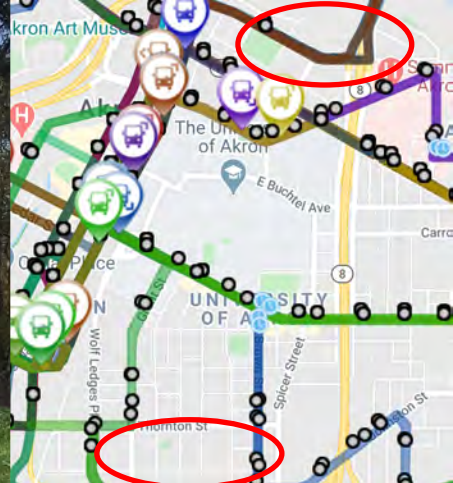
High Litter



Litter

Novel solutions

- Add more trash cans to high traffic and remote areas.
- Regularly check and clean areas of foliage on roads and intersections, especially in high traffic areas.
- Bus stops have trash cans nearby. There do not appear to be any bus stops located in the areas that received the fewest “Low” rankings, meaning that the addition of a trash can could be highly beneficial.
- Install “No Litter” signage.
- University Park Cleanup Day – work with volunteers from the University Park neighborhood, Serve Akron, Habitat for Humanity, and Keep Akron Beautiful.

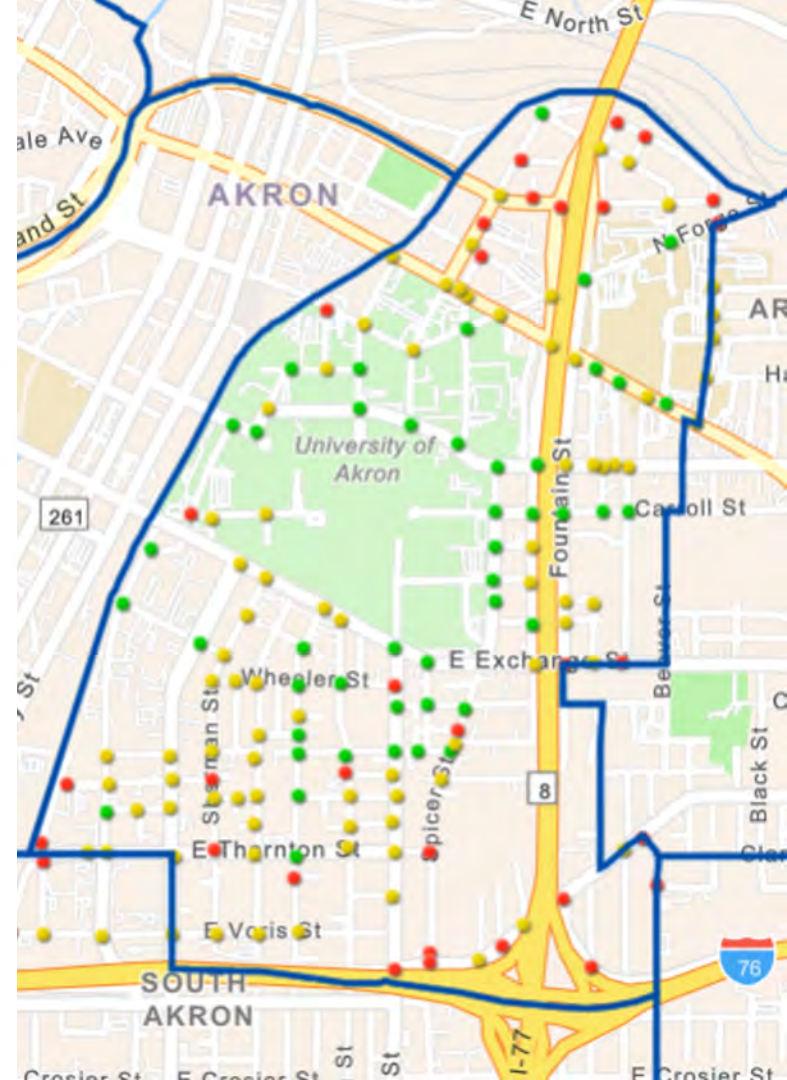
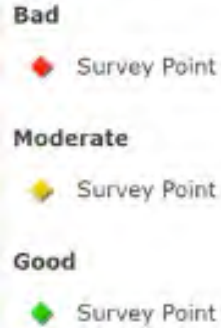




Greenery

Criteria for assessment

- Look from the devil strip to property edge.
- Consider grass, bushes, trees, landscaping, branches, foliage, etc.
 - Is it invasive? Impeding passage or visibility?
 - Is there dirt or exposed earth where there should be something?
- Attractive = outstanding (seasonal considerations).
- Landscaping included as a positive.





Greenery

28% Attractive

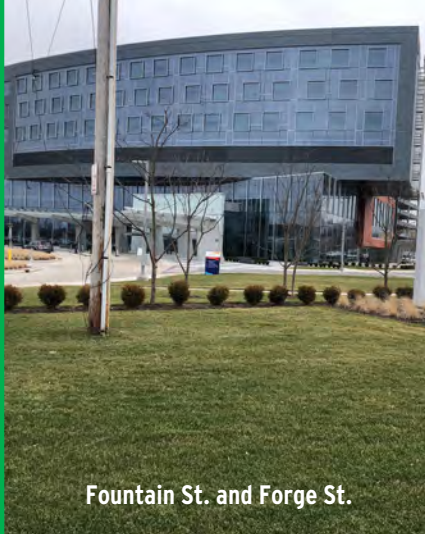
- Landscaping
- Green space
- Natural space

52% Moderate

- Nothing special or eye-catching
- Nothing overgrown, dead, or barren

20% Unattractive

- Overgrown
- Dead
- Lacking



Fountain St. and Forge St.



Voris and Sherman



Johnston and Spicer



S. College St. and Hill St.



S. Adolph and Buchtel



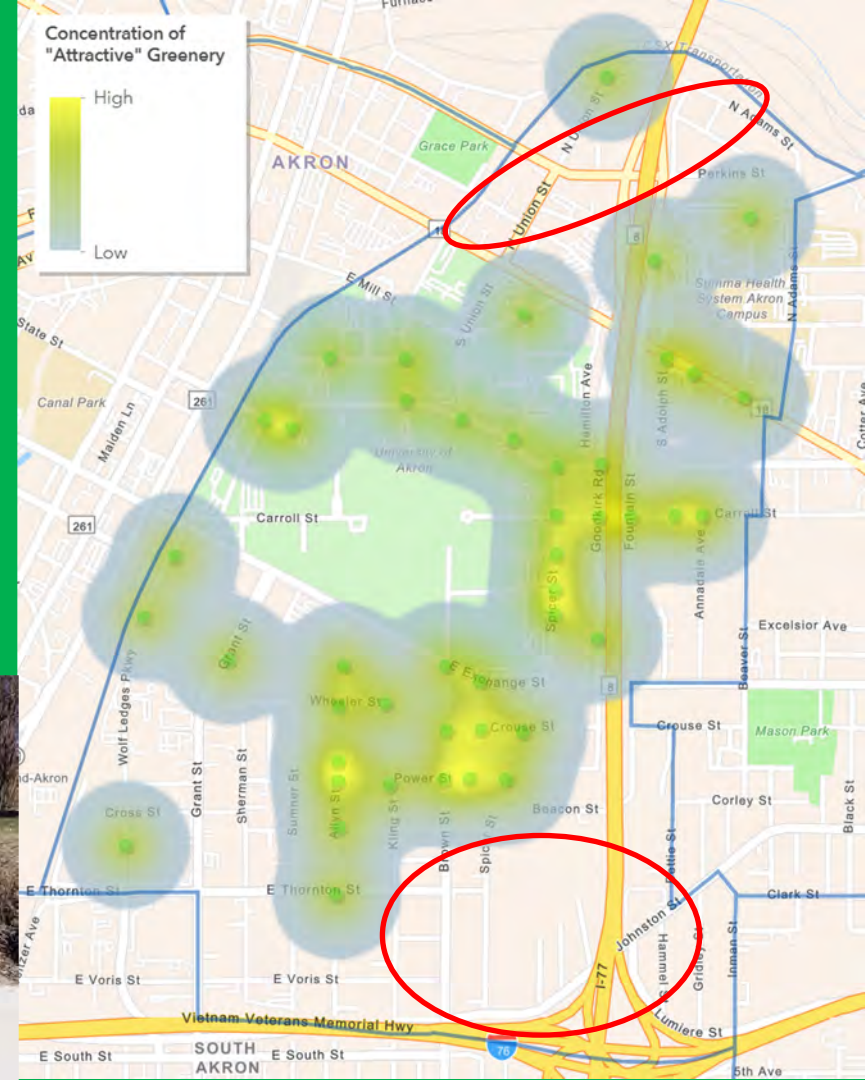
Hugill Ct. and N Adams St.



Greenery

Strategic recommendations

- North end of neighborhood
 - > Residential
- Johnston St. area
 - > Enter/Exit of neighborhood near highway
 - > High traffic area





Greenery

Novel solutions

- Publicize method to report to city
- Engage local groups & share their info
 - > Let's Grow Akron
 - > Keep Akron Beautiful
 - > Summit County Master Gardeners
 - > Summit County Soil & Water Conservation District
- Community clean-up days
 - > Prior to yard waste collection day(s)
 - > Volunteers from UA (prior to Earth Day)
- Plant / bulb swaps



Butterfly Garden Public Park



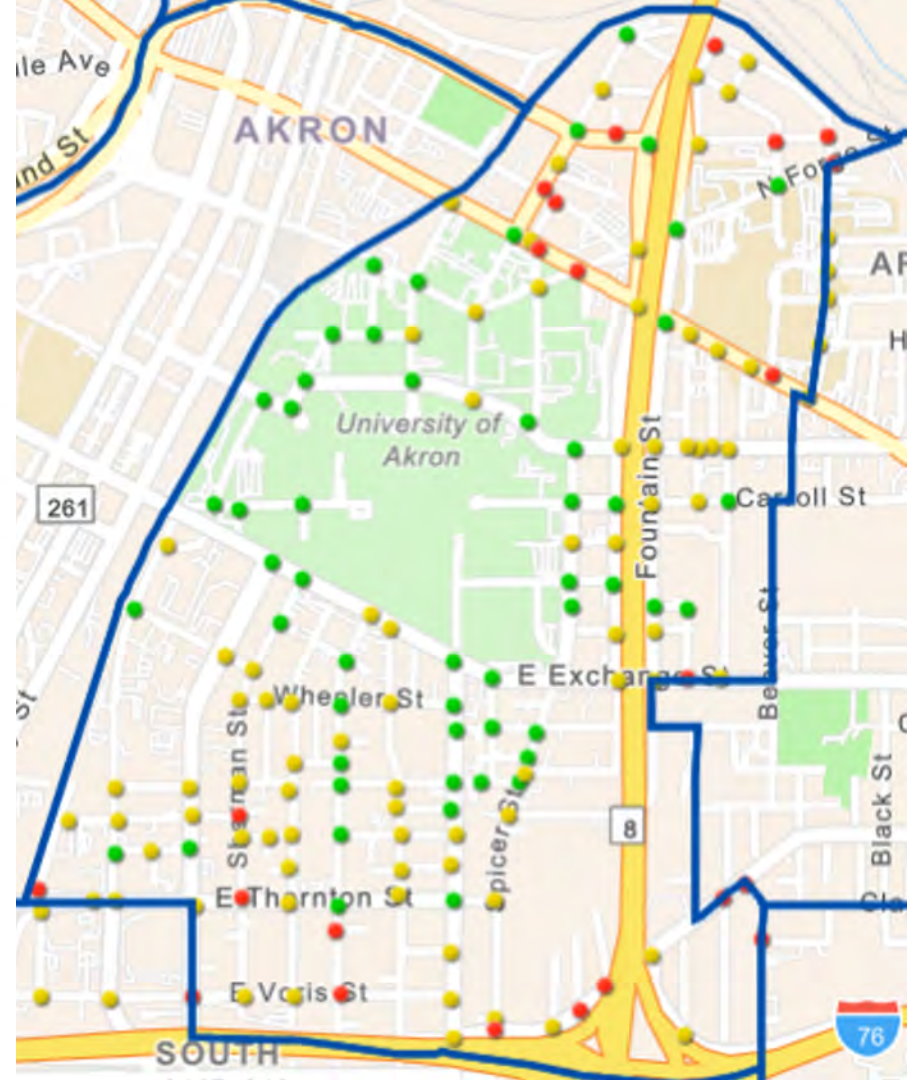
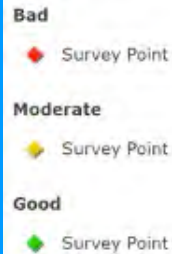
Keep Akron Beautiful



Structures

Criteria for assessment

- Looking at all man-made structures
- In a radius of 2-3 buildings
- Curb appeal, condition, upkeep, outstanding features
 - Outstanding = point of attraction
- New ≠ good
- Bad = not maintained, un-useable, broken, condemned, dangerous
- Outdated ≠ bad





Structures

32% Good

- Clean
- Maintained
- Colorful
- Curb Appeal

53% Moderate

- Was there one nicer building, but the rest were in poor condition?

15% Bad

- Grime
- Collapsing
- Boarded up



Exchange St. and Brown St.



Voris and Brown



Allyn St. and Danville Ct.



Allyn and Wheeler



Exchange and Kling



Sherman and Duer Ct.



Structures

Strategic recommendations

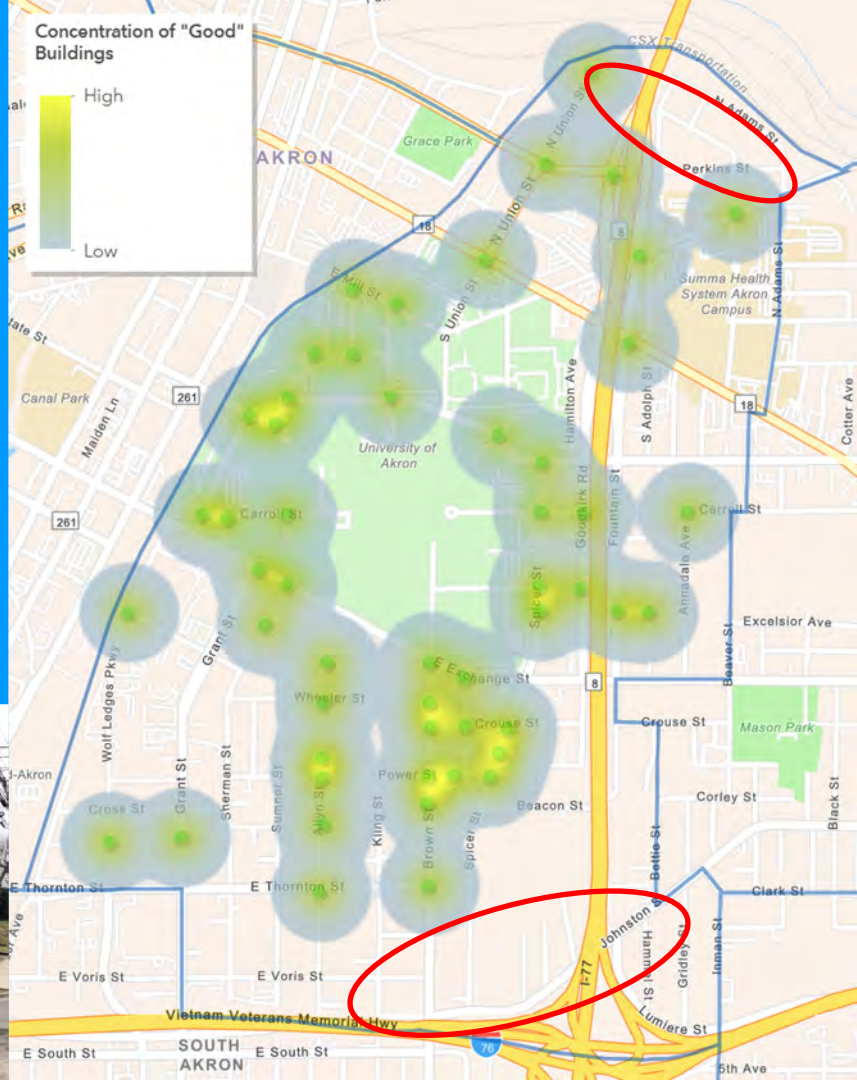
- Focus
 - > Northern Neighborhood (residential)
 - > SE Neighborhood (corridor in and out)
- Curb Appeal Day
 - > Volunteers addressing walkability (Habitat for Humanity, University of Akron, Serve Akron, Keep Akron Beautiful)
- Neighborhood Network
 - > Painting boarded windows



Johnston St. & Johnston Ct.



N. Forge St. & N. Adams St.





Structures

Novel solutions

- Connections between residents and local groups
 - > Rebuilding Together (NEO), Department on Aging, United Way
- Add public art & signature distinctions
 - > Don Drumm, Akron Art Brigade, Art x Love, ArtsNow, other artists
- Conversations with landlords
- City initiatives to add:
 - > Exterior lighting, handrails, curb appeal
- Pressure washing request
- Encourage clear signage at all shops
- Removing buildings does not necessarily make the space feel safer – leaves a cavity





Daytime Visibility

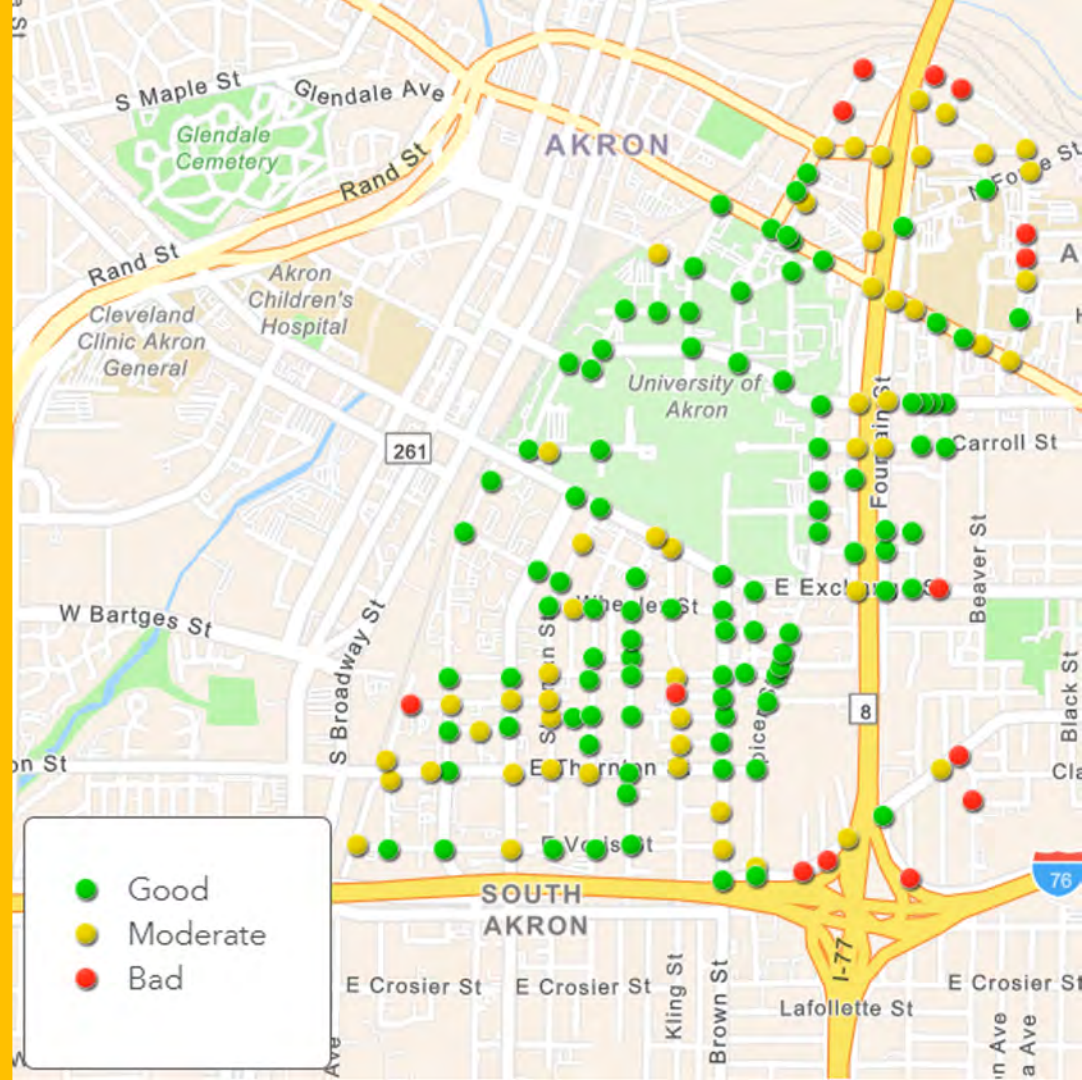
Criteria for assessment

- Any physical objects or sights impeding one's view of streets from intersection.
- Sources of visibility reduction include:
 - > Buildings located at very sharp turns.
 - > Vegetation stretching sidewalks and streets.
 - > Street lights (extreme fog/cloud cover)

Scoring

- Good
 - > Very clear near, far-sighted visibility.
- Moderate
 - > Mix of clear and diminished visibility.
- Bad
 - > Significantly low visibility (50% or more)

Note: Visibility not recorded for one daytime data point





Daytime Visibility

60% Good

- Well-lit in bad weather, near-twilight/dusk skies
- Virtually no obstruction
- Can see surroundings very clearly

32% Moderate

- Some obstruction from landscape
- Some obstruction from road curvature, fence
- Some obstruction from trees

9% Bad

- Significant obstruction from road curvature, trees, building
- Significant obstruction from traffic
- Significant landscape obstruction



Brown St. and Rankin St.



E. Buchtel Ave. and Fountain St.



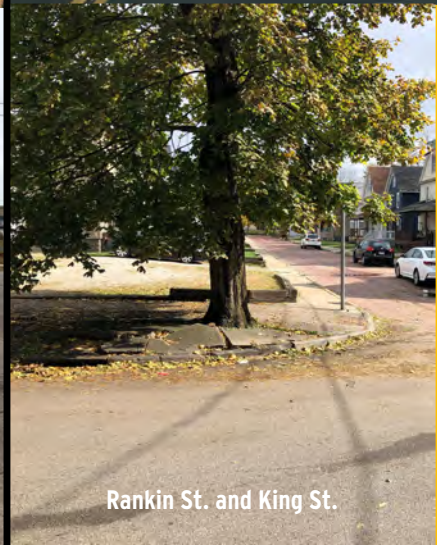
Inman St. and Edge St.



Wheeler St. and Brown St.



E. Voris St. and Grant St.



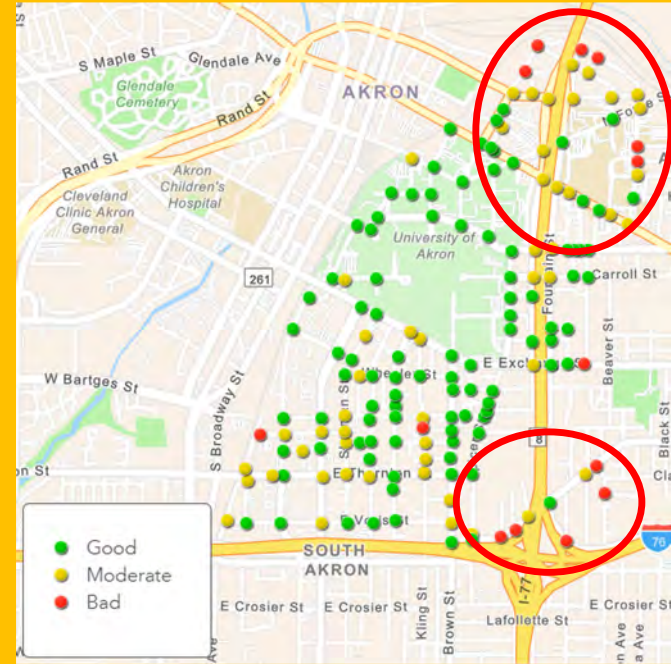
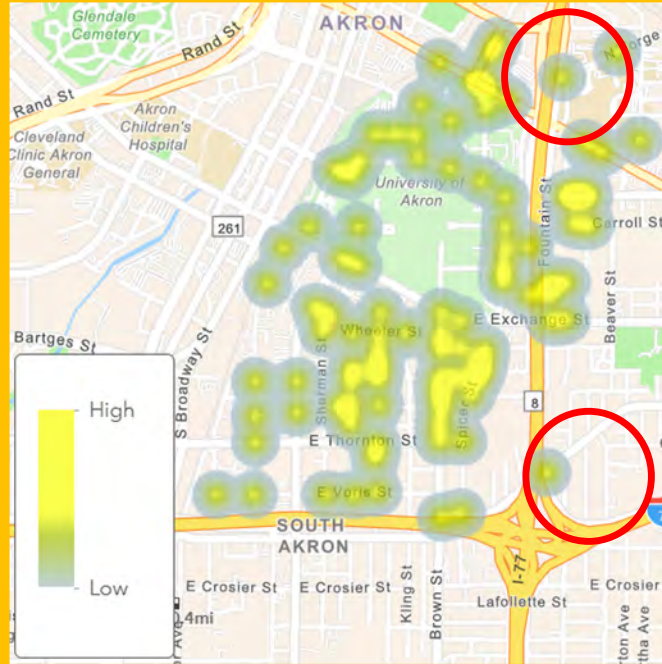
Rankin St. and King St.



Daytime Visibility

Strategic recommendations

- Top-right corner
 - > Residential neighborhood
- Bottom-right corner
 - > Highway entrance, exit





Daytime

Visibility

Novel solutions

- Curved mirrors at intersections w/ extreme road curvature
- Additional lighting (LED, if possible) in areas w/ very few lights for cases of bad weather
- Removal of overgrown vegetation
- Change in locations of fences
- Demolition of unused/abandoned buildings impeding sidewalk/road views at intersections





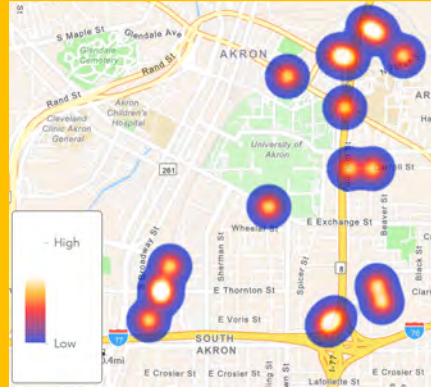
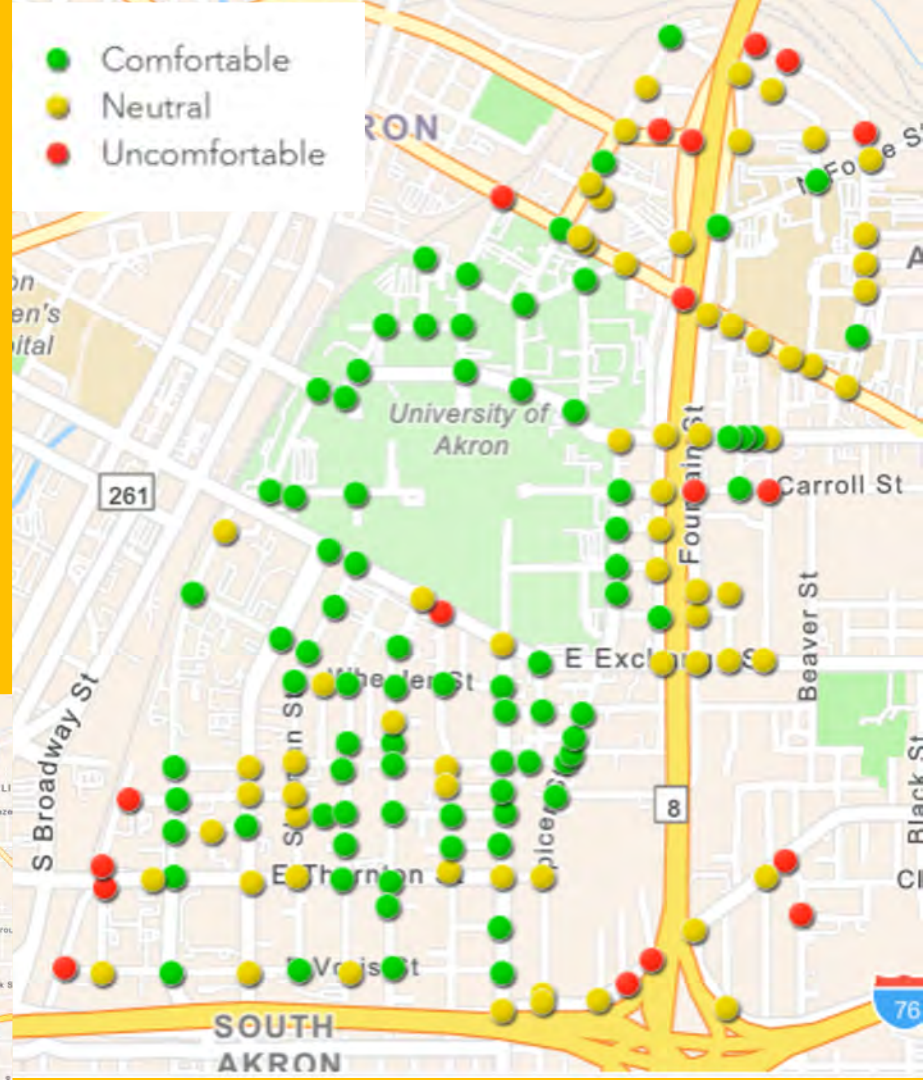
Daytime Safety

Criteria for assessment

- Surroundings = comfortable pedestrian crossing?
- Objects and sights included, but not limited to:
 - > Highways, emergency contact areas, specific buildings, lighting (if bad weather), vehicle noise

Scoring

- Comfortable = feels very safe
- Neutral = feels neither outstandingly safe nor unsafe
- Uncomfortable = feels very unsafe





Daytime Safety

49% Comfortable

- Presence of hospital
- Presence of houses in relatively good condition
- Presence of businesses

40% Neutral

- Presence of highway
- Presence of shoes on power lines
- "Emptiness"

11% Bad

- Run-down sidewalk, overgrowth
- Poor quality of infrastructure, ominous look to buildings
- Broken utilities



Brown St. and Crouse St.



N. Forge St. and Goodkirk Rd.



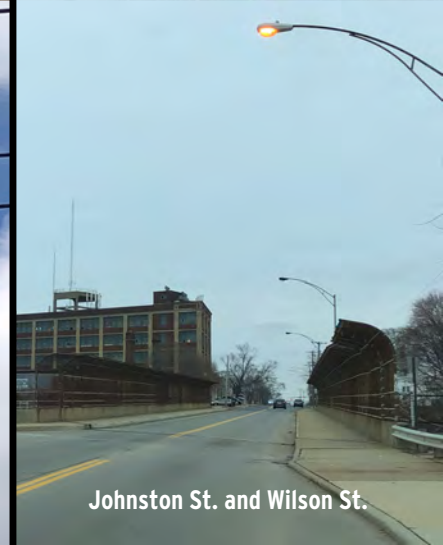
Perkins St. and N. Adams St.



McCoy St. and Wolf Ledges Pkwy.



Power St. and King St.



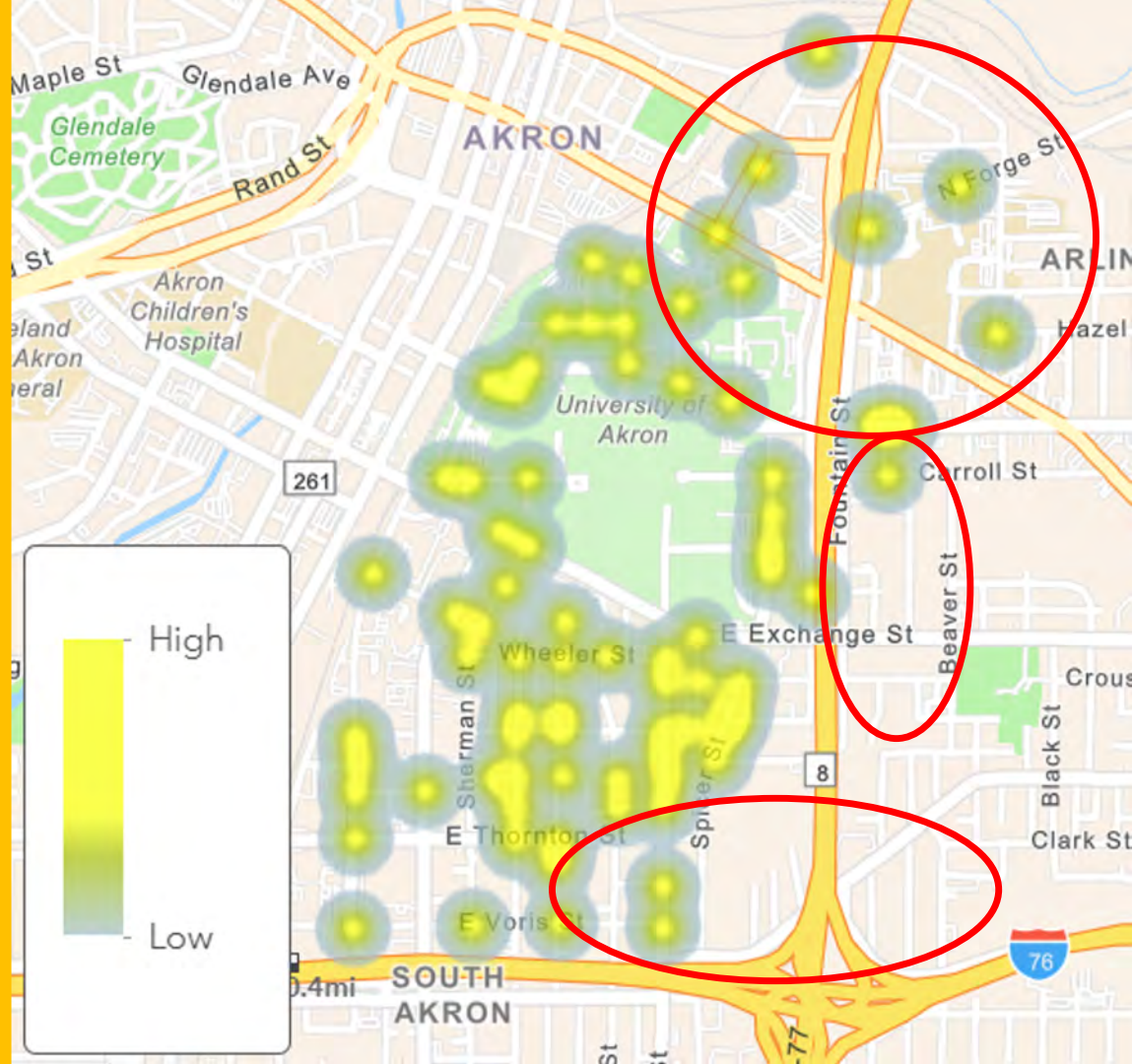
Johnston St. and Wilson St.



Daytime Safety

Strategic recommendations

- Bottom-right corner
 - > Highway area
- Middle-right corner
 - > Eastern part of UA campus
- Upper-left corner
 - > Residential area



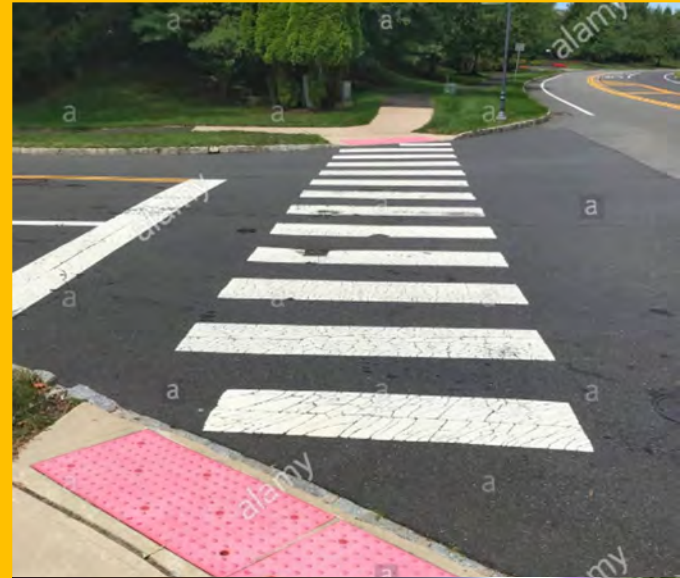


Daytime

Safety

Novel solutions

- Addition of lights (possibly LED) in areas with very few lights (for bad weather)
- Removal of shoes from power lines
- Repairing of wooden power line bases
- Renovation or demolition of deteriorating, abandoned buildings, replaced w/ healthy verdancy
- Repairing of road infrastructure
- Addition of, repairing of crosswalks (especially at highway intersections)
- Passage of ordinances vis-a-vis automobile sounds

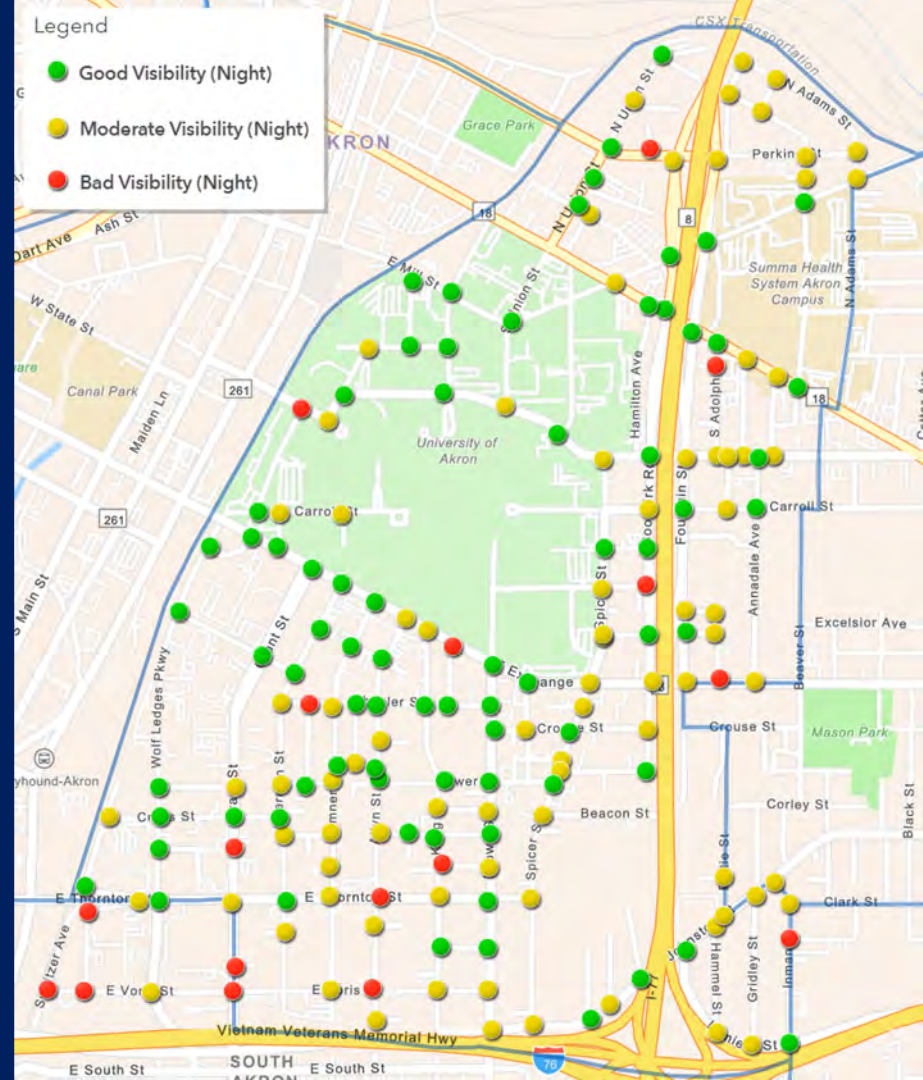




Nighttime Visibility

Criteria for assessment

- How much light was present in and around an intersection?
- Quantity of light sources
 - > Street lights, house lights, and lights from public buildings
- Brightness of individual lights
 - > Incandescent vs LED
 - > Burnt out street lights
- Does the light appropriately fill the entire intersection?
 - > How many corners of the intersection are illuminated?





Nighttime Visibility

43% Good (-17% vs. daytime)

- Many lights Wolf Ledges & Arc Dr.
- Extra light from buildings E. Buchtel Ave. & Annadale Ave.
- Very bright light bulbs Brown St. & Power St.

47% Moderate (+15%)

- One street light over the intersection Spicer St & Beacon St.
- Some light from extra buildings E Voris St & Brown St.
- Not noticeably bright or bad E Buchtel Ave & Spruce St.

10% Bad (+1%)

- Many unlit street lights Rentschler S.t & Wheeler St.
- No lights on surrounding buildings Grant St. & Sues Ct.
- Dull light bulbs Inman St. & Edge St.



E Buchtel Ave & Annadale Ave



E Buchtel Ave & Spruce St



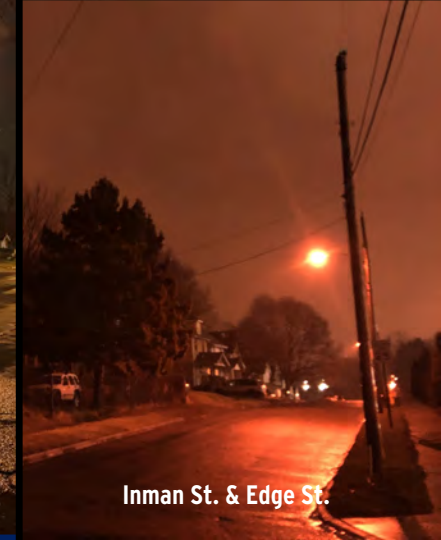
Grant St & Sues Ct



Brown St & Power St



E Voris St & Brown St



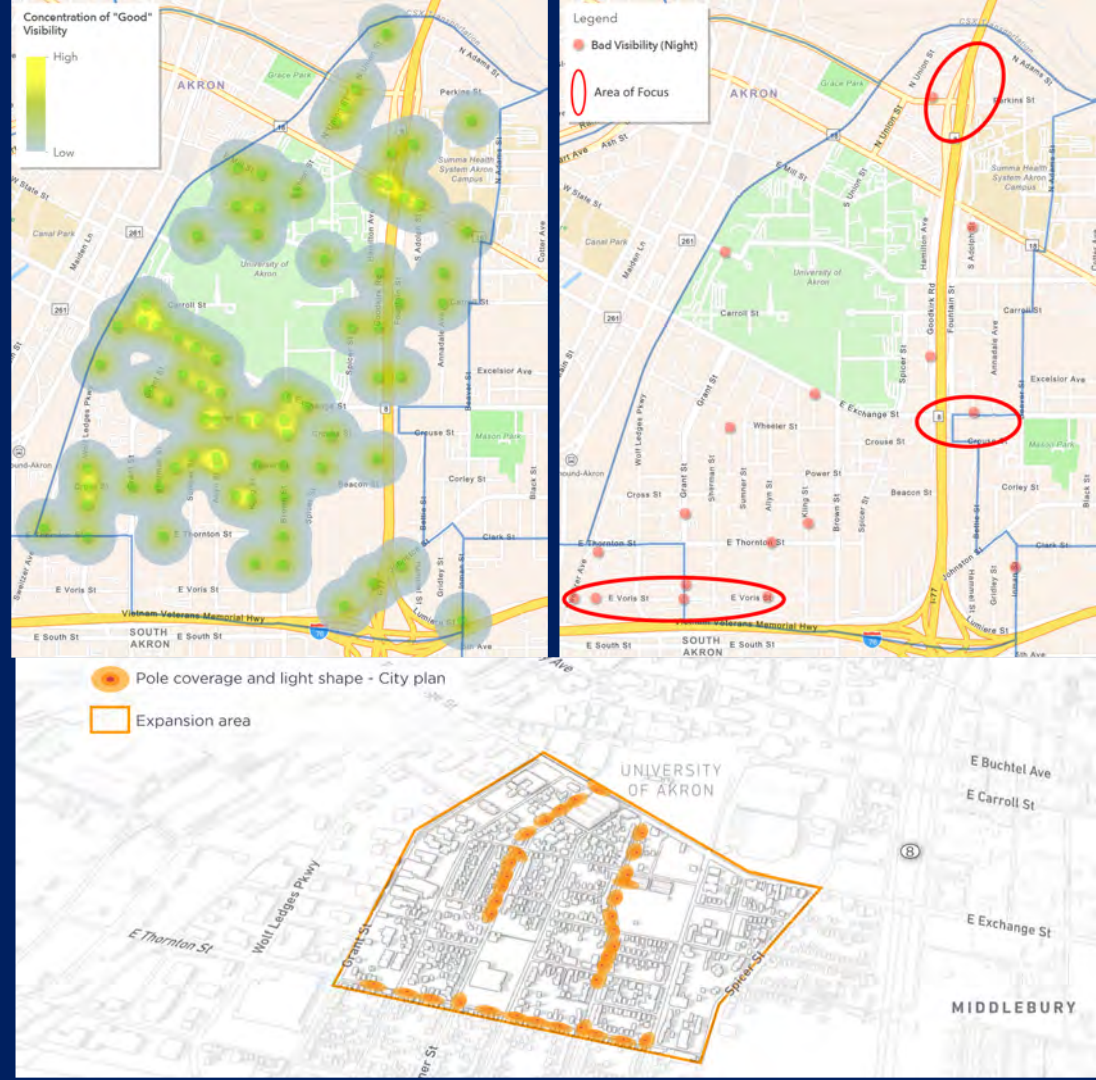
Inman St. & Edge St.



Nighttime Visibility

Strategic recommendations

- Comparing the City Planned Street Light Program:
 - Brighter lights on Thornton St is a good start.
 - Sumner & Kling St both ranked moderate to good visibility in this survey.
- Adding brighter lights to areas of focus could have a larger impact than lights to already good areas.





Nighttime Visibility

Novel solutions

- Incentivize residents through the mail with free or discounted security lights for their homes.
- Is there a way to report burnt out street lights?
- Replace dull street lights with brighter LED bulbs.

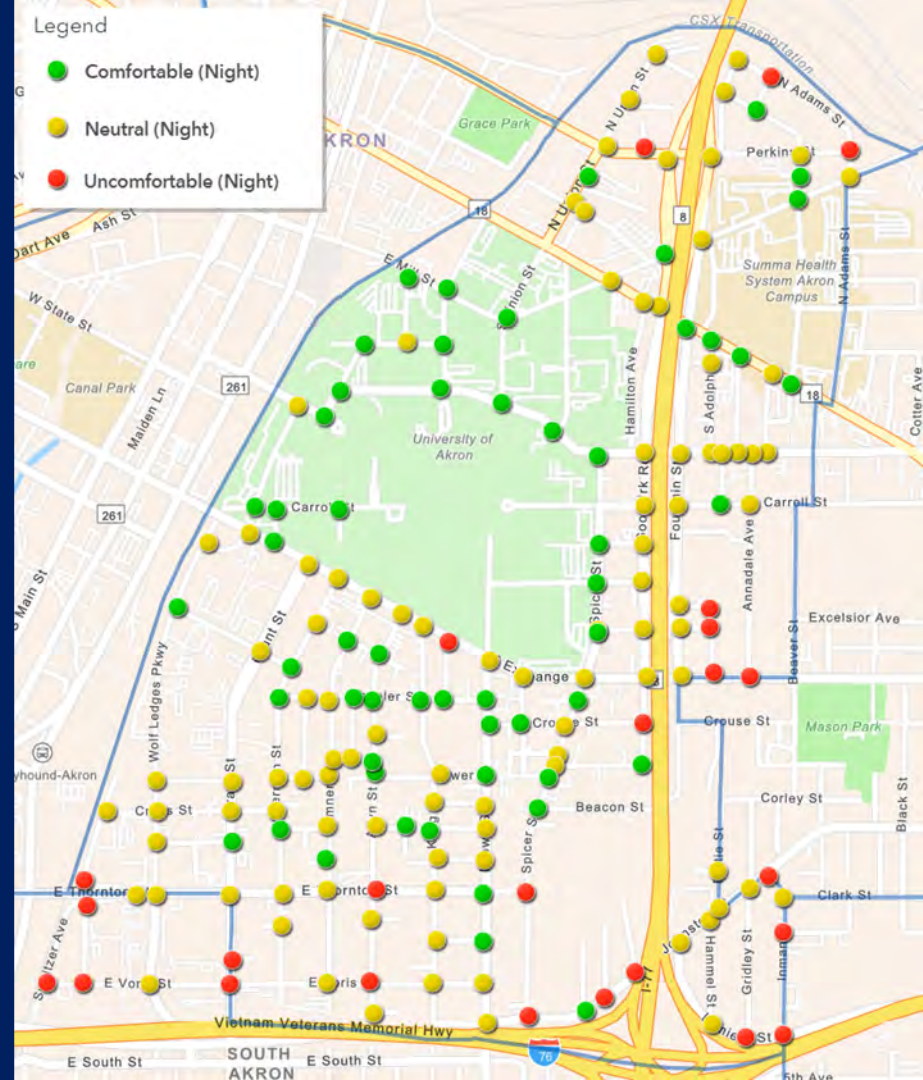




Nighttime Safety

Criteria for assessment

- Similar criteria as the daytime perception of safety.
 - > How comfortable are you with your surroundings while crossing the street?
- Are there dark corners or vast empty spaces that create uneasy feelings?
 - > Does not have to correlate directly to visibility.
- Even though we were surveying as a group, try to picture yourself alone at this intersection.
 - > Would someone hear if you called out for help?
- Similar criteria as the daytime perception of safety.
 - > How comfortable?





Nighttime Safety

31% Comfortable (-18% vs. daytime)

- Open feeling, easy to view surroundings *E. Mill St & Lincoln St*
- No dark corners or vast empty spaces *Brown St & Wheeler St*
- Vibrant *E. Market St & Franklin St*

55% Neutral (+15%)

- Not completely open, but partially clear *Sumner St & E Thornton St*
- One corner of intersection is empty space *N Union St & Perkins St*
- Some signs of life or public activity *Gage St & Spicer St*

14% Uncomfortable (+3%)

- Closed feeling, hard to view surroundings *Johnson St & Ct*
- Vast cavity *N. Adams St & Hugill Ct*
- Desolate, isolated location *Miami St & E. Voris St*



Brown St and Wheeler St



Sumner St & E Thornton St



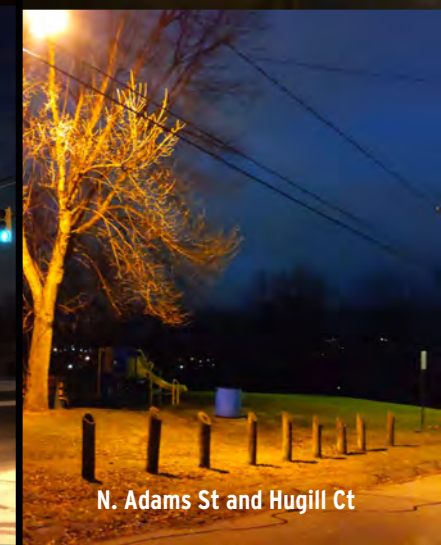
Johnson St & Johnson Ct



E. Market St & Franklin St



N Union St & Perkins St



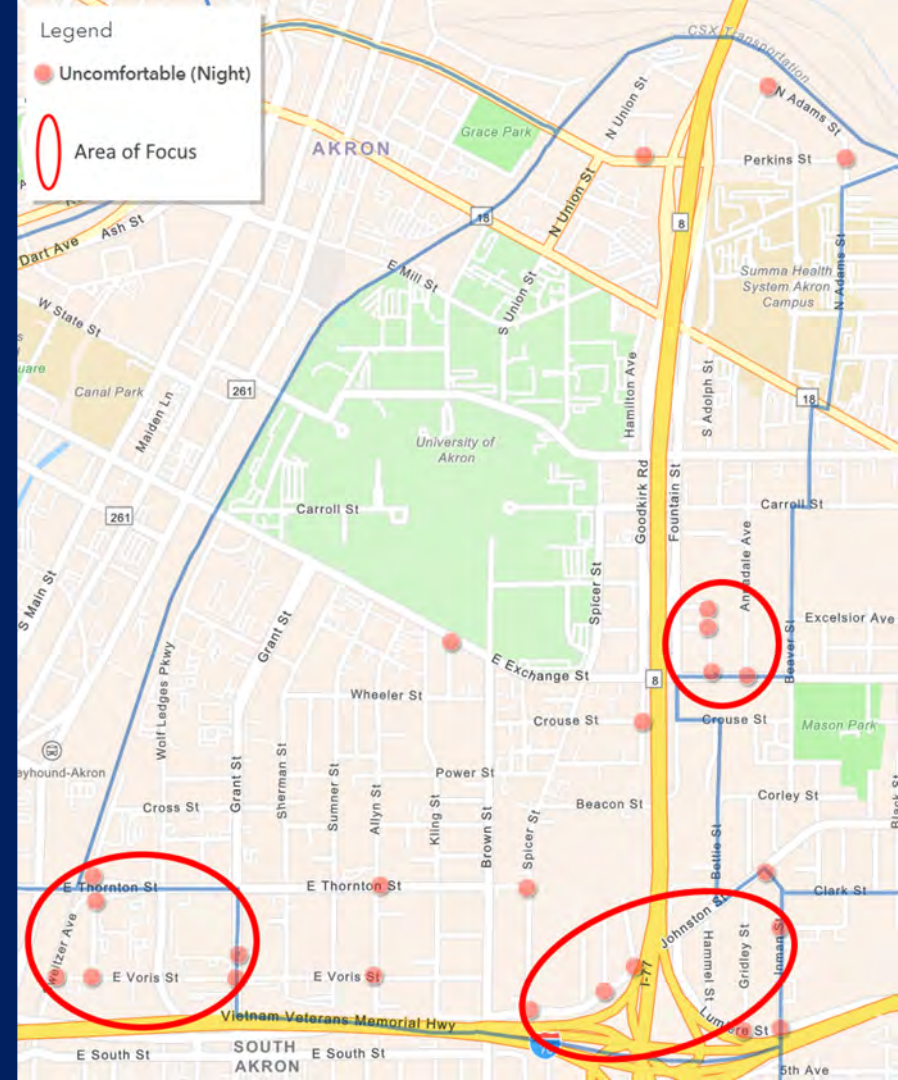
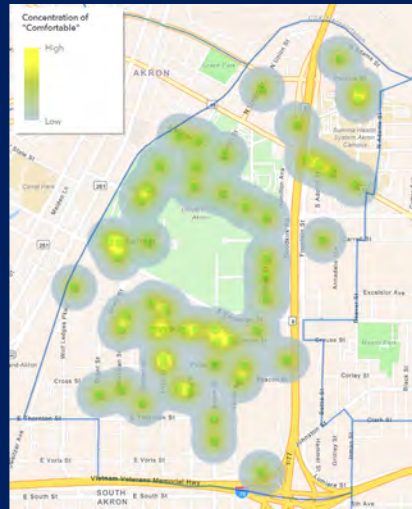
N. Adams St and Hugill Ct



Nighttime Safety

Strategic recommendations

- Heat map of “Good” intersections highlight large sections of the neighborhood that are uncomfortable.
- Southeast corner often ranked uncomfortable despite having moderate to good visibility.
 - Perception of safety is possibly influenced by all other categories. Improving these might indirectly improve perception of safety.

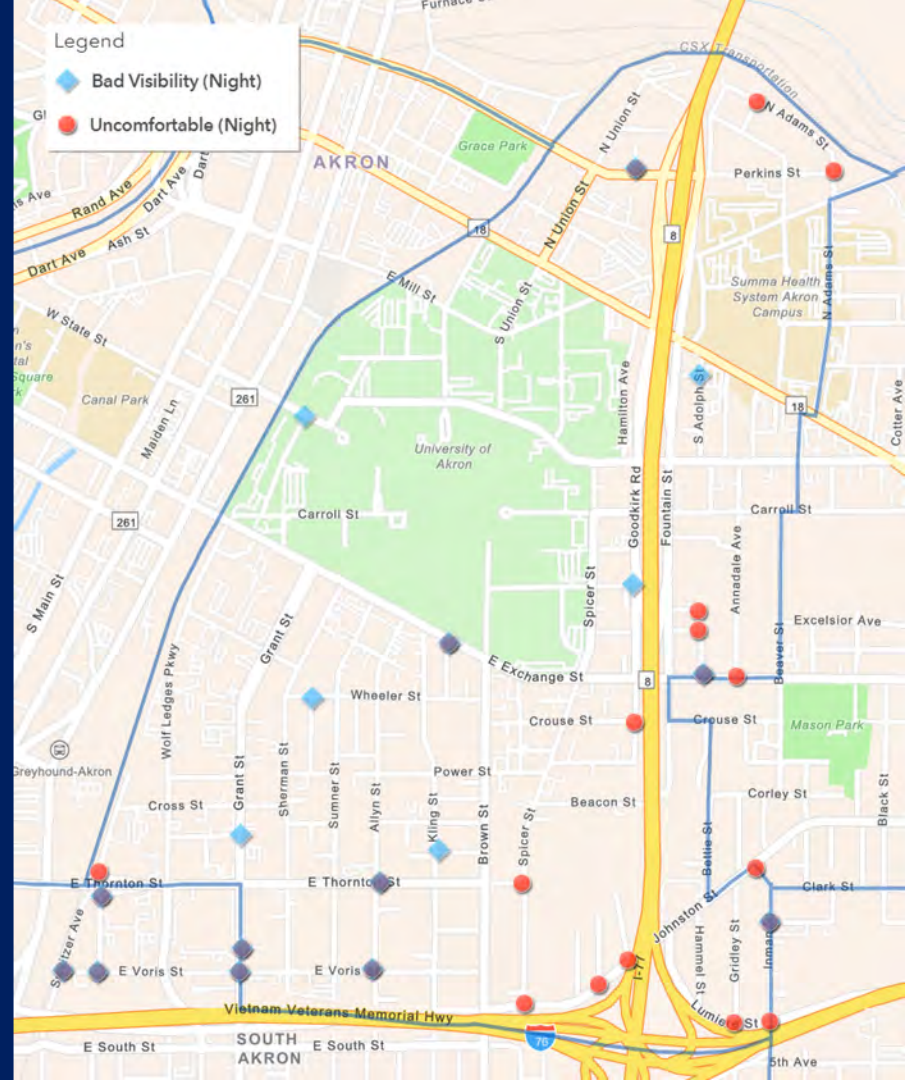




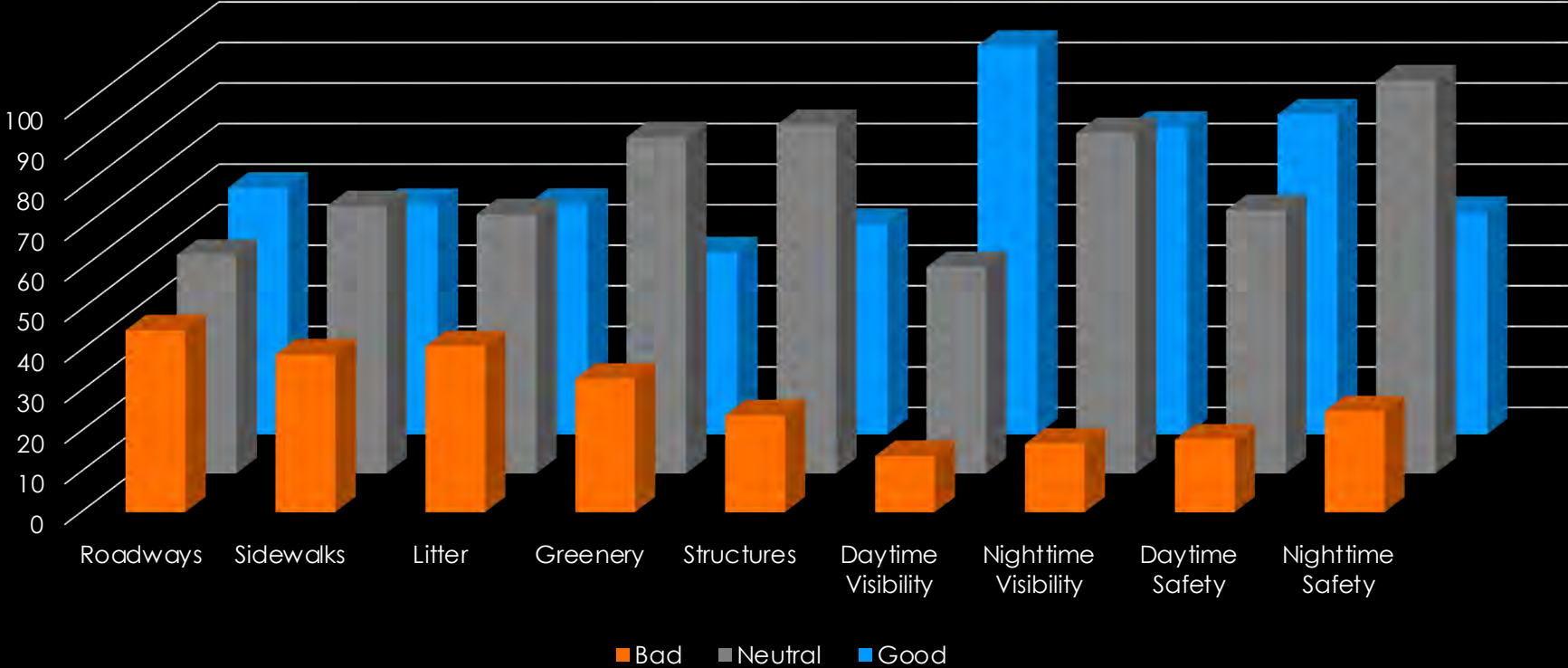
Nighttime Safety

Novel solutions

- Blue safety lights always had a positive impact on perceived safety around campus.
- Cluster of uncomfortable on E Exchange St to the east of Route 8.
 - Adding a blue safety light here would help improve the feeling of safety.
- Some correlation between perceived safety and visibility.
 - Southwest corner of the neighborhood has multiple intersection with both bad visibility and uncomfortable perception of safety



Summary findings



* Based on 162 Daytime intersection assessments and 177 Nighttime intersection assessments. Discrepancy between number of Daytime/Nighttime intersections assessed is due to technical error with one user deleting their application after assessment was completed.

Next steps

In 1 year...

- Address outstanding litter areas.
- Paint crosswalks.
- Implement residential lighting assistance program.

In 3 years....

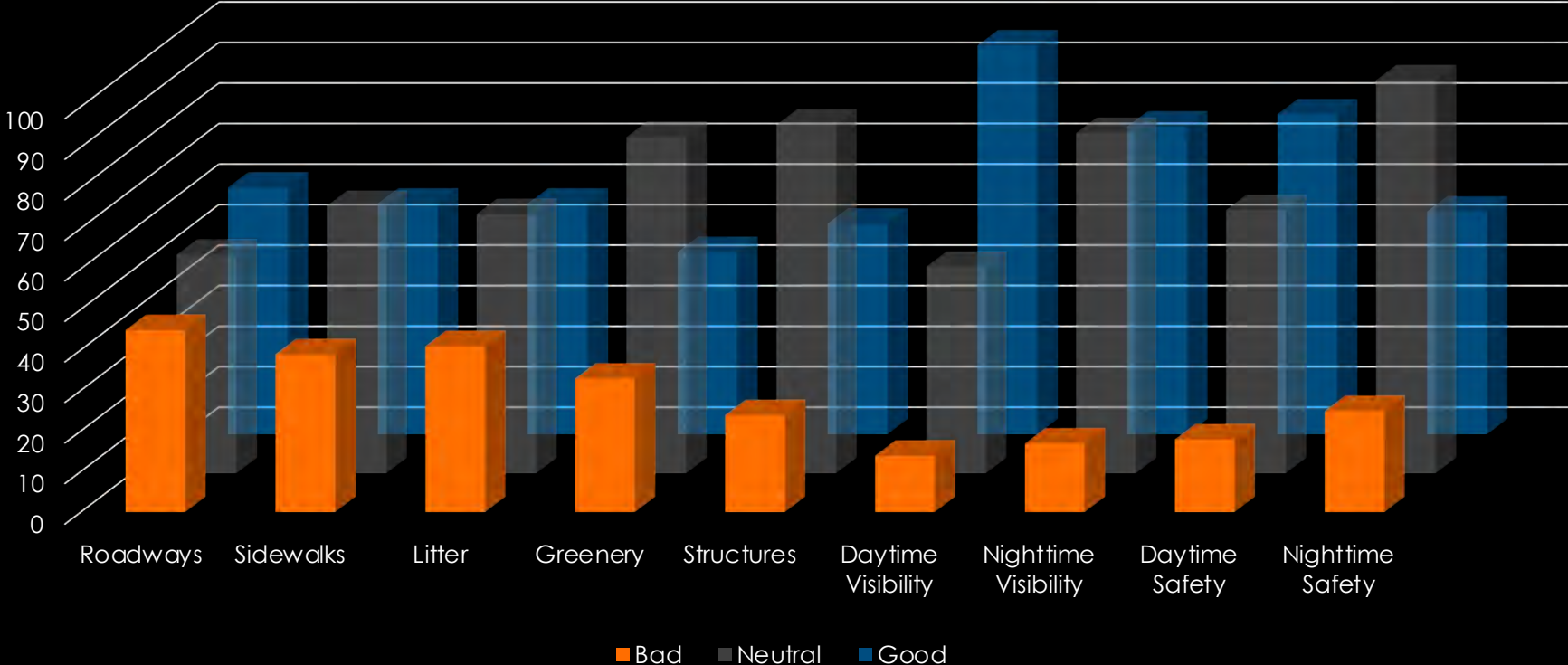
- Repair sidewalks.
- Repave E Exchange & E Buchtel
- Improve green spaces and park areas (Allyn)

In 10 years...

- Transform Grant Street into a vibrant small business and residential corridor.
- Repave Wolf Ledges and transform into an eclectic transportation paradise.

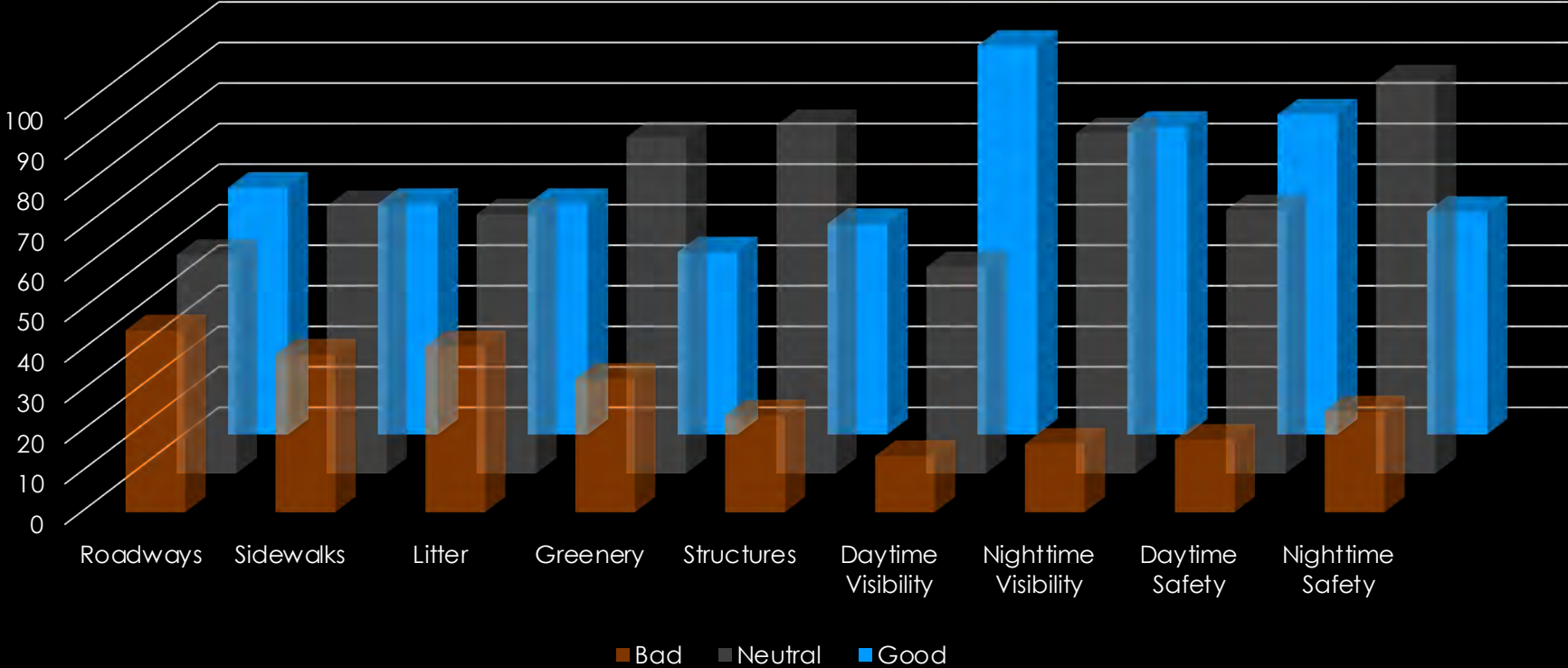
Appendix

Summary findings - bad



* Based on 162 Daytime intersection assessments and 177 Nighttime intersection assessments. Discrepancy between number of Daytime/Nighttime intersections assessed is due to technical error with one user deleting their application after assessment was completed.

Summary findings - good



* Based on 162 Daytime intersection assessments and 177 Nighttime intersection assessments. Discrepancy between number of Daytime/Nighttime intersections assessed is due to technical error with one user deleting their application after assessment was completed.

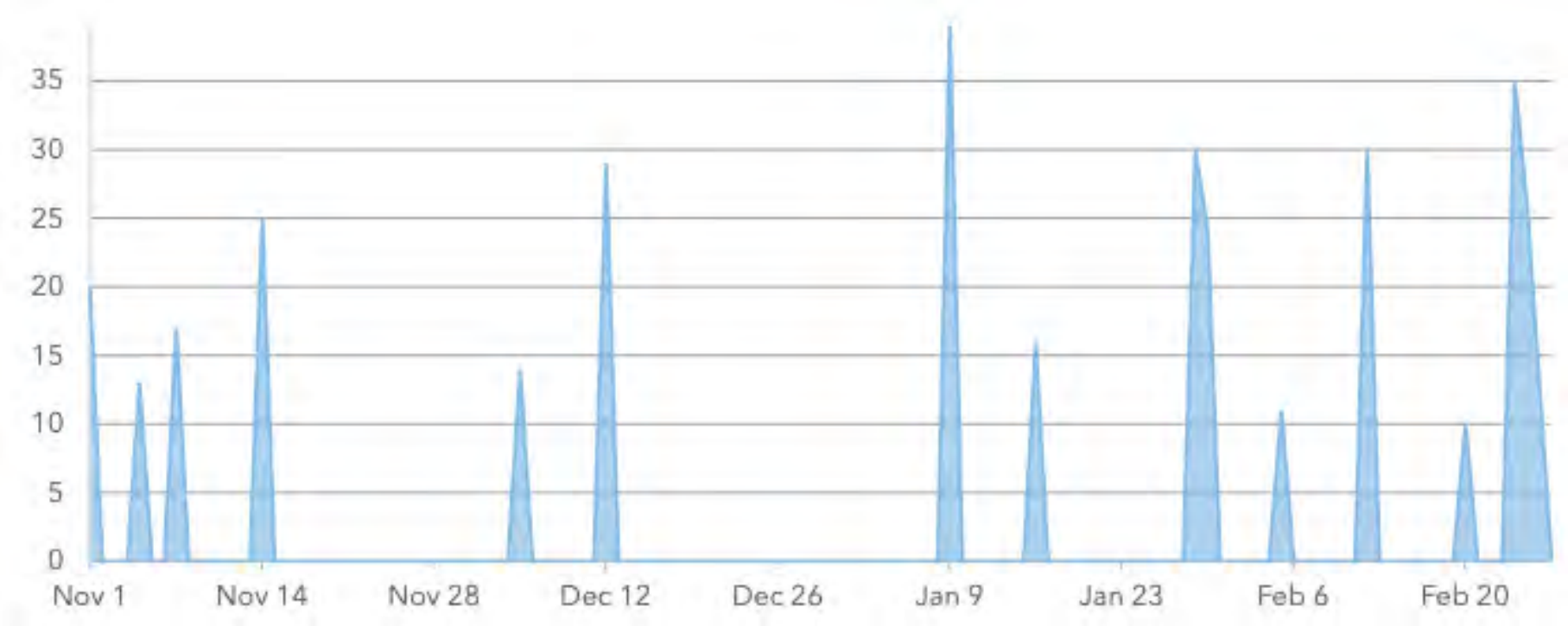
Additional comments

The follow chart represents the frequency of key words that appeared in our “Additional Notes” section of in-field research. The larger the word, the more frequently we used it.



Timeframe

The following chart represents the dates our team was in the field logging data, with the Y-axis representing the number of intersections we rated that day

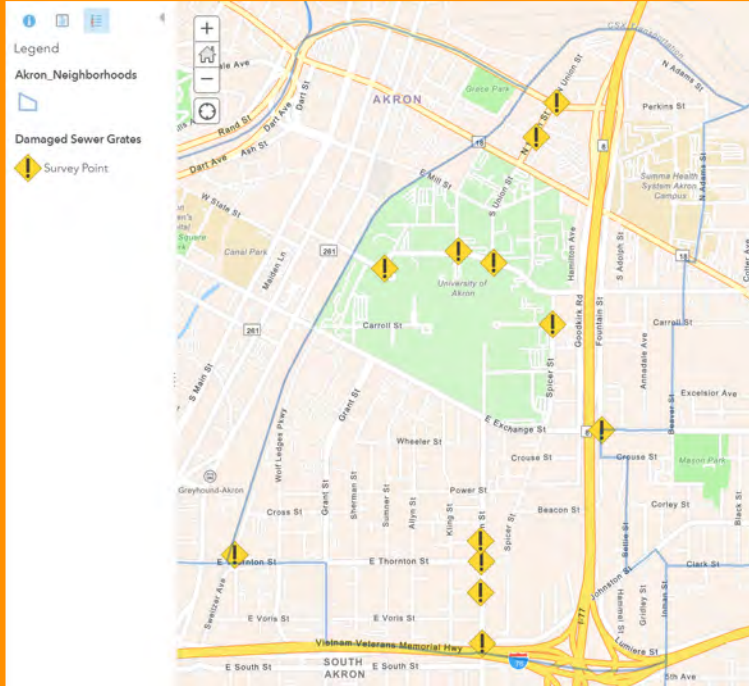




@PLAYGIS reporting - Roadways

- extensive opportunities for improved data collection and city services efficiency
- mobilizes and empowers residents to be strong advocates for and contributors to responsible city improvement

Sewer grates for repair

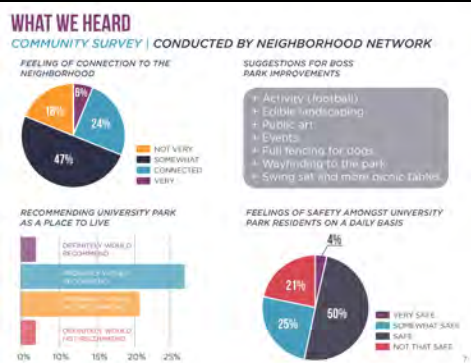


Varying types of disrepair



University Park - Neighborhood Plan

Our team conducted all research before the release of the University Park neighborhood plan from MKSK, The City of Akron, and Habitat for Humanity. We took these plans into consideration after reviewing all data and developing novel solutions.

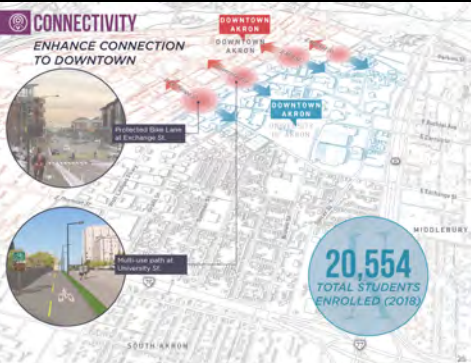


CONNECTIVITY | IMPROVING NEIGHBORHOOD CONNECTIONS

ACTION ITEMS

- + Overcome **physical barriers**
- + Enhance **Exchange Street**
- + Improve **connectivity** to Downtown
- + Promote **trails and bike** infrastructure
- + Develop a **residential porch light program** and campaign to improve safety in the neighborhood





IMPLEMENTATION

CREATE AN IMPLEMENTATION ENTITY

UPTOWN CONSORTIUM | CINCINNATI, OH

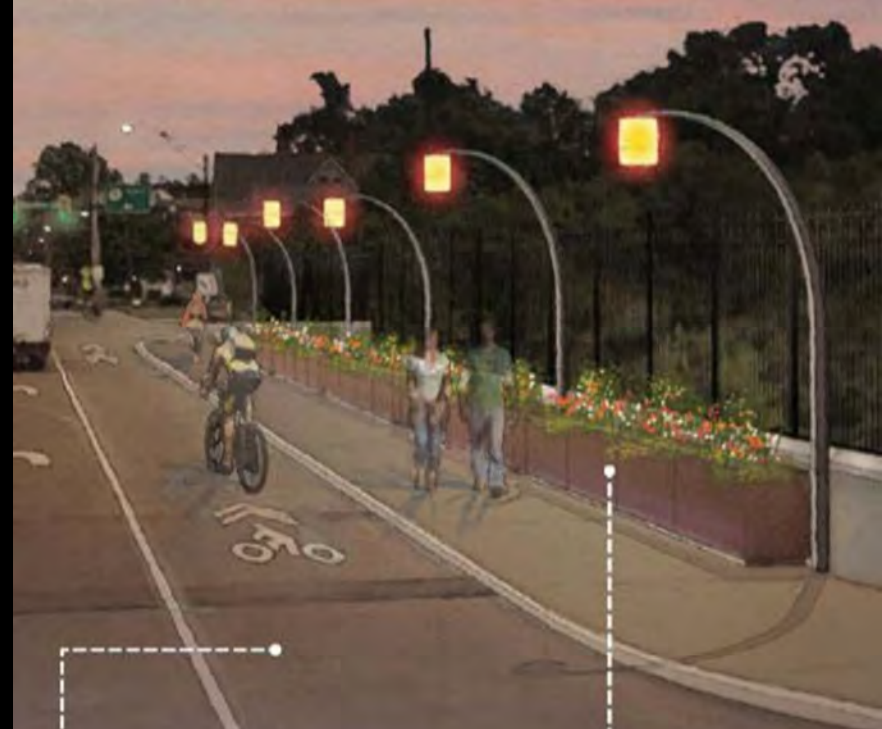
- + Founded in 2004
- + Formed by **leaders from nearby anchor institutions**:
 - Cincinnati Children's Hospital Medical Center
 - Cincinnati Zoo & Botanical Garden
 - UC Health
 - Tri-Health, Inc.
 - University of Cincinnati
 - City of Cincinnati
- + Focuses on transportation, safety, economic development, community inclusion, and more
- + To date, have secured more than **\$400 million in redevelopment, new construction, and neighborhood improvements**





Planning considerations

- Unique pedestrian lighting and landscaping
 - Address safety criteria – creates a “vibrant, public space.”
 - Greatest impact on back streets – push “neutral” to “comfortable” ranking.
 - Could be good on the southern part of Grant Street near existing bars.
- Add artwork / paint to neglected buildings.
 - Sumner Street pedestrian crossing bridge and old Thornton Street shop.
- Develop a student rental code enforcement program to ensure safety and maintenance of student rental properties.
 - Environmental Health and Housing Code – is this enforced?
- Re-paving E Exchange may have larger visual and functional impact than adding bike lanes.
 - Add cool crosswalk designs!



Thank you!

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