



AGENDA
OXFORD CITY COUNCIL WORK SESSION

COURTHOUSE

TUESDAY, MAY 6, 2025 AT 6:30 PM

William Snavely, Mayor

Chantel Raghu, Vice-Mayor
Jason Bracken
Michael Smith

Amber Franklin
Alex French
David Prytherch

-
1. Roll Call.
 2. Topic
 - A. Pedestrian and Traffic Safety Planning-Mile Square Discussion
 3. Adjourn.

An aerial photograph of Oxford, Ohio's Mile Square, showing a mix of historic brick buildings, modern structures, green spaces, and streets with cars and pedestrians. The image is partially covered by a dark green diagonal overlay.

PEDESTRIAN AND TRAFFIC SAFETY PLANNING IN OXFORD, OHIO'S *Mile Square*

MIAMI UNIVERSITY
ADVANCED URBAN
& REGIONAL
PLANNING



Contents

PROBLEM STATEMENT	1
KEY CONCEPTS	3
EXISTING CONDITIONS	4
STAKEHOLDER INPUT	7
TRAFFIC SAFETY SURVEY	8
BEST PRACTICES	13
CASE STUDY	17
APPLICATIONS	20
NEIGHBORWAYS	26
SUMMARY	29
REFERENCES	31

PROBLEM STATEMENT

Oxford, Ohio is a college town that prioritizes walkability and equality, values emphasized in the local Comprehensive Plan. Yet, the historic Mile Square experiences significant vehicular traffic and pedestrian safety issues. Incomplete streets have long been a source of conflict between automotive, pedestrian, and bicyclist traffic. While the City of Oxford has taken action, there is room for improvement to ensure the city's roads have an equitable and safe method of use for all modes of transportation.



Car dominated intersections and crossings in the Mile Square

Pedestrian risks and near-miss events are not uncommon in Oxford. As many stakeholders have had experiences like this, our team wants to understand what traffic issues locals have observed. To understand current conditions, our team has done analyses of existing plans and data collection of traffic information. From this, we've been able to propose a direct course of action for the future of Oxford Ohio.

The Oxford Request for Proposal (RFP) asked researchers to find non-invasive and cost-effective ways to enhance pedestrian and cyclist safety. We have extensively researched various traffic calming technologies and placemaking techniques to accomplish such goals. Time was also spent analyzing case studies of towns in similar situations to Oxford. We have compiled these best practices and case studies, adapting this to the Mile Square to ensure low-cost, equitable proposals.

PLANNING PROCESS



Stakeholder Data Collection



To understand the project and develop solutions, the planning process unfolded over a four-month period that engaged key stakeholders and the public via an initial site visit, stakeholder visioning session, public survey, and a draft plan presentation.

KEY CONCEPTS

Oxfords concerns about traffic safety can be categorized into the following key concepts in traffic planning:

VISION ZERO is a traffic safety philosophy method to decrease and eliminate all traffic fatalities and/or severe injuries while increasing safe mobility for all. In contrast to a traditional approach, it's rooted in the idea that traffic deaths are preventable by integrating the human failing approach, preventing fatal/severe accidents, using the system to take control, and advocating that it isn't expensive to do so. This is done with a multidisciplinary approach, utilizing diverse stakeholders at the table to address their issues and needs.

TRADITIONAL APPROACH	VIZION ZERO
Traffic deaths are INEVITABLE	Traffic death are PREVENTABLE
PERFECT human behavior	Integrate HUMAN FAILING in approach
Prevent COLLISIOINS	Prevent FATAL AND SEVERE CRASHES
INDIVIDUAL responsibility	SYSTEMS approach
Saving lives is EXPENSIVE	Saving lived is NOT EXPENSIVE

TRAFFIC CALMING improves traffic and pedestrian safety by slowing traffic through design cues. Examples of traffic calming are; speed bumps/humps, raised crosswalks, speed cushions, curb extensions, intersection daylighting, and many more. Traffic calming helps improve the safety of streets by forcing drivers to be more attentive, reduce speeds, reduce crashes, and encourage higher tendencies to yield for pedestrians.

PLACEMAKING goes beyond improving traffic and aims to recapture the street's role as a public space. Placemaking works to strengthen community connection through one's personal connection to a space. This collaborative process pays attention to the physical, cultural, and social identities that define a place and support its ongoing evolution.

EXISTING CONDITIONS

STANDARD STREET HIERARCHY MAP



This map, from the existing Oxford Transportation Plan, explains how roadways are traditionally classified in the hierarchy based on traffic volumes. It lays out Oxford's Mile Square through this traditional lens.

STREETSCAPE CLASSIFICATION MAP



(OXFORD COMPREHENSIVE PLAN)

Streets are classified in a hierarchy based on traffic flow and urban context. These include:

Local roads:

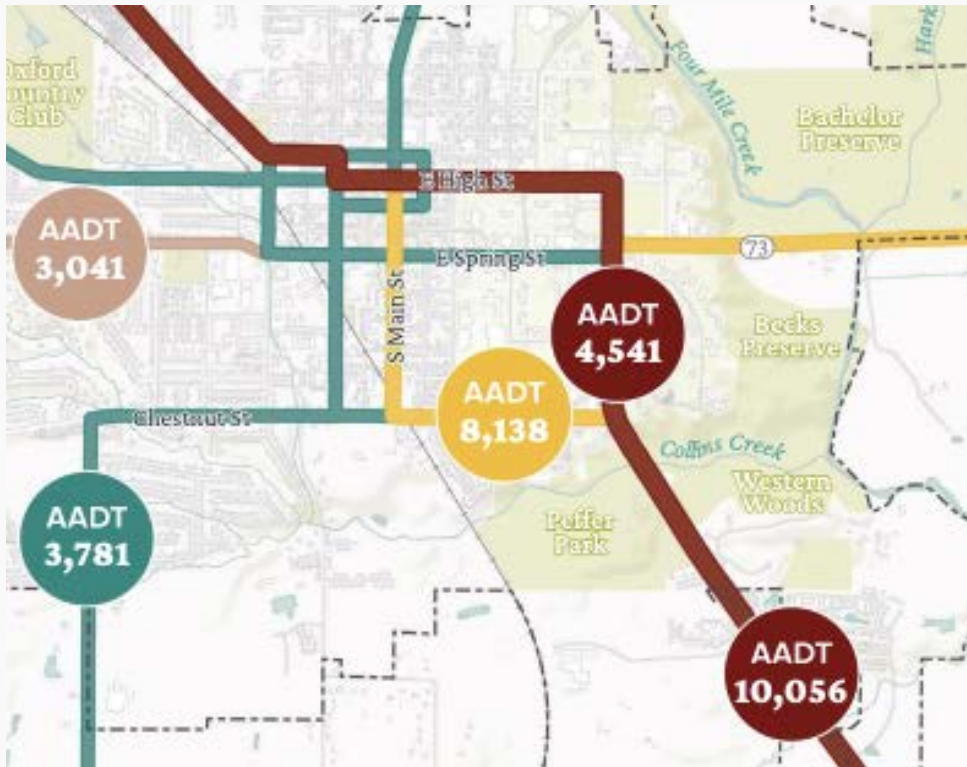
- serve neighborhoods
- lower speed limits
- prioritize safety

Arterial:

- larger volumes of traffic
- higher speed limits
- fewer access points

FURTHER CONDITIONS

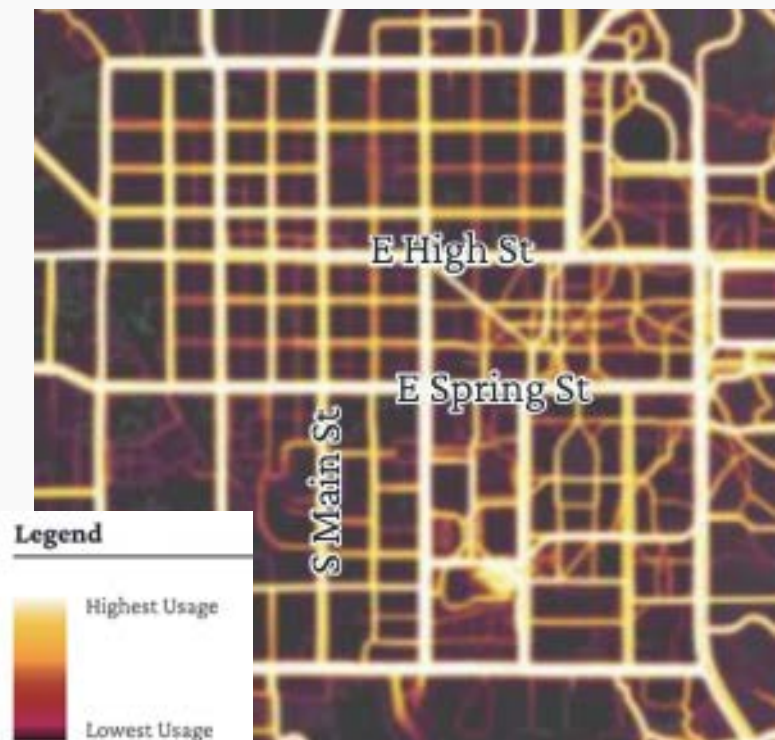
ANNUAL AVG. DAILY TRAFFIC MAP



Annual Average Daily Traffic Counts (AADT) from the Comprehensive Plan is a critical factor in determining what safety improvements are appropriate for a given context. While certain streets in the Mile Square experience high volumes, most are low-volume roadways with AADT between 3000-6000.

STRAVA HEAT MAP OF OXFORD STREET USAGE

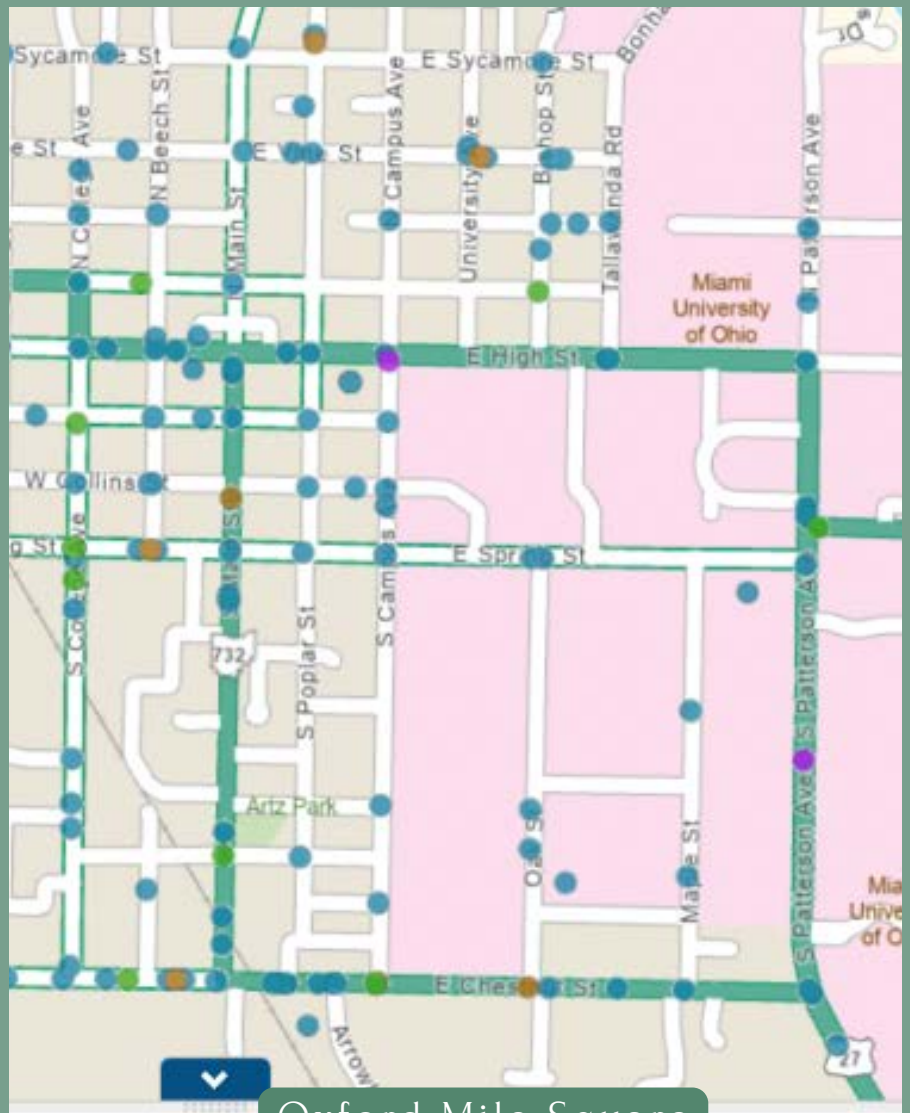
Data on walking and biking is equally important as AADT but can be harder to measure. Strava is an app that collects activity data from phones. Users start the app and track their running and walking routes. The data is publicly shared allowing municipalities to better understand the frequency of routes. This data highlights high pedestrian and cyclist volumes on local connectors, like Campus and Walnut.



FURTHER CONDITIONS

ACCIDENT MAP 2019

The Oxford GIS map displays dots, each representing a particular accident reported to the Oxford Police Department. By mapping these accidents, we can identify areas with the highest traffic safety concerns. According to this data, local connector roads are particularly prone to accidents and should be prioritized for traffic calming implementation. Our stakeholder survey results further corroborated this data, with many respondents expressing that they felt unsafe while moving through these streets,



LEGEND



VEHICULAR ACCIDENTS



CYCLIST ACCIDENT



PEDESTRIAN ACCIDENTS

STAKEHOLDER INPUT



Meeting with City of Oxford staff and officials -- including members of the Parking and Transportation Advisory Board -- helped clarify goals, identify key problem areas, and brainstorm potential solutions.

Stakeholder Proposal Presentation Goals from Stakeholder Input

1. Slow and Calm Traffic
2. Beautify the Streetscape
3. Increase Community Connection
4. Improve Pedestrian / Bicyclist Safety
5. Develop Unique and Applicable Techniques for Oxford's Situation

The stakeholder input sessions gave us insight into visions that leaders of community efforts had for the city. Here, stakeholders pointed out problem areas they'd witnessed. These community leaders encouraged us to seek out equitable solutions with both minimal infrastructural changes and widely felt effects.



Brainstorming Map from Proposal Meeting

TRAFFIC SAFETY SURVEY



Tabling of the general public for data

In addition to stakeholder input, we used two methods to survey local residents to better understand safety conditions: electronic and in-person. Surveying included a 10-question survey asking respondents to measure their safety while walking on local streets and intersections within the Mile Square. The survey was followed with an online pin-drop map for students to self-select areas they felt constituted problem areas.

65
Respondants

10
Questions

5
Roadways

Pedestrian
Oriented

RESPONSES

The 10-question survey, geared toward pedestrians of the Mile Square accrued 65 respondents. The respondents were surveyed about the general safety and conditions of 5 Mile Square Roadways.

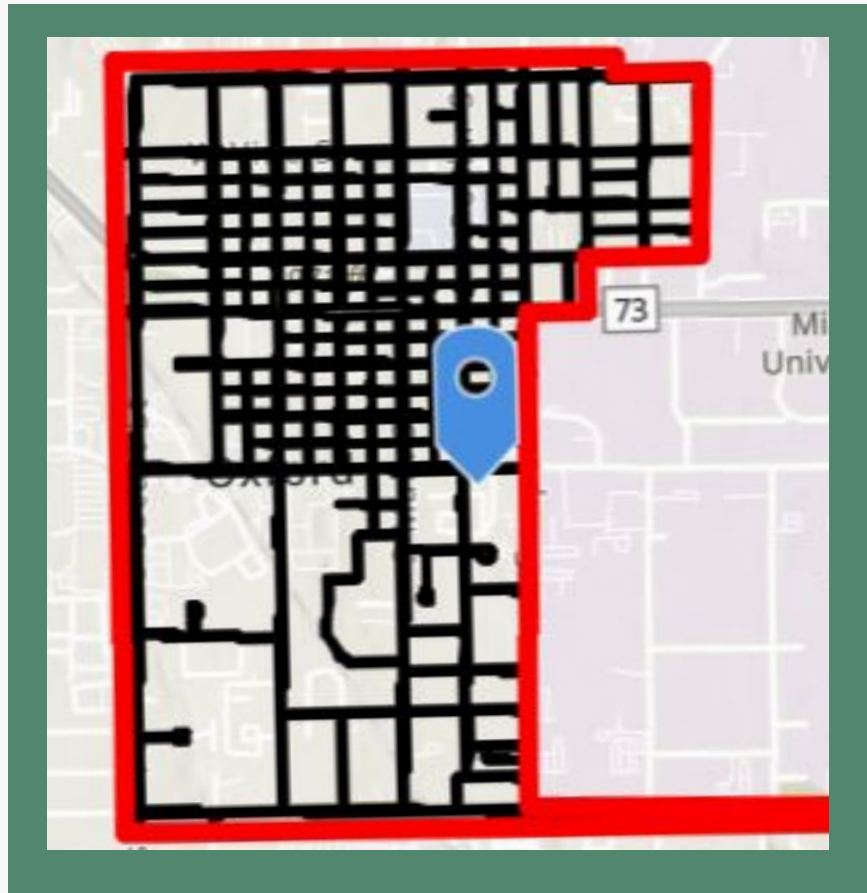
Surveying techniques included a combination of a qualitative, written survey and a quantitative 1-5 safety survey. Together these two surveys allowed for a greater understanding of how the local public feels and where the City of Oxford needs to focus its energies. Combined, we got over 75 responses from unique stakeholders, allowing us to expand upon findings and concerns from the initial stakeholder brainstorming session.

PUBLIC PERCEPTION OF TRAFFIC SAFETY

ONLINE SURVEY

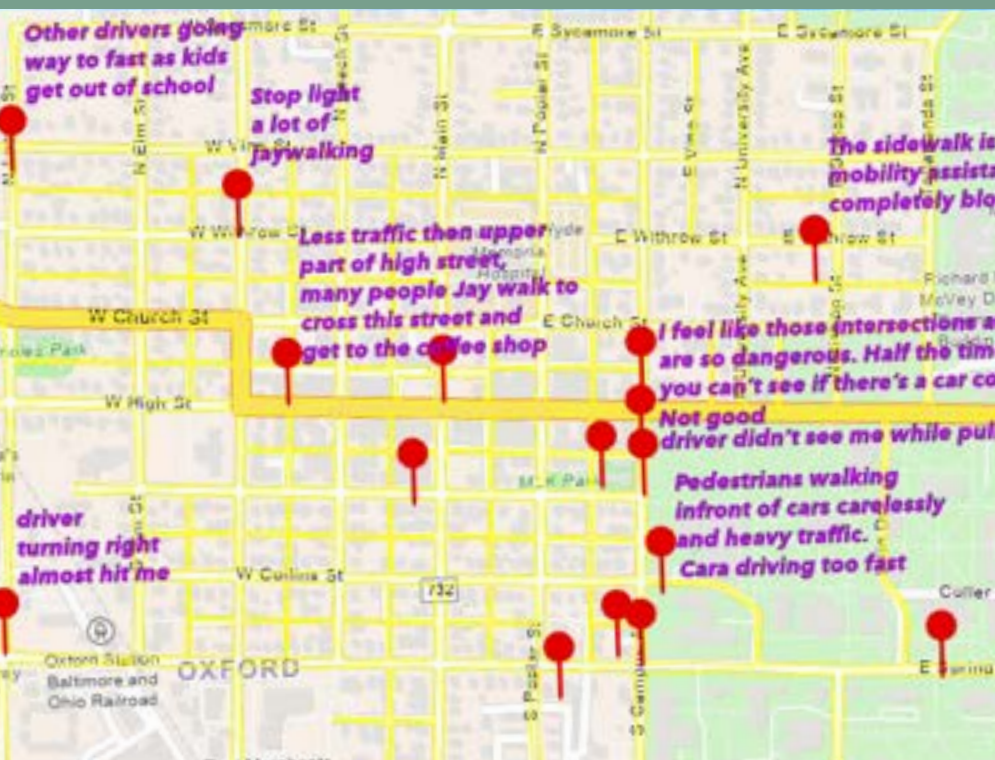
To collect data on public perception of traffic issues, the research team created an online pin-drop survey in the ArcGIS app called Survey 123

Users chose a location they felt had issues as a pedestrian, bicyclist, or automobile user and gave information regarding the experience. The platform can be expanded upon to create a long-term data collection app for Oxford Ohio's future planning



PIN DROP SURVEY

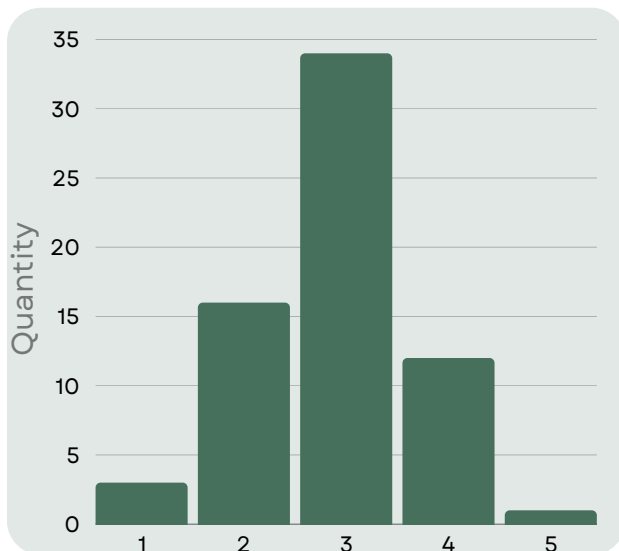
In an optional online survey, students were prompted to select a location they felt was “unsafe” and were invited to give further commentary as to why they felt “unsafe” and what experiences they had there. They were also asked about their primary mode of transportation. Knowledge of this primary mode of transportation led the research to show which modes were most popular among our respondents and which were most at risk. The majority of our respondents felt unsafe as pedestrians.



QUALITATIVE PEDESTRIAN SAFETY ANALYSIS

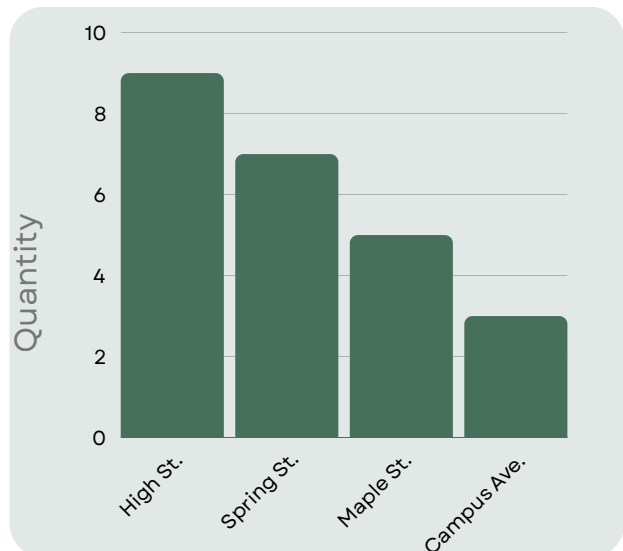
Our student pedestrian survey aimed to address the following:

- Students experience with current traffic conditions.
- Students perception of their safety as pedestrians in the Mile Square.
- Locations of interest concerning visibility, pedestrian near-misses, and failure to yield.

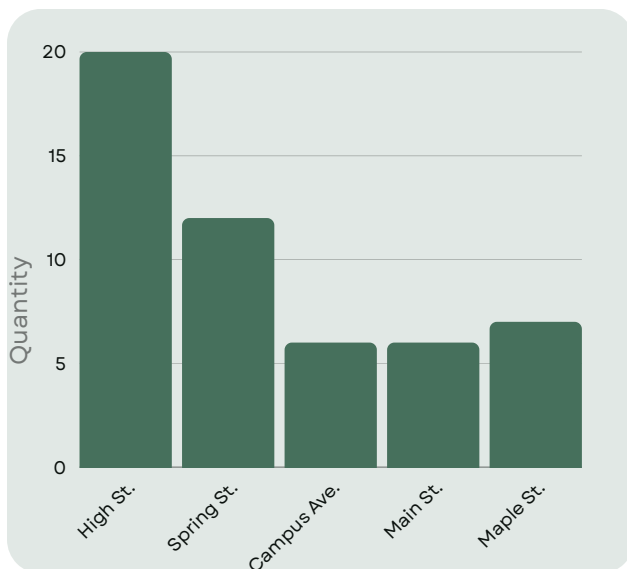


How Students Perceive Traffic Conditions across the Mile Square.

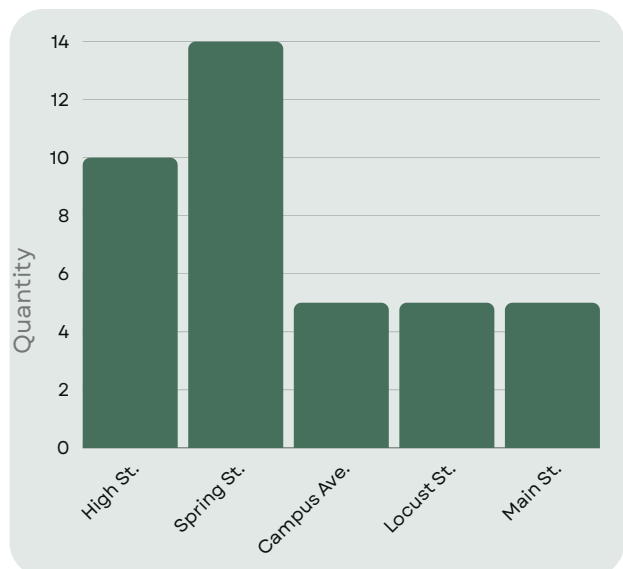
Dangerous (1) - Very Safe (5)



Where is visibility poor?



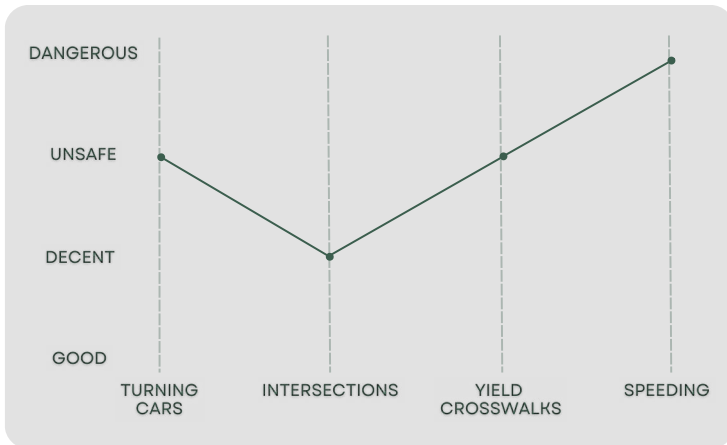
Where are pedestrian near misses?



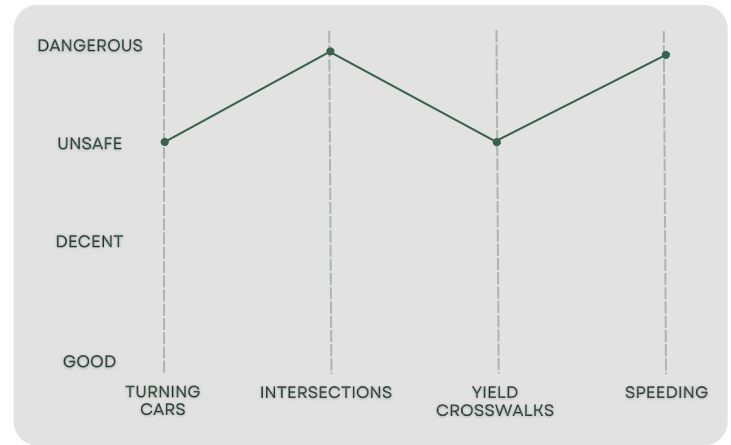
Where do people fail to yield?

PEDESTRIAN SAFETY SURVEY RESULTS

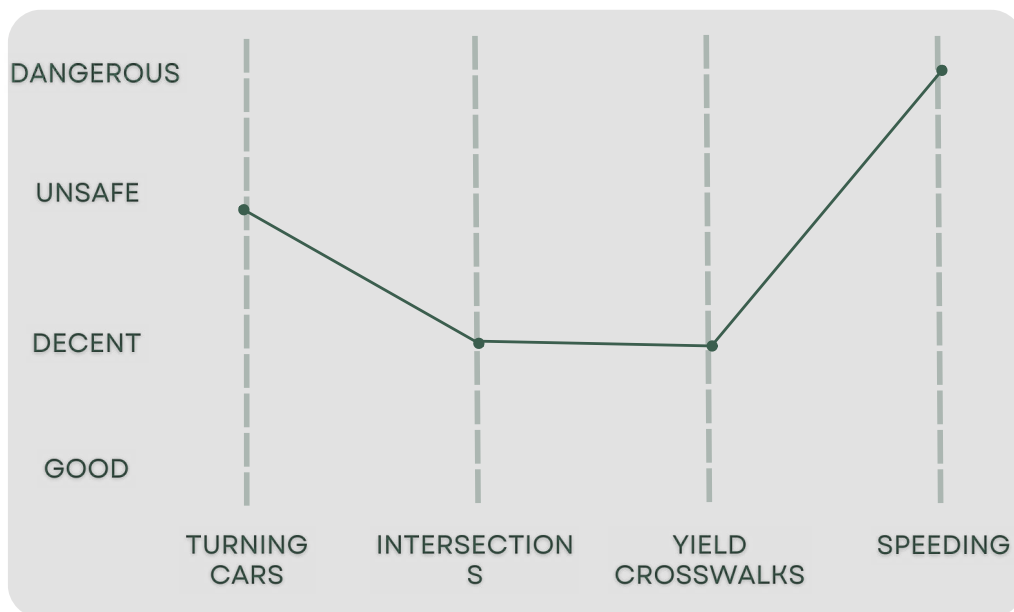
We asked students to rate safety issues at a few key intersections. These intersections were: High St, Chestnut. Campus Ave, Locust, and the High/Campus intersection. This information guided us in determining how to equitably distribute our solutions.



What makes you feel most unsafe while walking on Chesnut Street?



What makes you feel most unsafe while walking on High Street?



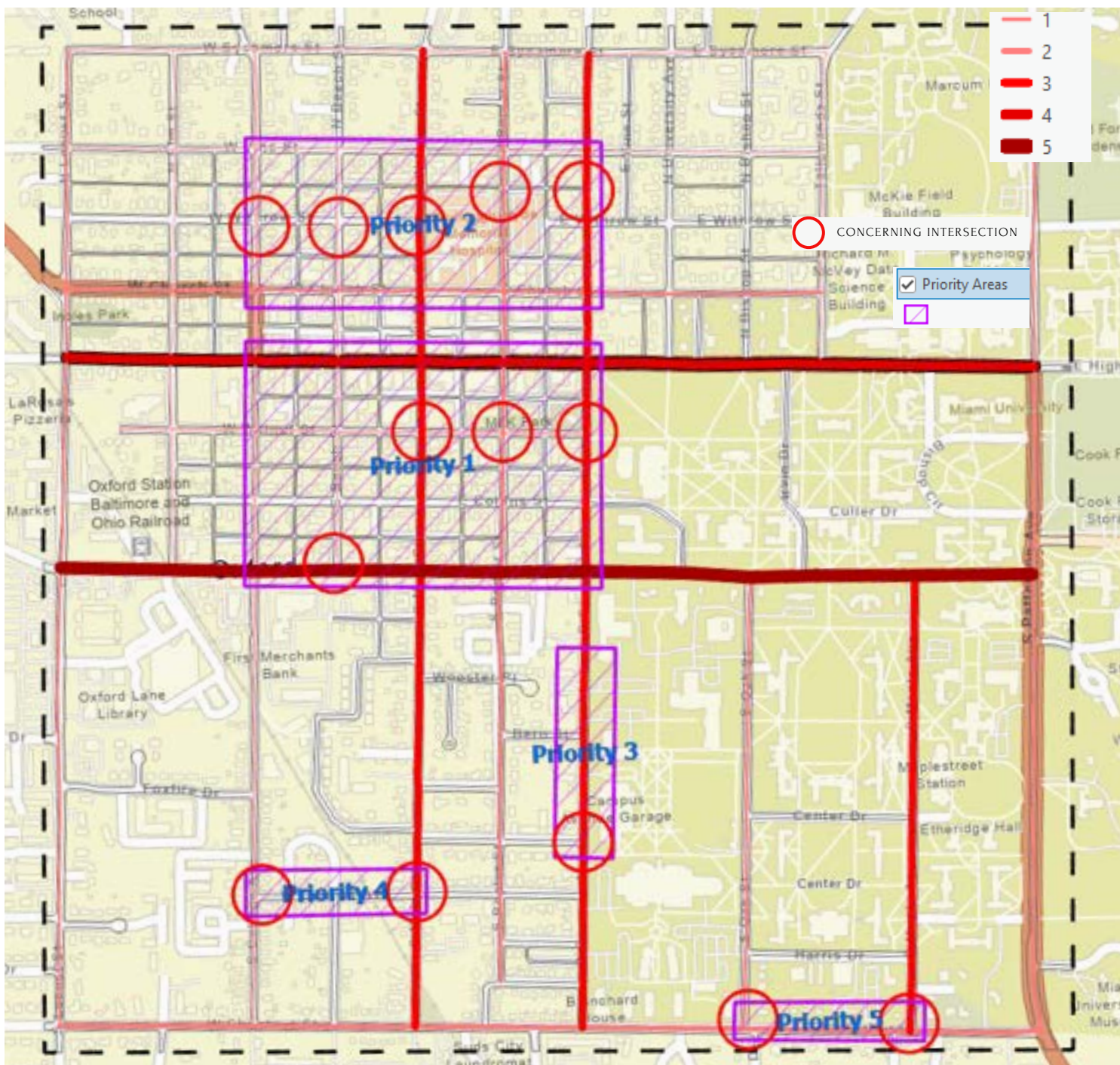
What makes you feel most unsafe while walking on N Campus Ave, Locust Street, High Street-Campus Avenue Intersection

COMBINING SURVEY DATA

PRIORITY ZONES FROM STAKEHOLDER'S SURVEY

We set priority zones based on input from stakeholders.

- We synthesized data from online and personal stakeholder engagements into an overall map that identifies areas in dire need of safety improvements. Key intersections of concern are circled, while streets are ranked from least (1, light) to most (5, dark) problematic.



BEST PRACTICES

IMPROVING TRAFFIC AND PEDESTRIAN SAFETY...

A variety of techniques exist to improve traffic and pedestrian safety. Our research into street planning best practices dissects these techniques by separating their purposes, including improving visibility to slowing traffic.

By integrating different technologies that are best fit to the streets of The Mile Square, Oxford can achieve its safety goals. We have highlighted best practices and organized them including benefits, ideal uses, and cost to implement. We also kept in mind that proposed solutions must be “ACTIONABLE” (as seen to the right), similar to proposal meetings conducted during the research process.

A DAPTABLE
C OST EFFECTIVE
T IMELY
I NNOVATIVE
OXFORD-ORIENTED
N ON-INVASIVE
A CCESSIBLE
B ALANCED
L ONG TERM
E QUITABLE

IMPROVING PEDESTRIAN VISIBILITY CROSSWALK & RAISED CROSSWALK

Crosswalks (Figure 5) and raised crosswalks benefit pedestrian safety by increasing driver attention. These apply to any type of street. Raised crosswalks can significantly calm traffic by further increasing visibility and adding a small shift in the streetscape, making drivers more aware of their situation.

The ideal Annual Average Daily Traffic (AADT) is >3,000 AADT for streets with normal crosswalks and >12,000 AADT for streets with raised crosswalks.

The cost for the painted crosswalk is \$750 and for a raised crosswalk is \$5000 - \$7000. The painted crosswalk can last 5-10 years, and the raised crosswalk is durable for up to 15 years.

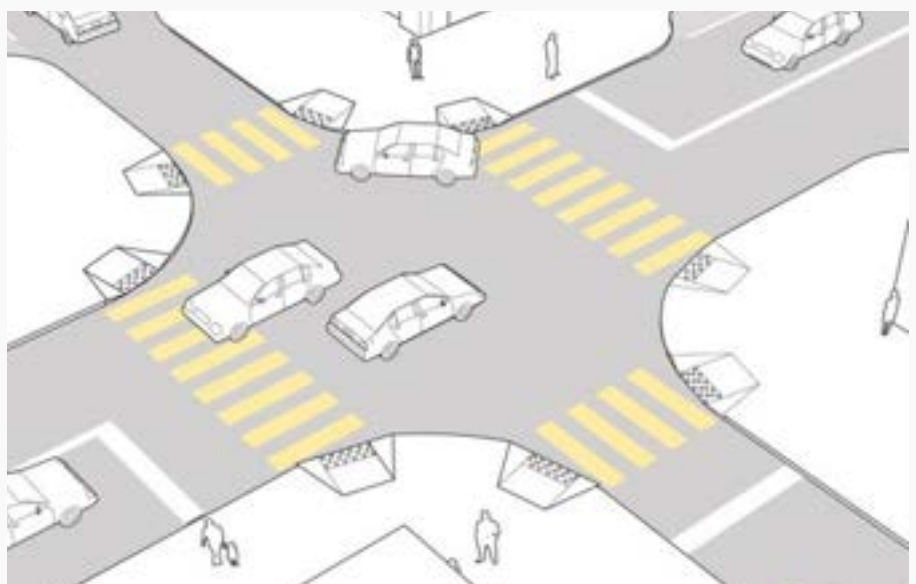


Figure 5

(National Association of City Transportation Officials)

INCREASING VISIBILITY

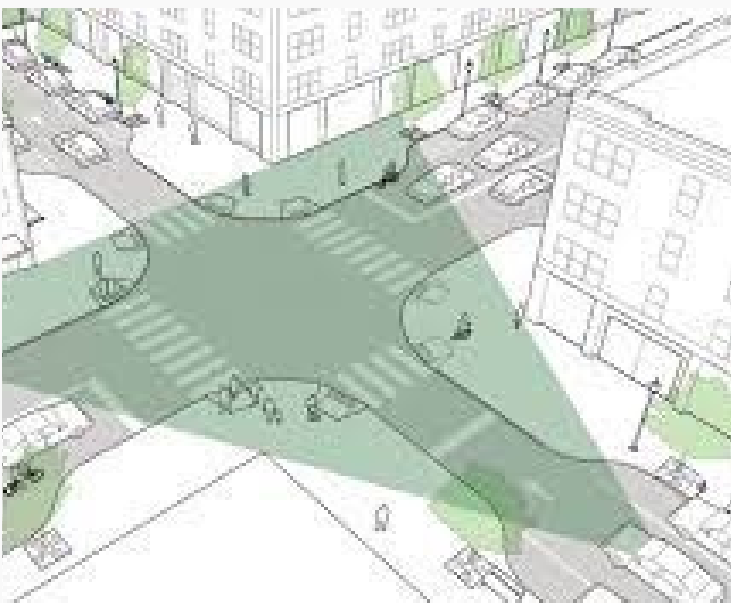
Increasing visibility is essential for safety by ensuring people and obstacles are visible in varied environments. This technology Improves awareness for pedestrians and drivers alike.

CURB BULB OUT

Curb bulb-outs maximize pedestrian space and visibility while minimizing crossing distances. They can be applied to local, residential, and connector street types. As they narrow the driving space, they also limit traffic speeds and help keep average traffic speed from 15-35 mph. This technology is best applied to roads with 500-5000 AADT.

A temporary bulb-out can cost between \$5000-10,000. (Figure 3)

A permanent curb bulb out can cost \$20000 and be durable for up to 20-30 years.
Figure 4



(National Association of City Transportation Officials)



Figure 3

INTERSECTION DAYLIGHTING

Intersection daylighting (Figure 4) improves safety at intersections and eliminates blind spots. This is often done by removing parking spots near the intersection. Daylighting can be applied on local, residential, and connector street types. These are best implemented on streets with average traffic speeds of 20-35 mph. However, this is useful for streets with any number of AADT.

SLOWING TRAFFIC

A strategy for improving safety is to slow the velocity of vehicles. Methods of slowing traffic can have the incidental benefit of diverting some traffic to places better suited to large volumes.

SPEED HUMPS

Figure 2



(National Association of City Transportation Officials)

Speed humps are meant to reduce traffic speeds. When applied on residential streets (Figure 2) roads with average speeds of 20-35mph can drop 10-15 mph. Speed humps are best suited for daily traffic volumes between 800-5000 AADT.

A temporary rubber speed hump can cost \$1500 and last between 1-3-years.

A permanent asphalt speed hump can cost \$2000 and can last up to 20 years.

SPEED CUSHIONS

Figure 1



Speed Cushions slow speeds while maintaining emergency medical service (EMS) accessibility. On residential streets, (Figure 1), roads with average speeds of 20-35 mph can reduce 5-10 mph of traffic speed. The ideal daily traffic where a speed cushion is best on a road is between 600-5500 AADT.

A temporary rubber speed cushion can cost \$5500 and is durable for 5-10 years.

A permanent asphalt speed cushion can cost \$18000 and last up to 15 years.

CALMING STREETS

Calming traffic creates safer streets by reducing vehicle speeds, increasing pedestrian and cyclist safety, and creating a pleasant urban environment.

STREET FURNITURE - PLANTERS

Street furniture such as planters provides the ability to divide spaces and manage movement. (Figure 6). This is useful for protecting bike lanes and slowing speeds.

They are useful on local and connector street types with between 20-35 mph. Street furniture can be applied on a wide range of streets with an AADT of 600-15,000. They are typically removable whenever needed.



Figure 6

TRAFFIC CIRCLE

Traffic circles (Figure 7) create a low-speed environment and reduce pedestrian-vehicular conflicts. When applied on single and multi-lane roads, they help keep the average traffic speed to 20-30 mph. Ideal traffic volumes to implement these are between 1000-5000 AADT.

A permanent traffic circle can cost \$8,000-15,000 and last for 25 years.



Figure 7

CASE STUDIES

BOSTON, MA: SLOW STREETS

As an example, Boston combined these methods to create a safer and less stressful street. The city worked to address several of the communities safety concerns including dangerous student crossings and low crosswalk visibility. In their slow streets plan, Boston proposed a variety of traffic calming technologies to slow traffic including speed humps, curb extensions, and new parking restrictions. These are expanded upon below.

Intersection Daylighting



Their parking restrictions were designed to make crossing distances shorter, increase pedestrian visibility, and stop drivers from parking on crosswalks increasing overall pedestrian safety.

SPEED HUMPS



The plan includes speed signs combined with speed humps 150' to 250' apart for local and residential streets to slow city speeds to 20 miles per hour.

CURB EXTENSIONS



**FROM: City of Boston
Transportation
Department**

Curb extensions extend the sidewalk up to the parking lane, shorten crossings, and allow drivers to better see people about to cross the street.

SOMERVILLE, MA: SHARED STREETS

Somerville also implemented a Shared Streets program to calm traffic, introduce placemaking, and divert traffic from their Neighborways roads. They utilized temporary speed humps, green cones, and painted curb extensions to narrow and slow the street. Additionally, they closed through traffic on weekends diverting it and lowering volumes, leaving the streets open to residents, guests, and emergency responders. Finally, as a form of placemaking, they strategically placed planters around the neighborhood to both beautify and narrow the street.

SHARED STREETS PROGRAM

Traffic Calming -- slow speeds

- Temporary speed humps
- Green cones / flex posts
- Painted curb extensions

Traffic Diversion -- lower volumes

- Closed to thru traffic signs on temporary barriers weekends only
- Open to residents and guests, deliveries, trash and recycling, and for emergency access

Placemaking

- Planters



IMPACT

Somerville saw max speed changes of over 75% on these streets, with a majority of abutting residents voting to extend the pilot program. Residents who lived in the neighborhood and were surveyed after the pilot voted 62% to extend the program into the foreseeable future.

SOMERVILLE, MA: NEIGHBORWAYS

WHAT ARE NEIGHBORWAYS?

Neighborways are dedicated to redesigning streets for bicyclists and pedestrians. These streets aim to readapt residential streets via art and temporary traffic calming technologies. The program builds on itself as success rates increase. They require speed limits of 25 miles, a maximum of two travel lanes, and a maximum vehicle volume of 3,000 per day. The incorporation of art is crucial to neighborways as it builds a destination out of street design.

HOW SOMERVILLE UTILIZED NEIGHBORWAYS:

The goal was to connect a high school to a bustling town center using the following technology:

(1) Crosswalk Gateway Treatments, specialized and vibrant crosswalks to signal at the beginning of the street that a non-traditional roadway starts here.

(2) Street Murals then spread the paint/design across the street to communicate continuity.

(3) Unique Street signage to show that pedestrians/cyclists are utilizing this space. These signs include kids at play, dog walking zone, etc.

(4) Temporary Curb Bump Outs to create distance between the crosswalk and automobiles.



Process + Design

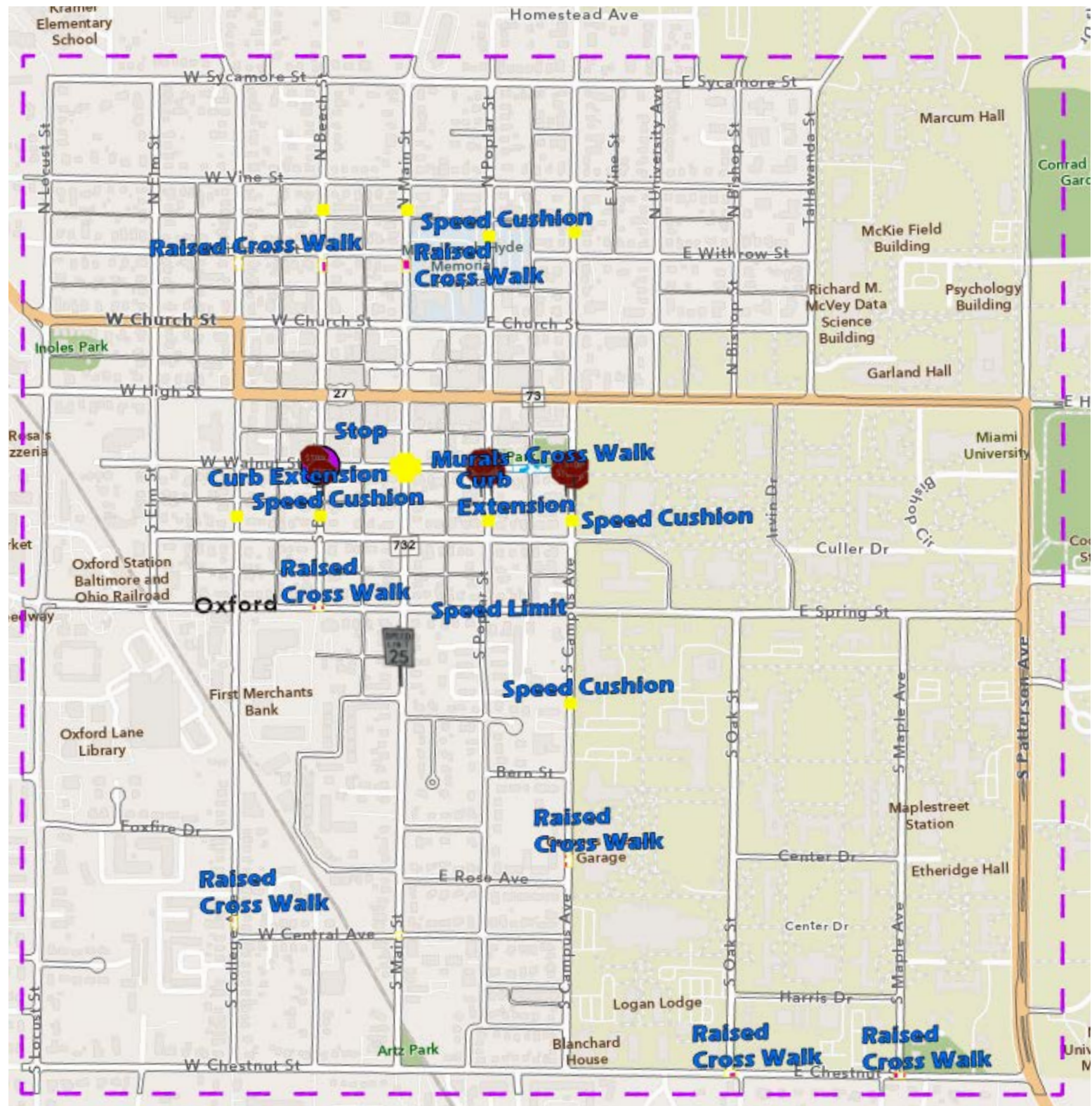
3 community meetings
10 youth, 30 adult
1 build day

Goals/Outcomes

Traffic calming
Neighborhood connection
More front yard parties

MILE SQUARE APPLICATIONS

Based on existing conditions, stakeholder input, prior city plans, and best practice research, we have identified many possible strategies for improving the situation of traffic safety in Oxford's Mile Square.



LIST OF APPLICATIONS



CHANGE IN TRAFFIC PATTERN

Crosswalk on S Campus Avenue at E Walnut St

2-Way stop at S Beech Street and W Walnut Street on North/South Traffic

Traffic circle at S Beech St & W Walnut St

4-Way stop at S Poplar Street and E Walnut Street

3-Way stop at S Campus Avenue and E Walnut Street

Change on S Main Street from 35 mph to 25 mph

Raised Crosswalks	Speed Cushions
S College Avenue & W Central Avenue	S Campus Avenue Near E Spring Street
S Main Street & W Central Avenue	N Poplar Street Near E Vine Street
S Oak Street & E Chestnut Street	N Campus Street Near E Withrow Street
S Maple Street & E Chestnut Street	N Main Street Near Alley Entrance
S Campus Avenue Near E Rose Avenue	N Beech Street Near Alley
W Spring Street & S Beech Street	S College Avenue Near W Collins Street
N College Avenue & W Withrow Street	S Beech Street Near W Collins Street
N Beech Street & W Withrow Street	S Poplar Street Near E Collins Street
N Main Street & W Withrow Street	S Campus Street Near E Collins Street

CURB EXTENSIONS

S Campus Avenue &
E Walnut Street

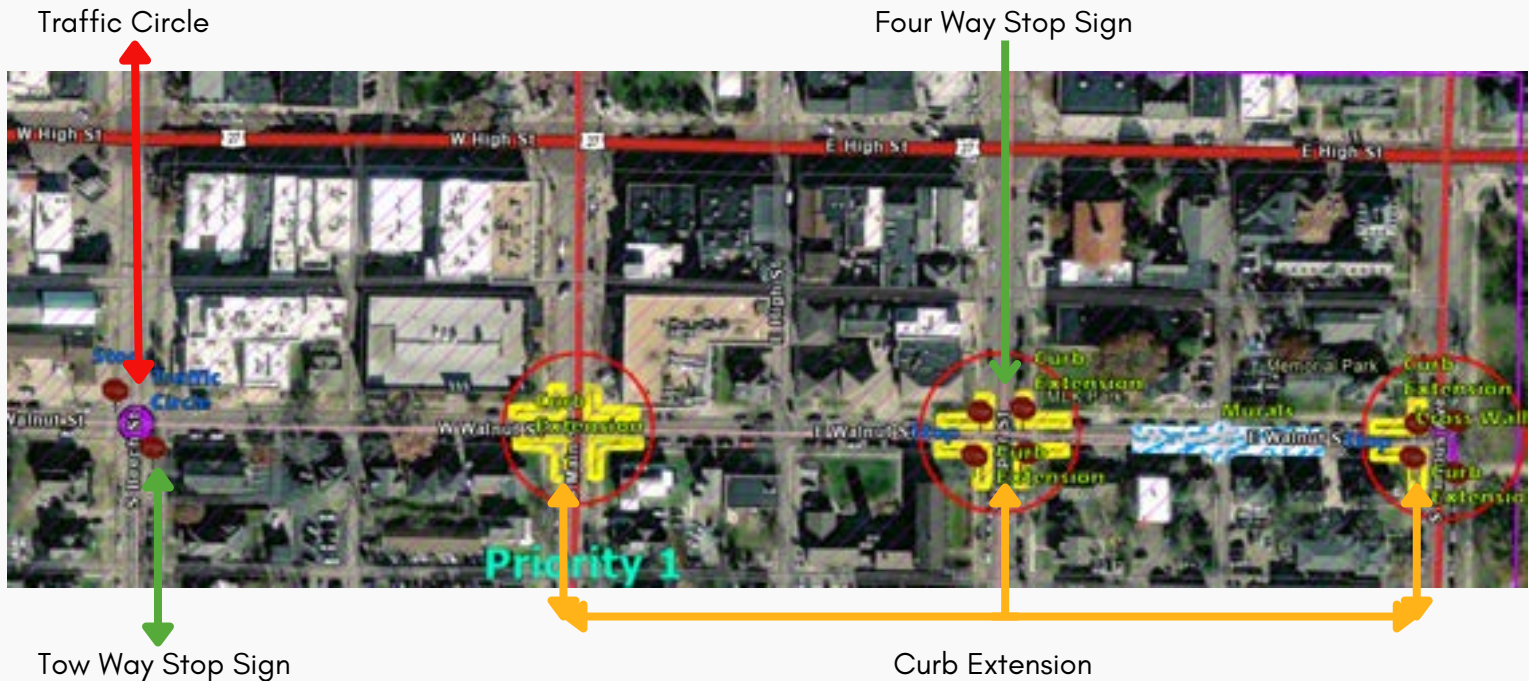
S Main Street & E Walnut Street

S Poplar Avenue &
E Walnut Street

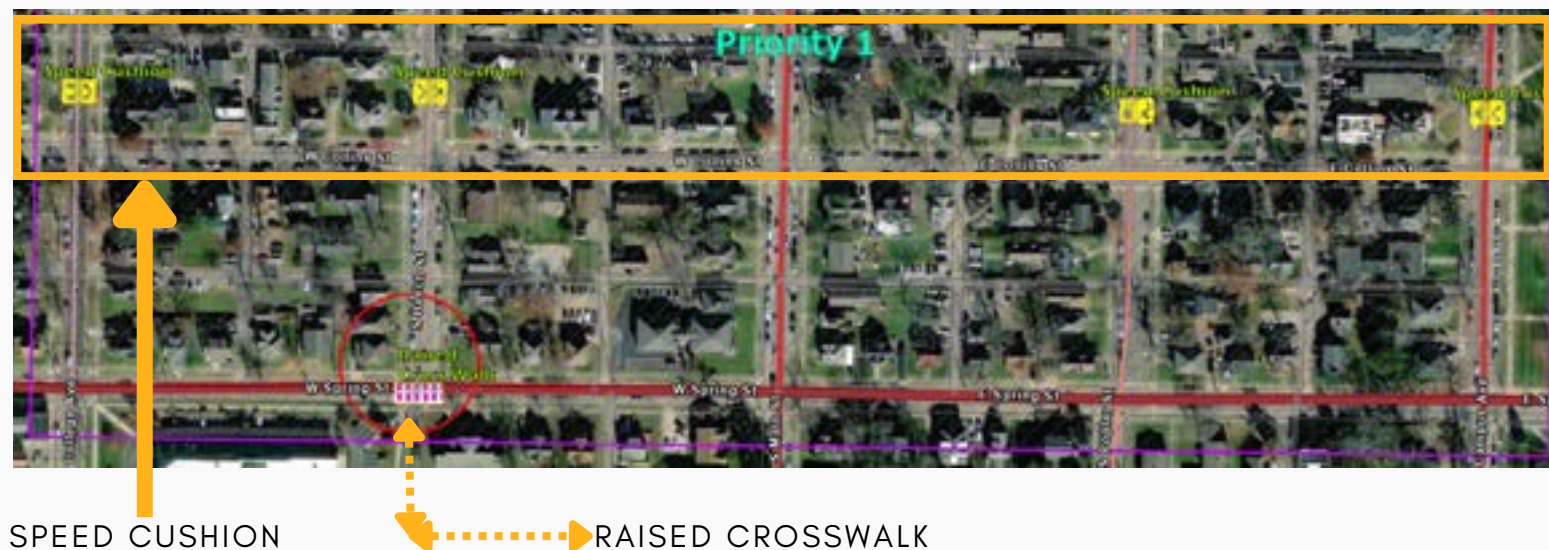
STREET APPLICATIONS

The following renderings show detailed proposals throughout the Oxford Mile Square sorted by area of the town and type of proposal.

APPLICATIONS: WALNUT ST. AND PRIORITY ZONE 1

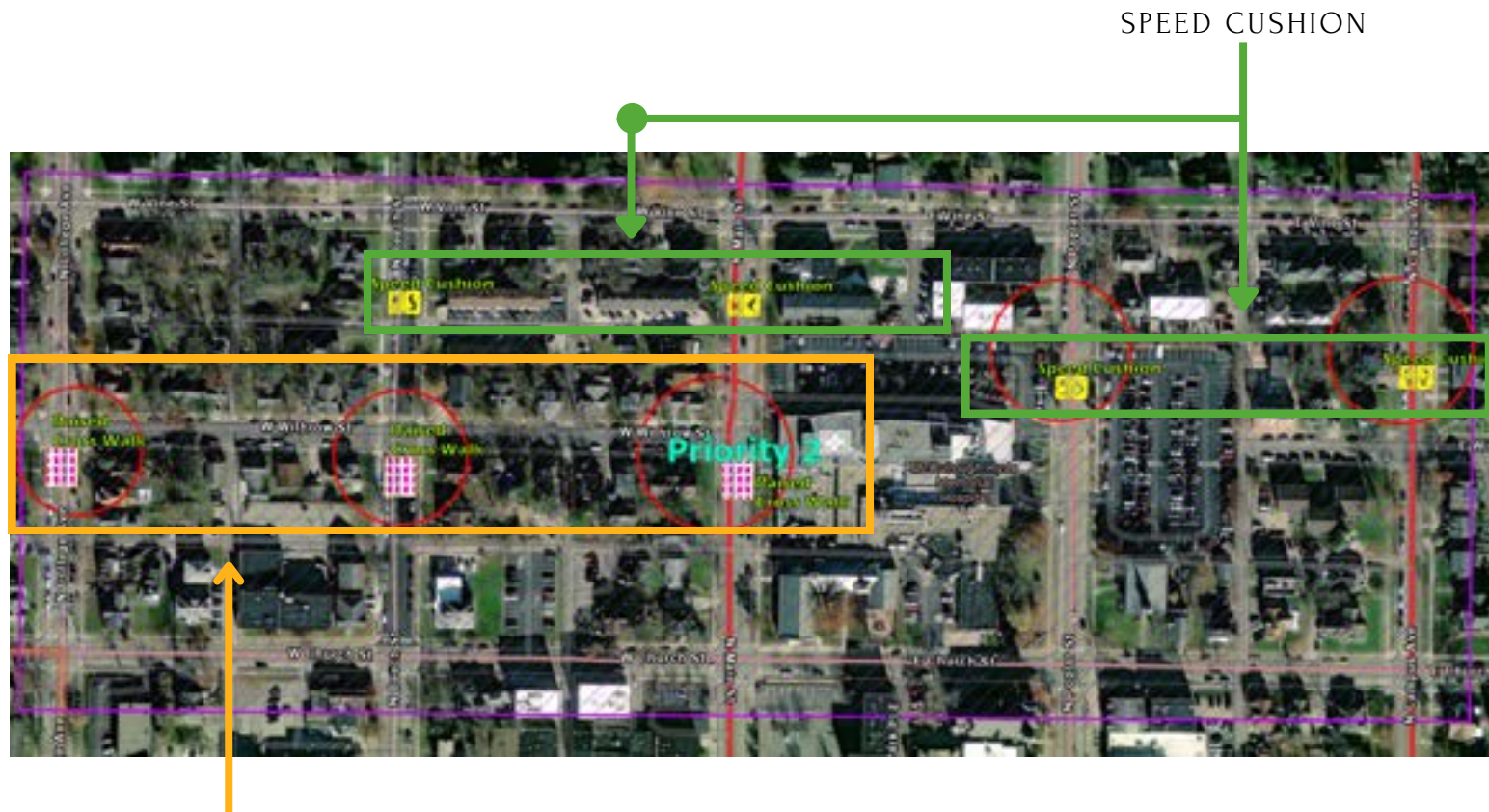


APPLICATIONS OF SPEED CUSHION & RAISED CROSS WALK ON PRIORITY ZONE 1



STREET APPLICATIONS

APPLICATIONS OF SPEED CUSHION & RAISED CROSS WALK ON PRIORITY ZONE 2



APPLICATIONS OF SPEED CUSHION & RAISED CROSS WALK ON PRIORITY ZONE 3 & 4



RAISED CROSSWALKS

Raised crosswalks are compatible with many of Oxford's roads. Many stakeholders identified visibility concerns. Few even cited visibility as the reason for a "near miss" with a speeding vehicle. The raised crosswalk application greatly increases the visibility of pedestrians and would therefore encourage cars to slow down.



**Potential Raised Crosswalk across
South Campus Avenue near South Campus Garage**

SPEED CUSHIONS

Oxford stakeholders, especially those in EMS services, expressed concerns about barriers for EMS vehicles. Our team wanted to find a solution for the speeding and vehicular dominance problems in Oxford. Speed Cushions are a perfect middle ground for this. They force regular vehicles to slow down while allowing large trucks and EMS vehicles to keep their same speed.



**Potential Speed Cushion on
South Main Street**

FOCUS AREA: MAIN ST.

South Main Street has long been a source of conflict between automotive, pedestrian, and bicyclist traffic. We heard from stakeholders and the public that this corridor experiences much too high pedestrian volume for the speed of cars. There is also only a single mid-block crosswalk on this street.

To fix these problems we propose a two-pronged approach. Firstly, the road needs more crossings. We suggest a raised crosswalk near the intersection with S Main Street and W Central Avenue.



We also suggest Oxford change the traffic patterns on South Main Street.

While much of Oxford is 25 miles per hour or less, South Main is 35 mph. This confuses with drivers as most people expect the road to remain at 25 mph. The increase in speed lowers safety for pedestrians. We propose a reduction in speeds and a change in the traffic pattern on South Main to combat this.

FOCUS AREA: WALNUT STREET

Transforming Walnut into a Neighborway

Oxford's City Council has set a 2024 goal of using creative placemaking as a way to improve quality of life. Oxford is specifically looking to highlight the unique history of Lorenzo Langstroth, the Father of American Beekeeping who resided in Oxford for the majority of his life.



Implementation Recommendation

Oxford installing a Neighborway similar to that in the Somerville Willoughby case study would allow the city to utilize creative placemaking while calming vehicular traffic in a way that requires minor infrastructural change, or at least temporary infrastructural change.

Launching a Neighborways program on Walnut Street with a theme of Beekeeping would allow the city to control the traffic in the bustling Mile Square while beautifying the city and telling an important story directly next to the City's main street, High St.

Walnut St+ Beekeeping Neighborway

- (1) By creating hive/bee-designed gateway crosswalks, the city would signal to drivers that this street is resident-oriented.
- (2) The street can then be muraled with bee-like or floral design, beautifying the streetscape while still maintaining existing parking infrastructure.
- (3) By placing various traffic calming measures throughout East Walnut including curb extensions and roundabouts, the city can ensure vehicular traffic is slowed for safety.

FURTHER POTENTIAL:

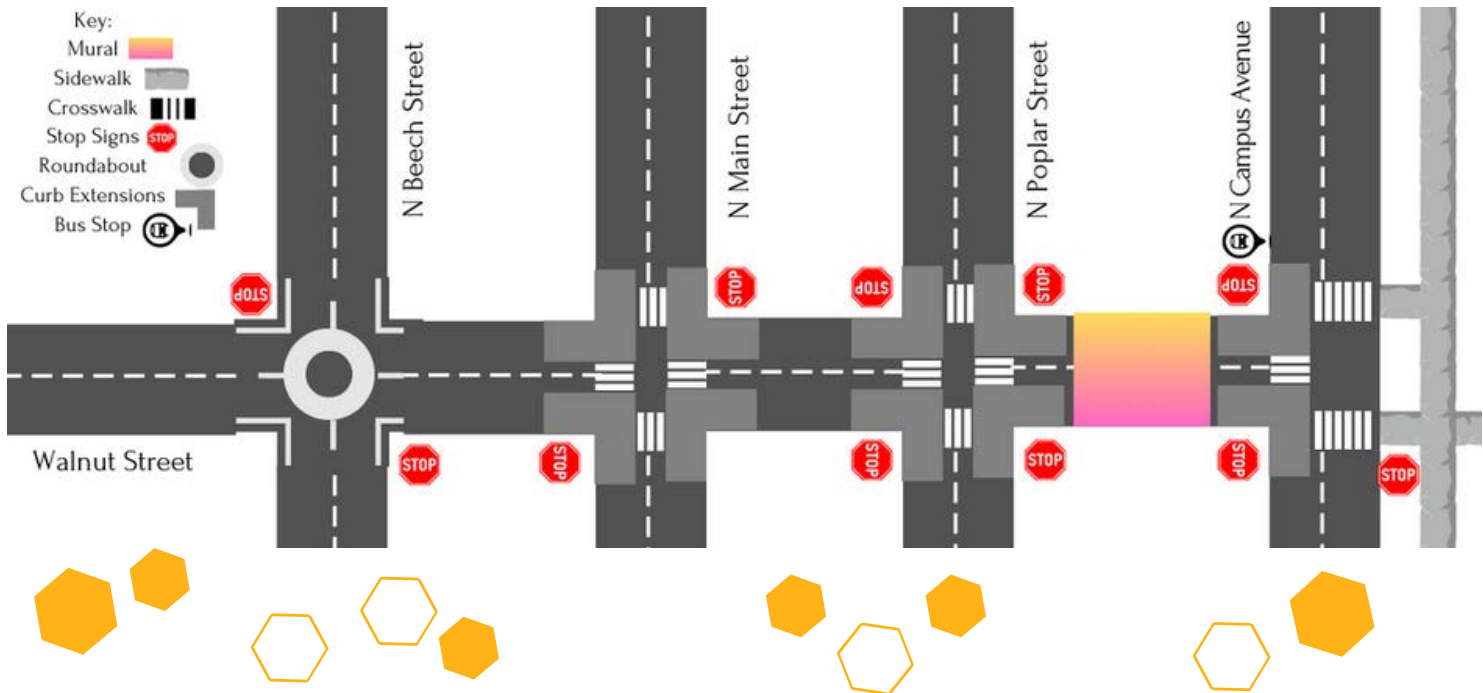
- (4) If the program succeeds, Oxford could begin to shut the street down on weekends, This allows the street to be opened to vendors, potential street furniture, and increased pedestrian traffic. This could become a space for economic opportunity and profits within the City, encouraging community building and togetherness.

Combining a range of traffic calming and placemaking strategies proposed for the Mile Square project, the proposal rendered imagines a change in Walnut Streets' importance.

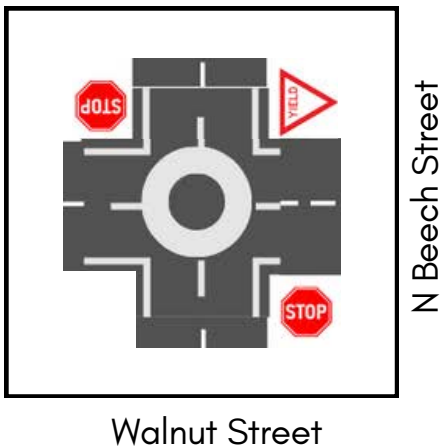
We propose a transformation of Walnut Street into a community-focused Neighborway with designs based on Oxford's Lorenzo Langstroth, to improve the Mile Squares' traffic situation.

NEIGHBORWAYS: WALNUT ST.

PROPOSED RENDERING:

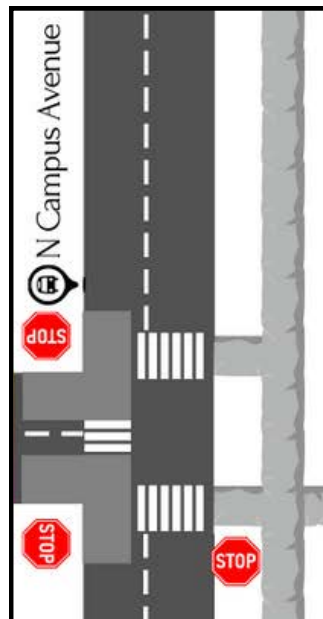


1.



This traffic circle will protect Walnut Street as a bicyclist/pedestrian boulevard, giving priority to East/West traffic to encourage bicyclist traffic.

2.



- Moving the bus stop from south the intersection to north
- Extending the curb to protect pedestrians and slow drivers
- Adding a crosswalk to create an additional crossing point
- Adding a sidewalk to line up with the additional crossing point
- Adding Stop Signs on the N/S parts of the intersection

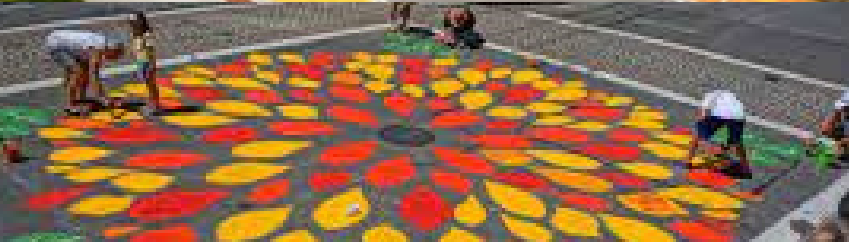
The addition of a sidewalk on 'Miami University's campus' heading into this new crosswalk is important to note. This would include collaboration between the university and the City of Oxford, increasing the time spent to carry out the project. However, it may also allow for the use of Miami University funds to improve pedestrian flow in this area.

NEIGHBORWAYS IMPLEMENTATION

1 - BEE ORIENTED GATEWAY CROSSWALKS



2 - STREET MURAL WITH BEES, FLOWERS, ETC



3 - SPEED CUSHIONING TO SLOW VEHICULAR TRAFFIC



PROPOSAL SUMMARY

General Application

Drawing from collaborative input shared during our stakeholder meeting (Figure 1) and the best practices detailed in this document, our proposal recommends the addition of:

- **Raised Crosswalks**
- **Curb Extensions**
- **Speed Cushions**

at various points throughout Oxford, each highlighted below (Figure 2).

Neighborways

To correspond to Oxford's placemaking goals, implementing a **Neighborway on East Walnut Street** would create not only a safer cycling and pedestrian route but a shared, historically relevant space in the City. Telling the story of Oxford's beekeeping history in this artistic, creative, and visible way possesses economic potential as well.

Targeted Application

Several streets with specific concerns have been identified throughout this process. Specific implementation recommendations have been made for these locations.

South Main Street was a primary target, with suggested raised crosswalks near the intersection with W Central Avenue. To further better the situation, the traffic flow should be changed and the speed lowered from 35mph to 25mph.

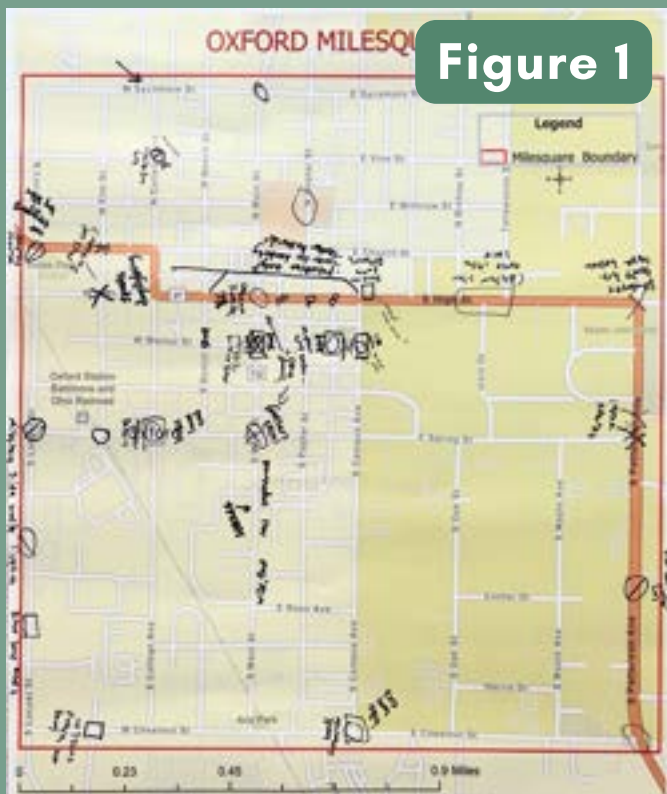


Figure 1

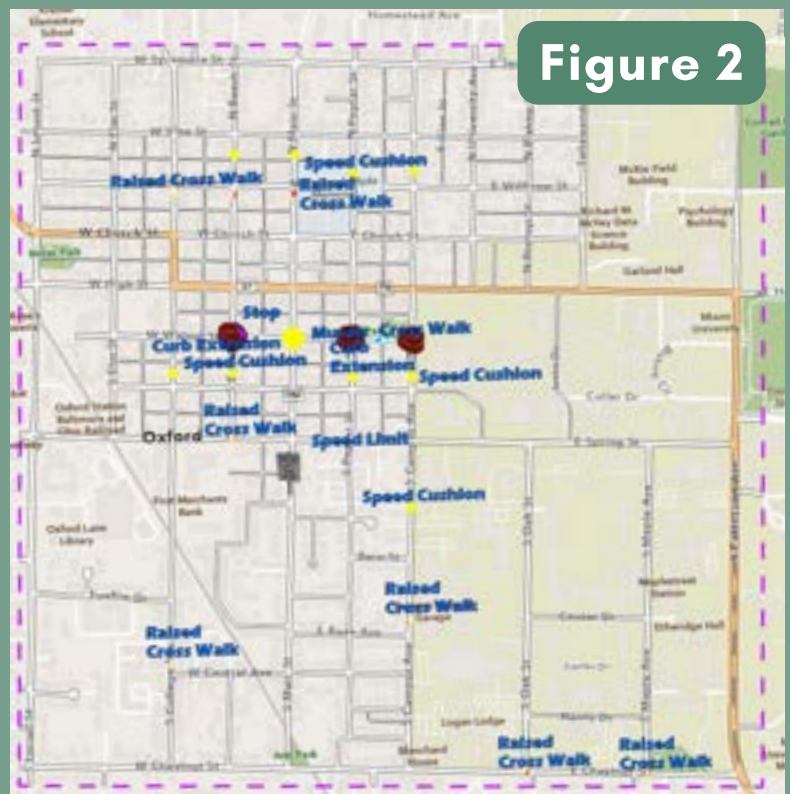


Figure 2

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