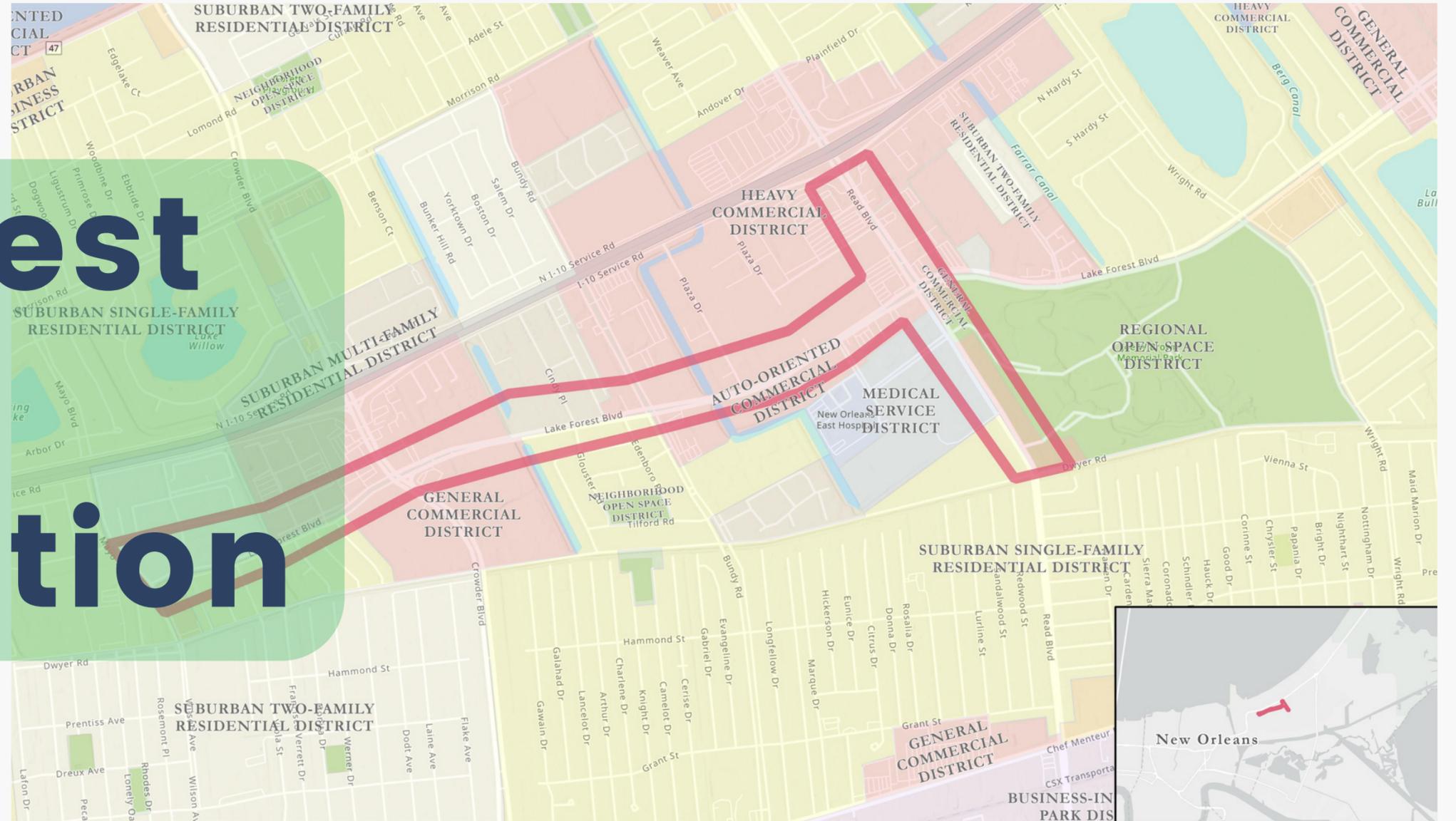


DANIELA SHUMAN
BAILEY BULLOCK
NINA LUONG
Development

ALEX NELSON
ADAM REID
NATALIE WEINER
Transportation

Lake Forest Blvd Revitalization



0 Vision

Lake Forest Boulevard is a lovely community on the eastern side of New Orleans. Home to the now-closed famous Lake Forest Plaza which was the destination spot for all community events, late-night dates, “emergency babysitter,” and just a hang out spot, according to Daniel Perez, a long-term resident of New Orleans East. Unfortunately, Hurricane Katrina resulted in the demolition of the old building. Revitalizing this area presents a unique opportunity to restore and rekindle the rich cultural heritage and deep sense of community that has long been cherished by its current residents.

Revitalizing this area presents a unique opportunity to **restore and rekindle the rich cultural heritage and deep sense of community** that has long been cherished by its current residents.

In the path to achieving a zero-carbon, sustainable, and resilient project, we included 6 of the 10 climate goals. We prioritized four of these six.

Recognizing the importance of transportation in carbon emissions, the solution integrated **low-carbon mobility** strategies. This included promoting the use of the new Bus Rapid Transit system in NoLa, cycling infrastructure, and encouraging walking as viable alternatives to reduce reliance on personal cars.

To confront the growing risks associated with climate change in New Orleans, the project emphasized **climate resilience and adaptation measures**. By incorporating resilient design features and infrastructure, such as the central barrier in Lake Forest Boulevard turning into a flood collection system, the community would be better equipped to withstand and recover from flooding events and heavy rain, ensuring the safety and well-being of its residents. Additionally, we addressed issues of heat exhaustion by including natural and artificial cooling mechanisms on public streets. We want to make sure people are comfortable while walking in the community.

In addition to addressing environmental concerns, the project dedicated attention to the preservation and creation of **green spaces, urban nature, and biodiversity**. These elements were integrated into the design, offering residents access to nature, promoting biodiversity, and improving overall quality of life.

Recognizing the significance of social inclusion, the project also emphasized **community engagement**. Stakeholders and community members were actively involved in the planning process, allowing their voices to be heard and ensuring that the project aligned with their needs and aspirations. This approach fostered a strong sense of ownership and promoted a more inclusive and cohesive community.

Our hypothesis posits that the implementation of **mixed-use development, characterized by increased density and vibrant city centers, will effectively stimulate a higher frequency of walking and micromobility usage, irrespective of their age.**

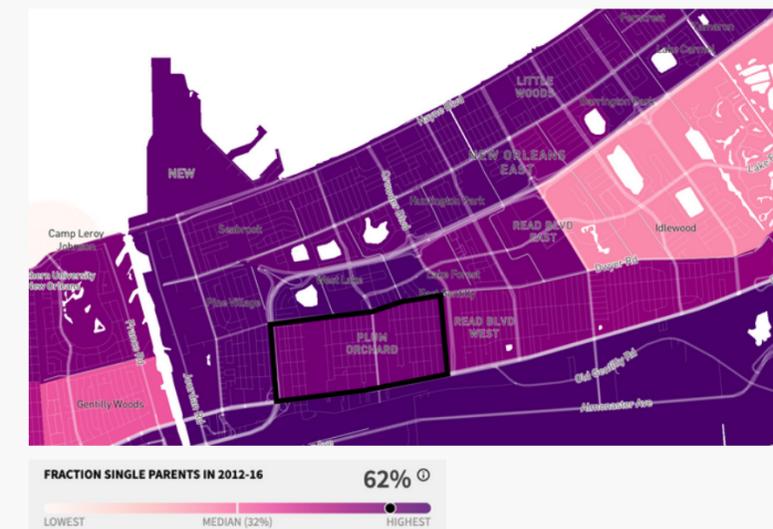
We verified this hypotheses in the Implementation Plan.

About the Neighborhood

According to the [Opportunity Atlas](#), we were able to find that the household income in this region is lower than the national average. There are more children in the area as compared to the national average, and a significantly higher portion of families are run by single parents. Additionally, 36% of people are college graduates in the region (higher than the national median at 19%). There is some variation across the region.



Plum Orchard has a lower income, more single families and a higher number of children than other tracts.



1 Stakeholders and Feasibility

Creating Connections

As of 2023, it was reported that an overwhelming majority (79%) of West Lake Reserve residents commute to work by personal car. To supplement the existing infrastructure and promote a reduction of vehicular transit, we propose an overhaul of the sidewalk, bus, and bike systems in the immediate neighborhood region.

- ▶ **Walkability** To facilitate walking between residential and urban areas, natural sidewalk covers will extend along Lake Forest Blvd and artificial sidewalk covers will reach to Community Centers
- ▶ **Leaving & Entering** Charging stations will be present in parking spots. Modifications to the bus system will be established in 2 tiers: (1) All stations will have seating areas with bright, visible signage and (2) all stations will be equipped with full or partial overhead cover for appropriate cooling during hot summers.
- ▶ **Biking** We will continue existing precedents of refurbishing existing bike lanes, as well as making them connect to all parts of the neighborhood and surrounding areas of the city. For cooling, trees will line the lanes as a natural source of shade. Other amenities like bike racks at common junctions, bike signals for lanes, and repair shops at community centers will be incorporated into the West Lake Reserve. Our plan also includes an expansion of the Blue Bikes NOLA initiative.

For Families

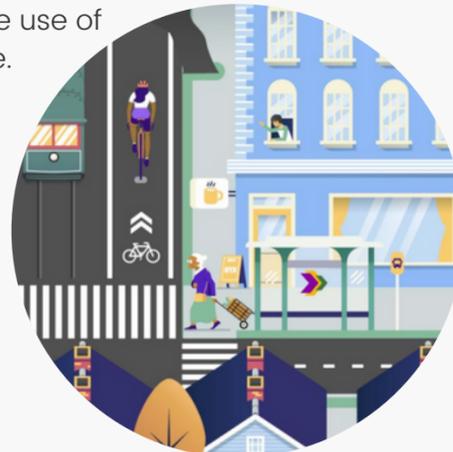
According to the census, the area has low population growth and approximately 10% multi-generational households. We hypothesize with the redevelopment, more families will move into the region. Since most children and younger people (under the age of 18) are not in possession of a personal vehicle, we hope to provide alternative transit methods and spaces throughout the neighborhood where children and young adults can at once feel safe and become more involved in their community.

- ▶ **Creative Spaces** To promote community building and allow for young people in the neighborhood to have an outlet for creativity, we plan to establish maker spaces and fitness programs (e.g., YMCA).for teenagers.
- ▶ **Safe Bus Systems** To provide access to schools and other areas of learning (e.g., nearby Sci Academy), the establishment of secure bus stops will also allow for children to make use of educational opportunities beyond walking distance while still feeling safe.



Creating Accessible Spaces: A Graphic Vision for the West Lake Reserve Neighborhood (Image Source: RIDE [State of Transit 2022](#), pg. 36)

Example of Effective Integration of Transit Systems (Image Source: RIDE [State of Transit 2022](#), pg. 33)



Although the residents of West Lake Reserve have defaulted to commuting by car, our plan aims to rebuild **trust in transit** among members of the community by **integrating existing bus systems with the improved RTA transit system and refurbishing bus stations in the neighborhood.**

As of 2023, it was reported that an overwhelming majority (79%) of West Lake Reserve residents commute to work by personal car. To supplement the existing infrastructure and promote a reduction of vehicular transit, we propose an overhaul of the sidewalk, bus, and bike systems in the immediate neighborhood region. We recognize the planned RTA BRT ends at Lake Forest Blvd & Read Blvd, the end of the assigned region, and will finish the route planning by end of 2024. In our design, the Lake Forest Blvd will have be designed as the following:



- ▶ Covered bus stations for non-BRT lines.
- ▶ Separated BRT lanes with divider and pedestrian island
- ▶ Protected and colored bike lanes
- ▶ Street vendors for walkability
- ▶ Naturally covered sidewalks for comfortable walking.

We are working with the existing Lake Forest Blvd layout to improve and revitalize the region so that anyone, no matter their preferred mode of transport, will be able to travel through our region. Based on existing studies across the US (1) (2) (3), we expect that people's access to work in the region will increase by 5% up to 30%. This is particularly helpful for the individuals who are running single parent homes and for older folks who want jobs that are easier to access.

2 Planning for the People

West Lake Reserve is a lovely community of majority black residents. The community is very car-dependent and has an aging population. Providing non-car options for transit is pivotal for reducing carbon emissions and developing a safe, welcoming environment for elderly folks.

An Aging Neighborhood

As West Lake Reserve continues to age, our strategies must accommodate the needs and well-being of older adults. It is crucial to create inclusive and age-friendly communities that promote active and independent living.

- ▶ **Multi-Sensory** High contrast and tactile paving is added for the visually impaired. Further, we added auditory crosswalk signals.
- ▶ **Cooling** With summers in the 90°, implementing natural & artificial sidewalk coverings is crucial to protect older pedestrians from harsh sun. Public Fans at bus stops will create oases with air movement.
- ▶ **Legible Signage** Braille indicating the street name for the visually impaired. Bright colors indicating way-finding. Arrow Signage directing pedestrians without smart-phones to community centers.
- ▶ **The Half-Mile** Within a half-mile of every residential block, there is at least one grocery store, pharmacy, restaurant, and green space. Many residential blocks also have access to a clinic.

For Families

Although the number of children in West Lake Reserve is declining, we expect the revitalization project to encourage more people to start their families in the neighborhood. Children should feel safe everywhere.

- ▶ **Kid-Safe** Slower Car Speeds around community centers. We are also adding sidewalk bollards to separate pedestrians from the Lake Forest Blvd in the commercial areas.
- ▶ **Stroller Friendly** We are widening the sidewalks and putting ramps at every intersection for individuals with strollers to go through. Stroller-friendly design is also helpful for individuals with disabilities and the elderly.
- ▶ **Street Art** City-sponsored community sidewalk chalk on the weekends can help build community across demographic groups of all ages. The city can apply to Bloomberg's Asphalt Art grant.
- ▶ **Protected Biking** Our transportation plan contains protected and green-painted bike lanes that make it safe for students to travel to school by other means than by car.

Considering Race

People of color form the majority of the inhabitants of the West Lake Reserve area. Their experiences of ostracization and discrimination should not be downplayed while considering future solutions

- ▶ **Fresh Eats** Ensuring equitable and reliable access to fresh food is critical for a healthy community. We are prioritizing including outdoor areas for groceries and for eating
- ▶ **Safe Gathering** We will be ensuring that all of our outdoor spaces have adequate lighting and an inviting atmosphere filled with art so as to allow for people to gather and share a meal

Shaping a Community with Reduced Car Dependence

Building a "Less-Cars" community entails creating an accessible and walkable environment that prioritizes pedestrian infrastructure, public transportation, and alternative modes of transportation, fostering a sustainable and inclusive urban landscape for people of all ages, including older adults. Making sure the environment is walkable is key, and providing community-oriented incentives (i.e. public art, family-run businesses, outdoor space), is pivotal.

- ▶ **Street Painting** Commissioning pieces of street art from community members is a great way to build community pride.
- ▶ **Public Bike Repair** Creating central places that facilitate a comfortable biking environment is key to encouraging alternative modes of transportation. This also encourages people to build communities out of bikers, both for utility and leisure.
- ▶ **Mixed-Use** People of all ages can spend weekends walking around the city center instead of driving to their respective locations.
- ▶ **Green Space** Benches in public open space facilitate a more desirable walking environment, especially for elderly folks. Traveling to a pharmacy, for example, doesn't need to be a chore, but can rather be a leisurely stroll with a destination.



Community Street Art in Portland, OR

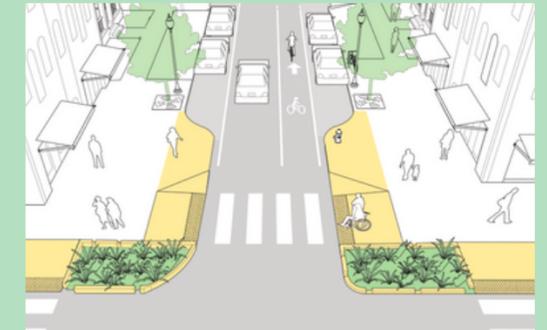


Public Bike Repair in Ontario

Safe Intersections are Pivotal for Reduced Car Dependence

Our vision for the Lake Forest Boulevard is to be a walkable neighborhood where residents can walk to wherever they need to on a daily basis. Considering the aging population, many of the residents will not need to commute outside the community regularly. We find this a very important aspect influencing how we designed the intersections. We recommend following ASLA Sustainable Transportation guidelines from the National Association of City Transportation Officials Guide. Our intersections along Lake Forest Boulevard are designed as follows.

- ▶ Curb cuts at every intersection with tactile paving as wide as the crosswalk.
- ▶ Very clearly labelled crosswalks with bright colors and auditory signals
- ▶ Pedestrian Islands in the divider on Lake Forest Blvd
- ▶ Street artwork along the crosswalks as commissioned pieces allows will slow down traffic.



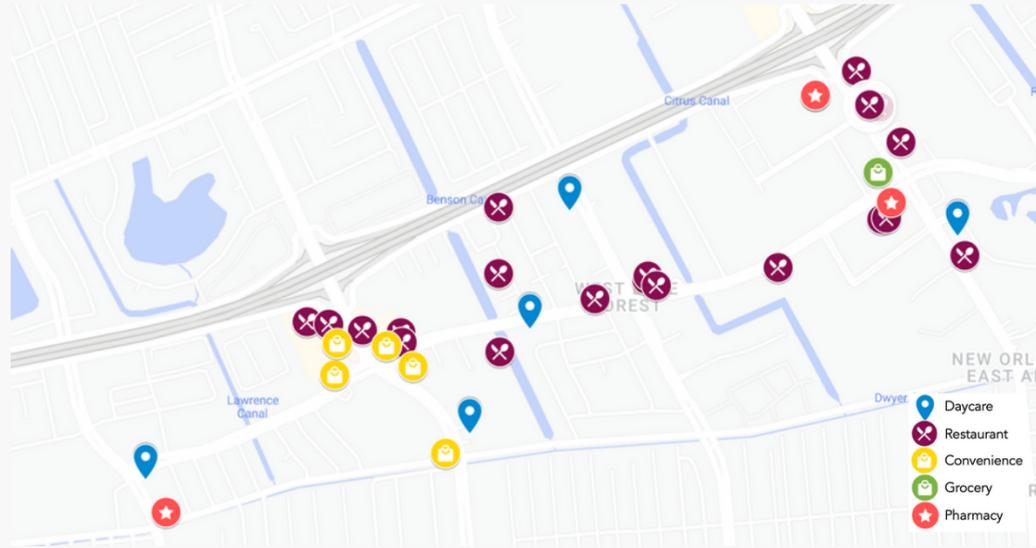
Safe Intersection, Curbed



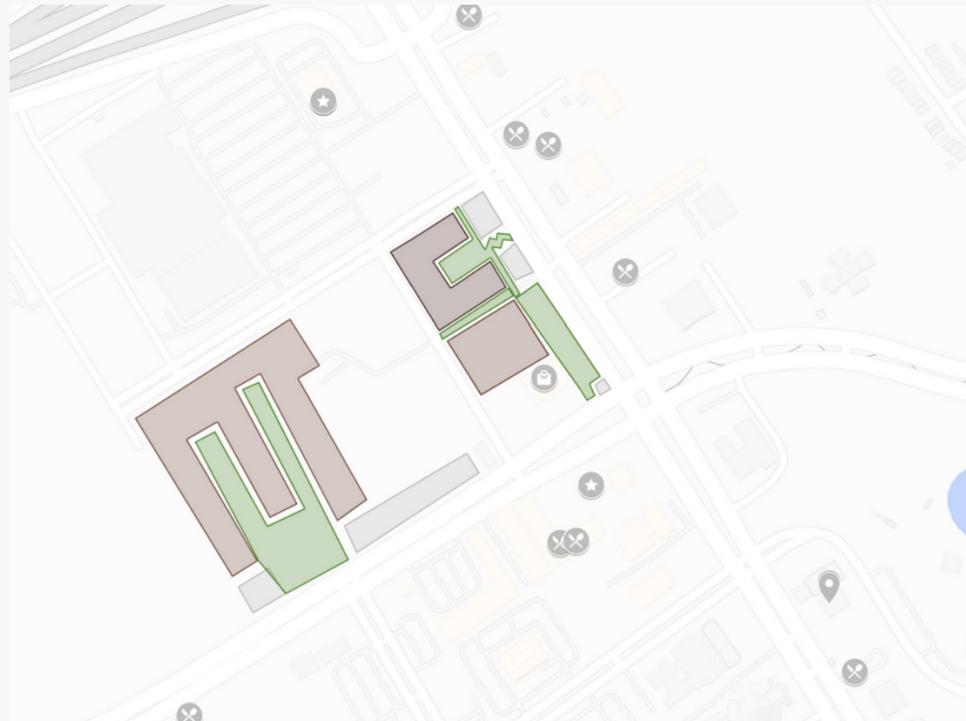
3 Development

One of the first steps to Transit Oriented Development is to encourage density around the community centers. This will encourage walkability and reduce the need for cars, which is particularly important for an aging population.

Here are the existing amenities in the region:



We propose the following amenities to be added to facilitate the half-mile strategy around elderly residential blocks.



Land-Use

One of the first steps to Transit Oriented Development,

- ▶ **Walkability** To facilitate walking between residential and urban areas, natural sidewalk covers will extend along Lake Forest Blvd and artificial sidewalk covers will reach to Community Centers
- ▶ **Leaving & Entering** Charging stations will be present in parking spots. Modifications to the bus system will be established in 2 tiers: (1) All stations will have seating areas with bright, visible signage and (2) all stations will be equipped with full or partial overhead cover for appropriate cooling during hot summers.
- ▶ **Biking** We will continue existing precedents of refurbishing existing bike lanes, as well as making them connect to all parts of the neighborhood and surrounding areas of the city. For cooling, trees will line the lanes as a natural source of shade. Other amenities like bike racks at common junctions, bike signals for lanes, and repair shops at community centers will be incorporated into the West Lake Reserve. Our plan also includes an expansion of the Blue Bikes NOLA initiative.

Resilience

[INFORMATION HERE]

- ▶ **Flood Relief** We took inspiration from the Cheong Gyejeon in Seoul, Korea. We are adding a stream in the center of the main road that acts as a collection & filtering system. Trees and native Louisiana brush line this stream to filter the water.
- ▶ **Reservoirs** The stream water will be filtered into a reservoir that is cleaned and pumped as fresh water for the community.
- ▶ **Heat Response** To provide access to schools and other areas of learning (e.g., nearby Sci Academy), the establishment of secure bus stops will also allow for children to make use of educational opportunities beyond walking distance while still feeling safe.

▶ [CAPTION / GRAPHIC DESCRIPTION HERE]
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4 Housing Development

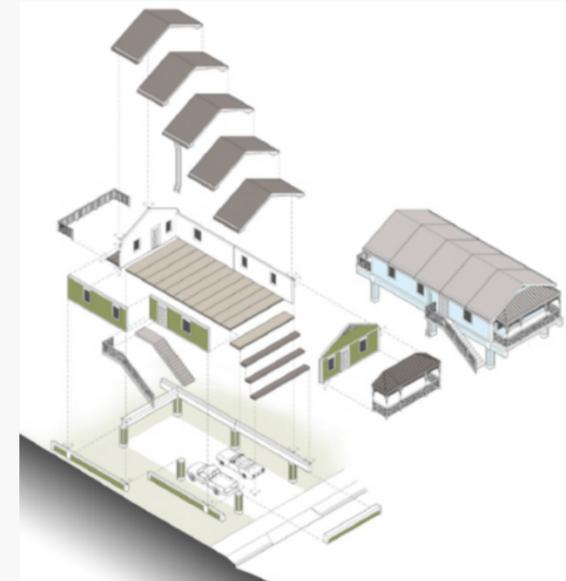
In terms of housing infrastructure, the main aims to consider are the feasibility, cost, time, and environmental factors of building new homes in addition to the cultural context of the community. Especially for an aging population, maintaining a familiar culture is vital to allowing the community to blend in seamlessly with the uniqueness of New Orleans.

Architecture and Culture

The main architectural design will be shotgun houses, which are integral in New Orleans's culture and history.

- ▶ **History** Shotgun houses started becoming prevalent in New Orleans neighborhoods in the early 1800s. The architecture originated in West Africa, moved to Haiti, and was introduced to New Orleans through West African and Haitian immigration. The aging population will be familiar with the existing shotgun architecture.
- ▶ **Efficient Living** The structure of shotgun houses is narrow rectangular houses without hallways in which rooms are located linearly behind each other. Typically, these houses are about 12 feet wide. With the shotgun house design, it allows for efficient space and energy usage. Opening doors on both ends of a house allows for effective cooling as well as for hot air to rise away from residents, which is useful for hot regions.
- ▶ **Community** With the existing structures of double shotgun houses, where two single shotgun houses are built next to each other and share a porch, the community aspect will be incorporated into the housing development plan. Shotgun houses structures allow for houses to be built close together within a neighborhood since they are uniformly rectangular in nature. We considered the assumption here that two people will be living in each single shotgun house. The shotgun house duplexes and the close proximity all houses have to each other will allow for the aging population to have easier access to individual mobility and build a community.

Typical shotgun house in New Orleans, familiar to an older population



Exploded view of the architecture of a Foreverhome shotgun house



Hurricane Resistance

To modernize the historical structure, there are methods of creating hurricane-resistant shotgun houses, as introduced by Foreverhome. Prioritizing hurricane-resistant homes is vital for New Orleans, as it is located in a region prone to storms and hurricanes.

- ▶ **Materials** The main building material of these modern shotgun homes will be precast concrete, which is engineered to be storm-surge and hurricane-resistant. These shotgun houses are additionally engineered to go beyond standards set by the International Code Council (ICC) and the Federal Emergency Management Agency (FEMA). The houses are LEED certified and certified "Fortified" by the Institute of Business and Home Safety (IBHS). Above all, the shotgun homes are insurable, energy efficient, and environmentally friendly.
- ▶ **Costs and Building Time** As mentioned prior, shotgun houses have a particular uniform structure that is popular in their known architecture. With the uniform structure and the ability to build shotgun homes with precast concrete, these shotgun homes are designed to be affordable with a short construction time. Construction time includes 30 days of casting and delivering and 40 hours of assembly.
- ▶ **Flood Relief** Because New Orleans is mainly below sea level, the modernized shotgun home can be raised on columns to address flooding concerns. All other factors and designs are not compromised with the raised design and added features such as ramps can be included to create accessibility for older residents.



Assembly process of the precast concrete pieces of a shotgun house

Fully assembled and decorated Foreverhome shotgun house



DANIELA SHUMAN
BAILEY BULLOCK
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Development

ALEX NELSON
ADAM REID
NATALIE WEINER
Transportation

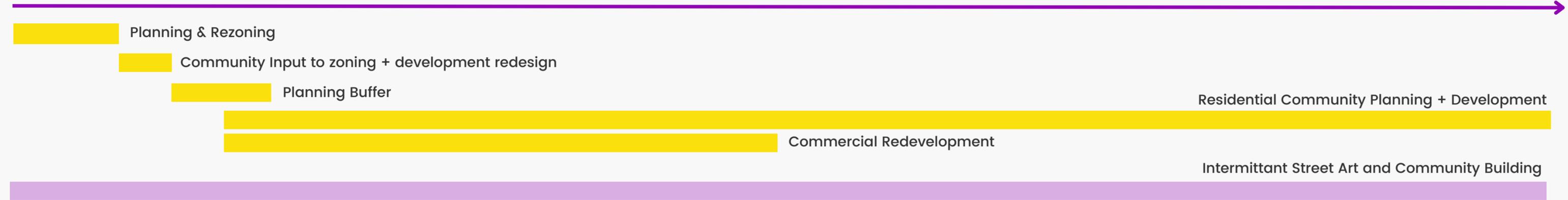
Implementation Plan



0 Timeline

- Development
- Transportation
- Community
- Homeowners
- Renters
- Louisiana Government
- New Orleans Government
- Private Business
- New Orleans RTA

2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041



Solution	Stakeholder	Budget
Street Intersection Reconstruction		\$
Bus Station Redesign		\$
Protect Bike Lanes		\$
Zoning Redesign		\$
Community Center Redevelopment		\$\$\$
Residential Community Development		\$\$\$
Pedestrian Friendly + Age Friendly Infrastructure		\$
Cooling Systems		\$\$
Green Space		\$\$
Bike Friendly Infrastructure		\$
Street Art + Community Building		\$

Funding through Bloomberg Asphalt Art

COMMUNITY PAVILLION

NATIVE PLANT FOREST GARDEN

DOG PARK

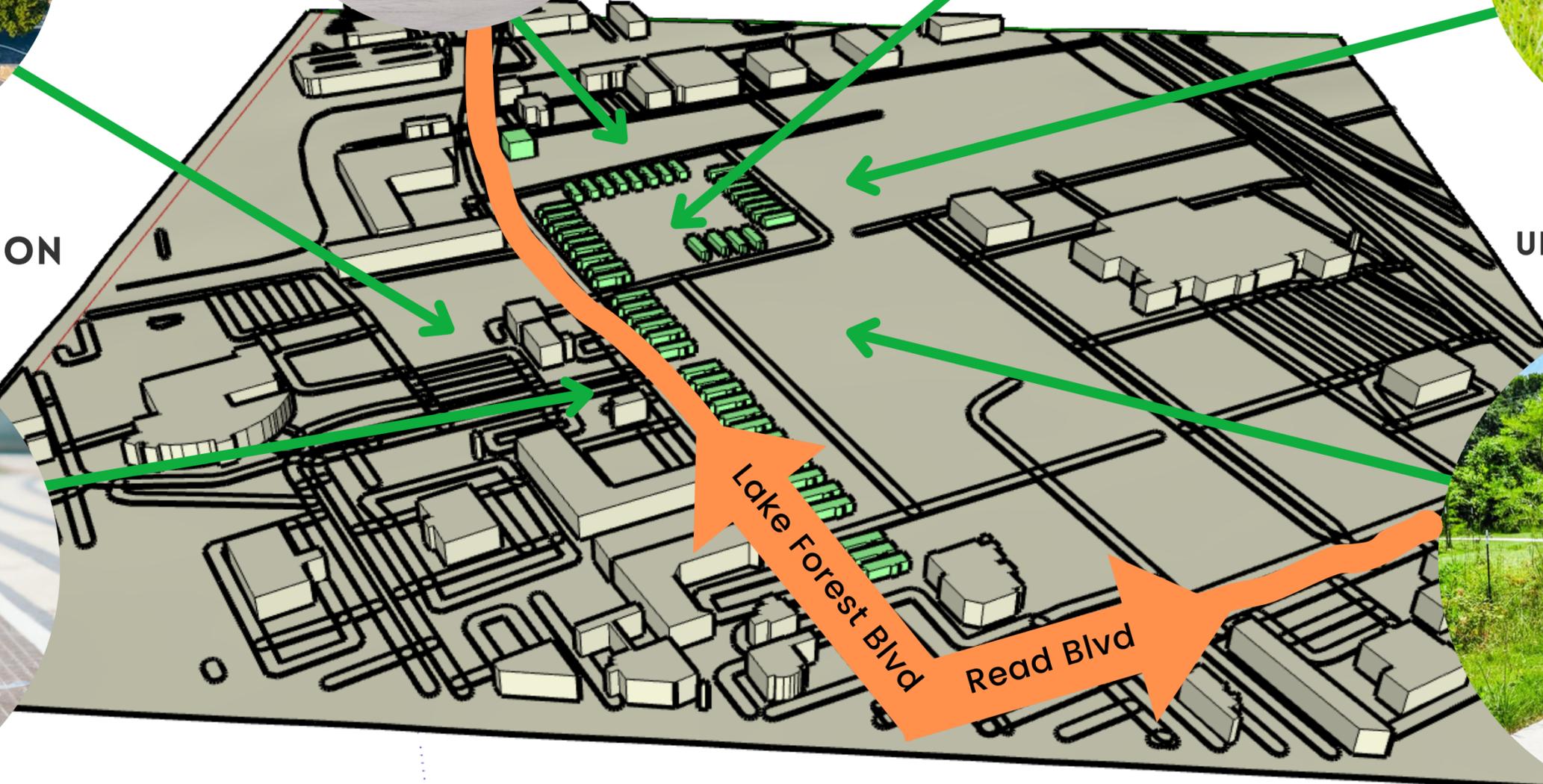
PLAZA: ADAPTIVE REUSE OF PARKING LOT



ACTIVE TRANSPORTATION WALKWAY



URBAN REFORESTATION NATURE PATH



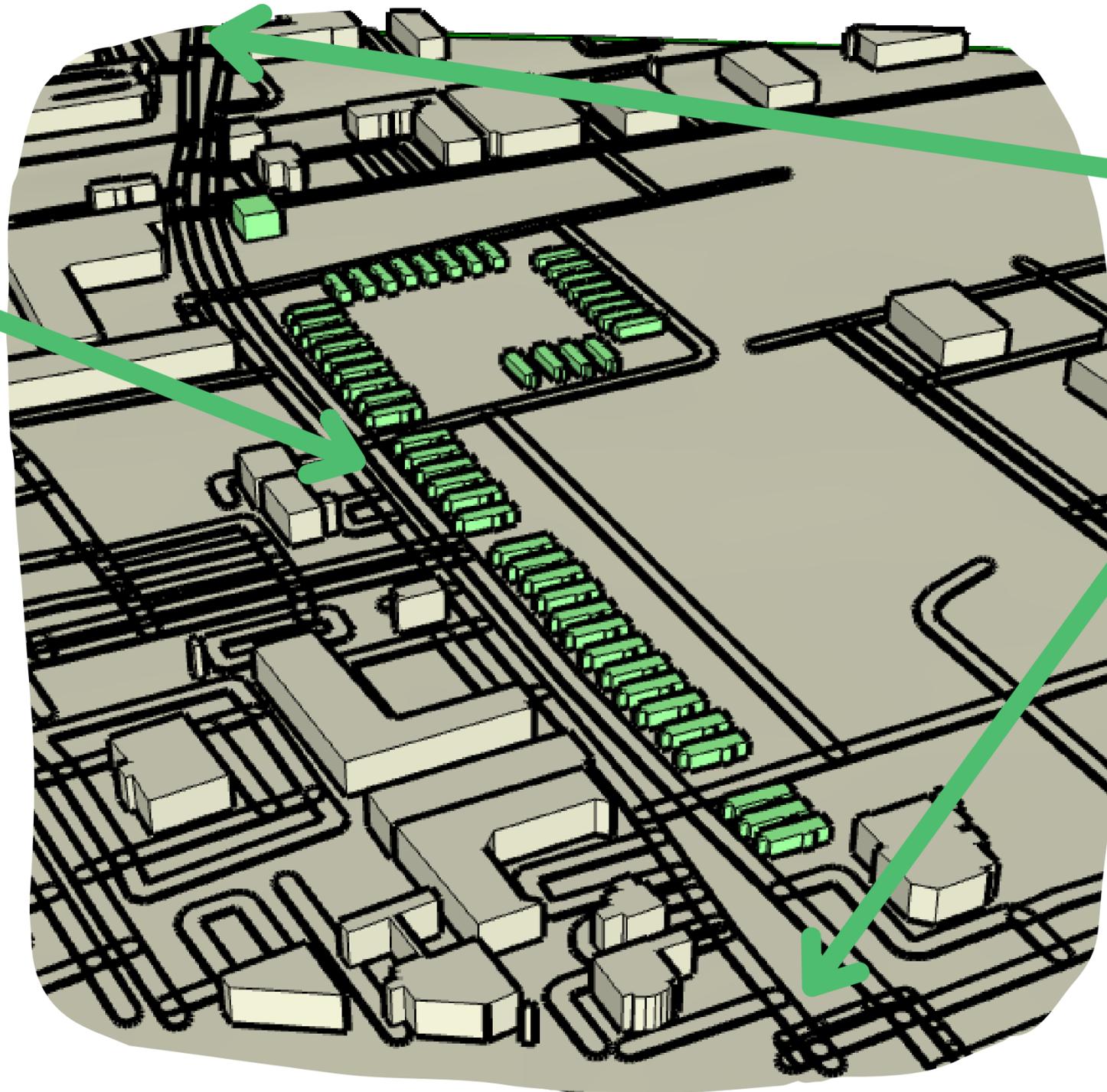
Lake Forest Blvd

Read Blvd

MIXED-USE INFILL DEVELOPMENT



To soften the existing auto-oriented environment, we propose that infill units be shotgun-style that may be occupied by either residential or commercial uses, such as exists on several blocks of Magazine Street in the Lower Garden District, for example. This would promote the addition of new commercial activity, while also allowing residents to access amenities within walking distance.



BRT STOPS



The green units are proposed infill for this block. The properties where the infill units are sited are currently designated as General Commercial in the future land use designation map on Property Viewer. We propose that properties with this designation within the Corridor Transformation Design Overlay District be re-designated as Mixed-Use Low Density for future land use to allow for walkable, transit-oriented communities.