

Complete Green Streets Guide

City of Madison

Renee Callaway, Pedestrian Bicycle Administrator

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Why Develop this Guide?

Current policies, practices, and ordinances have moved us to wider street

Right Sized Streets



28 feet wide



48 feet wide

Resident Concerns Over Streets & Safety

Wide streets with low parking utilization lead to people driving fast

Residents want street design changes, even for relatively new streets



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Principles of Complete Green Streets

- Complete Streets are for everyone, no matter who they are or how they travel.
- There is no one design of a Complete Street. Each street design considers the specific context of the community, neighborhood & street.
- A Complete Street is designed & operated in a way that prioritizes safety, comfort, and access for people.
- Green streets are part of a healthy, equitable design that are part of designing for a City's resilience.



Complete Green Streets: Street Design Impact



A process centered in community values



Clear direction on priorities



Defined street types to use as starting point for design



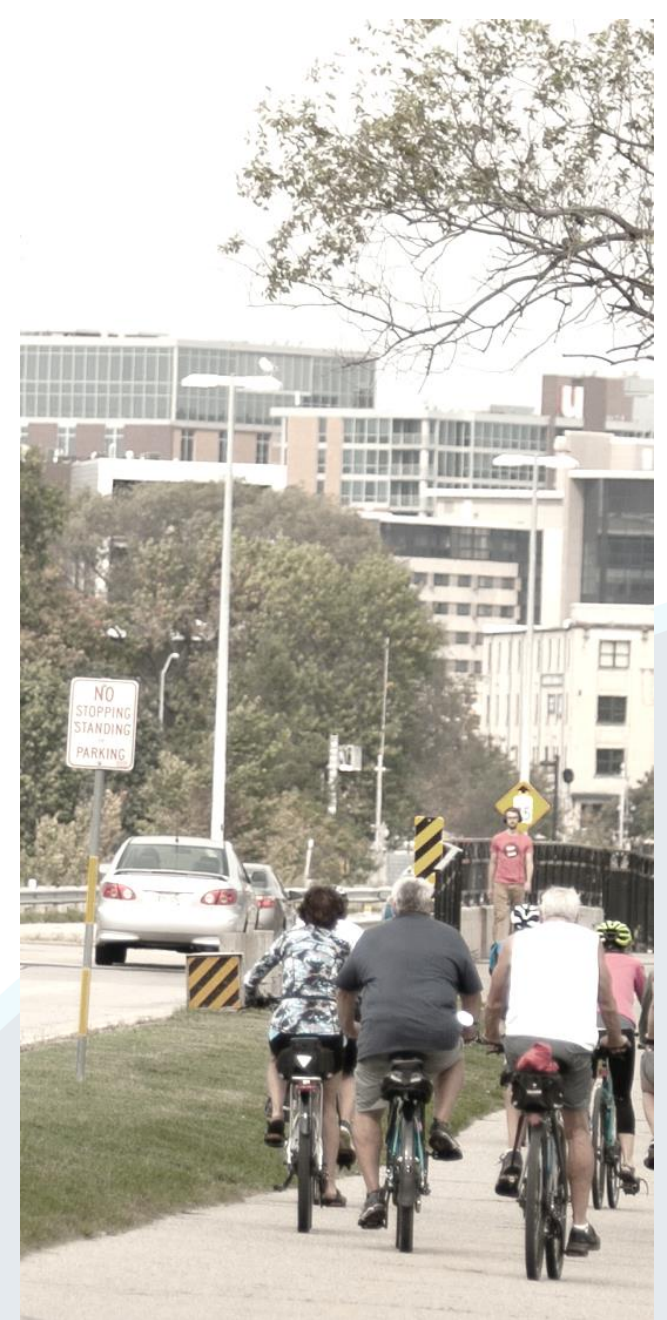
Explicit equity framework and associated process



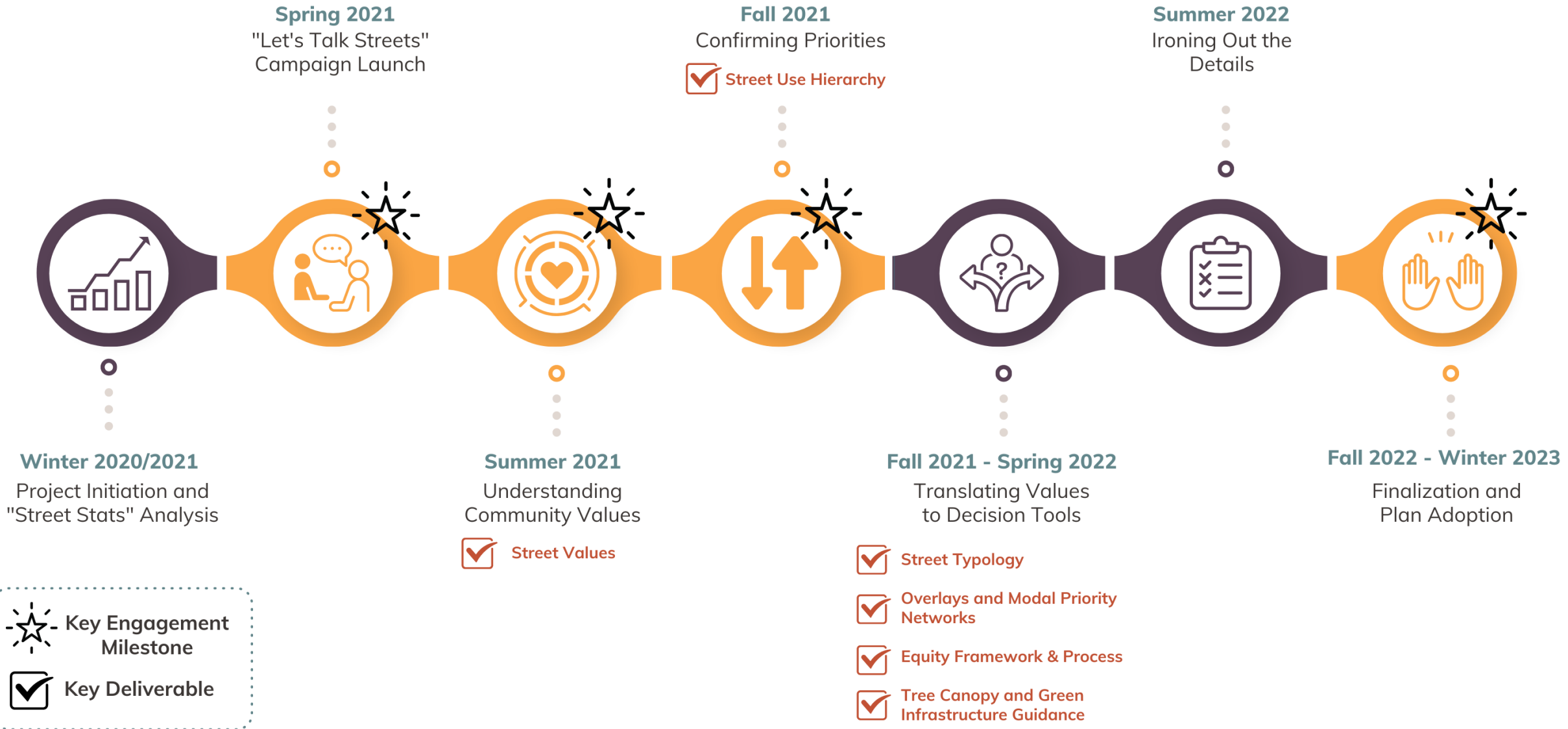
Flexible tool that will evolve over time as Madison evolves

Building Better Streets

- **Human Centered Streets**, acknowledging the travel needs of unprotected users (people walking and biking). A street should provide safe accommodations for everyone.
- **Right-sized Streets**, that are not overbuilt. Streets should be designed for today's needs, with additional right of way reserved for the future if needed.
- **Green Infrastructure**, that helps our right of way become both sustainable and a welcoming public place.



PROJECT TIMELINE



Engagement

Three phases of engagement

- Listening Phase
- Reflecting Phase
- Testing Phase

Online surveys, a virtual open house, a webinar

One survey focused on gathering input from people with disabilities

Online videos

Each phase had focus groups to talk with people of color & low income residents

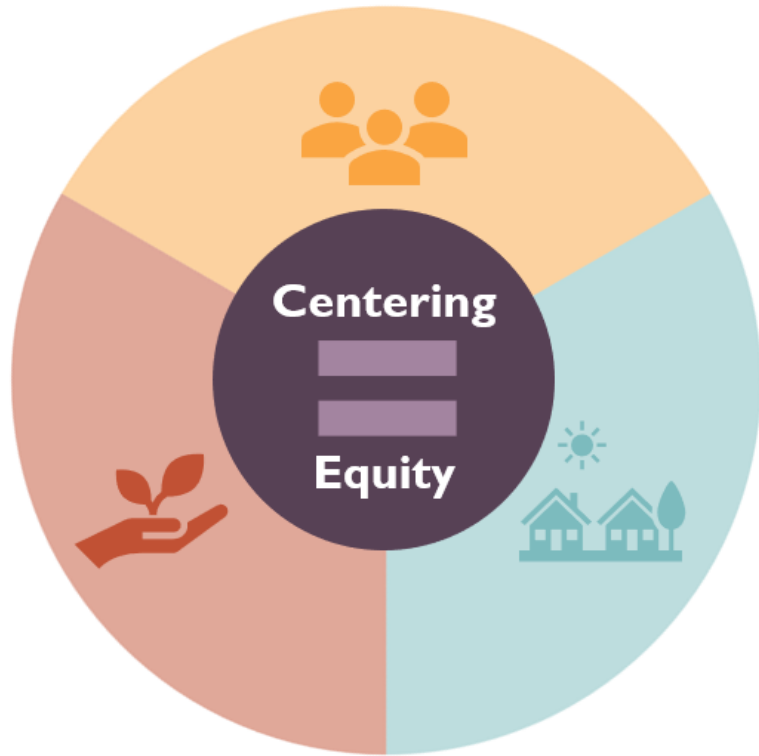




Guide - Process Overview

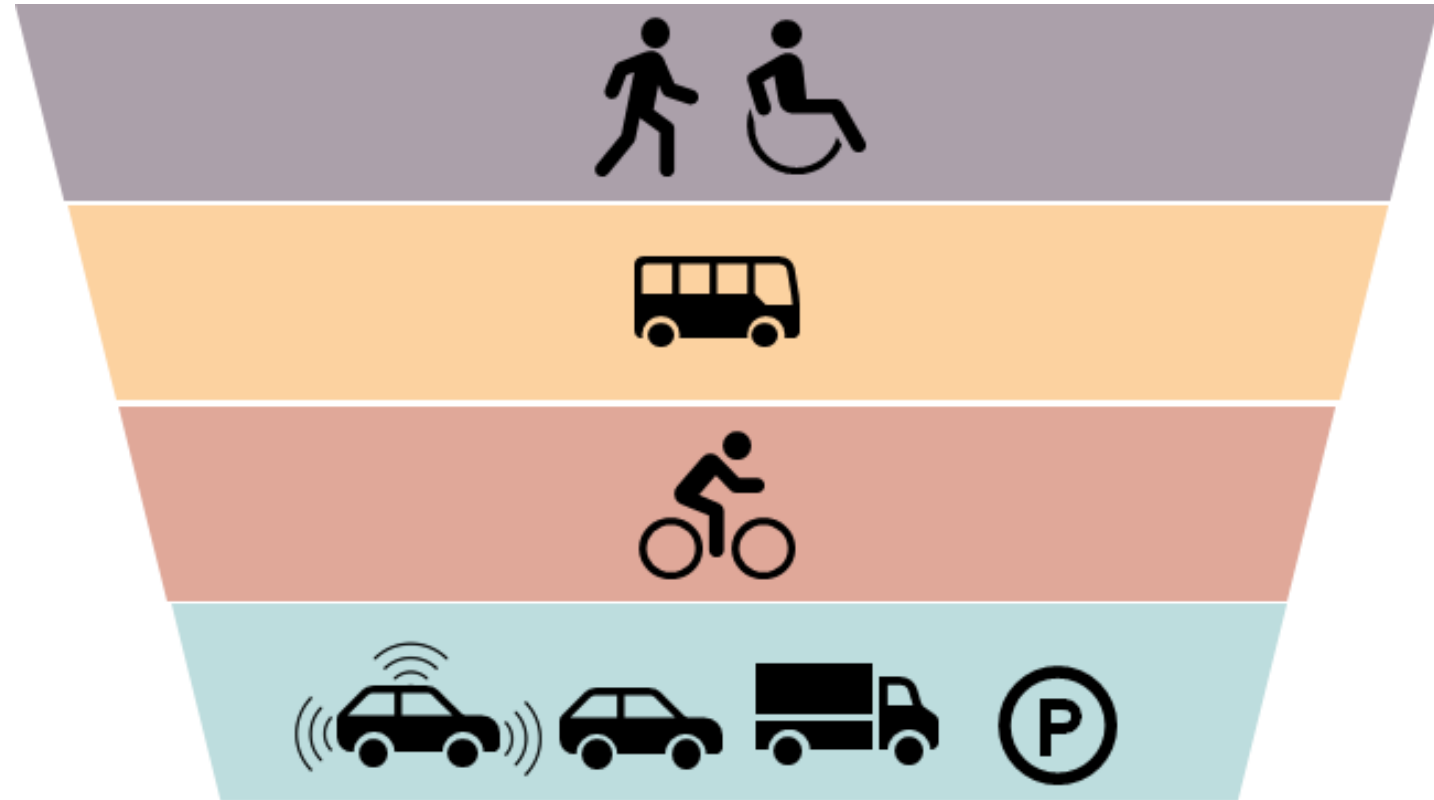
Street Values & Modal Hierarchy

Putting People First



Fostering
Sustainability

Supporting
Community

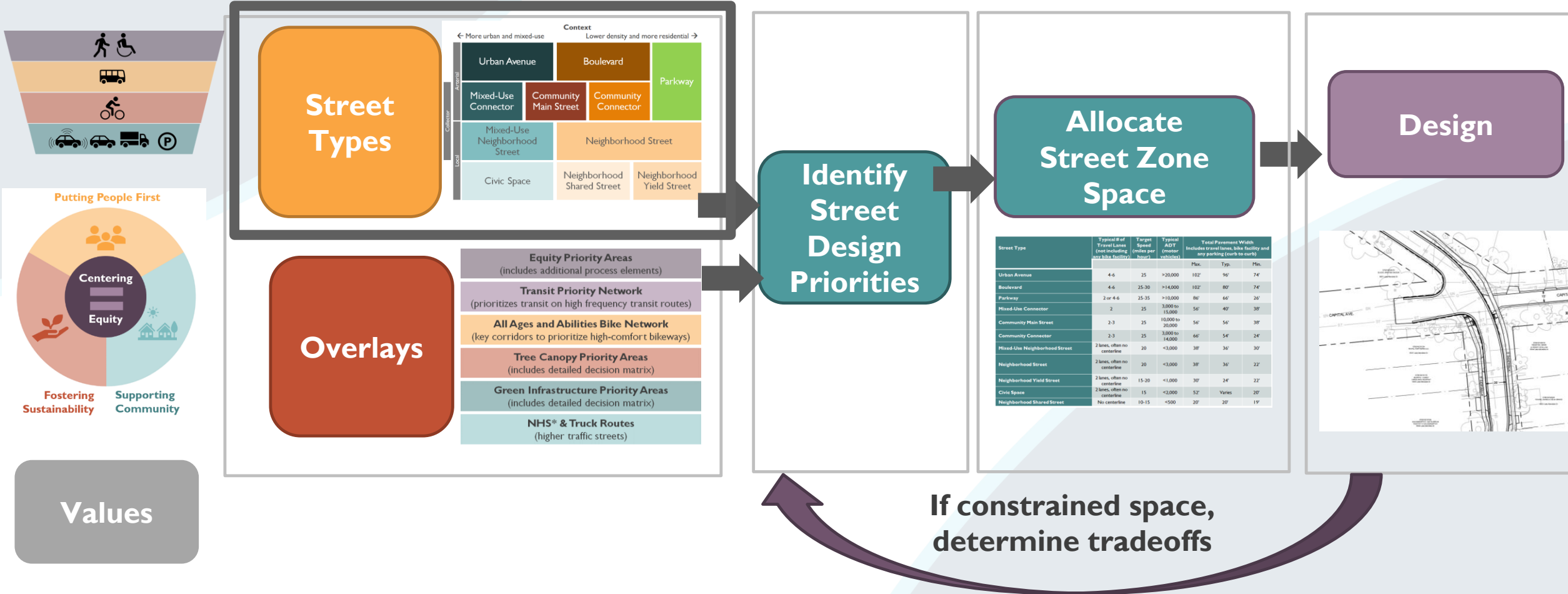


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Process and elements

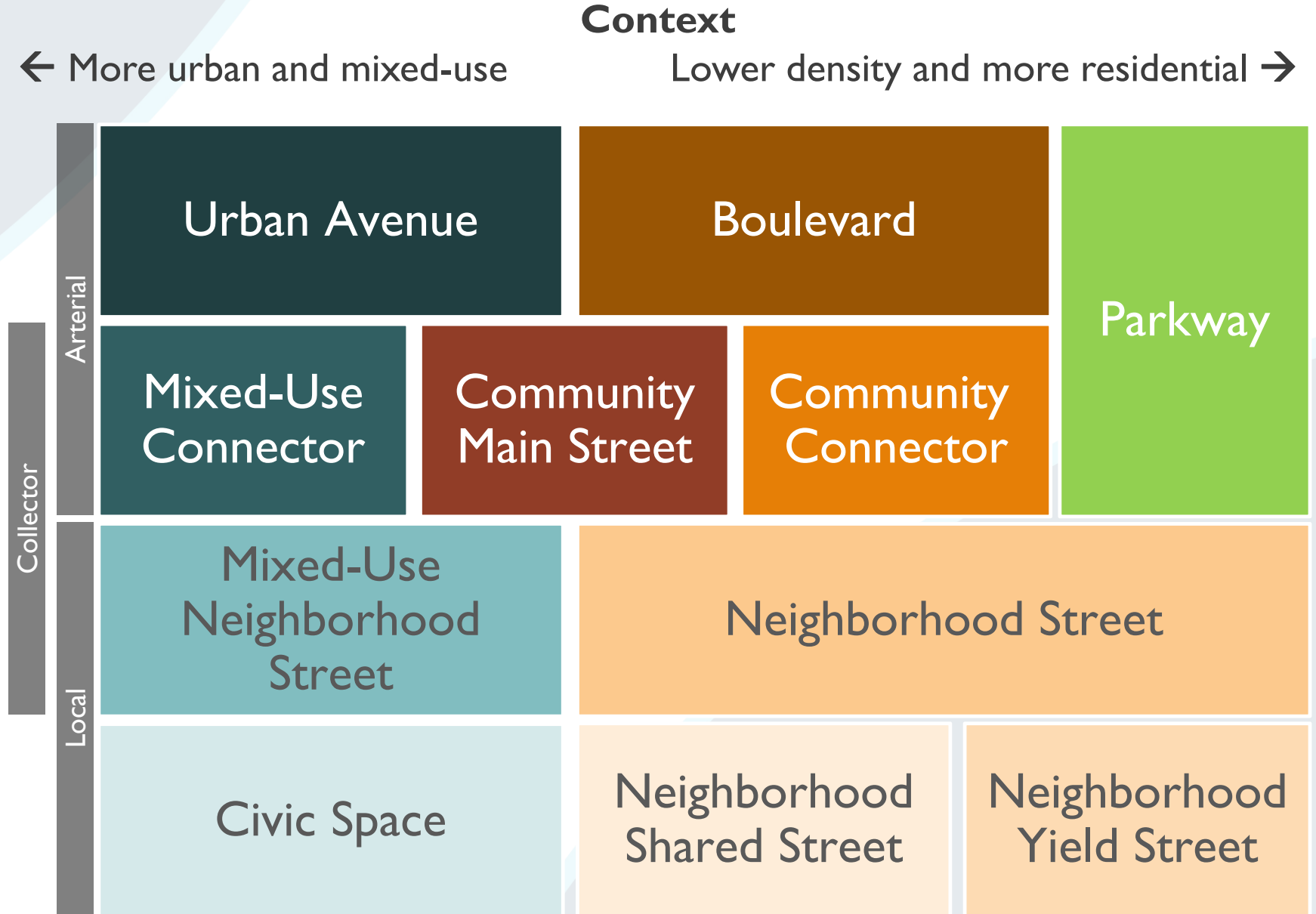


Street Types

CGS is built around a collection of **11 street types** (the typology) that describe the spectrum of current and future streets in Madison. They serve as **starting points for street design**.

The types are based on **context** and the amount of varied activity occurring.

They are intended to be **aspirational**.



Street Zones

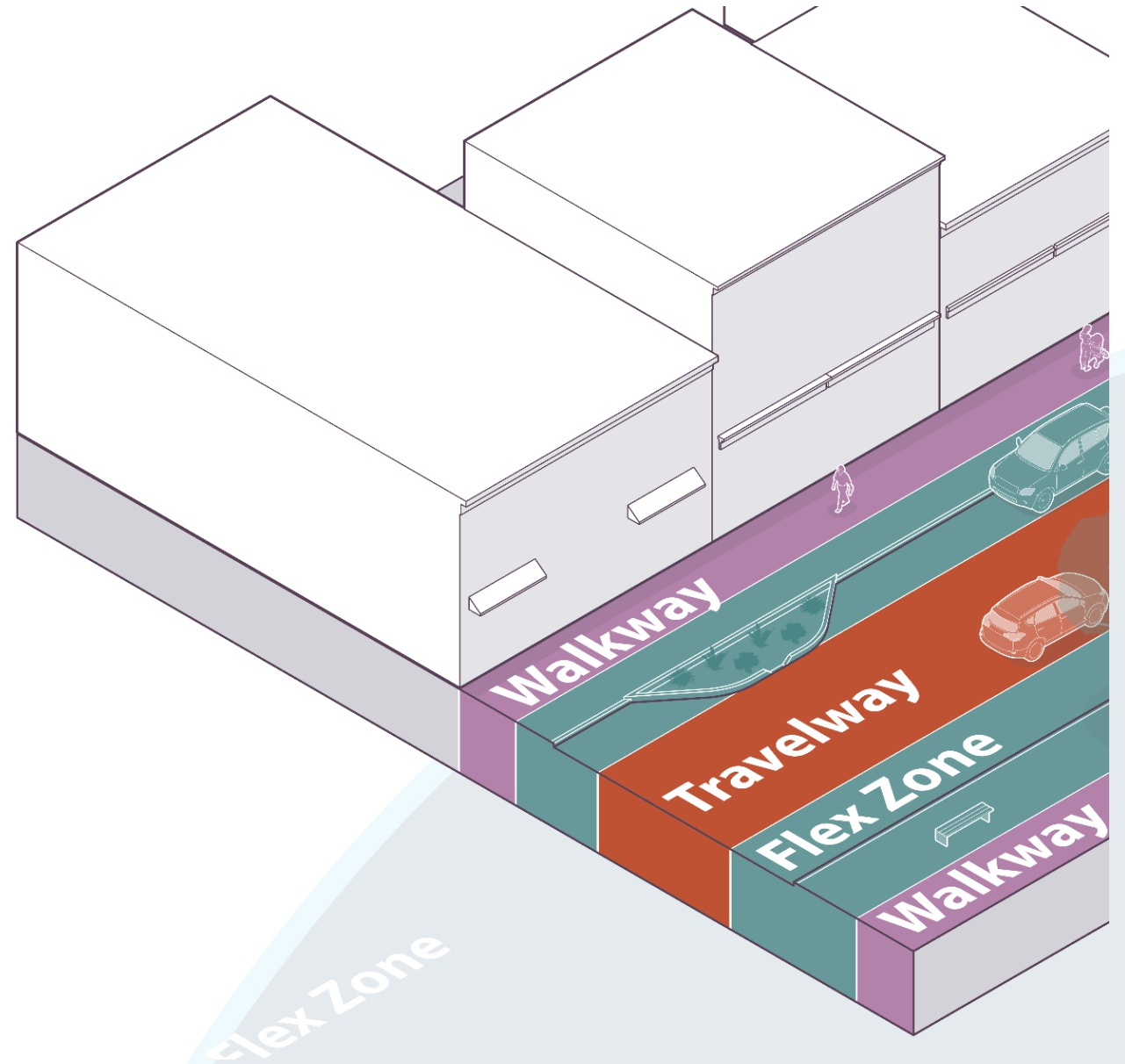
Each street type is divided into zones.

Movement (walking, biking, driving) happens in the walkway and travelway.

Bike facilities might be part of the travelway (lanes or cycletrack) or part of the walkway (a path).

Stationary uses (parking, cafes, trees) occur in the flex zone.

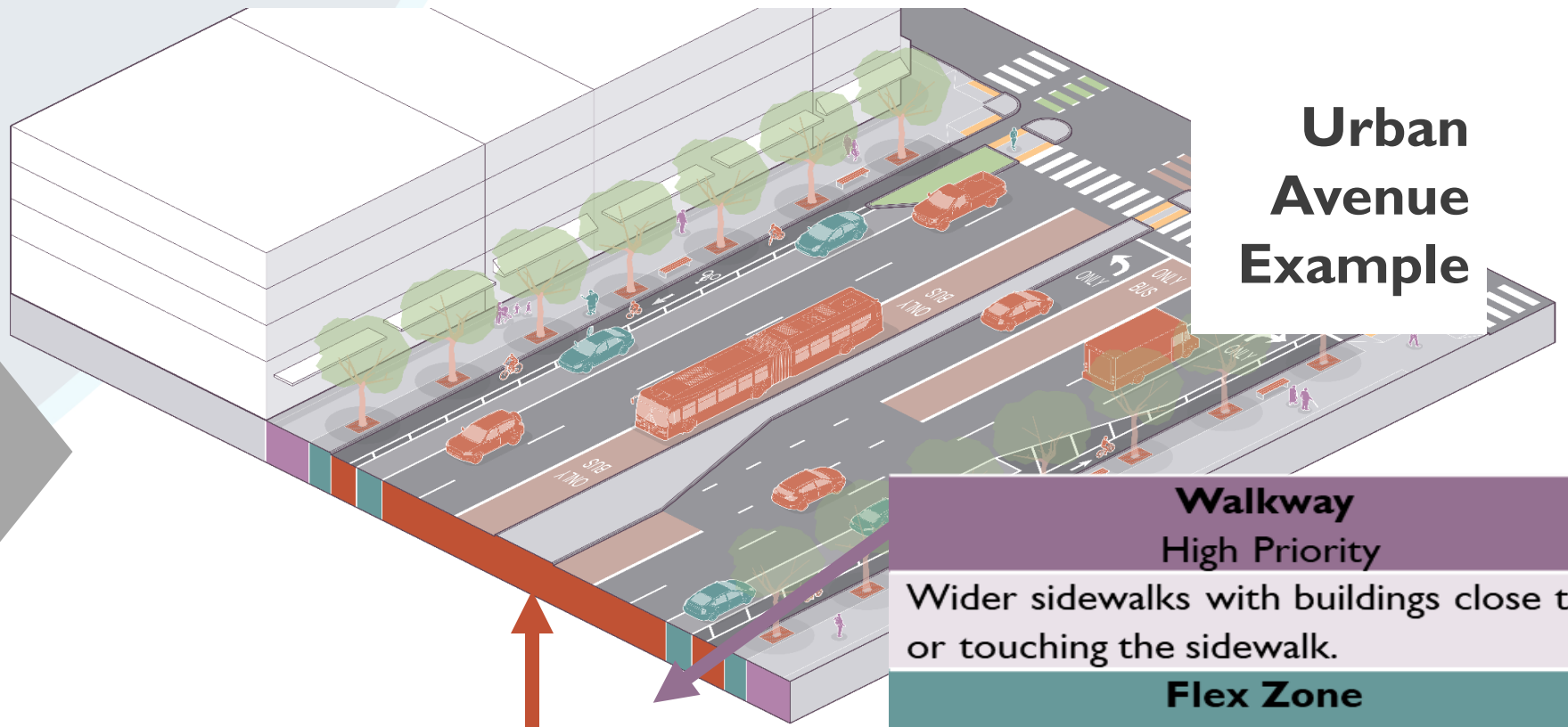
The flex zone can be terrace or part of the roadway.



Street Zones

Each street type graphic identifies the **location and relative size** of each street zone, with color-coding.

Each street type describes the relative **priority** of each zone, as well as what is **typically provided** in each zone, specific to that street type.



Urban Avenue Example

Walkway

High Priority

Wider sidewalks with buildings close to or touching the sidewalk.

Flex Zone

Medium Priority

Street trees, bike racks, and enhanced transit stops. Parallel on-street parking. Loading zones, if needed, should be provided around the corner on intersecting minor streets.

Travelway

High Priority

Dedicated transit lanes, separated bike lanes, often 2 travel lanes per direction, and medians.

Example: Urban Avenue

Major streets that serve as backbones of the street network and convey large numbers of people via multiple modes.

Walkway

High Priority

Wider sidewalks with buildings close to or even at the edge of the right of way.

Flex Zone

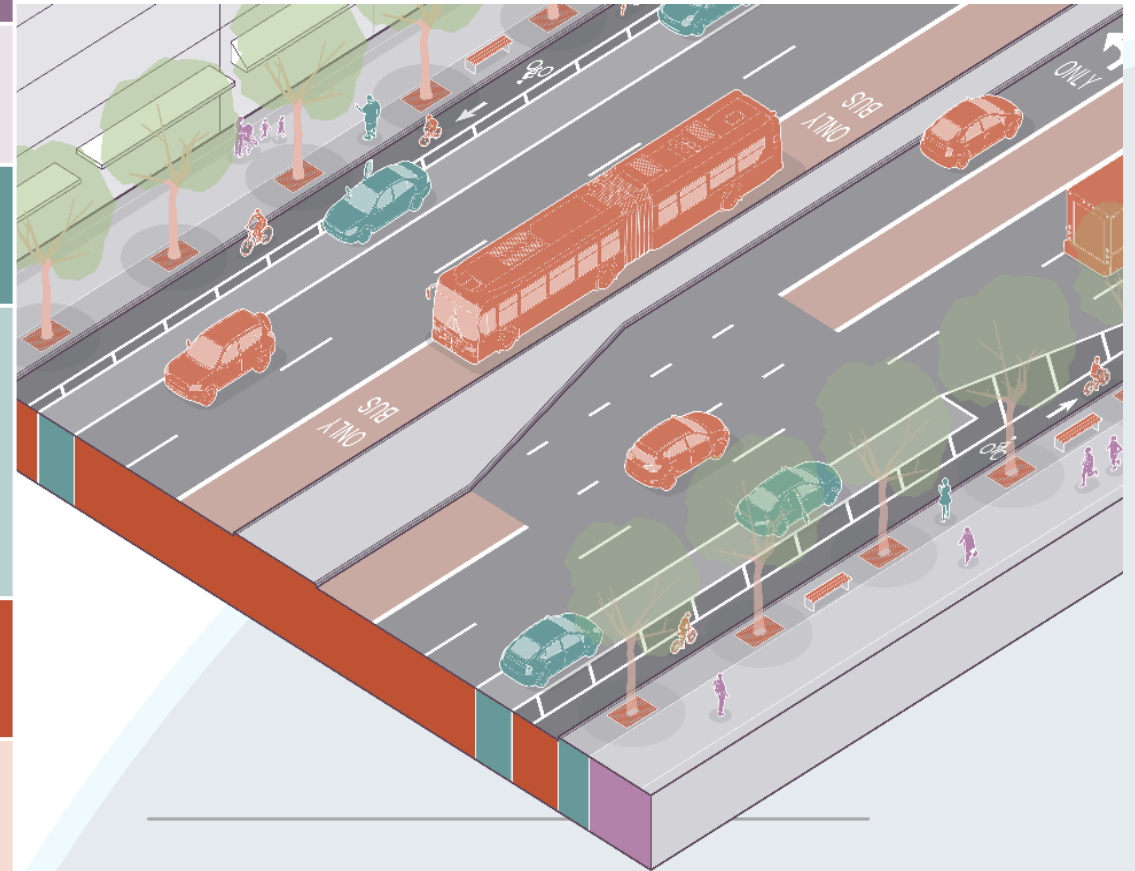
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Travelway

High Priority

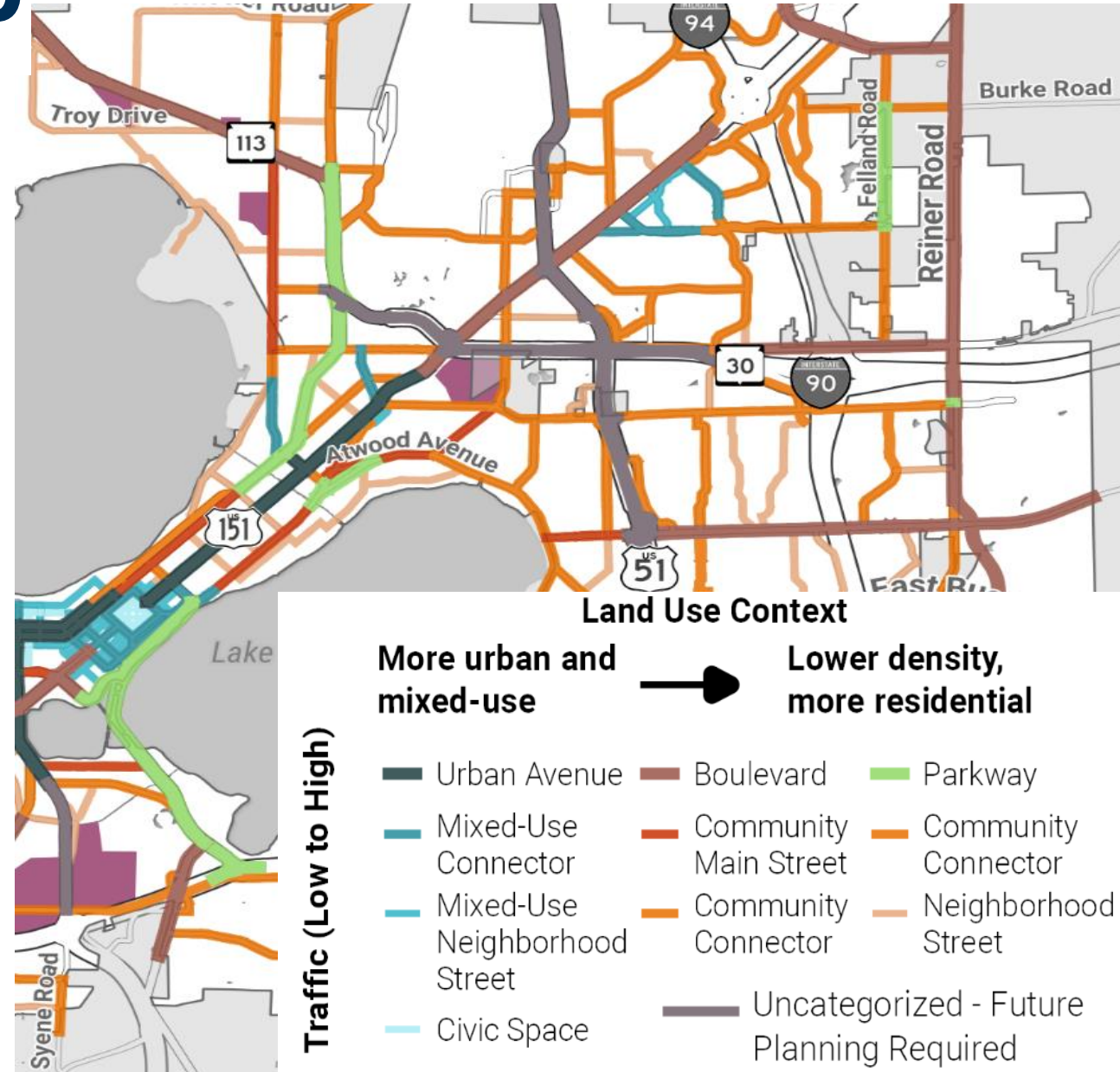
Dedicated transit lanes, separated bike lanes, often 2 travel lanes per direction, and medians.



Initial Street Type Map

The street type map will evolve and change over time as development and land use plans change.

Sub-area plans, instead of recommending typical sections, will instead designate a street type that may have multiple cross sections that achieve desired objectives.

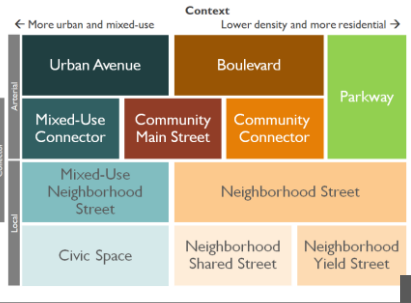


Process and elements



Values

Street Types



Overlays

- Equity Priority Areas** (includes additional process elements)
- Transit Priority Network** (prioritizes transit on high frequency transit routes)
- All Ages and Abilities Bike Network** (key corridors to prioritize high-comfort bikeways)
- Tree Canopy Priority Areas** (includes detailed decision matrix)
- Green Infrastructure Priority Areas** (includes detailed decision matrix)
- NHS* & Truck Routes** (higher traffic streets)

Identify Street Design Priorities

Allocate Street Zone Space

Street Type	Typical # of Travel Lanes (not including turn/bike facility)	Target Speed (miles per hour)	Typical ADT (motor vehicles)	Total Pavement Width (includes travel lanes, bike facility and any parking (curb to curb))		
				Flc.	Typ.	Min.
Urban Avenue	4-6	25	>20,000	102'	96'	74'
Boulevard	4-6	25-30	>14,000	102'	80'	74'
Parkway	2 or 4-6	25-35	>10,000	86'	66'	26'
Mixed-Use Connector	2	25	3,000 to 15,000	56'	40'	38'
Community Main Street	2-3	25	10,000 to 30,000	56'	56'	38'
Community Connector	2-3	25	3,000 to 14,000	66'	54'	24'
Mixed-Use Neighborhood Street	2 lanes, often no centerline	20	<3,000	38'	36'	30'
Neighborhood Street	2 lanes, often no centerline	20	<3,000	38'	36'	22'
Neighborhood Yield Street	2 lanes, often no centerline	15-20	<1,000	30'	24'	22'
Civic Space	2 lanes, often no centerline	15	<2,000	52'	Varies	20'
Neighborhood Shared Street	No centerline	10-15	<500	20'	20'	19'

Design



If constrained space, determine tradeoffs

Overlays

- Overlays influence design decisions and the priority of various elements.
- Each street type describes the influence of each overlay.

Equity Priority Areas
(includes additional process elements)

Transit Priority Network
(prioritizes transit on high frequency transit routes)

All Ages and Abilities Bike Network
(key corridors to prioritize high-comfort bikeways)

Tree Canopy Priority Areas
(includes detailed decision matrix)

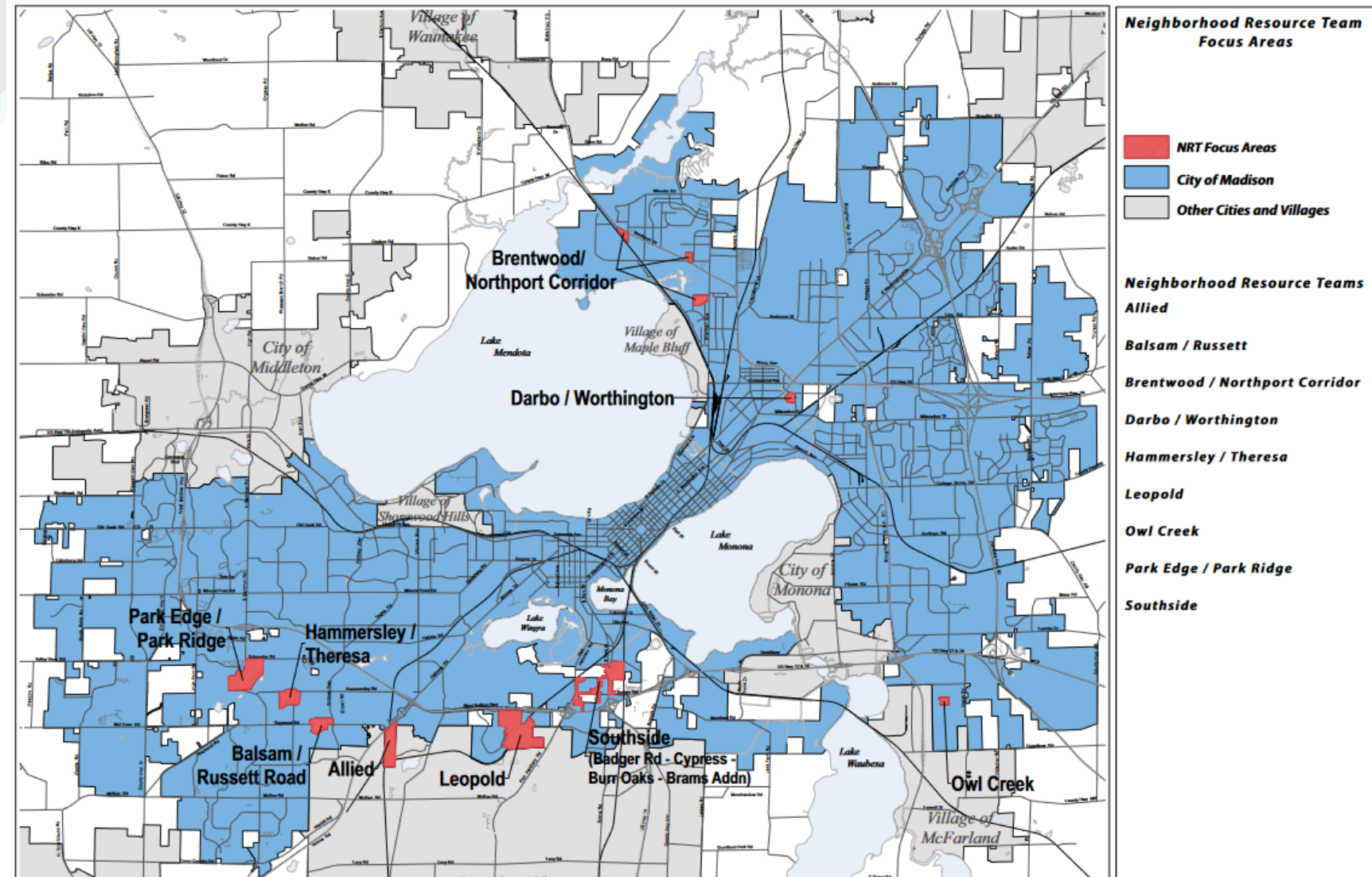
Green Infrastructure Priority Areas
(includes detailed decision matrix)

National Highway System & Truck Routes
(higher traffic streets)

Equity Priority Areas

Consult the Map of Equity Priority Areas (EPAs)

- Initial map based on Neighborhood Resource Team (NRT) areas
- City project started that will identify additional areas based on demographic data



Equity Priority Areas

- EPA locations trigger additional process steps that will be in the CGS Project Checklist

Is the project within or near an EPA?

- Engage with community to understand needs
- Engage with NRT
- Review past public input
- Use EPA questions on CGS project checklist

Are there other City departments active in the CGS project area?

- Engage with community to understand needs
- Engage with NRT
- Review past public input & other department projects in area and coordinate work
- Use EPA project checklist

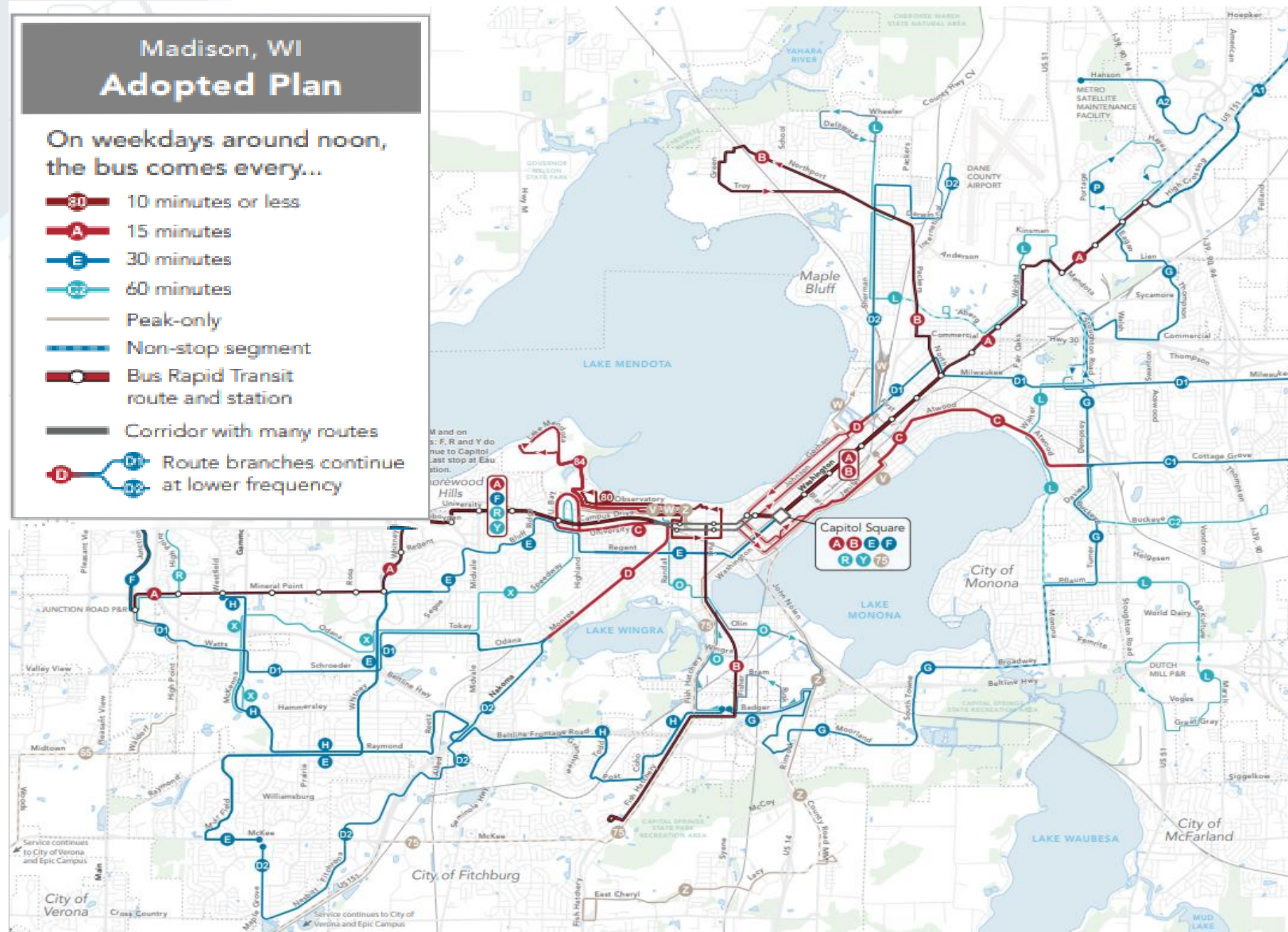
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Transit Priority Network

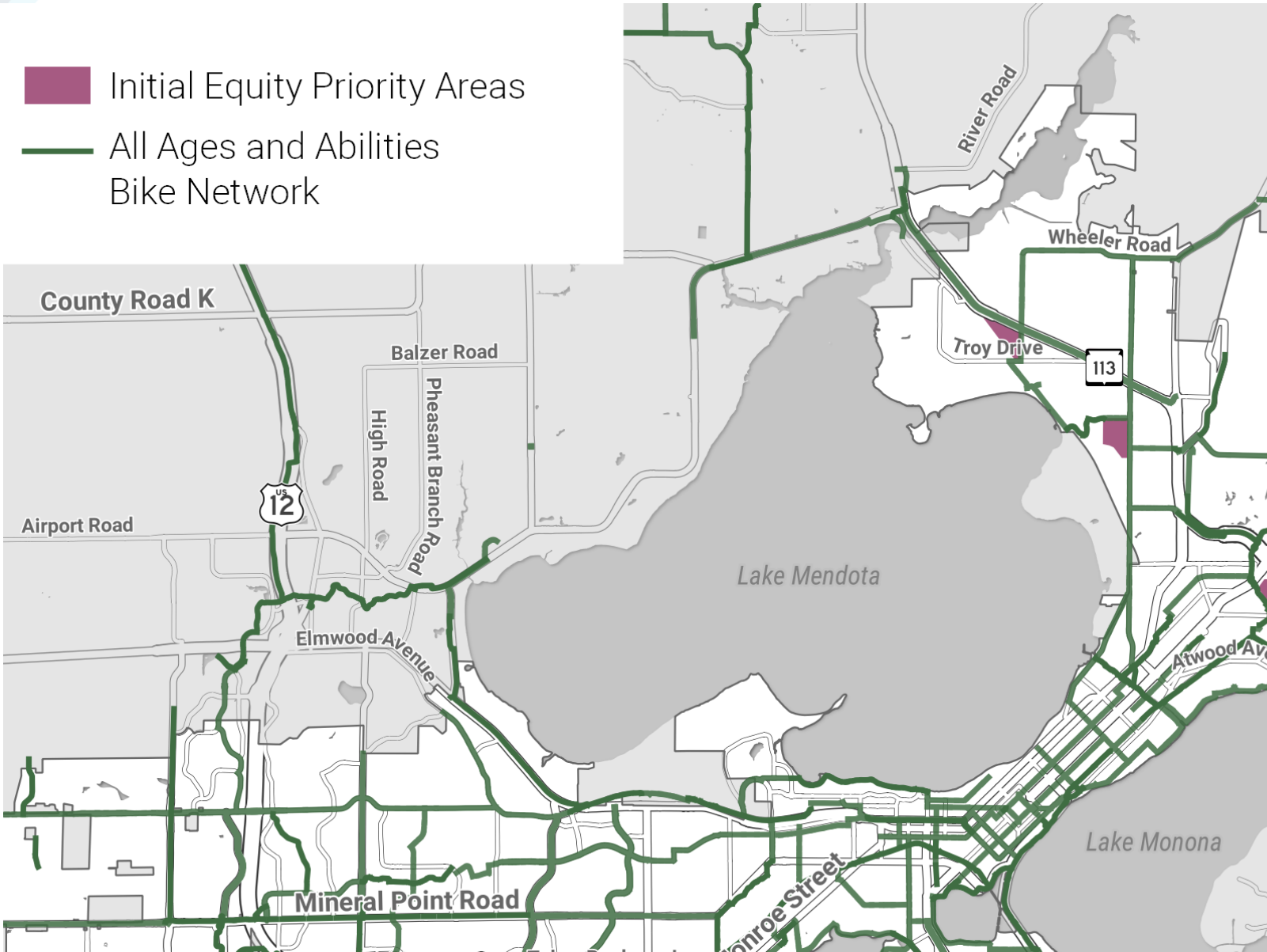
- Transit Priority based on approved routes
- Priority streets would have 15 minute service on weekdays, midday



All Ages Ability Bike Network

All Ages Ability Bike Network

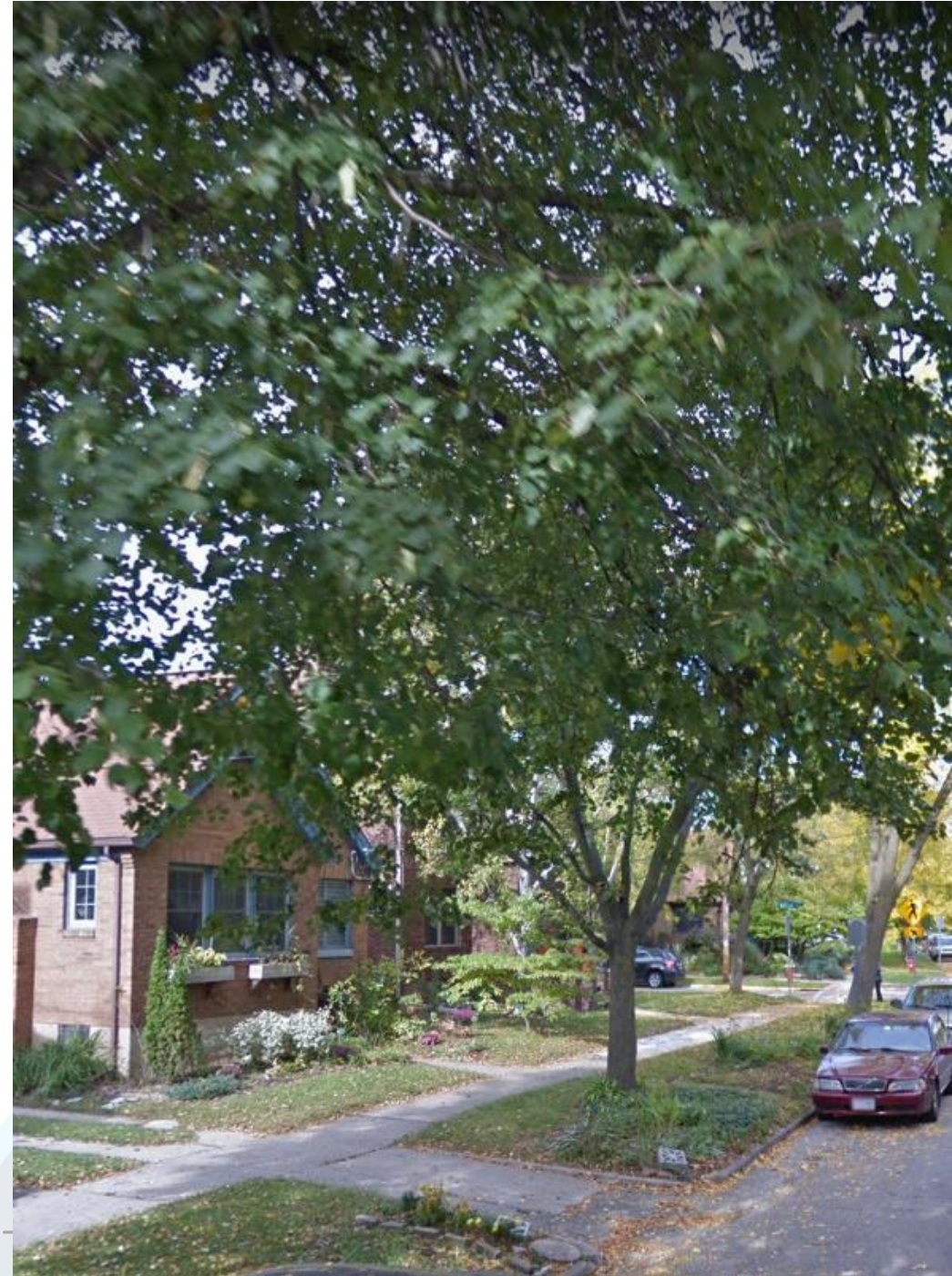
- Considered most critical for creating a complete network.
- Designed for all ages and abilities.
- Start with interim map & finalize in 2023
- Updates to map approved by Transportation Commission



Tree Canopy priority

Purpose & Goals

- Reach citywide goal of 40% tree canopy coverage.
- Identify areas with low amounts of existing tree canopy coverage to prioritize space in Flex Zone for trees
- Identify appropriate solutions for planting trees while reducing conflicts with other right-of-way priorities.
- Support for [Urban Forestry Task Force Report](#)

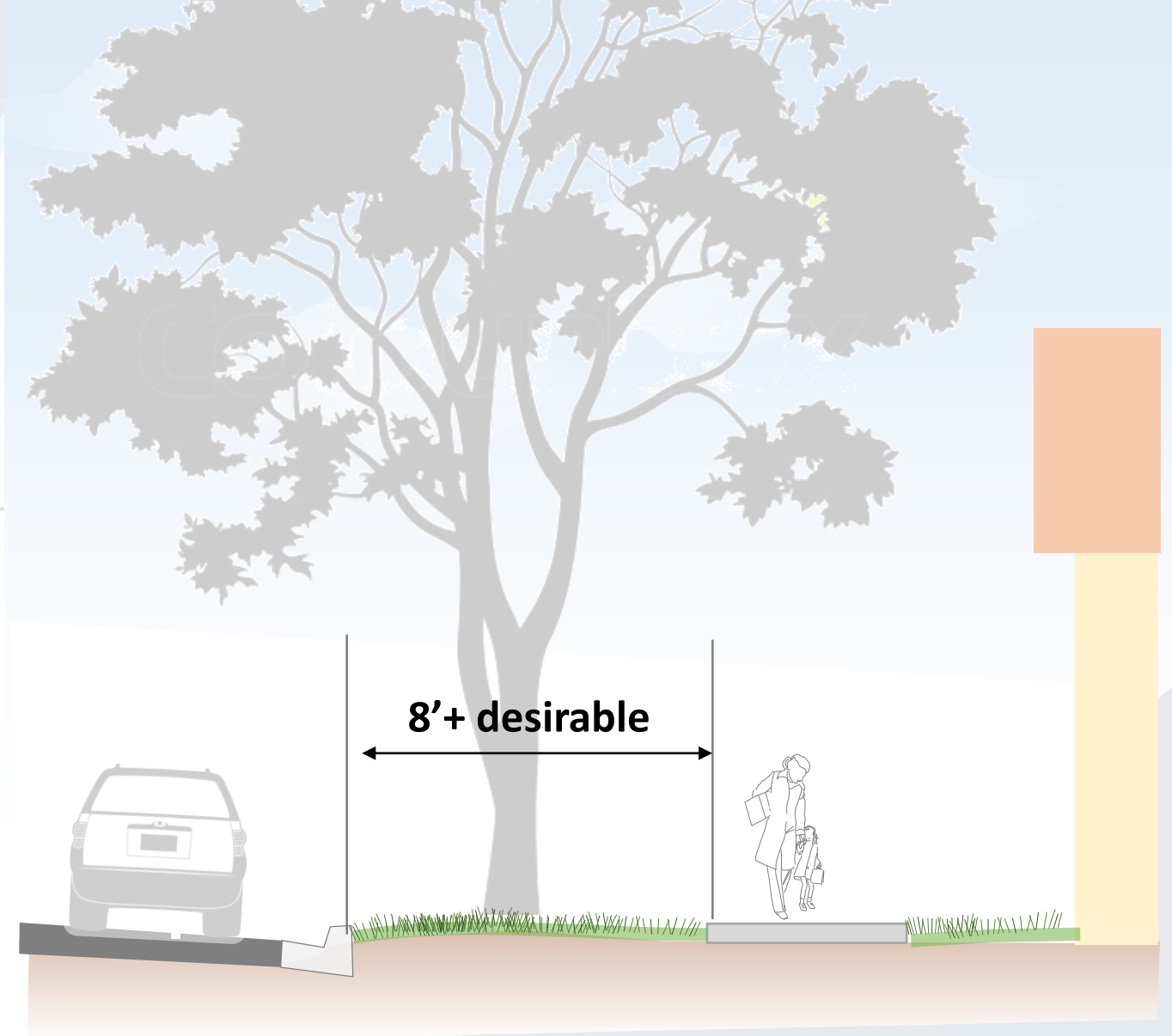


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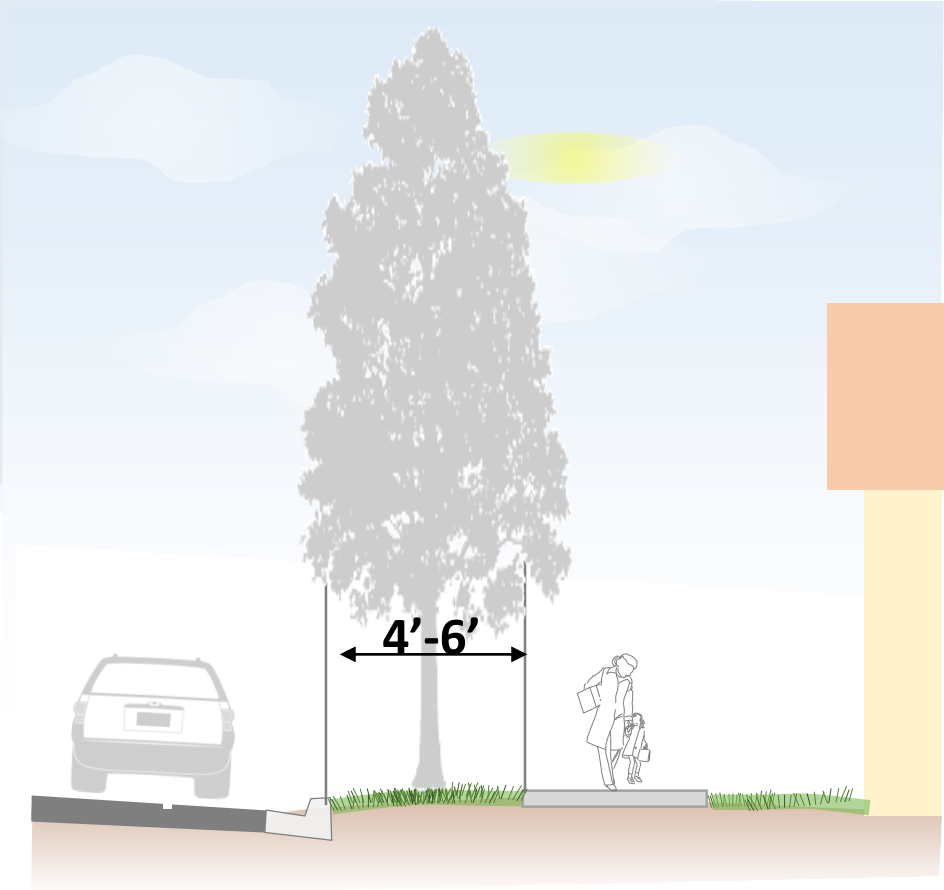
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Tree Canopy Priority

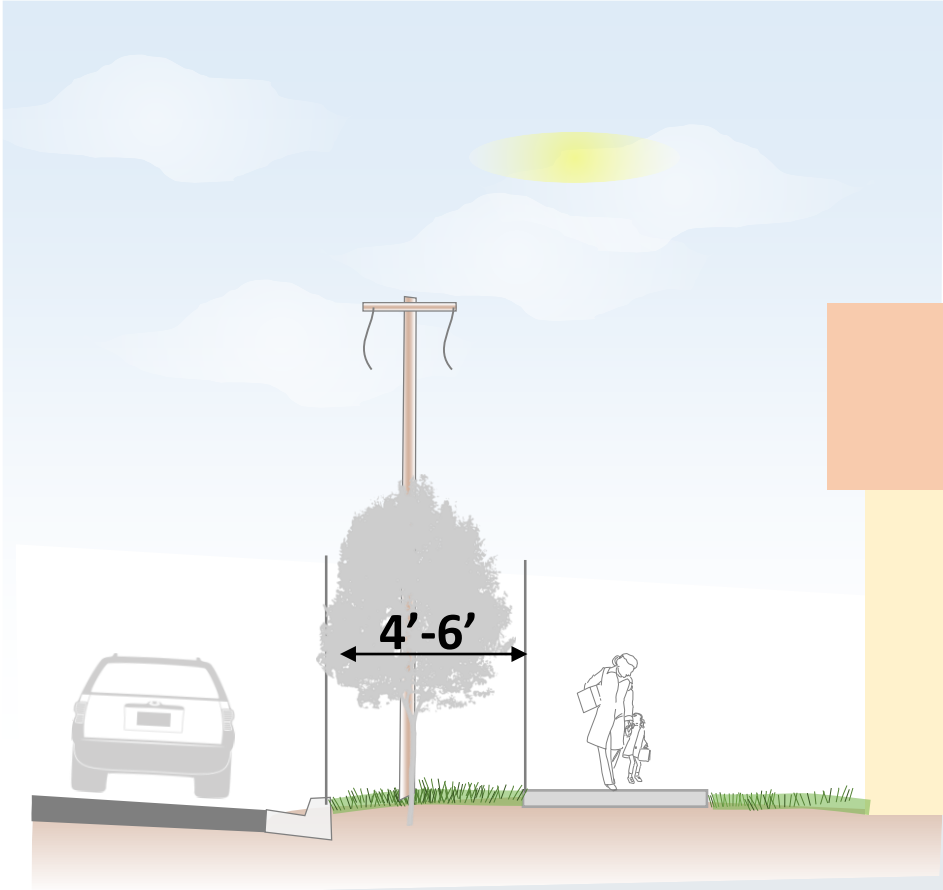


**Reconstruction
Canopy Trees**

Tree Canopy Retrofit

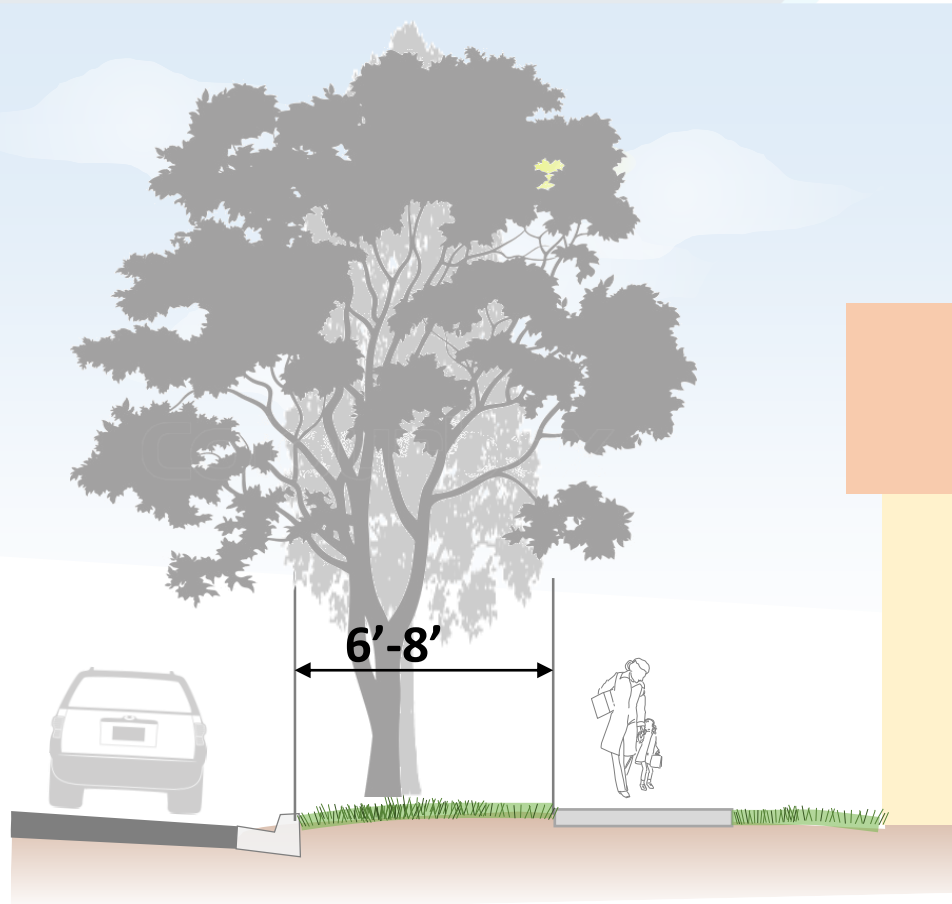


Retrofit
No Utility Conflicts
Narrow Trees

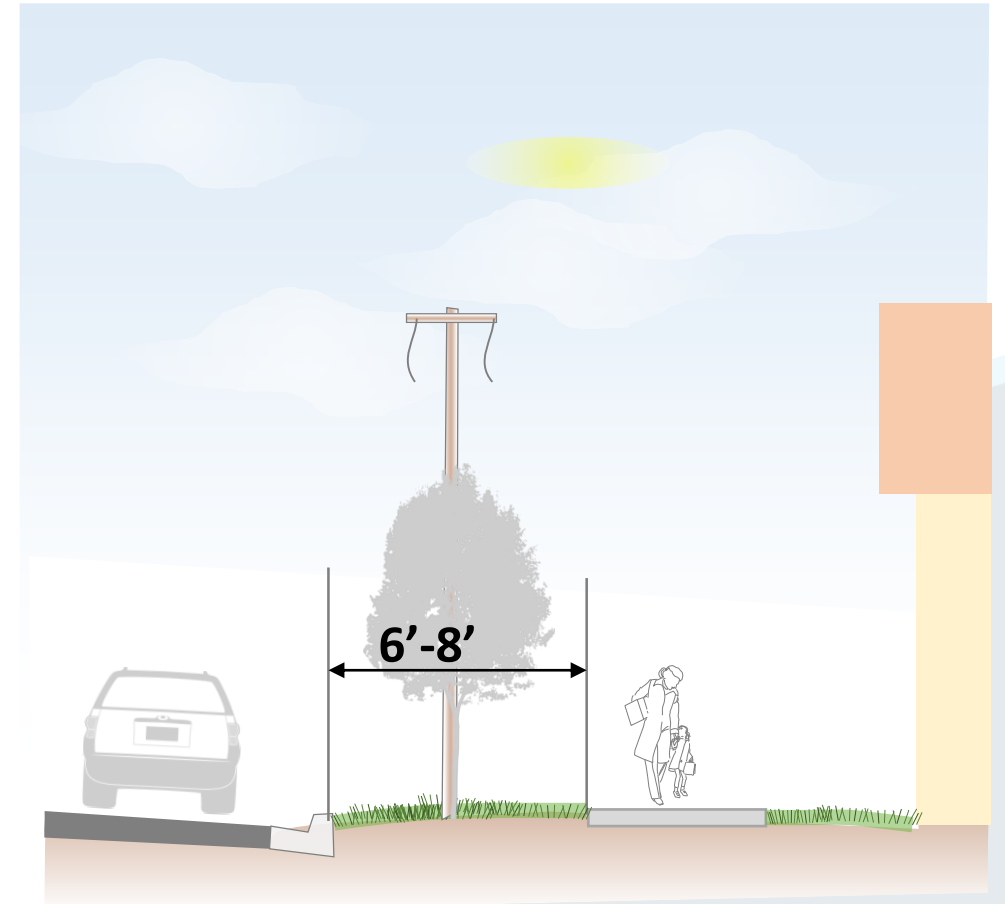


Retrofit
Utility Conflicts
Ornamental Trees

Tree Canopy Retrofit



Retrofit
No Utility Conflicts
Narrow & Medium Trees

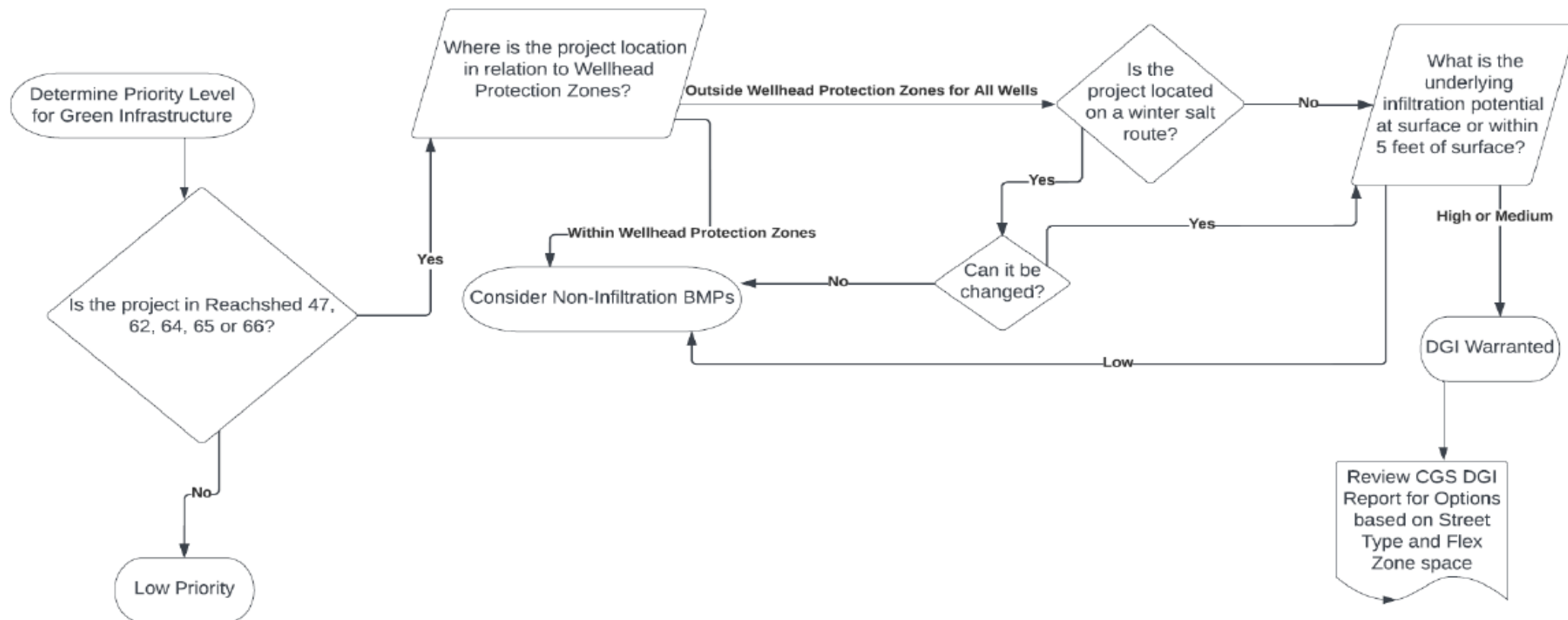


Retrofit
Utility Conflicts
Ornamental Trees

Green Infrastructure Priority

Purpose & Goals

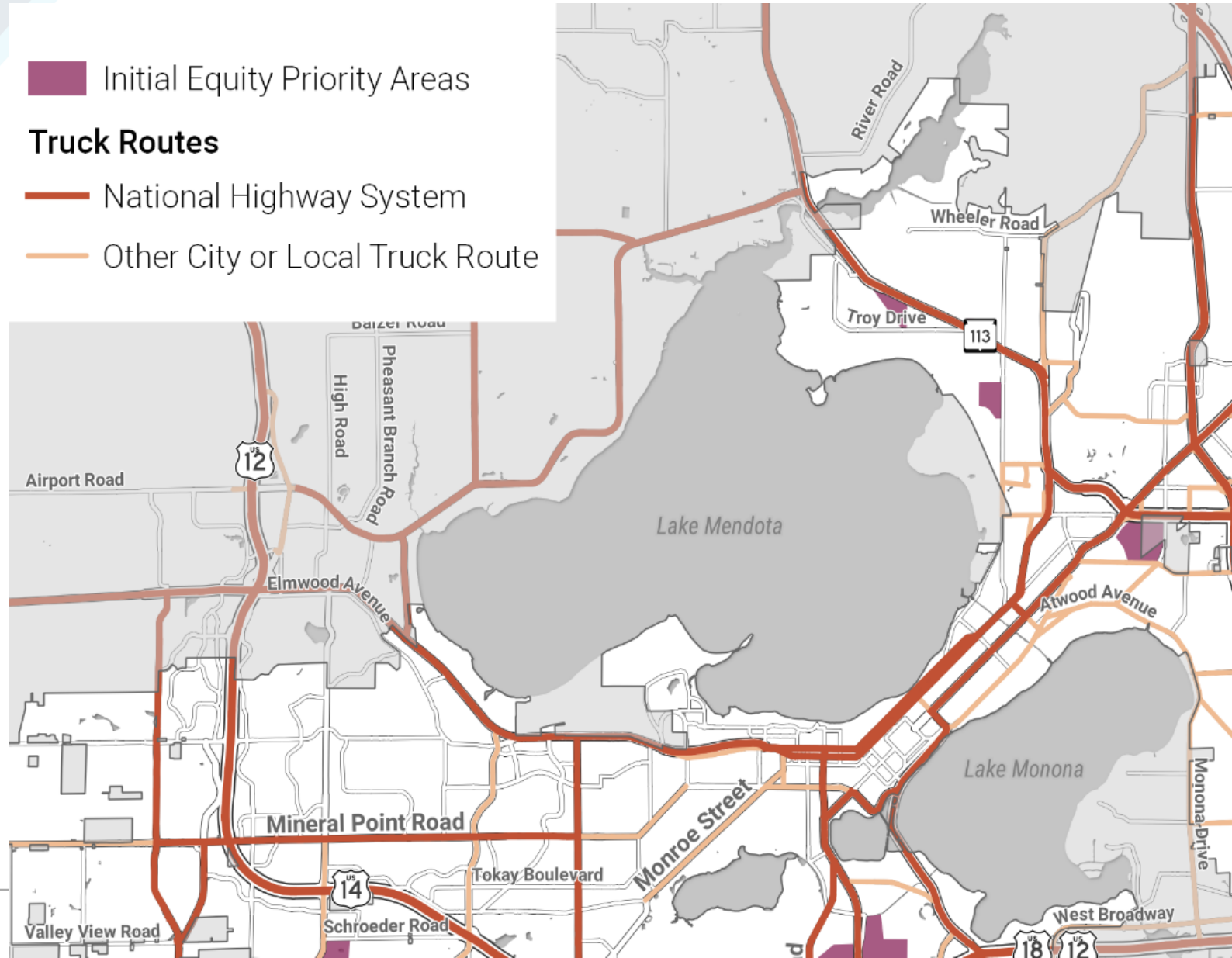
- Identify appropriate and viable locations for distributed green infrastructure (DGI) for stormwater management and water quality improvement and appropriate engineering solutions.



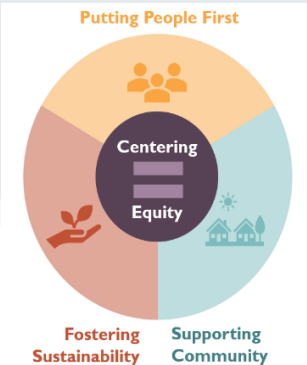
National Highway System & Truck routes

Changes to NHS routes only occur through collaboration with WisDOT and the Greater Madison MPO.

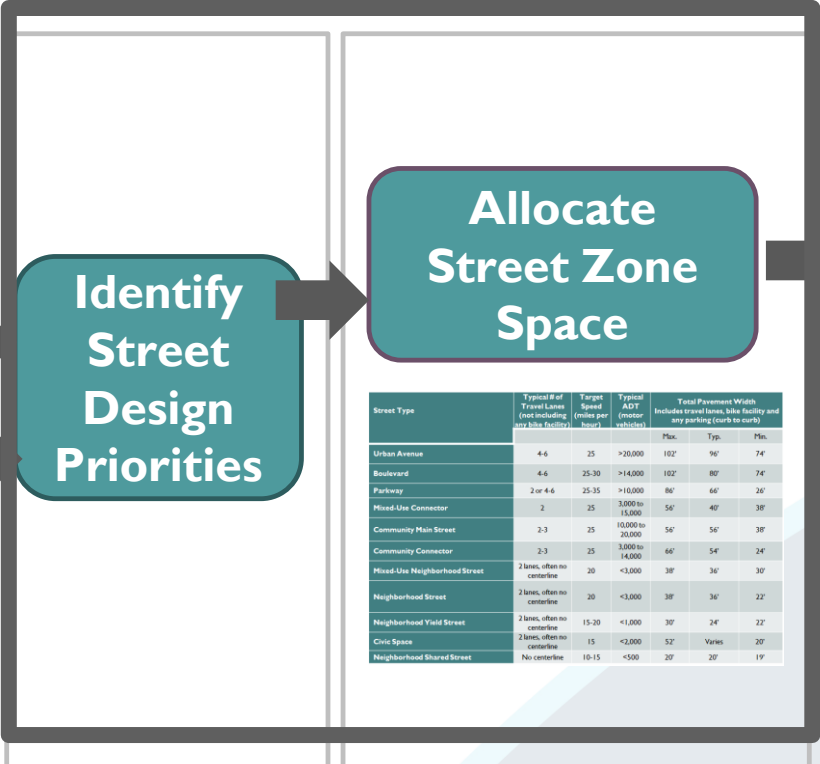
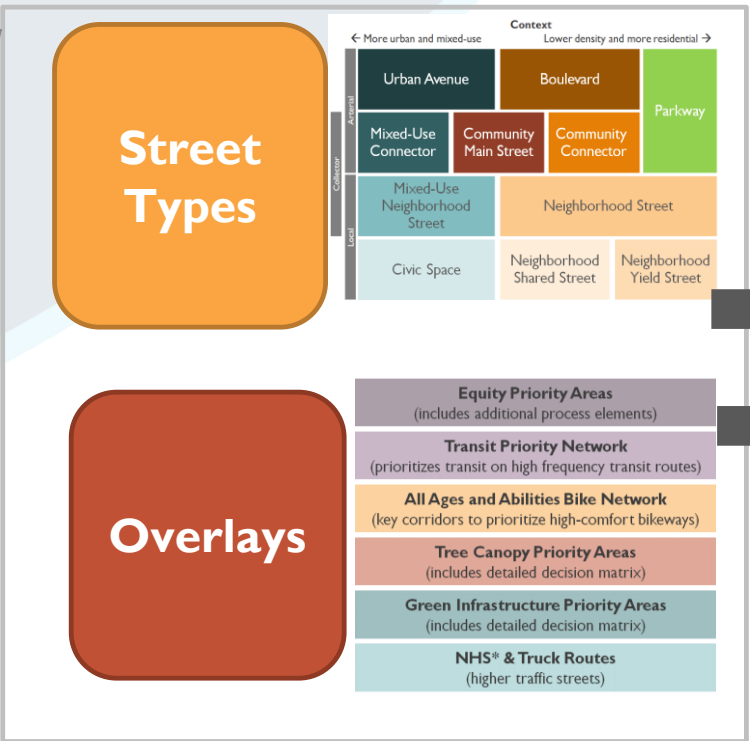
Truck routes must be able to accommodate larger vehicles.



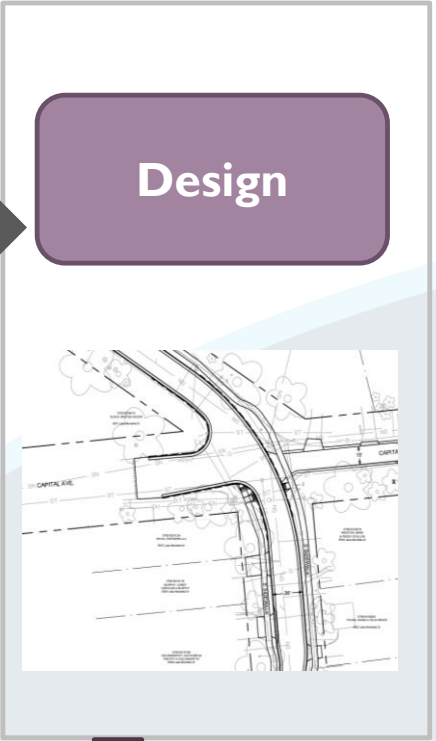
Process and Elements



Values



Street Type	Typical # of Travel Lanes (not including any bike facility)	Target Speed (miles per hour)	Typical ADT (motor vehicles)	Total Pavement Width (includes travel lanes, bike facility and any parking (curb to curb))		
				Pbk.	Typ.	Min.
Urban Avenue	4-6	25	>20,000	102'	90'	74'
Boulevard	4-6	25-30	>10,000	102'	80'	74'
Parkway	2 or 4-6	25-35	>10,000	86'	66'	26'
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If constrained space, determine tradeoffs

Street Zone Allocation Charts

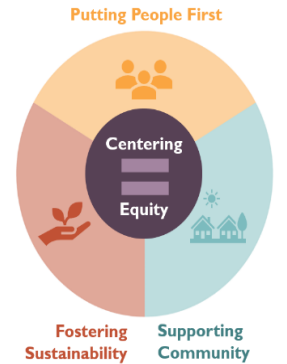
Chart with widths for each street zone

- May be typical widths and/or minimum/maximums

ROW based on preferred widths for each zone

Street Type	Travelway									
	Typical # of Travel Lanes*	Lane Width			Center Turn Lane / Median	Target Speed (miles per hour)**	Typical ADT (motor vehicles)	Total Pavement Width‡ (curb to curb)		
		Max.	Pref.	Min.				Max.	Typ.	Min.
Urban Avenue	4	11'	10'	10'	Median Standard	25	>20,000	106'	100'	80'
Boulevard	4	11'	10'	10'	Median Standard	25-30	>14,000	106'	84'	80'
Parkway	2-4	11'	10'	10'	Median standard	25-35	>10,000	64'	64'	26'
Mixed-Use Connector	2	11'	10'	10'	Optional	25	3,000 to 15,000	56'	48'	32'
Community Main Street	2-3	10'	10'	10'	Optional (not common)	25 or less	10,000 to 25,000	60'	52'	40'
Community Connector	2-3	10'	10'	10'	Optional	25 or less	3,000 to 14,000	52'	46'	24'

Process and Elements



Values

Street Types

Context

← More urban and mixed-use Lower density and more residential →

	Urban Avenue	Boulevard	Parkway
Arterial	Mixed-Use Connector	Community Main Street	Community Connector
Collector	Mixed-Use Neighborhood Street	Neighborhood Street	
Local	Civic Space	Neighborhood Shared Street	Neighborhood Yield Street

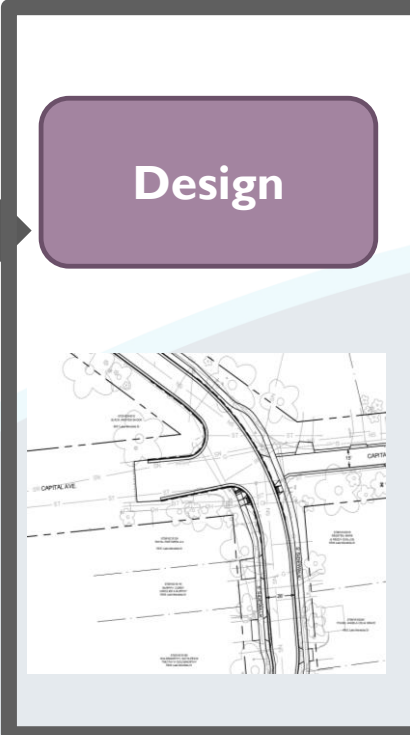
Overlay S

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				Max.	Typ.	Min.
Urban Avenue	4-6	25	>20,000	102'	90'	74'
Boulevard	4-6	25-30	>14,000	102'	80'	74'
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If constrained space, determine tradeoffs

Resolution

Sub Area Plans will recommend street types based on the Complete Green Streets Policy Guide

Sub Area Plans and plats that recommend street facilities and right of way widths that vary from the Complete Green Streets Policy Guide shall only be included if approved by the Transportation Planning and Policy Board

Revision to Sections 16 and 33 of the Madison General Ordinances to be consistent with the Complete and Green Streets Policy Guide.

- Subdivision Ordinance
- Committee Responsibilities

Questions?

Renee Callaway, Pedestrian Bicycle Administrator

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www.cityofmadison.com/transportation/initiatives/complete-green-streets

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