Resilient City Design & Infrastructure

The design and location of our buildings, streets, paths, parks, green spaces, and other community assets shapes how we live and work. It also helps determine the sustainability and resilience of our city. Climate-friendly development patterns and infrastructure like roads, stormwater systems and buildings support the wellbeing of people and nature by protecting against climate hazards like flooding, heat waves, and poor air quality.

The City of Madison Comprehensive Plan is a guide to the growth and design of our city over the next 20 years. It provides strategies for how Madison can meet the needs of the 67,000 new households and 50,000 new jobs that are expected by 2050. The Land Use and Transportation section makes recommendations for facilitating growth along public transit corridors and neighborhood activity centers. Activity centers are mixed-use areas where housing, retail, jobs, green spaces, and other amenities are close together. This makes it easy to walk, bike, roll, and access transit.

Compact development constructed with access to low- and no-carbon transportation is key to reducing climate pollution from buildings and transportation while our population grows. Adding new housing options in existing Madison neighborhoods helps prevent the loss of natural areas and farmland to development in neighboring communities through urban sprawl. The City works to ensure all Madisonians can access green spaces and waterways. We also continue to support food access through market gardens and urban agriculture. These urban ecosystems do important jobs like collecting

stormwater to reduce flooding, providing habitat for pollinators and other animals, capturing and storing carbon, reducing urban heat island, and serve as spaces where people can enjoy time outdoors.

The City is also working to make sure our roads, stormwater systems, buildings, and other community assets are climate-friendly. This means that our built environment both minimizes climate pollution and helps protect against climate change impacts like flooding, heat waves, and poor air quality. The City's Traffic Engineering Division, Streets and Urban Forestry Division, and Engineering Division are working to improve our community's climate resilience. They do so by prioritizing green infrastructure like trees, rain gardens, green roofs, and native prairie plantings across the community. These natural climate solutions reduce the impacts of heavy rain and increased temperatures.

The following goals and actions aim to help our city grow in ways that enhance the health and wellbeing of our community and our environment while improving our resilience to the impacts of climate change.

Complete Green Streets

Madison is among a growing number of cities that use a Complete Green Streets (CGS) process to provide residents with sidewalks, terraces, and roadways that are safe for everyone, regardless of where they live, their age, or ability. The CGS process also includes prioritizing locations for green infrastructure to help clean stormwater where it can be most effective.

The CGS process is also good for our natural environment. By promoting walking, biking, and transit, it reduces climate and air pollution from cars and trucks. The CGS decision-making process also includes increasing tree cover, which reduces the urban heat island effect and helps capture and store carbon.

Watershed Study Program

Madison had a historic flood in August 2018. That storm was a wake-up call that our stormwater system is not ready for the rainstorms we will have in the future. The City of Madison Engineering Division launched its Watershed Study Program to identify improvements to our existing stormwater system that will help reduce flooding in each of Madison's 18 watersheds.

Resilient City Design & Infrastructure | Goals & Actions	
GOAL 3	**Provide equitable access to parkland, lakes, and other natural areas as well as sports, recreation, education, and wellness programming offered by the City and its partners.**
METRICS	Percentage of residential areas with the service area of parks Percentage of park facilities that provide equitable mobility/language access Number of parks and partner programs and Number of people served per program Trust for Public Land ParkScore Index
ACTION 3.1	Upgrade facilities, infrastructure, signage, and maps at City parks and natural areas to provide greater mobility and language access to enable enjoyment for residents of all cultures, age groups, and abilities.
ACTION 3.2	Expand parkland, natural areas, and protected shoreline through the purchase of property or easements to improve public access, in alignment with the Parks and Open Space Plan.
ACTION 3.3	Enhance City parks programs and partnerships (e.g., with schools, non-profit organizations, other governmental units, businesses, neighborhood associations) to provide public education, recreation, sports, and wellness activities that include people across cultures, age groups, and abilities.

Resilient City Design & Infrastructure | Goals & Actions	
GOAL 4	**Preserve, protect, and increase access to land for urban agriculture, particularly for community members who live in rental housing.**
METRICS	Area of land in urban agriculture within the city. Measure total and in each census tract.
ACTION 4.1	Facilitate the location of community gardens and edible landscapes on city-owned land in collaboration with community organizations, including proactively planning for gardens in parks and open spaces.
ACTION 4.2	Create guidelines to inform both community and City decision-makers regarding planning and permitting for the remaining farmland in our community and ensure community members, especially renters, have access to garden space.
ACTION 4.3	Support the location and development of market garden opportunities.

Resilient City Design & Infrastructure | Goals & Actions	
GOAL 5	**Facilitate the development of dense, compact, and livable neighborhoods that support walking, biking, and transit use.**
METRICS	Area in City's zoning Number of neighborhood plans that include mixed-used activity centers
ACTION 5.1	Plan and facilitate the development of mixed-use activity centers featuring shops, services, employment, green space, and a mix of housing types as identified in the Growth Priority Areas Map in the City's Comprehensive Plan.
ACTION 5.2	Implement Transit-Oriented Development (TOD) Zoning along Bus Rapid Transit (BRT) and other high-frequency transit service corridors.
ACTION 5.3	Encourage formation of Transportation Management Associations to coordinate Transportation Demand Management (TDM) efforts on large projects.

Transit Oriented Development (TOD)

The City of Madison adopted the Transit Oriented Development (TOD) Overlay Zoning District in 2023. The new district allows taller buildings with more housing units located within a quarter mile of high-frequency transit. It encourages new construction along the future bus rapid transit (BRT) lines and places with more local transit service. This policy encourages people to take public transit, bike, walk, and roll instead of drive. It also helps create more mixed-use activity centers near public transit.

Resilient City Design & Infrastructure | Goals & Actions	
GOAL 6	**Increase resilience to climate change impacts including heat waves, storms, and flooding.**
METRICS	Percentage of area within the City resilient to extreme heat, flooding, and direct/indirect impacts of storms. Measure total and in each census tract. Area of managed natural areas (prairies, meadows, etc.) in parks, golf courses, and greenways
ACTION 6.1	Develop and implement a climate resilience plan that incorporates updated findings from the Wisconsin Institute on Climate Change Impacts 2021 Climate Assessment Report.
ACTION 6.2	Assess the location and characteristics of urban heat islands and populations sensitive to extreme heat, and collaboratively develop and implement equitable heat resilience strategies to reduce the magnitude of urban heat islands and improve community adaptive capacity to extreme heat events.
ACTION 6.3	Complete the Comprehensive Watershed Study program to determine the causes of flooding across Madison's watersheds and implement recommended projects to reduce flood risk.
ACTION 6.4	Integrate nature-based solutions, including green infrastructure and native, deep-rooted plants, into City projects to improve climate resilience and provide ecosystem services such as urban cooling, water and air quality improvements, and carbon sequestration.