

Nature in Motion

Urban Greening as a Traffic Solution



July 2026

CIRCULATE
PLANNING & POLICY



Acknowledgments



Leslie Aparicio, Lead Author

Associate Planner, Circulate Planning & Policy

Leslie Aparicio is an Associate Planner at Circulate Planning & Policy. She graduated with her masters in City Planning at San Diego State University. She has experience in public and active transportation planning, community engagement, and research. Leslie's work includes producing high-crash data maps across the San Diego region, creating social media graphics and visual renderings, and leading community engagement efforts focused on improving pedestrian and bicycle safety.



Carlisle Dockery, Co-Author and Editor

Director of Planning and Community Engagement, Circulate Planning & Policy

Carlisle Dockery is the Director of Planning and Community Engagement at Circulate Planning & Policy. She is a transportation planning professional with experience in active transportation, community engagement, and public health advocacy. She has worked in the nonprofit sector for nine years and joined Circulate in October 2021. Her projects focus on improving pedestrian and bicycle safety, advancing complete streets and active transportation planning, and supporting community-centered planning efforts across the region.



About Circulate Planning & Policy

Circulate Planning & Policy is a nonprofit think tank whose mission is to create excellent mobility choices and vibrant, healthy neighborhoods. Circulate promotes public transit, safe streets, and sustainable growth. Circulate has successfully led campaigns to transform empty parking lots into affordable homes, to implement free transfers for transit riders, and for local jurisdictions to adopt Vision Zero to end traffic fatalities and serious injuries.

For more information, visit www.circulatesd.org.

Special Thanks

We are grateful for the financial support for this report provided by our sponsor, SDG&E. Thank you to Colin Parent for his editing support.

Table of Contents

Executive Summary	3
Introduction	4
Urban Greening & Traffic Calming Toolkit	5
Actionable Solutions for Local Government	6
Actionable Solutions for Residents	10
Conclusion	12

Executive Summary

Urban greening and traffic calming are essential strategies for more sustainable urban environments. Urban greening involves the strategic integration of trees, landscaping, green infrastructure, and other nature-based solutions. These interventions can improve air quality, mitigate urban heat, manage stormwater, and enhance biodiversity. Traffic calming focuses on reducing vehicle speeds, which improves traffic flow and safety for pedestrians, cyclists, and other vulnerable road users. When combined, these approaches create safer and more sustainable mobility.

This Urban Greening and Traffic Calming Toolkit provides practical guidance to implement cost-effective and rapid solutions across San Diego County. Examples include:

- **Landscaped medians:** Separate traffic lanes, create pedestrian refuge islands, and naturally slow vehicles. Case studies show reductions in speeding and crashes.
- **Landscaped roundabouts:** Improve safety by reducing pedestrian exposure while serving as community landmarks.
- **Street trees:** Provide visual narrowing to encourage slower driving, improve air quality, and offer shade.
- **Planter-protected bike lanes:** Enhance cyclist safety by providing physical separation from vehicles using planters.
- **Parklets, green walls, vertical gardens, and rain gardens:** Engage residents, increase green space and improve water management by enhancing the overall aesthetic, and ecological value of streets.

These strategies empower local governments and residents to collaboratively create vibrant and sustainable streetscapes. By integrating urban greening with traffic calming measures, San Diego communities can improve public safety and environmental resilience to enhance quality of life while advancing towards urban development that is equitable and climate-resilient.

Introduction

What are urban greening and traffic calming?

Urban greening and traffic calming are essential strategies for creating safer, more livable cities that align with sustainability and climate resilience goals. Urban greening through the strategic planting of street trees, landscaping, and green infrastructure helps mitigate the urban heat island effect. These strategies can also improve air quality and promote biodiversity. Traffic calming measures are designed to reduce vehicle speeds and improve pedestrian and cyclist safety. Common treatments include curb extensions, roundabouts, protected bicycle lanes, and more.

When combined, urban greening and traffic calming work together to create vibrant, pedestrian-friendly environments. Green elements help soften infrastructure and create more inviting streets. Traffic calming measures improve safety for all users and support sustainable mobility by encouraging walking, rolling, cycling, and transit use. Combining urban greening initiatives with traffic calming strategies will help reduce reliance on cars by decreasing carbon emissions and enhancing community well-being. These strategies align with both the County of San Diego's Climate Action Plan goals and Vision Zero goals.

Does this apply to me?

Urban greening and traffic calming are key components of the San Diego Association of Governments (SANDAG) Vision Zero Action Plan, which aims to “eliminate all traffic deaths and serious injuries, while increasing safe, healthy, and equitable mobility for everyone” in the San Diego region.¹ Vision Zero, urban greening and traffic calming are all aligned with the overarching goals of creating safer and more sustainable streets. Traffic safety impacts us all regardless of how we choose to travel and this report demonstrates how our infrastructure can protect us.

¹ San Diego Association of Governments, Vision Zero Action Plan (November 2024), available at <https://www.sandag.org/-/media/SANDAG/Documents/PDF/projects-and-programs/regional-initiatives/vision-zero/sandag-vision-zero-action-plan-report-2024-11-21.pdf>.

Urban Greening & Traffic Calming Toolkit

This report and toolkit details urban greening approaches to traffic calming for public agencies, community organizations, and other motivated entities to implement across San Diego County. This toolkit also focuses on cost-efficient quick build solutions. By embracing a coordinated approach, we can expedite safer and more sustainable streetscapes.

Rapid population growth along with urbanization has transformed our natural environment. By developing in denser areas, we can conserve resources and reduce the destruction of natural habitats due to sprawl. In this context, urban greening can be a powerful tool for enhancing traffic calming measures. By integrating nature-based solutions into urban planning, cities can reduce vehicle speeds, improve safety and create more pleasant environments for pedestrians and cyclists. Combining these urban greening techniques with other traffic calming methods like chicanes, curb extensions, and roundabouts can help cities create safer urban spaces that prioritize people over cars.



Actionable Solutions for Local Government

Landscaped Center Medians

The U.S Department of Transportation defines a median as an area between opposing lanes of traffic. A landscaped median is a median with greenery. Medians are beneficial because they help separate motorized and non-motorized road users, reducing crashes. These can include raised medians and pedestrian refuge islands. Landscaped, tree-lined medians can calm drivers and encourage slower speeds. Studies show that trees along roads make the space feel narrower, which prompts drivers to slow down for safety.² In contrast, long stretches of open road often lead to faster driving due to a lack of visual cues. Street trees can play a dual role to improve both the aesthetic quality and safety of urban roads.

The Caltrans official Traffic Calming Guide includes this approach, confirming that “landscaping the raised median island contributes to community livability and environmental sustainability.”³ This traffic calming solution provides a refuge for pedestrians traversing busy streets, helping reduce crashes. Planter medians are proven to help slow down drivers by narrowing roads, creating physical protection for pedestrians and narrowing crossing distances.

- 2 Trees for Streets, How Street Trees Help Make Our Roads Safer (November 2021), available at <https://www.treesforstreets.org/how-street-trees-help-make-our-roads-safer>.
- 3 California Department of Transportation, “Traffic Calming Guide,” available at https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/traffic-calming/final-traffic-calming-guide_v2-a11y.pdf.



Geary Rapid Project

Source: San Francisco Municipal Transportation Agency

Case study: Geary Boulevard

San Francisco enhanced planter medians and other pedestrian improvements in 2021 along Geary Boulevard, a major arterial road with high traffic volumes. With the adoption of Vision Zero, pedestrian refuge islands were added to the landscaped center median as a part of a broader initiative to improve safety and reduce crossing distances. Initial data indicates that these improvements have already resulted in a 70-80 percent reduction in vehicles traveling more than 5mph over the speed limit.⁴

Landscaped Roundabouts

Caltrans defines a roundabout as a type of circular intersection that has been recognized as one of the Federal Highway Administration 28 Proven Safety Countermeasures for their substantial safety and operational advantages. Landscaping within roundabouts ensures clear sightlines and visibility by controlling where and how drivers focus their attention. It also creates a gateway feature for the community and deters unauthorized travel through the center of the intersection. Additionally, roundabouts limit the amount of time pedestrians are exposed to potential conflicts in the travel lanes, creating safer streets.

Case study: La Jolla Boulevard

In 2007, the City of San Diego installed five landscaped roundabouts on La Jolla Boulevard between Colima Street and Camino de la Costa. Within ten years of construction, noise levels dropped by 77 percent, business improved by 35 percent, and average speeds dropped from 40mph to 19mph.⁵ Perhaps even more impressively, traffic crashes were reduced by 90 percent.⁶

4 SFMTA, Riders are Feeling the Difference on Geary (December 8, 2022), available at <https://www.sfmta.com/blog/riders-are-feeling-difference-geary>.

5 Logan Jenkins, "Roundabout apostle comes full circle, revisits Bird Rock," San Diego Union Tribune, February 17, 2017, available at <https://www.sandiegouniontribune.com/2017/02/16/roundabout-apostle-comes-full-circle-revisits-bird-rock>.

6 Congress for the New Urbanism, "Road diet bridges a barrier, boosts safety," January 10, 2018, available at <https://www.cnu.org/publicsquare/2018/01/10/road-diet-bridges-barrier-boosts-safety>.



Street Trees

Street trees are a powerful traffic calming tool due to their ability to give a narrowing effect on roads. Caltrans attributes this narrowing effect to trees framing the street while simultaneously giving drivers the perception of encountering pedestrians, bicyclists, and cross-traffic while driving.⁷ The presence of street trees enhances visibility and reduces speeding to promote safer interactions between drivers and vulnerable users. Additionally, trees enhance the urban environment by providing shade and improving air quality. Trees also absorb water to reduce flooding. All of these qualities ultimately make streets more inviting and livable.

Planting trees both in the public right-of-way and on private property improves the city's tree canopy. The City of San Diego was awarded a \$10 million grant from an agency of the U.S. Department of Agriculture for a five-year tree planting program, set to run from 2025 to 2030.⁸ The project will focus on planting trees in designated census tracts and residents may request trees through the City's Ready, Set, Grow website.⁹

7 California Department of Transportation, Traffic Calming Guide, available at https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/traffic-calming/final-traffic-calming-guide_v2-a11y.pdf.

8 City of San Diego, "Ready, Set, Grow San Diego," available at <https://www.sandiego.gov/transportation/urban-forestry/ready-set-grow>, last visited June 9, 2025.

9 City of San Diego, "Ready, Set, Grow San Diego," available at <https://www.sandiego.gov/transportation/urban-forestry/ready-set-grow>, last visited January 30th, 2026.



Planter-Protected Bike Lanes

Cycle tracks, also known as Class IV or protected bikeways, provide physical separation from motor traffic while remaining on-street and distinct from the sidewalk.¹⁰ Traditional modes of protection may include flexible delineators, bollards, parked vehicles, or curbs. Planters can provide a safety barrier as well. A 2015 Portland State University study interviewed hundreds of people in San Francisco, Chicago, and Portland to determine bicyclists' levels of comfort traveling within different types of protected infrastructure. Approximately 70 percent of respondents indicated that they felt "very comfortable" with planters separating the bikeway, compared to just 55 percent who were very comfortable with a two to three foot buffer and plastic flex posts.¹¹

10 City of San Diego, "Lanes and Routes," available at <https://www.sandiego.gov/bicycling/lanes-and-routes>, last accessed June 9, 2025.

11 BikePortland, "New Portland study says greenery is the preferred bikeway buffer," December 1, 2015, available at <https://bikeportland.org/2015/12/01/169430-169430>.



Bikers on Planter Protected Bike Lane

Source: J. Maus/Bike Portland

Actionable Solutions for Residents

Community members and business owners also have the power to make their neighborhoods safer, greener, and more walkable through simple yet impactful actions. Residents can transform their communities into healthier and more livable spaces that benefit everyone. The following suggestions are ways community members can contribute to urban greening and traffic calming in their neighborhoods.

Parklets and Green Spaces

A parklet is a sidewalk extension that provides more space and amenities for people using the street. Parklets are proven to attract people, creating public common spaces that improve walkability, provide space for relaxation, and reduce urban heat island effects.¹² Furthermore, parklets help promote social interaction and can become community gathering hubs. Planters are often added to parklets as a means of enhancing green space and incorporating physical barriers from traffic. Community members and business owners in the County of San Diego can apply for a parklet permit through their local city.

12 University City District, The Case for Parklets: Measuring the Impacts on Sidewalk Vitality and Neighborhood Business (2015), available at https://issuu.com/universitycity/docs/the_case_for_parklets_2015?ff.



Neighborhood Parklet

Source: Patch

Vertical Garden and Green Walls

A vertical garden is a technique that uses vertical spaces like trellises, fences, or planters instead of ground-level surfaces. Climbing vegetables, such as beans, cucumbers and squash grow well vertically. The same goes for flowering vines like jasmine and honeysuckle. A green wall is a vertically built structure intentionally covered by vegetation. Common plant varieties for green walls include ivy, climbing roses, bamboo, and succulents.¹³

Both of these urban greening approaches bring ecofriendly designs to existing infrastructure, allowing for the seamless integration of green spaces into our communities and shared spaces. Whether adding some vining plants along the edge of your property or committing to a full green wall, cultivating a garden of your own is an excellent way to create a more scenic and comfortable environment for pedestrians in your neighborhood.

Rain Gardens

Rain gardens are vegetated landscape features designed to capture and filter stormwater, thus limiting flooding in the public right-of-way that can inhibit access to sidewalks, crosswalks, and bike lanes.¹⁴ Planting flood-tolerant native species can help reduce flooding while also improving water quality by filtering out pollutants like oils, fertilizers, and sediment. Certain plants, such as marsh marigold and cardinal flower, thrive in rain gardens, offering both environmental benefits and aesthetic value.¹⁵ In addition to their ecological function, rain gardens also provide critical habitats for local wildlife, enhancing biodiversity, and promoting healthier urban environments.

13 Sarah Wilson, "Best plants to cover a wall – 10 ideas for a fabulous sweep of flowers and foliage," Homes and Gardens, August 6, 2023, available at <https://www.homesandgardens.com/gardens/best-plants-to-cover-a-wall>.

14 Sunset, "Easy water-wise gardening," 2009, available at <https://www.sandiego.gov/sites/default/files/legacy/water/pdf/waterwisegardening.pdf>, last visited June 9, 2025.

15 Tom's Guide, "7 Flood-Tolerant Plants to Protect Your Yard", September 2023, available at www.tomsguide.com/how-to/7-flood-tolerant-plants-to-protect-your-yard, last visited 9 May 2025.



Conclusion

Urban greening and traffic calming are vital strategies for creating safer, more sustainable communities. By integrating nature-based solutions like street trees, landscaped medians, planter-protected bike lanes and parklets, communities can address key urban challenges. Urban greening can help improve traffic safety and air quality while also supporting stormwater management and reducing urban heat. These interventions slow vehicle speeds and promote safer interactions among all road users. They also strengthen livability and improve environmental resilience in urban spaces.

Aligned with Vision Zero goals, urban greening and traffic calming support more equitable and multimodal communities, creating climate resilient cities. This toolkit offers practical and cost-effective solutions. Public agencies, community organizations, and residents can work together to implement them and create streets that prioritize safety and long-term community well-being.



Photo source: Mark Thomas

Circulate Planning & Policy
701 B St, #1150
San Diego, CA 92101
www.circulatesd.org
@CirculateSD

CIRCULATE
PLANNING & POLICY