Los Angeles Urban Forest Equity:

Design Guidebook

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Prepared by the Los Angeles Urban Forest Equity Collective

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About this Guidebook

The LA Urban Forest Equity Collective (UFEC) co-produced a new method of classifying urban space, the Planting Tiers Framework, which allows community members, planners, and decision makers to consider varying levels of tree planting difficulty based on the built environment. This framework accounts for the limitations imposed on canopy expansion in areas that have been highly developed, historically disinvested, and where a preponderance of impervious surfaces limits planting opportunities.

Articulating a common language and enacting a targeted, coordinated prioritization and action plan can facilitate progress toward urban forest equity in areas where physical constraints exist. The tiered model presented here emerged from a necessity for scalability, and it seeks to codify new terminology for measuring levels of investment, trade offs, and opportunities to reach meaningful solutions to the systemic problem of urban forestry inequity. The tiers reflect types of interventions and levels of investments needed to reach a more equitably distributed tree canopy, from individual streets to council districts and larger political jurisdictions throughout Los Angeles.

This guidebook was written by Krystle Yu, a graduate of the Masters in Urban Planning program through the University of California Los Angeles, with guidance from the greater UFEC team.

The Los Angeles Urban Forest Equity Collective Model

Vision Statement

Los Angeles communities and leaders recognize the systemic causes and impacts of urban forest inequity and work together to dismantle the physical, political, and social barriers that perpetuate it. Los Angeles is actively growing, protecting, and prioritizing an accessible, inclusive, and adequately funded urban forest for all Angelenos. By advancing urban forest equity, Los Angeles will build climate resilience and enduring protection for our frontline communities.

Who is UFEC?

The Urban Forest Equity Collective (UFEC) is a consortium of urban greening experts, City of Los Angeles staff, community-based organizations, researchers, and consultants. This collaboration among interdisciplinary, cross-sectoral partners imbues UFEC's work with a uniquely holistic, multi-faceted lens on urban forestry issues spanning ecological and social concerns, spatial characteristics, community buy-in, implementation, and policy.

The UFEC project aims to create a holistic analysis and strategy to advance urban forest equity in LA's lowest-canopied neighborhoods. We aim to address decades of systemic disinvestment and misinvestment that have resulted in poor public health outcomes, limited access to green spaces, and a host of related consequences ranging from heat exposure and poor air quality, to food insecurity and reduced ecosystem services. This is to be done in a manner that enables co-production of knowledge; integration of theory, research and practice; meaningful community engagement and resident input; and the identification of pathways from research and analysis to planning and implementation. UFEC is intended to provide a replicable framework that can be used regionally and beyond Los Angeles.

How to use this guide

Page Sections Breakdown

Name of the improvement

Improvement Tier

Illustration of improvement

Explanation of improvement

Explanation of possible placement

Relative cost and time required for improvement

Pinchpoint or midpoint curb extensions

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Curb extensions may be applied midblock to slow traffic speeds, add public space, and create new space for trees where it didn't previously exist. Mid-block curb extensions are called "pinch points" or "chokers" when utilized as a traffic-calming treatment.

Where can this happen?

Pinch points are helpful on streets with high pedestrian traffic with lower car speed limits.

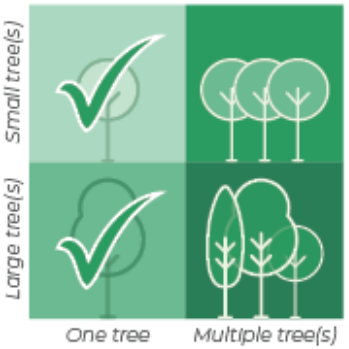
24

What are the opportunities and challenges?

Pros & cons

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?



Depending on the space created, this can bring multiple small or large trees.

Possible canopy coverage

Has it been done before?

Yes, attached curb extensions are a large part of LA's Vision Zero Plan though it's currently rare to see them planted.

Case studies

25

Tiered System of planting

UFEC's tiered system categorizes planting opportunities based on the effort and investment associated. Generally, the higher the tier, the more effort, time, and investment are needed.

As community experts, you are best equipped to identify where these interventions could go.

Tier 1

Tier 1 opportunities involve locating and planting in existing plantable space in Los Angeles.

Keep an eye out for...

empty tree wells, empty parkway strips, and other spaces that appear plantable.

Tier 2

Tier 2 opportunities involve more minor space reallocations in the public right of way to be used towards urban greening.

Keep an eye out for...

wide sidewalks, reverse parkways, covered or narrow tree wells, and small trees planted in wide parkways with few overhead utilities.

Tier 3

Tier 3 recommendations involve significant space reallocations in the public right of way or land acquisition to support goals of urban greening.

Keep an eye out for...

wide sidewalks, wide roadways, unsafe streets for pedestrians and bicyclists, underutilized streets and alleyways, trees that have outgrown their tree wells, and potential development sites with setbacks.

Tier 1

Locating and planting in existing plantable space on private property, streets, or parks.

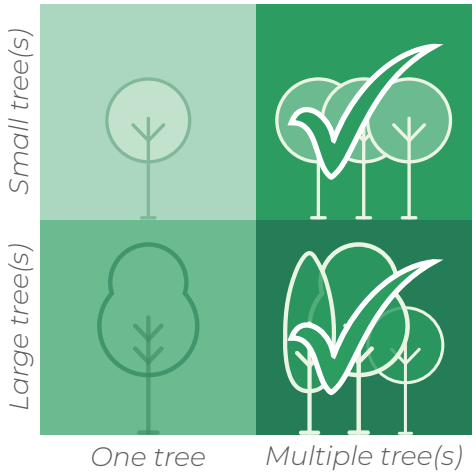
Planting on private property

Tier 1

What's this?

An estimated 80 - 90% of Los Angeles' urban forest is on private property, indicating the critical role of individual residents in growing a greener, cooler, and more equitable future. Long-standing city programs offer "free tree" programs for private property, and grant funding also supports tree planting in historically disinvested neighborhoods through Los Angeles.

How much canopy can this bring?

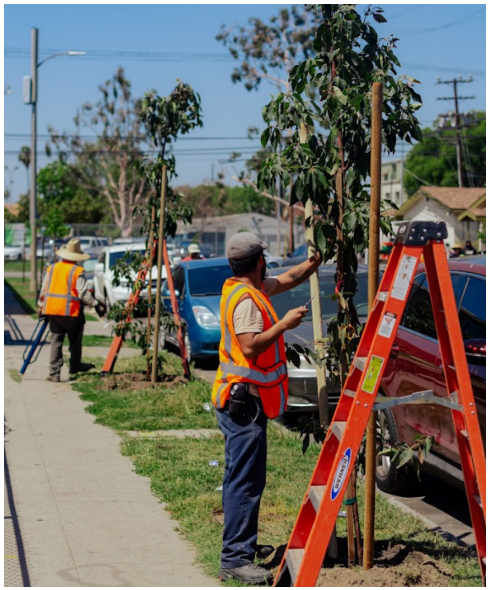


Where can this happen?

Angelenos can search for local nonprofits and public agencies to access urban greening programs. Within the City of Los Angeles, and likely the County, there is significantly more opportunity to expand tree canopy through private rather than public planting. However, housing tenure and turnover can also pose challenges for tree establishment and survival, as renters, who constitute a majority of Angelenos, may not feel like they have the option or capacity to plant and care for new trees. Preservation of mature trees is also critical.

Planting trees in available parkways, the public-right-of way, or planting strips

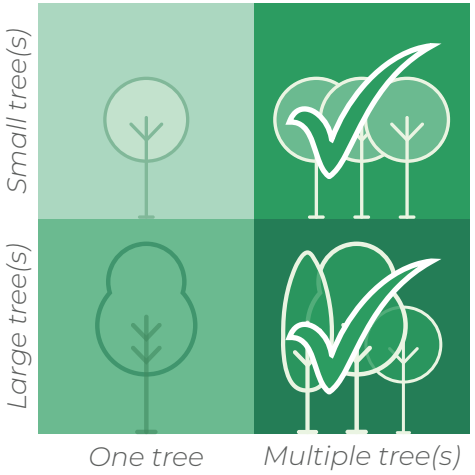
Tier 1



What's this?

Angelenos can search for local nonprofits and public agencies to access urban greening programs. Street trees are critical city infrastructure, lining our residential streets, schools, and commercial corridors with lifesaving shade, reducing energy usage, lowering health risk, and cleaning our air. The City of Los Angeles's Street Tree Spacing Guidelines indicate how far newly planted street trees need to be planted from other critical city infrastructure.

How much canopy can this bring?



Where can this happen?

UFEC estimates that there are about 60,000 parkway sites currently available for planting within the City of Los Angeles. Parkway planting strips in historically disinvested neighborhoods are often nonexistent or too small and can only fit small trees, resulting in less shade and fewer public health benefits. Overhead wires also preclude the planting of large stature shade trees in disinvested communities.

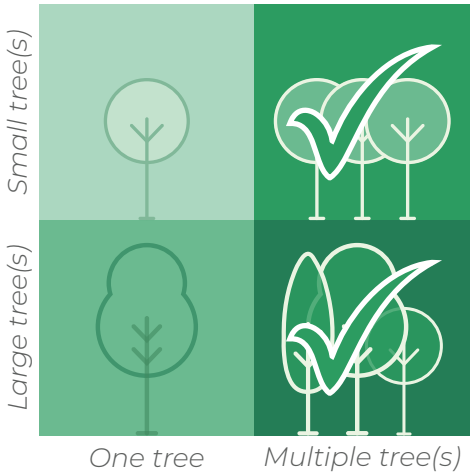
Planting in public parks

Tier 1

What's this?

Parks are critical safe-havens for Angelenos during extreme heat events, and government-funded and nonprofit grant programs support new tree planting throughout LA parks.

How much canopy can this bring?



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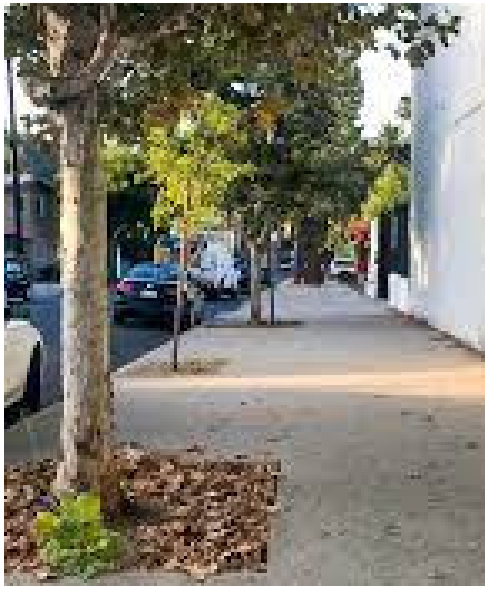
Tier 2

Involves minimal site modifications following municipal or regional policies and using existing standards to accommodate tree planting.

New tree well (one-sided)

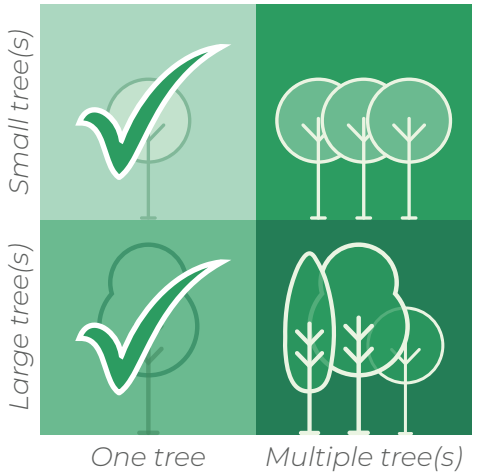
Tier 2



What's this?

This is when concrete is removed from the sidewalk to create new plantable space for a tree that was previously paved. The size of the tree that can be planted depends on the amount of available sidewalk space.

How much canopy can this bring?



Where can this happen?

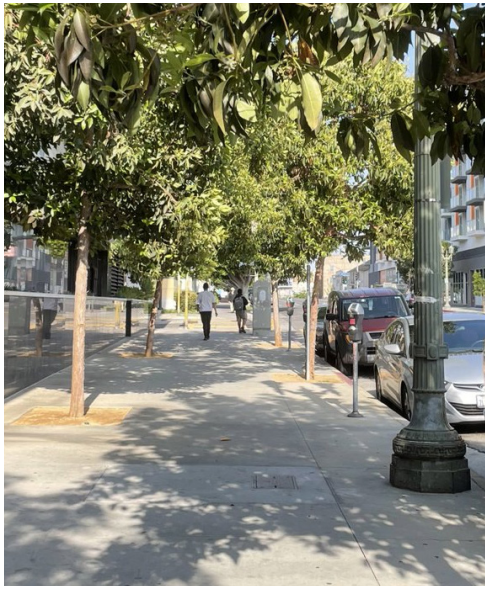
Depending on the sidewalk width, three different sizes of tree wells can be installed on sidewalks. Before planting, your local government will check whether or not there are any sewer lines or infrastructure that may conflict with the trees.

New tree well (two-sided)

Tier 2

What's this?

This is when the City cuts two (2) tree wells on either side of a single sidewalk, creating more shade for everyone navigating the sidewalk.

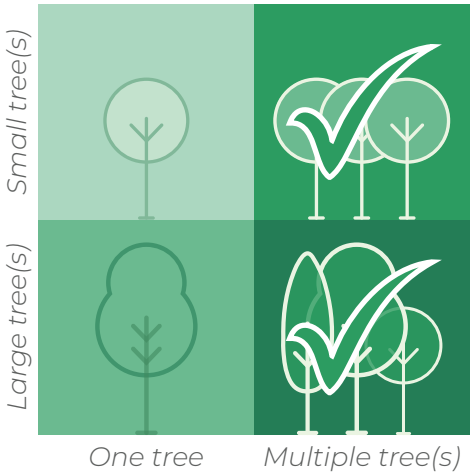


Pictured right: 7th and Westmoreland, Koreatown

Where can this happen?

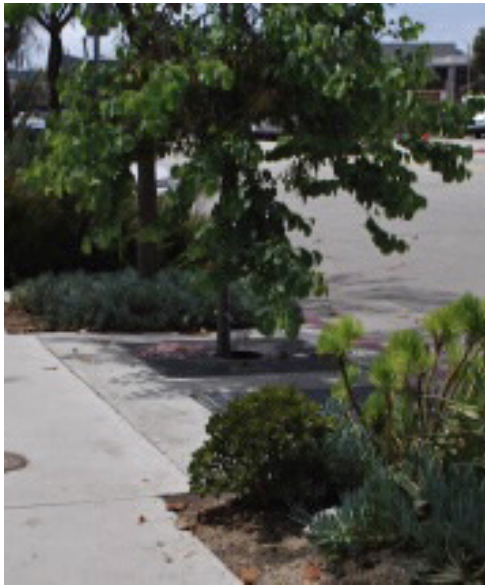
This intervention can only be implemented on streets with sufficiently wide sidewalks (>15 feet). Before planting, the City will check whether or not there are any sewer lines or infrastructure that may conflict with the trees.

How much canopy can this bring?



Expanding existing tree well

Tier 2



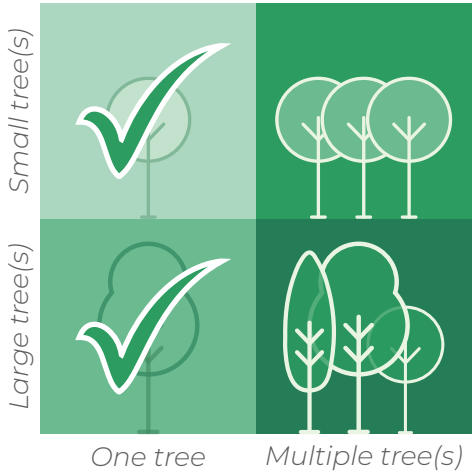
What's this?

This means taking an existing tree well and making it bigger to accommodate a larger tree.

Larger trees bring more community benefits, including more shade.

Pictured left: Grand Boulevard Tree Wells, Los Angeles

How much canopy can this preserve?



Where can this happen?

The Americans with Disabilities Act requires sidewalks be at least 4 feet wide. On wider sidewalks, there is potential space for larger tree wells to support larger trees that maintain this 4-foot minimum.

Reverse parkway planting

Tier 2

What's this?

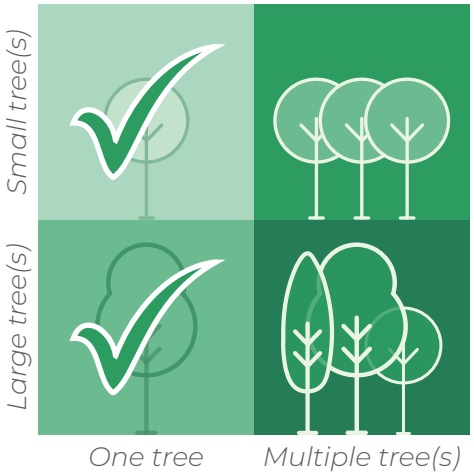
Reverse parkways are public spaces between the sidewalk and private property. The City or County must be consulted to determine the location of private and public property lines before a tree can be planted. Planting in a reverse parkway also requires discussion with the adjacent property owner.

Pictured right: reverse parkway in Sylmar

Where can this happen?

This can only happen in areas with reverse parkways.

How much canopy can this bring?



Removing tree well obstructions

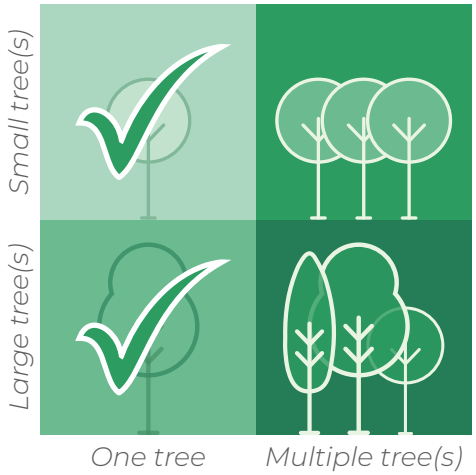
Tier 2

What's this?

Sometimes an existing tree well gets covered by concrete or other obstructions. Removing that covering is an easy way to reclaim community space for greening and all its benefits.

Pictured left: An old tree well covered in agriperm in Sylmar, Los Angeles

How much canopy can this bring?



Where can this happen?

Depending on funding, resources, and staffing levels, City or County agencies or a local non-profit may be able to improve site conditions or indicate the origin and reason for the obstruction.

Photo credit: Alissa Walker

Tier 3

Involves significant space reallocations in the public right of way or land acquisition to create tree planting opportunities.

Attached curb extensions (Type 1)

Tier 3

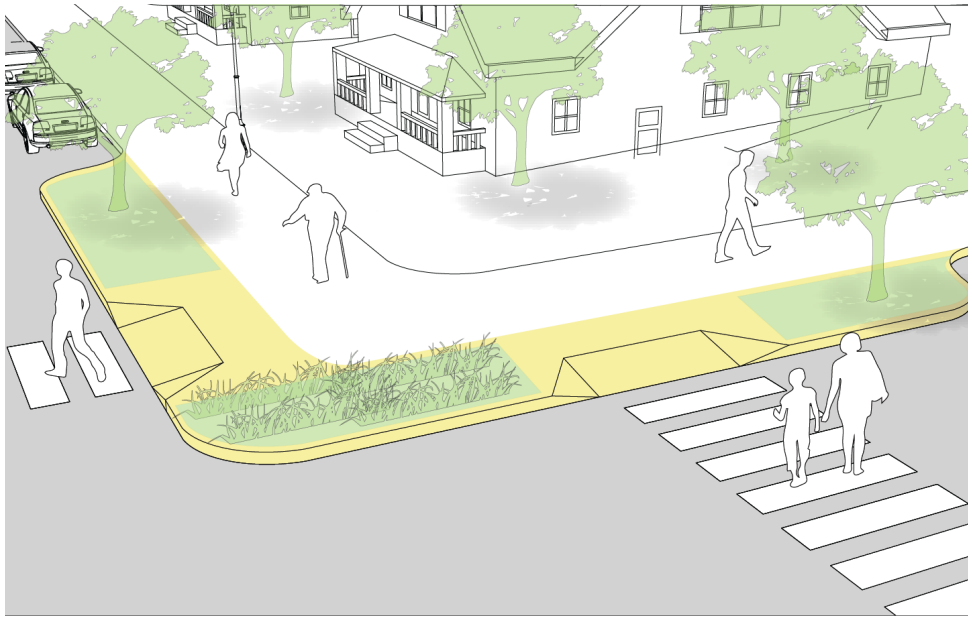


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Curb extensions are when a curb extends into the car lane to expand space for pedestrians, bus stops, and more. Attached curb extensions (Type 1) are directly connected to the sidewalk. Because installing these curb extensions can obstruct storm drains and disrupt stormwater drainage, Type 1 extensions are preferable in areas without storm gutters. When designed with nature in mind, curb extensions can allow for greater stormwater capture by decreasing impermeable surface.

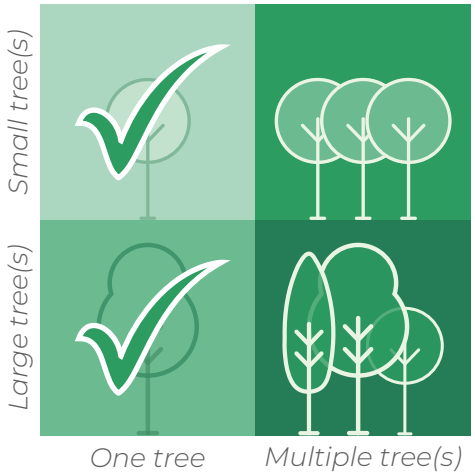
Where can this happen?

Curb extensions (floating and attached) are installed in areas with less traffic and slower car speeds.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?



Depending on their size, each curb extension brings one small or large tree.

Has it been done before?

Yes, attached curb extensions are a large part of the City of LA's Vision Zero Plan.

Floating curb extensions (Type 2)

Tier 3

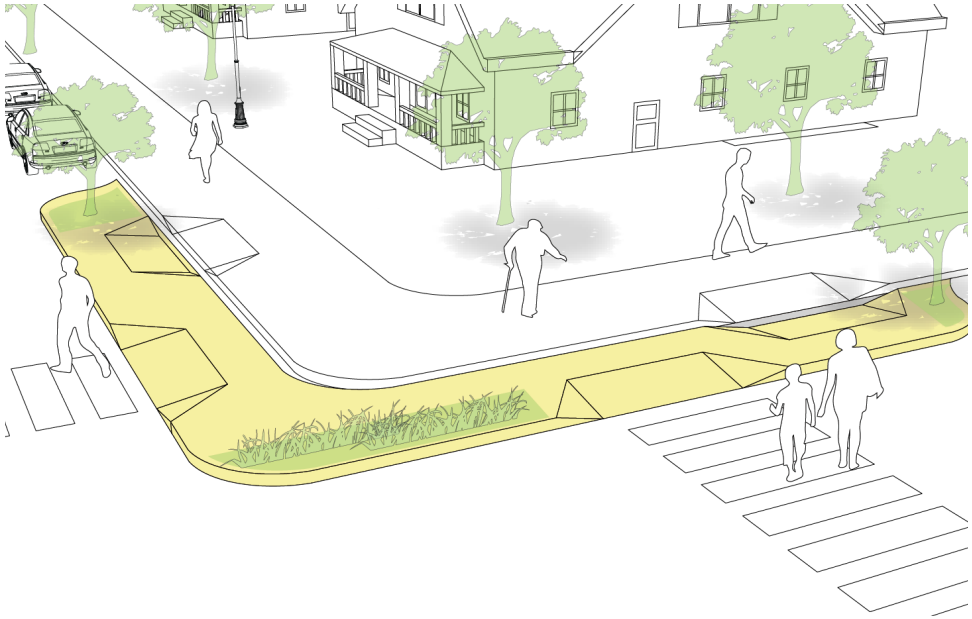


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Curb extensions are when a curb extends into the car lane to expand space for pedestrians, bus stops, and more. Floating curb extensions (Type 2) are separated from the adjacent sidewalk. Floating curb extensions are preferred when storm drains are onsite.

Where can this happen?

Curb extensions (floating and attached) are typically most likely to be installed in areas with less traffic and slower speeds.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May reduce on-street parking where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Accounts for existing stormwater drains

How much canopy can this bring?

Depending on their size, each curb extension brings one small or large tree.

Has it been done before?

Yes, though they're less common in LA at the moment.

Pinchpoint or midpoint curb extensions

Tier 3

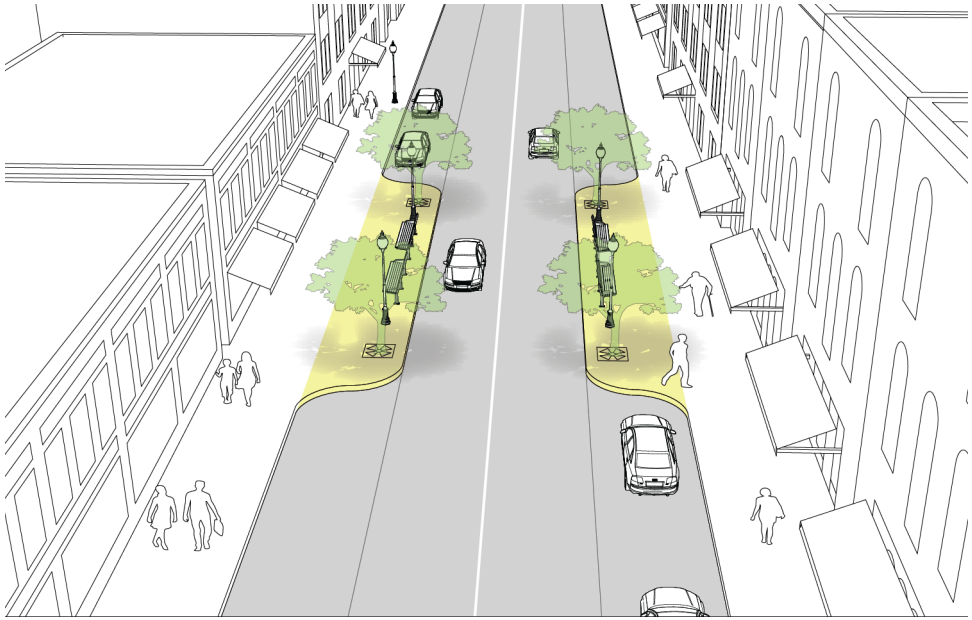


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Curb extensions may be applied midblock to slow traffic speeds, add public space, and create new space for trees where it didn't previously exist. Mid-block curb extensions are called "pinch points" or "chokers" when utilized as a traffic-calming treatment.

Where can this happen?

Pinch points are helpful on streets with high pedestrian traffic with lower car speed limits.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
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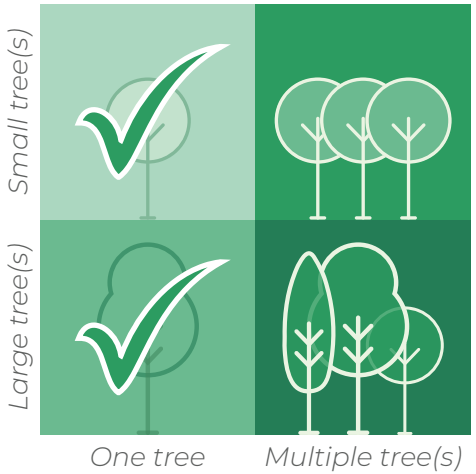


Depending on the space created, this can bring multiple small or large trees.

Has it been done before?

Yes, attached curb extensions are a large part of LA's Vision Zero Plan though it's currently rare to see them planted.

Bus bulbs

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Bus bulbs are curb extensions that align the bus stop with the parking lane, allowing buses to stop and board passengers without ever leaving the travel lane. This intervention can speed up bus pick-ups and drop-offs while creating more tree space.

Where can this happen?

Bus bulbs are installed in high-ridership areas, where they can help make bus pick-ups and drop-offs faster.

What are the opportunities and challenges?

- Improves transit rider experience (speeds up pick-up and drop-off)
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?

Depending on the space created, this can bring multiple small or large trees.

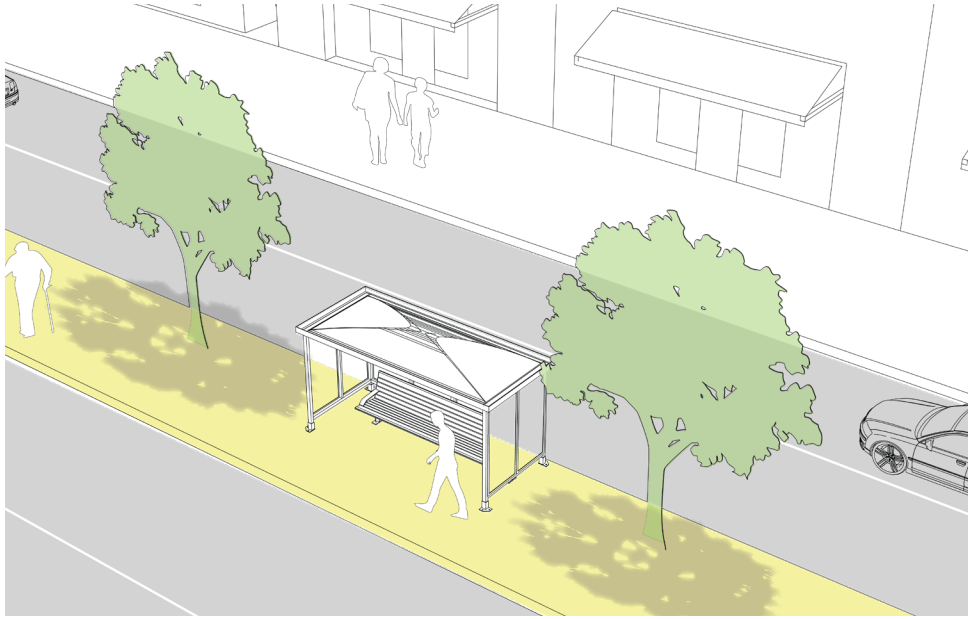
Has it been done before?

Bus bulb in Downtown LA

Yes. Downtown Los Angeles has implemented bus bulbs.

Median bus boarding islands

Tier 3



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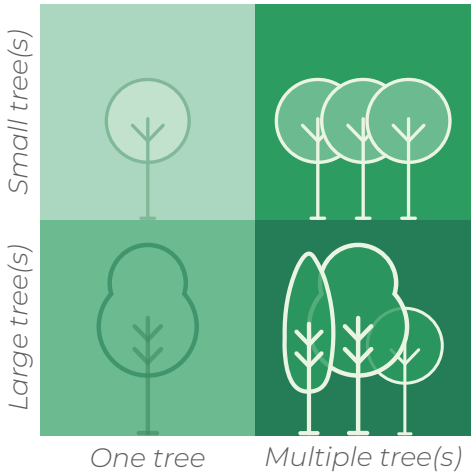


Depending on the space created, this can bring multiple small or large trees.

Has it been done before?

Center bus lane in San Francisco

Yes. Examples of this include Van Ness Blvd in San Francisco. Incorporating trees in the early stages of design can create much-needed shade.

Gateways

Tier 3

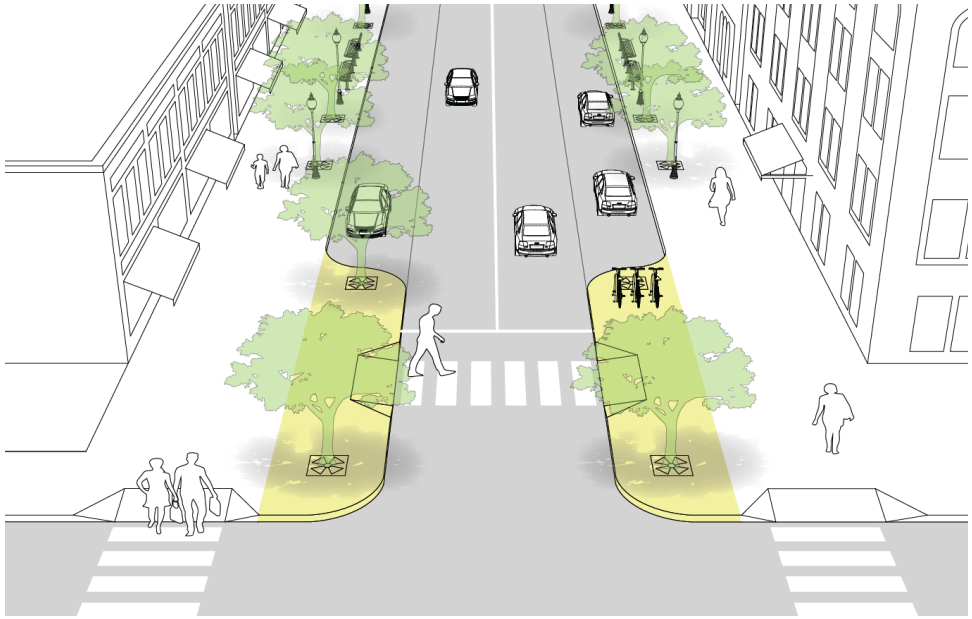


Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Gateways are curb extension treatments on both sides of a street at an intersection. This treatment encourages cars to slow down and be more mindful of pedestrians crossing the street. It also makes it safer for pedestrians by shortening the time they spend on the pavement when crossing the street.

Where can this happen?

This treatment is preferred on high foot-traffic streets with on-street parking.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?

Depending on their size, each gateway brings one small or large tree.

Has it been done before?

4th and Breed St, Los Angeles

Yes, attached curb extensions are a large part of LA's Vision Zero Plan, though it's currently rare to see them planted.

Tree bulbs

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

A tree bulb is a floating curb extension made explicitly to plant a tree or preserve an existing tree. Tree bulbs generally take up the space of an existing street parking space and can be spaced according to community and site specific needs. Tree bulbs can be an important option for adding shade in many low-canopy communities where parkways are non-existent or too narrow for new trees.

Where can this happen?

Tree bulbs are suitable for residential settings with street parking.

What are the opportunities and challenges?

- Creates space for greening
- Potential conflict with power lines (if existing)
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented
- Accounts for existing stormwater drains

How much canopy can this bring?

Depending on their size, each tree bulb brings one small or large tree.

Has it been done before?

Tree bulb, San Fernando, CA
Photo credit: Alissa Walker

Yes. The City of San Fernando has adopted tree bulbs on some of its residential streets.

Crossing islands

Tier 3

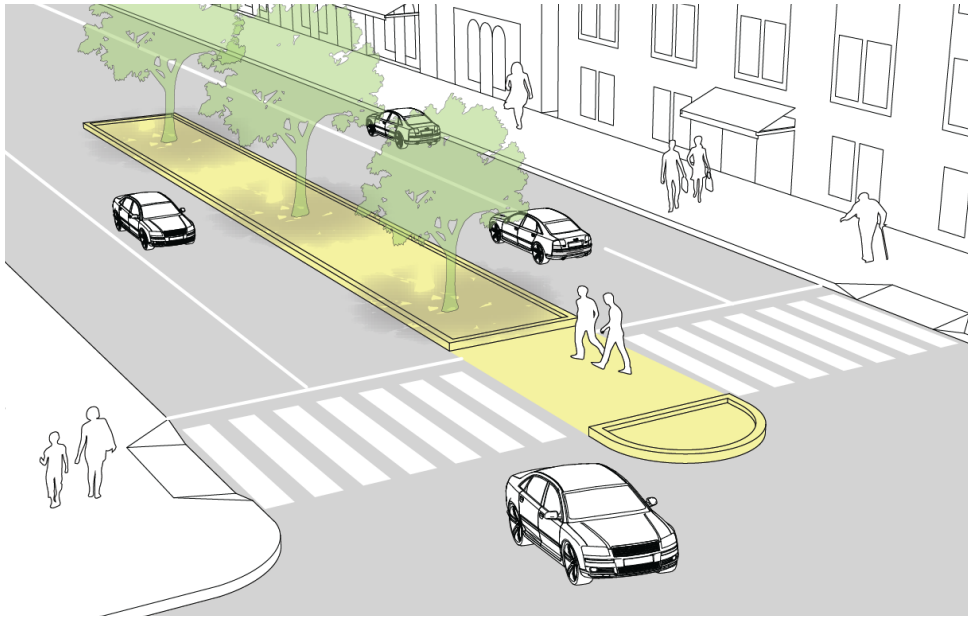


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Pedestrian medians are protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings. They also help calm traffic by narrowing down travel lanes while providing potential space for street trees. Trees in pedestrian medians can help provide shade and cover the dark asphalt that contributes to urban heat islands in Los Angeles.

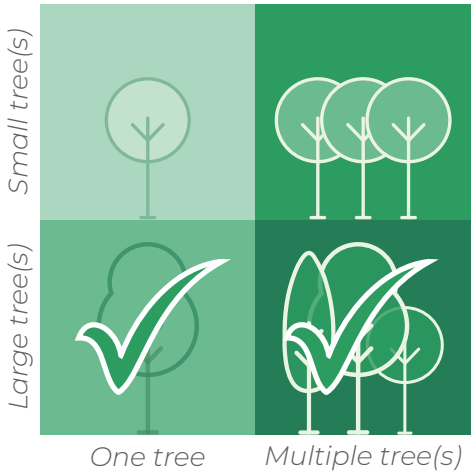
Where can this happen?

Pedestrian medians can be installed on wide multi-lane streets to make conditions safer for pedestrians crossing the street.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce on-street parking where implemented
- Generates shade and cools down the neighborhood

How much canopy can this bring?



In LA, pedestrian medians need to be 6 feet wide, which can create space for one or a single row of larger trees.

Has it been done before?

Wilshire Blvd., Santa Monica

Yes, pedestrian medians exist throughout the City and County, but it's not common to see them planted.

Landscaped medians

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Landscaped medians help calm traffic by narrowing down travel lanes while providing potential space for street trees. Trees in pedestrian medians can help provide shade and cover the dark asphalt that contributes to urban heat islands in Los Angeles.

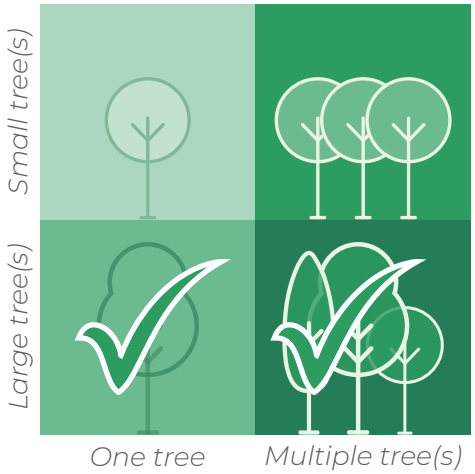
Where can this happen?

Landscaped medians can be installed on wide multi-lane streets to make conditions safer for pedestrians crossing the street.

What are the opportunities and challenges?

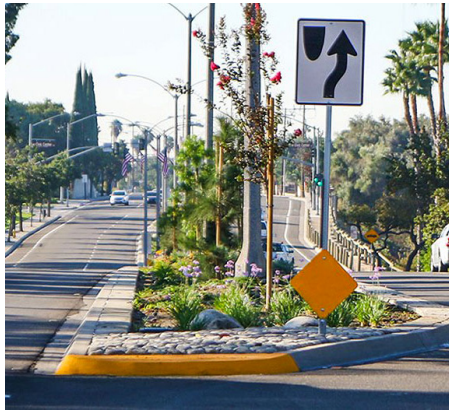
- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce on-street parking where implemented
- Generates shade and cools down the neighborhood

How much canopy can this bring?



In LA, pedestrian medians need to be 6 feet wide, which can create space for one or a single row of larger trees.

Has it been done before?



La Mirada, California

Yes, landscape medians exist throughout the City and County, but it's not that common to see them planted, and tree maintenance is an important consideration in medians.

Shifted sidewalks

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Shifting the sidewalk involves moving the sidewalk alignment to avoid conflicting with existing or planned street trees. This helps address concerns that the roots of large trees may lift the sidewalk and create ADA and accessibility concerns for pedestrians and mobility-aid users. This also removes the need for cutting down large trees for adequate pedestrian space.

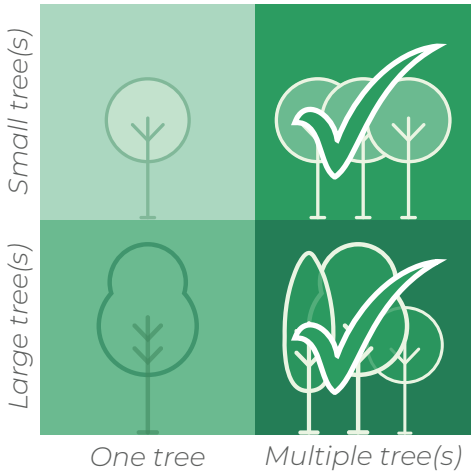
Where can this happen?

These are recommended in areas where large tree roots may conflict with the sidewalk.

What are the opportunities and challenges?

- Prevents trees from lifting sidewalks
- May require relocating stormwater infrastructure where implemented
- Preserves large mature trees
- Potential conflict with power lines (if existing)
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?



A shifted sidewalk can provide space for planting or preserving many small or large trees.

Has it been done before?

Pasadena Ave, City of Los Angeles

Yes. The picture above is an example of the City of LA shifting a sidewalk to preserve existing mature trees.

Sidewalk extensions

Tier 3

Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Sidewalk extensions extend sidewalks into the public roadway to enhance walkability and the pedestrian experience. This, in turn, also creates more space for trees, shade, stormwater capture, and pedestrian safety.

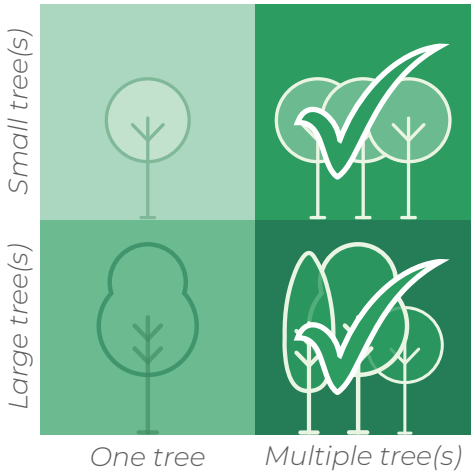
Where can this happen?

Sidewalk extensions can happen in areas needing greater pedestrian space and streets with less traffic and slower speeds.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- Creates space for pedestrians, greening, and other street amenities
- Generates shade and cools down the neighborhood
- May require relocating stormwater infrastructure where implemented
- May reduce travel lane space where implemented
- May reduce on-street parking where implemented

How much canopy can this bring?



Sidewalk extensions are large infrastructural projects with the potential to bring rows of small

Has it been done before?

Sidewalk & Curb Extension, Long

Yes. These extensions have the potential to create a lot of space for additional trees.

Chicanes

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

A chicane is a curve in the road created by curb extensions that slows cars and increases pedestrian safety. Chicanes also increase the amount of pedestrian space available on a corridor and can be activated using benches, bicycle parking, trees, and other amenities.

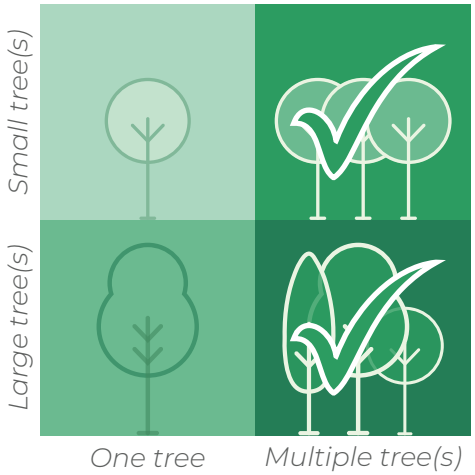
Where can this happen?

This can happen on residential or low-volume streets that are currently wider than needed.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?



When implemented on street segments, chicanes have the potential to bring rows of trees.

Has it been done before?

San Fernando Road, San Fernando

Yes, we can find chicanes as close as the City of San Fernando.

Mini-roundabouts

Tier 3

Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

On slower streets, neighborhood roundabouts can replace all-way stop controls. Roundabouts promote traffic safety by eliminating the possibility of T-bone collisions and encouraging drivers to slow down. When combined with greening elements, this intervention also creates space for tree planting.

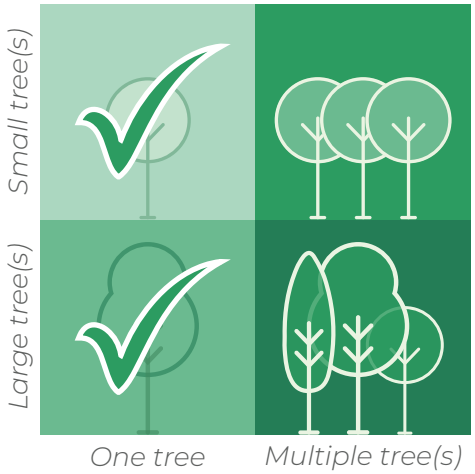
Where can this happen?

These can be installed at more minor intersections. It should not be implemented in areas with high pedestrian/bicyclist traffic.

What are the opportunities and challenges?

- Increases driver safety (removing possibility of T-bone collisions)
- Creates space for pedestrians, greening, and other street amenities
- Generates shade and cools down the neighborhood
- May require underground infrastructure changes to prevent conflicts with trees
- May require special tree species selection and consideration to ensure driver visibility

How much canopy can this bring?



If planned correctly, each neighborhood roundabout can bring one small or large tree.

Has it been done before?

Glenarm Blvd, Pasadena

Yes, mini roundabouts can be seen in Pasadena, Santa Monica and Los Angeles.

Diverters (planted)

Tier 3

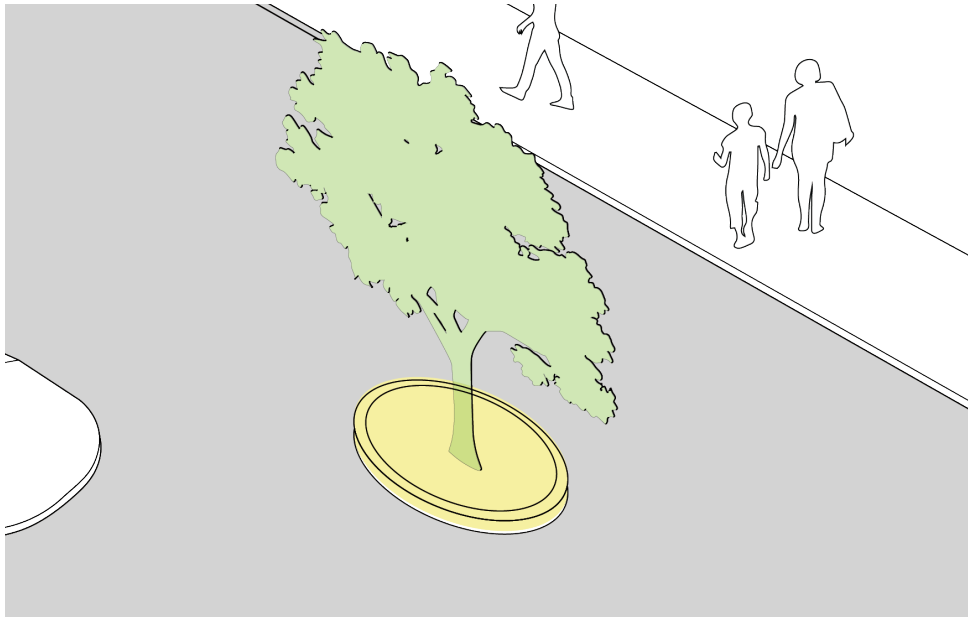


Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

These are small planted medians that divert and slow cars and traffic. Planted diverters are generally smaller than pedestrian medians and would only accommodate smaller trees. They are typically used to slow down cars and direct traffic.

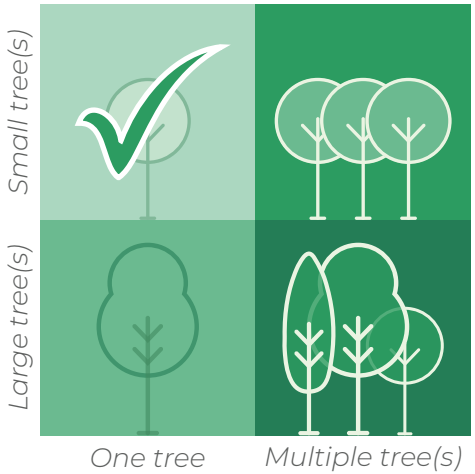
Where can this happen?

They're installed on streets where slowing car traffic for safety is an explicit goal, typically in more residential areas.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require underground infrastructure changes to prevent conflicts with trees
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood
- May reduce on-street parking where implemented

How much canopy can this bring?



Planted diverters tend to be smaller, so they bring one small tree even when planted.

Has it been done before?

Portland, Oregon

Yes, though planted diverters are currently more popular in other states.

Green streets or alleys

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

A Green Street or Alley is a stormwater management approach that incorporates vegetation (perennials, shrubs, trees), soil, and engineered systems (e.g., permeable pavements) to slow, filter, and cleanse stormwater runoff from impervious surfaces (e.g., streets, sidewalks). Communities throughout LA have identified the need for Green alleys as a means to increase neighborhood safety, biodiversity, green space, and public health.

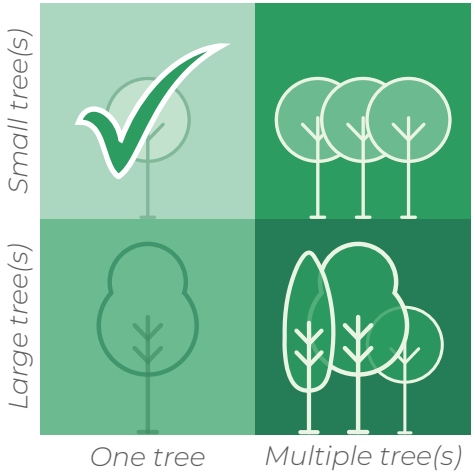
Where can this happen?

Streets with adequate sidewalk space and residential alleyways are often good candidates for green streets and alleys.

What are the opportunities and challenges?

- Encourages groundwater retention
- May require a lengthy and expensive implementation process
- Beautifies and greens a community
- May require high maintenance funds
- Generates shade and cools down the neighborhood

How much canopy can this bring?



Green alleys are great for plants but have limited space for trees.

Has it been done before?

Elmer Street Green Alley

Yes. Los Angeles has its own green alleys program to support the creation of green streets and alleys.

Land acquisition

Tier 3

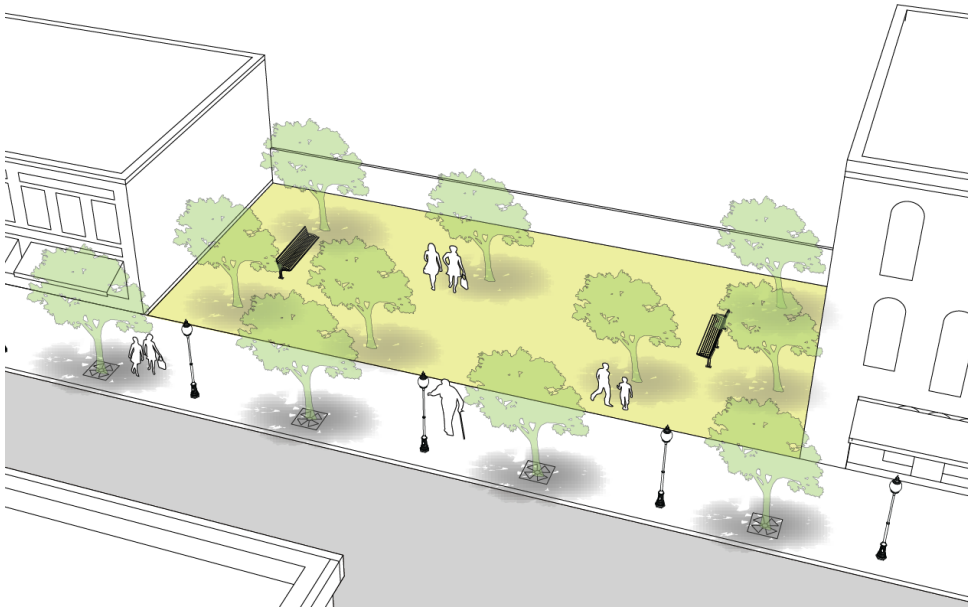


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Land acquired to build new parks, community gardens, and public spaces creates powerful opportunities for bringing more trees and tree benefits to a community. For land acquisition projects, it is essential to collaborate with the community, the public, and the private sectors to support the process of purchasing and potentially converting a piece of land.

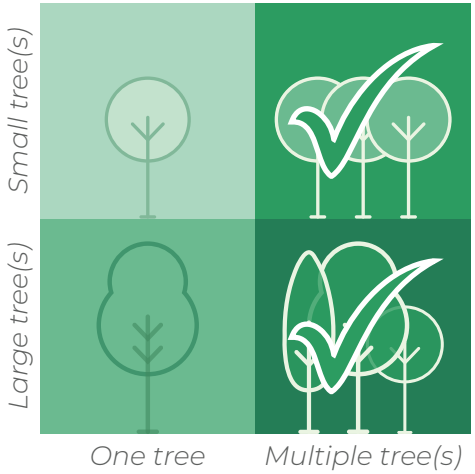
Where can this happen?

This can be done on open pieces of land for purchase.

What are the opportunities and challenges?

- Creates space for pedestrians, trees, and community recreation
- Creates space for pedestrians, trees, and community recreation
- Supports active recreation, exercise, and public health
- May require a lengthy and expensive implementation process
- May require high maintenance funds

How much canopy can this bring?



New public or community land is an excellent opportunity to bring many trees of all sizes.

Has it been done before?

Earvin "Magic" Johnson Park, Los Angeles

Yes. The county is currently working on constructing a new park in Willowbrook.

One-way Streets

Tier 3

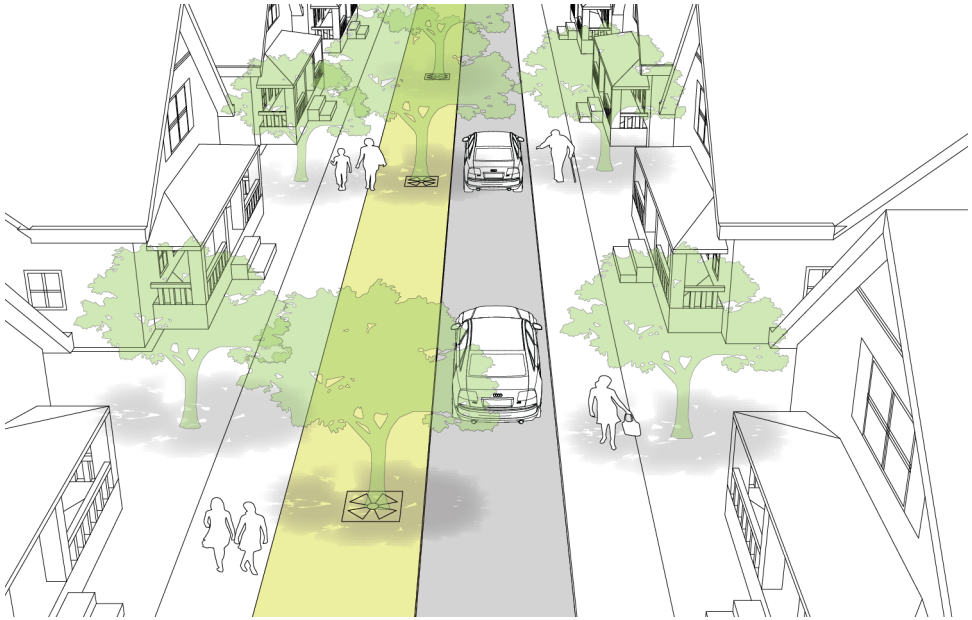


Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

A vehicle lane could be re-purposed on streets with low traffic volumes to provide a wider sidewalk and space for tree planting. This could be implemented on one side of the road to maximize tree space. The street would be wide enough to retain on-street parking on both sides and allow emergency access.

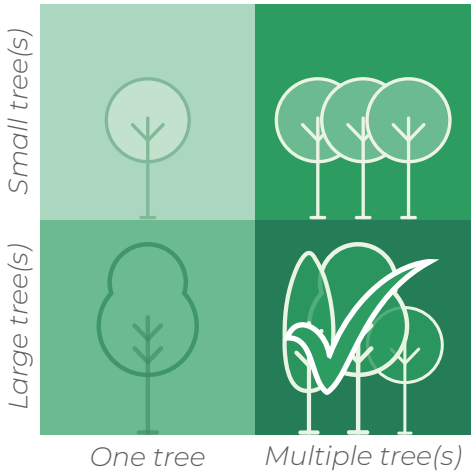
Where can this happen?

Low traffic volume vehicular lanes.

What are the opportunities and challenges?

- Calms traffic and creates safer conditions for pedestrians
- May require relocating stormwater infrastructure where implemented
- Creates space for pedestrians, greening, and other street amenities
- May reduce travel lane space where implemented
- Generates shade and cools down the neighborhood

How much canopy can this bring?



This intervention can bring rows of trees that provide cooler sidewalks and opportunities for people to walk in neighborhoods.

Has it been done before?

Franklin Street, San Francisco

Yes, and where appropriate they can be a great way to provide additional planting space in areas without it.

Incentives for planting in private property setbacks

Tier 3

Image Source: National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

When multi-family housing is developed in the City of Los Angeles, zoning codes require the project to plant at least one 24-inch box tree for every four units. Street trees in the public parkway may be counted towards the required trees. Trees planted on private property would increase shade on sidewalks and provide additional public benefits.

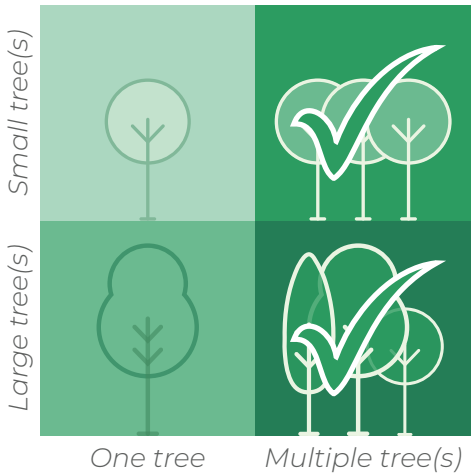
Where can this happen?

Trees can be planted in setbacks to provide shade and permeable areas in new residential developments around Los Angeles.

What are the opportunities and challenges?

- Beautifies and greens a community
- May reduce the buildable area of residential projects
- Generates shade and cools down the neighborhood
- May require other incentives or discretionary approvals

How much canopy can this bring?



This depends on the size of the setback, but this can be an opportunity to plant multiple large trees.

Protected bikeway (class IV)

Tier 3

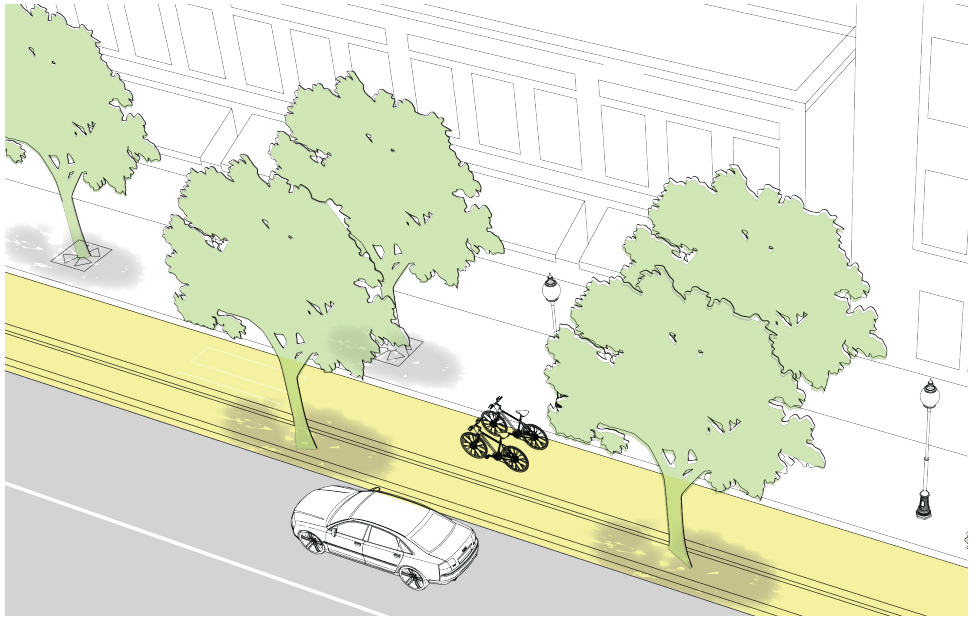


Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Class IV Bikeways, also referred to as separated bikeways or cycle tracks, provide an alternative to other bikeways that may minimize interactions with other modes of travel by introducing a vertical element separation. The objective is to foster bicycling as a means of transportation, in a manner that improves safety for all users, including motorists, transit users, and pedestrians, including persons with disabilities.

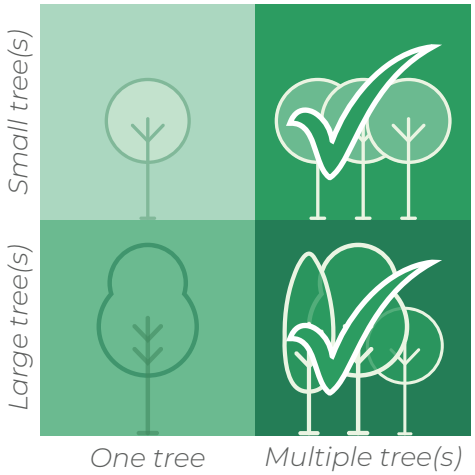
Where can this happen?

They can be planted in setbacks to provide shade and permeable areas in new residential developments around Los Angeles.

What are the opportunities and challenges?

- Creates safer conditions for bicyclists
- May reduce travel lane space where implemented
- Beautifies and greens a community
- May reduce on-street parking where implemented
- Generates shade and cools down the neighborhood

How much canopy can this bring?



There's an opportunity here to plant rows of large and small trees alongside the bike lane.

Has it been done before?

Los Angeles

Yes, and they're a great way to increase planting locations while also supporting biking.

Plazas

Tier 3

Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Plazas convert a redundant or underutilized portion of a street into a public and community space with tables, chairs, and other furnishings. This can increase public safety, foster community cohesion, and add space for new trees if incorporated in the early stages of design.

Where can this happen?

They can be planted in setbacks to provide shade and permeable areas in new residential developments around Los Angeles.

What are the Opportunities and Challenges?

- Fosters a sense of place and community
- May reduce travel lane space where implemented
- Beautifies and greens a community
- May reduce on-street parking where implemented
- Generates shade and cools down the neighborhood

How much canopy can this bring?

Depending on the size of the plaza, there's an opportunity to plant multiple small or large trees.

Has it been done before?

Leimert Park Plaza, Los Angeles

Yes, the Leimert Park Plaza converted underused streets into a space for people and future projects can consider how to incorporate trees in the early stages of design to maximize shade and public health benefit.

Underground power lines

Tier 3

Image Source:
National Association of City Transportation Officials, Urban Streets Design Guide.

What's this?

Overhead power lines hanging over parkways and tree wells can be a barrier to tree planting because of fears that the tree will conflict with the power line as it matures. Overhead power lines often prevent the planting of large, shade providing trees, particularly in historically disinvested communities. By undergrounding power lines, we free up parkways for tree planting while protecting the power lines from strong winds and falling trees.

Where can this happen?

This may be an option in areas where there are power lines over existing plantable spaces, depending on feasibility and government agency capacity.

What are the opportunities and challenges?

- Can increase public safety
- Process of undergrounding power lines can be costly
- Beautifies and greens a community, particularly in neighborhoods where it's needed most
- Generates shade and cools down the neighborhood

How much canopy can this bring?

Undergrounding rows of powerlines creates opportunities to plant multiple small or large trees where the lines used to be.

Has it been done before?

Broadway, NYC, New York

Yes, a 1972 City of LA Ordinance established regulations and procedures for undergrounding power lines via the creation of Underground Utility Districts, and it has been applied in special cases.

Acknowledgements

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- Department of City Planning, Complete Street Design Guide and Urban Design Studio
- Bureau of Engineering and Department of Transportation, Supplemental Street Design Guide
- LA Sanitation and Environment, Green Streets and Green Corridors Program
- Streets LA, Urban Forestry Division, Street Tree Spacing Guidelines
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County of Los Angeles

- Department of Public Health, Step by Step: Pedestrian Plans for Unincorporated Communities
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