



Platte Ave.
A ConnectCOS Community Corridor

PLATTE AVE. CORRIDOR STUDY STREETScape TOOLBOX

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PREPARED BY
DESIGNWORKSHOP

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Photo Location: Platte Ave. and N. Nevada Ave.

PROJECT BACKGROUND

Streetscape Toolbox Purpose

Project Context

Character Areas

The Importance of the Pedestrian Realm's Role

Streetscape Users

Understanding the Streetscape Toolbox

Implementation of Toolbox Strategies

Evaluation of Toolbox Elements

STREETSCAPE TOOLBOX PURPOSE

The Platte Ave. Corridor Study focuses on a six-mile-long stretch of the Corridor starting from I-25 to Hwy 24 / N. Powers Blvd. Throughout the study, the goal was to define an Improvement Plan for the Corridor that does not only include operation and capacity improvements but also focuses on multi-modal, economic improvements, safety, and aesthetic improvements to the public realm. Critical overall goals include creating a corridor that is equitable, accessible, sustainable, and reliable.

The Streetscape Toolbox works in partnership with the Platte Avenue Corridor Study plan document to express the intent for future design considerations. It is a kit-of-parts in which there are various potential solutions for enhancing different elements of the pedestrian realm. These solutions are meant to be flexible and fit the numerous differing conditions along the Platte Ave. Corridor. The solutions purpose and considerations are described to provide adaptable approaches for a long timeline of implementation.

Within the Streetscape Toolbox are a variety of recommendations, such as intersection improvements, sidewalk design, and recommendations for medians along Platte. These recommendations are not intended to be specific to a particular location but rather adaptable to fit within the site's varied contexts along the Corridor and existing constraints. The potential solutions themselves were developed from the various public engagement events that took place throughout the Platte Ave. Corridor Study. Addressing these elements of the pedestrian realm will help make Platte Ave. safer and more accessible Corridor, while contributing to an improved public realm for residents and visitors.

The following pages showcase the various Toolbox elements and suggest locations where these improvements may be considered for implementation.

PROJECT CONTEXT

Due to its immensely varied existing conditions, the Platte Avenue Corridor is divided into four character areas to focus the study further (see Map 1). These character areas are referred to as Downtown, Middle Shooks Run, Knob Hill, and the Eastern Reaches.

Throughout the Corridor, numerous problems raise concern, and as the city of Colorado Springs continues to grow, these problems will only intensify. Some of these issues center around safety. For example, improving pedestrian safety near Palmer High School is essential in the Downtown Character Area. This same safety issue takes an entirely different form in the Knob Hill Character Area, where supporting local businesses and reducing pedestrian driveway conflicts is one of the main issues. There are also concerns that are seen all throughout the Corridor, like lack of continuous sidewalks, minimal north-south connections and safe pedestrian crossings, and overall ADA accessibility. The community identified the canopy of street trees and expansive grassy median in Middle Shooks Run as one of their favorite features of the current roadway. However, watering needs in this arid climate pose a challenge to maintaining that approach for the entirety of the Corridor.

To lead the approach on how to address the numerous issues facing the Platte. Ave. Corridor, a list of Functional Objectives was created. The Streetscape Toolbox expresses the purpose and means for achieving a future condition desired by the community. Through the Streetscape Toolbox, these issues facing the Corridor are intended to be addressed in the Platte Ave. Corridor Study.



Photo Location: Platte Ave. and N. Union Blvd.
Project Background | 7

PLATTE AVE. CORRIDOR STUDY | CHARACTER AREAS

Map 1



N. Academy Blvd.

HWY. 24 / N. Powers Blvd.

Character Area 4
Eastern Reaches
Chelton Rd. - Peterson Blvd.

Airport

DOWNTOWN CHARACTER AREA CONDITIONS

Along Platte Ave. in Downtown Colorado Springs, the conditions in the pedestrian realm vary quite a bit, as does the experience. In some areas there are mature trees that cover the sidewalks and in others there is expanses of concrete, or some form of gravel. The Corridor along this area currently presents a limit between Downtown to the south and the northern areas that are redeveloping. Streetscape improvements can help transform this perceived limit into a place for gathering and social life, while responding to surrounding uses like the school or Acacia Park. By improving the sidewalks, medians, and intersections both the pedestrian experience and the impression of this segment could be improved to create a more vibrant and lively place.

MAJOR ISSUES FACING THE DOWNTOWN SEGMENT

- Long crossing distances for pedestrians near Palmer High School
- Safety concerns for Palmer High Students and visitors
- Poorly constructed pedestrian crossings
- Lack of connection with Acacia Park consistent with Historic Parks Master Plan
- Lack of north-south crossings
- Frequent curb cuts disrupting pedestrian movement
- Confusion for vehicle movements around the Palmer median statue
- Inappropriate street frontages to program outdoor dining and other flexible street uses that activate other parts of the downtown
- Inconsistent tree planting or poor street tree health



MIDDLE SHOOKS RUN CHARACTER AREA CONDITIONS

The Middle Shooks Run area is predominately a residential area characterized by it's boulevard streets with overreaching mature trees. For the most part, this area is functioning well, and the current residences would like for this area to stay relatively the same. However, due to lack of traffic calming efforts, speeding vehicles through the segment contributes to an unsafe and noisy experience for residents and pedestrians.

MAJOR ISSUES FACING THE MIDDLE SHOOKS RUN SEGMENT

- Lack of defined north-south pedestrian crossings
- Lack of safety for pedestrians at intersections
- Long pedestrian crossing distances
- High speed traffic in area (and related noise)



Knob Hill Character Area Conditions

Knob Hill is a transition point from the highway-like area of the Eastern Reaches to the predominately residential area of Middle Shooks Run. However, there is a little to signify this change to vehicular traffic. As such, motorists tend to speed through the area. Throughout the Knob Hill area there are raised medians and limited north-south connections. Combined, these aspects make it difficult for pedestrians to transverse Platte Ave. safely.

Sidewalks are narrow with minimal vegetation. Throughout great portions of the area the sidewalk abuts parking area in front of local businesses. The combined effect of these various elements is that it creates an unpleasant experience for the pedestrian, where they don't necessarily feel prioritized. This can and helps to contribute to lack of activity along the corridor. With the lack of regular activity it can lead endorsing undesired activities.

MAJOR ISSUES FACING THE KNOB HILL SEGMENT

- Lack of north-south crossings
- Missing segments of sidewalks
- Long crossing widths at intersection are a safety concern for all visitors and residents
- Medians are a barrier
- Large unactivated areas
- Lacks transition from Eastern Reaches to Middle Shooks Run
- Needs more on street parking
- Lack of provisions of space for pedestrians



EASTERN REACHES CHARACTER AREA CONDITIONS

The Eastern Reaches is functions today primarily as a traffic corridor leading to Downtown Colorado Springs. Throughout this segment there are extended stretches along Platte Ave. without any sidewalks for pedestrians. Even fewer are the intersections to allow pedestrians to safely cross up to seven lanes of traffic.

MAJOR ISSUES FACING THE DOWNTOWN SEGMENT

- Missing segments of sidewalks for pedestrians
- Lack of north-south crossings
- Reduce crossing distances in strategic locations
- Vacant Parcels and Buildings
- Unattractive highway-type treatment that lacks distinct character



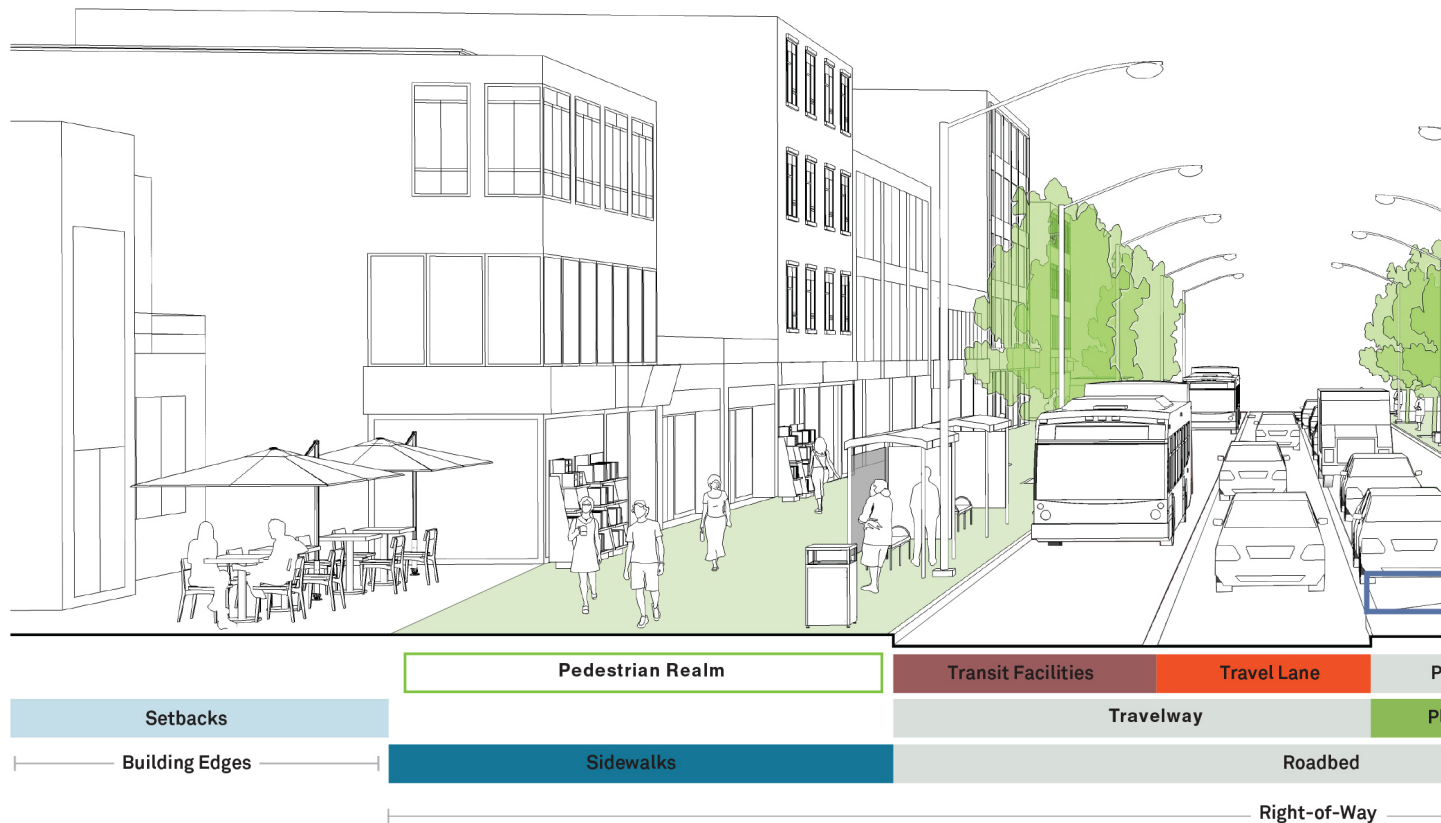
THE IMPORTANCE OF THE PEDESTRIAN REALM'S ROLE

This Streetscape Toolbox focuses on the public realm along Platte Ave., which includes the area between property lines. This area, also known as “Right-of-Way,” comprises various zones, as depicted below in the graphic. One of these zones is the “pedestrian realm,” which serves as a network in a city that connects people to places and people to people. Here, people can meet, exchange ideas, conduct business, and live together. A well-designed and inviting pedestrian realm helps create a vibrant area. This is critical as lively areas attract social and

economic activity and improve people’s sense of safety while deterring unwanted activities such as crime. Even more so, the quality of the pedestrian realm influences people’s perception of the city.

Elevating the pedestrian realm along the Platte Ave. Corridor will help this project achieve its functional objectives. Improving aspects like sidewalks and intersections will help make Platte Ave. a safe and more walkable environment for pedestrians. In

Typical Street Zone Definitions



Right of Way

The limits of public space that can be altered in the Main Street Management Plan.

Pedestrian Realm

Dedicated space with clear walking paths and universal access used for a variety of activities and functions

Travelway

The space between the street edges that can be designed to carry various modes of transportation.

Transit Facilities

Dedicated space for transit facilities used for various modes of transportation.

In addition, enhancing factors like plantings, lighting, and overall aesthetics will improve the overall pedestrian experience and help perceive the corridor as safer. At the same time, stormwater management strategies can be introduced as part of the public realm design. Creating a place that invites people to linger, stay longer, and activate the surrounding areas helps create an identity, improve the pedestrian experience, and better stormwater management.



Facilities

... within the different types of ... on.

Street Edge

The space between the curb and the travelway that can be dedicated to stationary cars, cyclists and loading/unloading zones.

Cycle Facilities

Dedicated space for cyclists to travel. This can be within or separate from the travelway.

Planting

Trees, planting beds, and green infrastructure within the sidewalk, between parking spaces or in medians.

STREETSCAPE USERS

Similar to the Right-of-way, which comprises various zones, the users of the right-of-way or streetscape are just as varied. Understanding the needs of streetscape users is critical to improve aspects like functionality or comfort.

focus on these users and improvements to make their experience a great and safe one.

The diagram below shows the various users of a streetscape and how important pedestrians and business owners are in this mix. The Toolbox will

Types of Streetscape Users



Pedestrians



Cyclists



Transit Riders



Motorists



**Freight Operators
and Service
Providers**



**People Doing
Business**

Information found at NACTO.ORG

UNDERSTANDING THE STREETScape TOOLBOX

STRATEGIES OF THE STREETScape TOOLBOX

The Streetscape Toolbox focuses on several strategies that informed the development of the solutions for the overall Streetscape Toolbox. These strategies include the following:

- Improve Walkability and Pedestrian Access
- Increase Human Comfort and Safety
- Enhance the Corridor's Overall Identity and Character
- Incorporate Sustainable Design Strategies
- Support Existing and Future economic Development

Each strategy is achieved through multiple methods, creating a more holistic approach. Below is a description of the methods used to accomplish each strategy.

IMPROVE WALKABILITY AND PEDESTRIAN ACCESS

- Widen Sidewalks
- Plant buffer between sidewalk and parking or travel lanes, or incorporated defined pedestrian crossings, or incorporated mid-block crossings
- Increase the number of north-south pedestrian crossings

IMPROVE HUMAN COMFORT AND SAFETY

- Widen sidewalks
- Create separation between cars and sidewalks with buffers
- Reduce pedestrian crossing distances
- Create defined pedestrian crossings
- Increase the amount of vegetation
- Use place-making at strategic locations along the corridor to activate it

- Provide site furnishings at a greater frequency along the corridor
- Add public pocket park type spaces and outdoor dining opportunities to attract visible activity.

ENHANCE CORRIDOR'S OVERALL IDENTITY AND CHARACTER

- Create a site furnishing palette that is recognizable and unique to Platte Ave. and helps communicate the Corridor's identity
- Add to and enhancing existing planting along Platte Ave.
- Create stronger connections to existing parks and infrastructure
- Provide gateway and art installation opportunities

INCORPORATE SUSTAINABLE DESIGN STRATEGIES

- Use various methods to increase stormwater infiltration, slow down stormwater
- Increase biodiversity of planting
- Use native species of plants that are drought tolerant

SUPPORT EXISTING AND FUTURE ECONOMIC DEVELOPMENT

- Improve connectivity and access for pedestrians
- Increase on-street parking
- Create better visitor experience through plantings, site furnishings, art installation opportunities
- Enhance and expand existing connectivity with existing features like Acacia Park.

UNDERSTANDING THE ELEMENTS OF THE STREETSCAPE TOOLBOX

The following section of this document, called “Streetscape Toolbox,” contains the various solutions to the different elements of the Streetscape Toolbox of the pedestrian realm addressed. Within this section, there are the following streetscape elements:

- Sidewalk Typologies
- Median Typologies
- Intersection Typologies
- Stormwater Management Typologies
- Planting Strategies
- Site Furnishings









For each one of these elements, various typical solutions are presented that can be implemented in different areas along the Corridor. As an example, under Sidewalk Typologies, three different solutions are presented.

1. Plaza Sidewalk
2. Widened Sidewalk
3. Flexible Sidewalk


Every streetscape element is presented with a graphic and brief description that addresses the main characteristics of the proposed design strategy. Various challenges related to the pedestrian environment, walkability, identity, and the public realm can be addressed by implementing these elements. Not every solution given is appropriate for everywhere along the Platte Ave. Corridor. Therefore, recommendations have been provided to show where specific solutions would work well in this document’s section called Character Areas and Toolbox Implementation. The Platte Ave. Corridor Character Areas each have a map of their specific section of Platte Ave., as shown below for the Downtown Character Area. The elements noted on this and other maps should be considered for implementation in concert with intersection and roadway reconfiguration recommendations contained in Chapter 7 of the corridor study.



On the site plan are small colored icons that represent the location where a solution is recommended. Taking a closer look at these icons and what they mean, under the legend are the following icons.

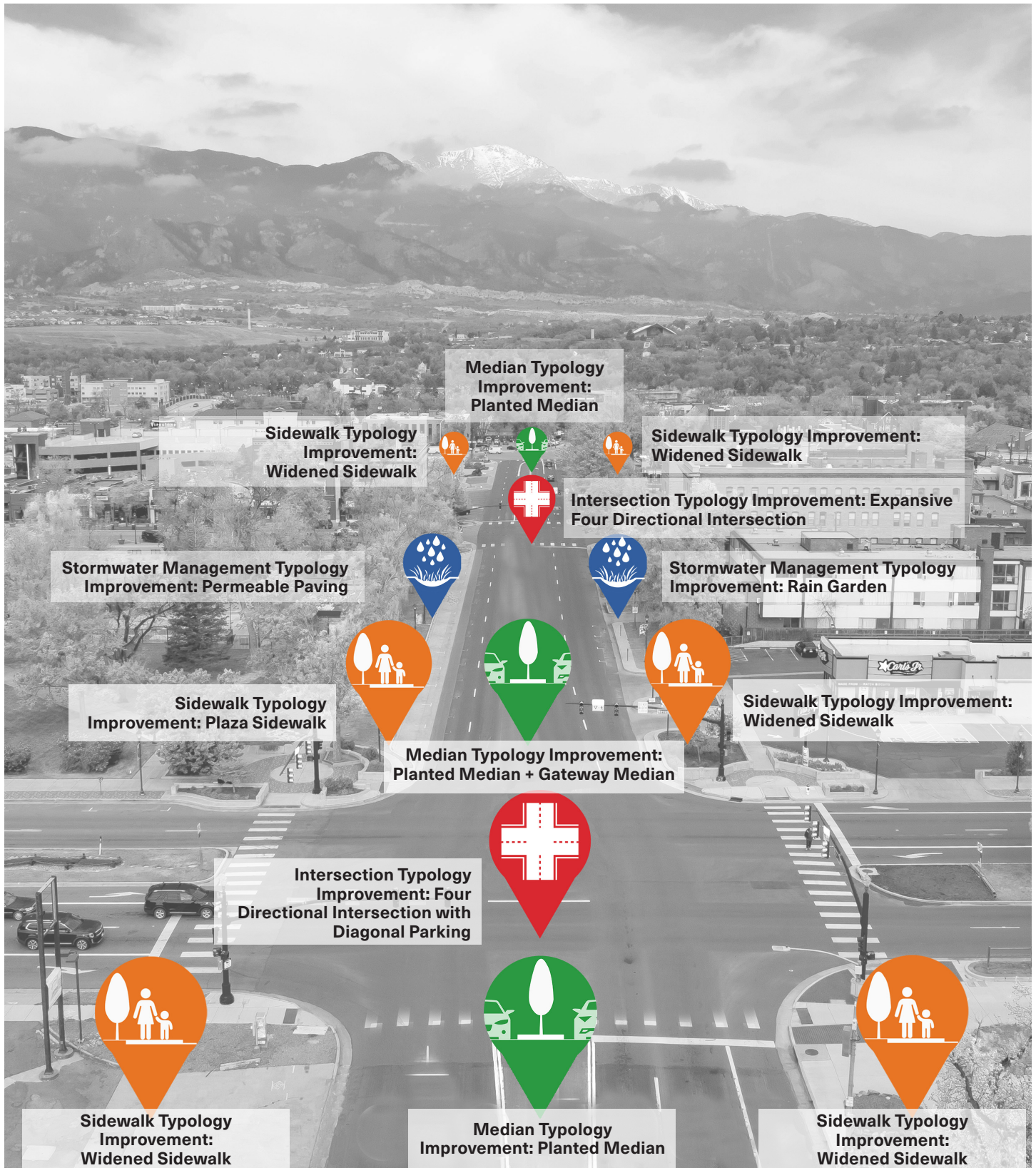
-  Intersection Typologies
- 
-  Sidewalk Typologies
- 
-  Median Typologies
- 
-  Stormwater Management Typologies
- 

The following is an explanation of a symbol on a site plan:
The color and shape refer to the typology being addressed, in this case, *Sidewalk Typologies*.



The letter within the circle refers to the specific solution recommended. For this example, A refers to the Plaza Sidewalk.

IMPLEMENTATION OF TOOLBOX STRATEGIES



EVALUATION OF TOOLBOX ELEMENTS

A three-part evaluation system has been included for each solution to provide basic information about the relative expected cost, environmental benefit, and community benefit. As seen below, a different icon is used for each of these rating systems.



of potential costs is high-level and not based on specific cost estimates.

Community Benefit: Refers to the impacts a specific solution might have on the community and quality of life in that area. Some of these impacts include safety, increased connectivity, added space along sidewalks that will offer flexibility to adjacent businesses, and new gathering spaces along Platte Ave.

Each of these ratings is presented out of a possible score of four, with four being the highest and one being the lowest. Below is an example of a four-score rating, followed by an example of a one-score rating. *Notice the use of a darkened icon vs. a lightened icon.*



The following is a short description of each rating system.

Environmental Benefit: Refers to the level of improvements a specific design solution would provide from an ecological perspective. For example, environmental benefits could relate to increased permeable surfaces and stormwater management benefits, additional green space and habitat opportunities for insects, birds, and pollinators, or increased tree canopy and shade that can help manage the heat island effect.

Cost: Refers to the general cost associated with implementing one of the Toolbox design solutions. Some of the more complex solutions might have a higher cost and, therefore, should be considered part of a phased implementation strategy. The evaluation



Photo Location: Platte Ave. and N. Circle Drive
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STREETSCAPE TOOLBOX

Sidewalk Typologies

Median Typologies

Intersection Typologies

Stormwater Management Typologies

Planting Strategies

Planting Lists

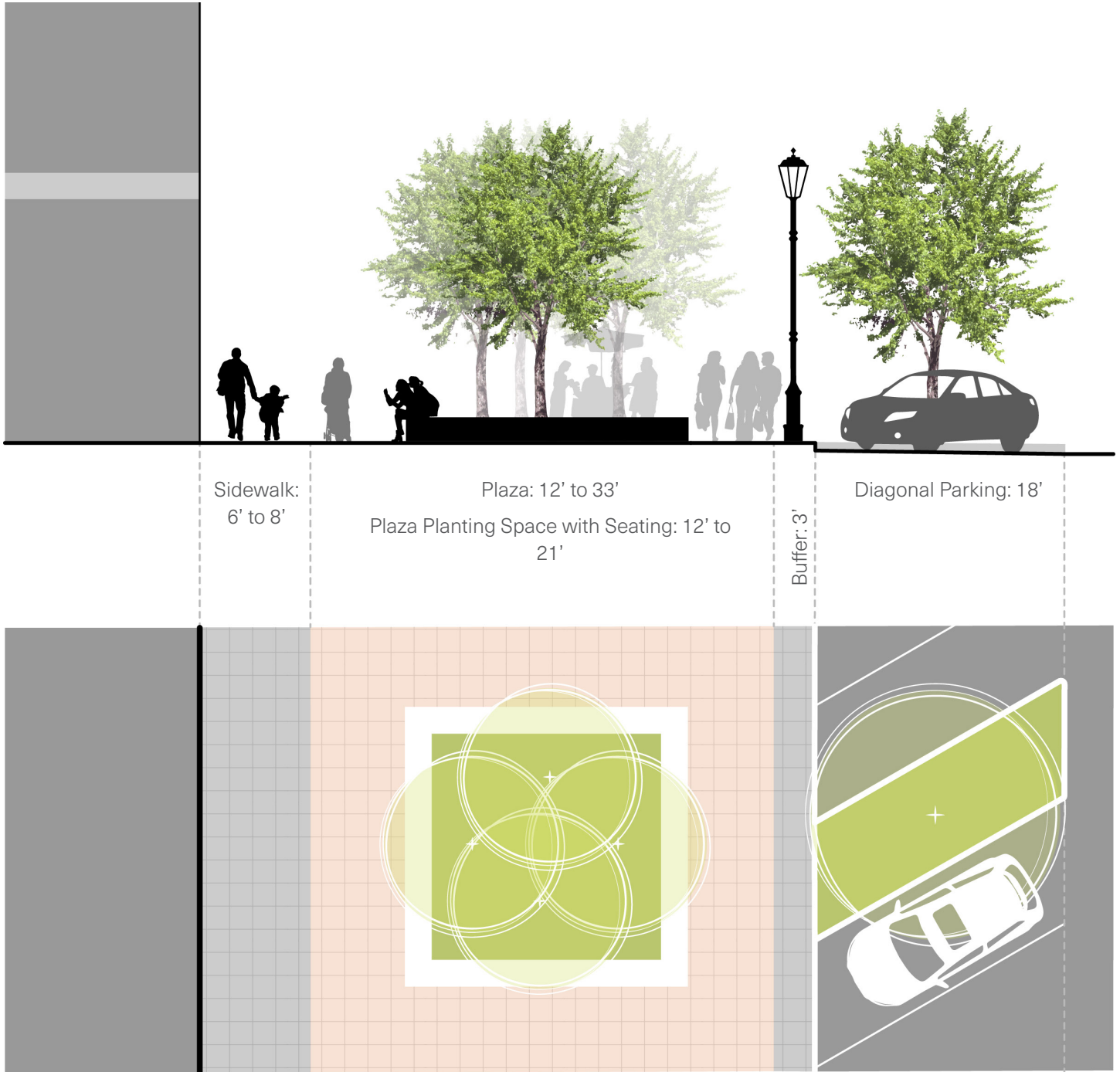
Stormwater Management Planting Strategies

Street Furnishing

Inspiration Imagery

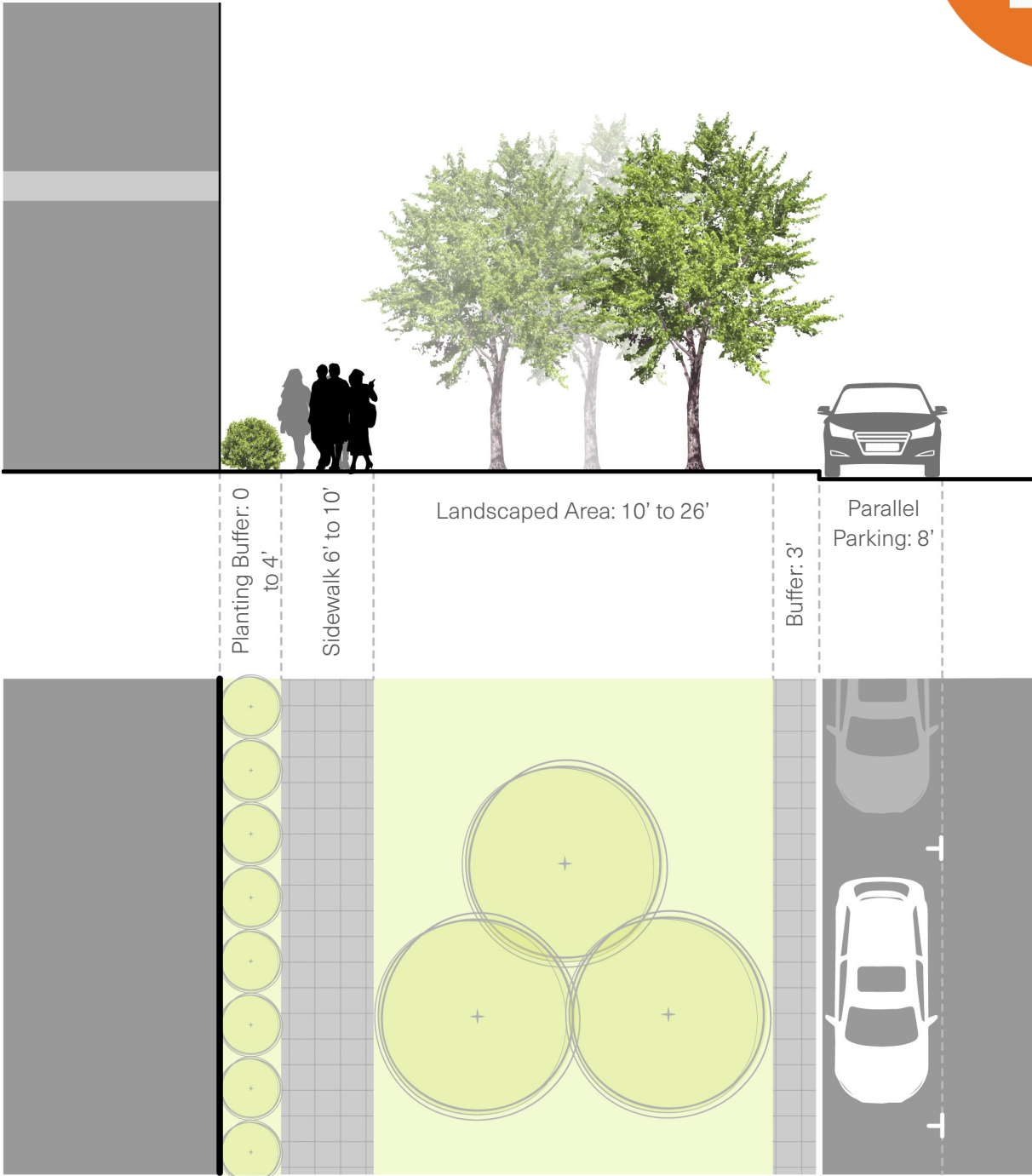
SIDEWALK TYPOLOGIES

The following sidewalk typologies present solutions that will help improve walkability along Platte Ave., while creating an attractive and cohesive aesthetic along the Corridor and its various character areas. These typologies can be applied in the different character areas of the Corridor depending on the context and Right-of-Way configurations. Maps showing potential locations where these typologies can be applied are showing the following chapter.



A. Plaza Sidewalk

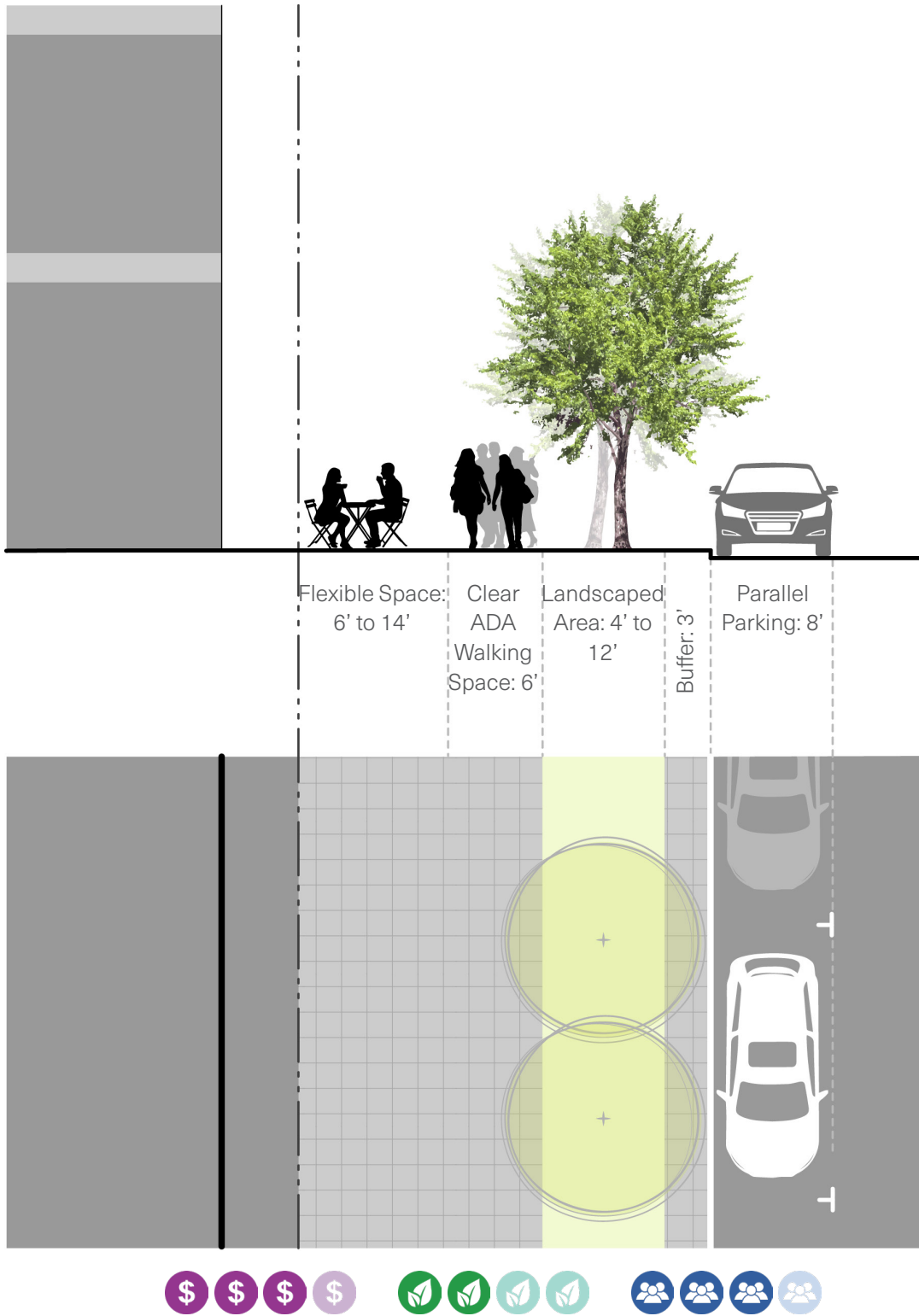
The Plaza Sidewalk creates flexible public space where programming and activities could take place, while supporting surrounding uses.



B. Widened Sidewalk

The Widened Sidewalk creates a wider and accessible path, ideally buffered from parking and/or drive lanes that creates a more defined space for pedestrians and helps avoid conflict with drivers, while enhancing comfort and the overall pedestrian experience.

SIDEWALK TYPOLOGIES



C. Flexible Sidewalk

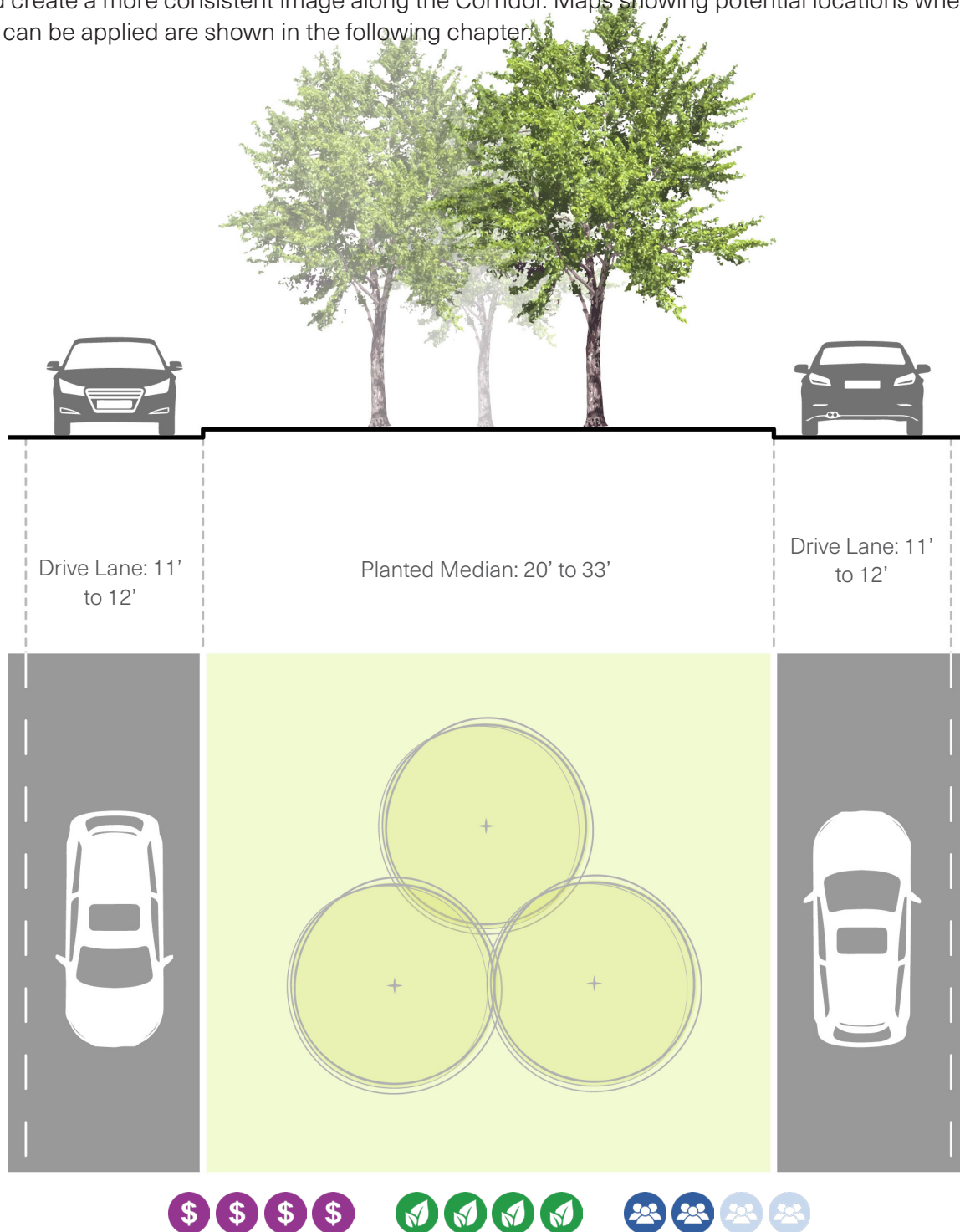
The Flexible Sidewalk provides a wider sidewalk that allows for outdoor seating and programming that can support restaurants and local businesses while creating a more vibrant and attractive pedestrian experience.



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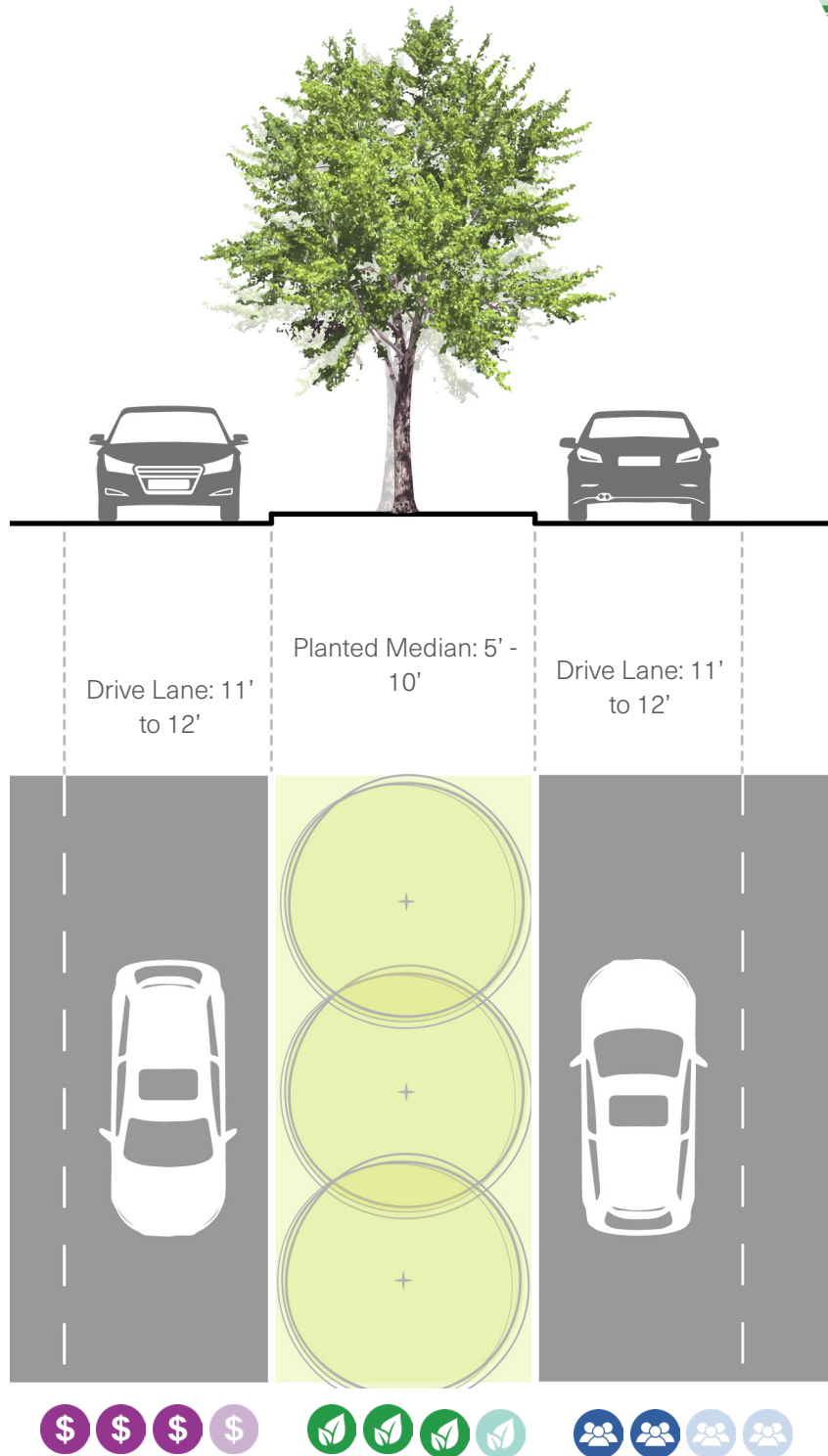
MEDIAN TYPOLOGIES

The following median typologies serve the purpose of reducing crossing widths for pedestrians, therefore increasing safety. They also allow for more green and vegetated areas, increasing permeable surfaces, and the opportunity to incorporate more street trees to the Corridor. There are currently existing medians in the Shooks Run area and also along Knob Hill. The opportunity exists to incorporate these where there is room in the Right-of-Way and create a more consistent image along the Corridor. Maps showing potential locations where these typologies can be applied are shown in the following chapter.



A. Large Planted Median

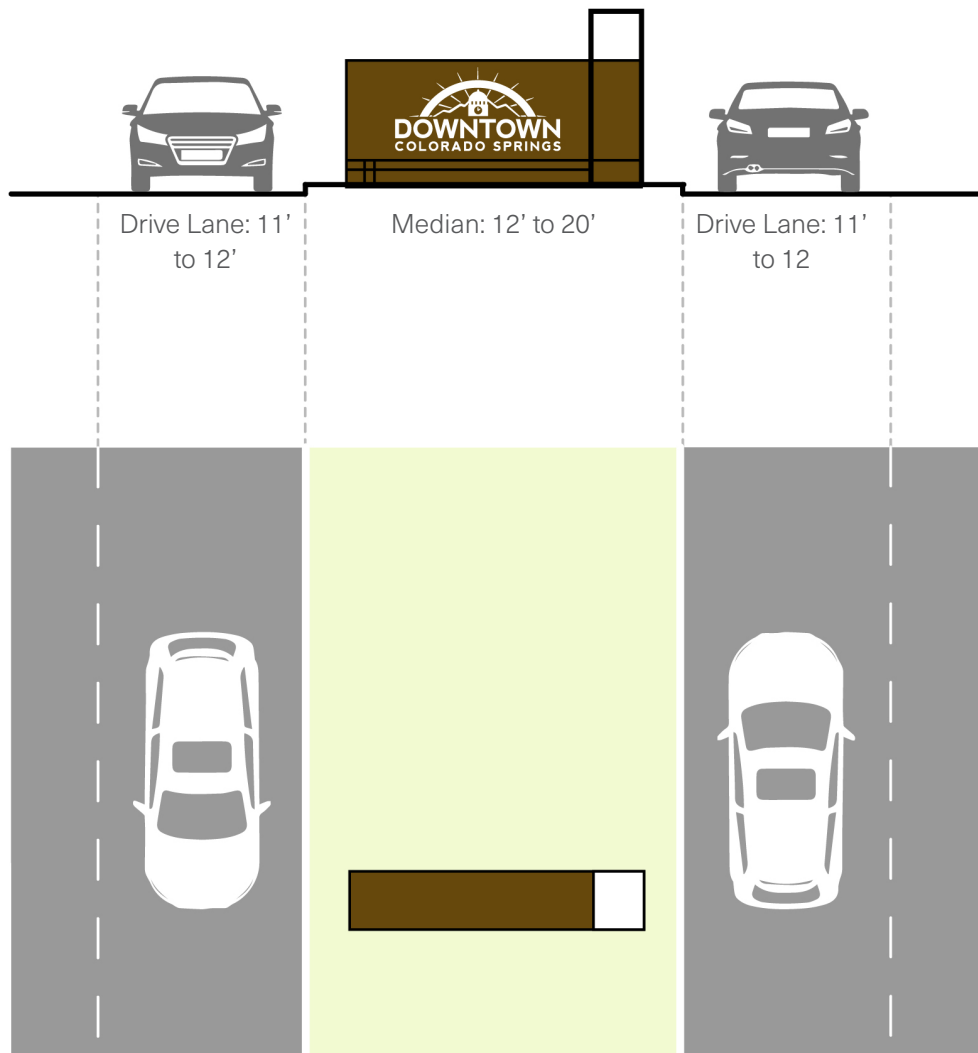
The large planted median is wider than 10' median and allows for increased planting and mature street trees. This is similar to what exists in a portion of the Middle Shooks Run Character Area. At intersections, pedestrian refuges can be added to the median to shorten crossing distances.



B. Planted Median

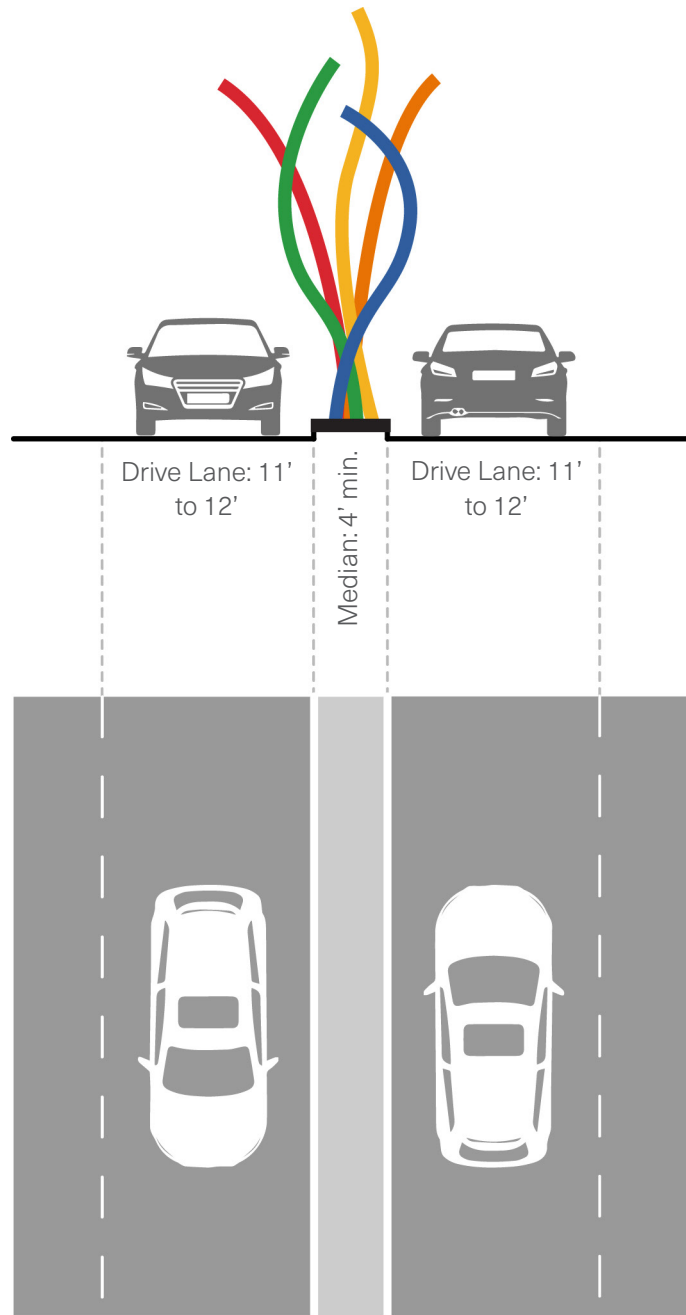
The Planted Median should have a minimum width of 5' and allows to incorporate medium size street trees and/ or perennials and grasses. At intersections, pedestrian refuges can be added to the median to shorten crossing distances.

MEDIAN TYPOLOGIES



C. Gateway Median

The Gateway Median is designed as a hardscape area that can help create a gateway by incorporating a signage element, sculpture, or key lighting/ art.

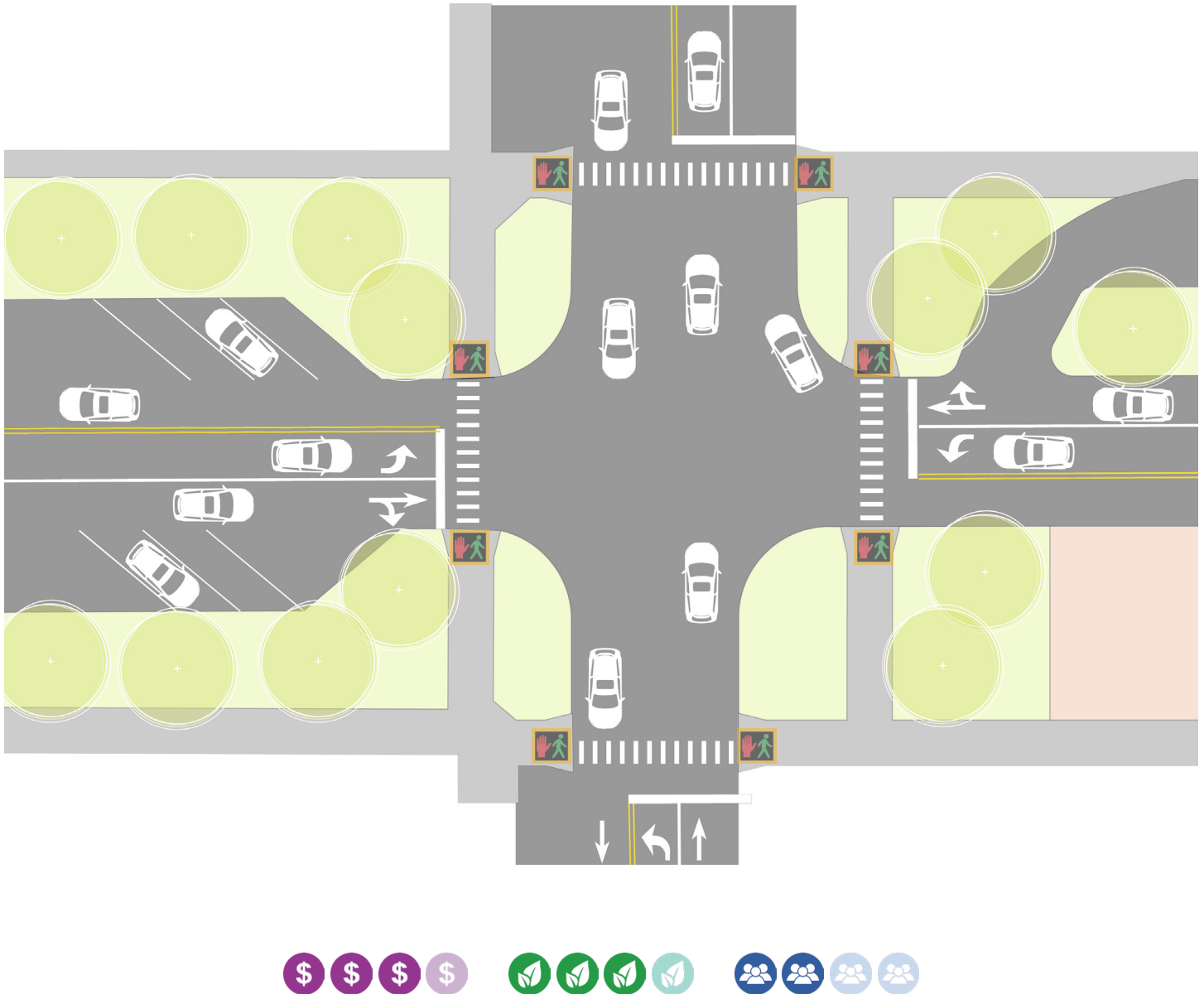


D. Art Median

The Art Median is meant to provide an opportunity to incorporate art into the streetscape. This median can be used when width is not enough to allow for healthy plant growth, and can help create a unique identity along a specific area of Platte Ave.

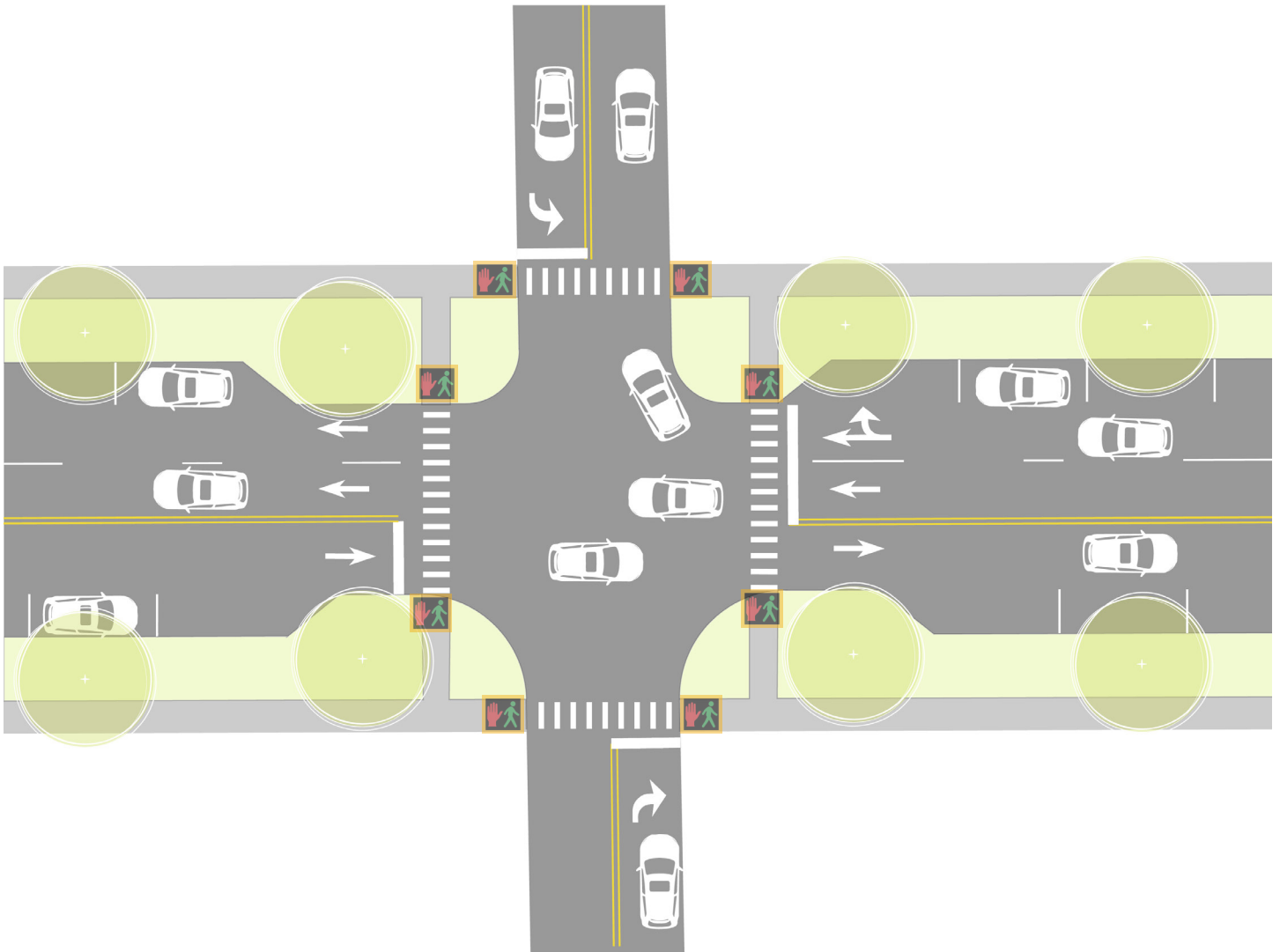
INTERSECTION TYPOLOGIES

The goal of the proposed intersection typologies is to create identifiable and safer pedestrian crossings, while also reducing speeds along Platte Ave. As areas of the Right-of-Way are re-designed along Platte Ave., improvements to the intersections and pedestrian crossings should be considered. Maps showing potential locations where these typologies can be applied are shown in the following chapter.



A. Four Directional Crossing with Diagonal Parking

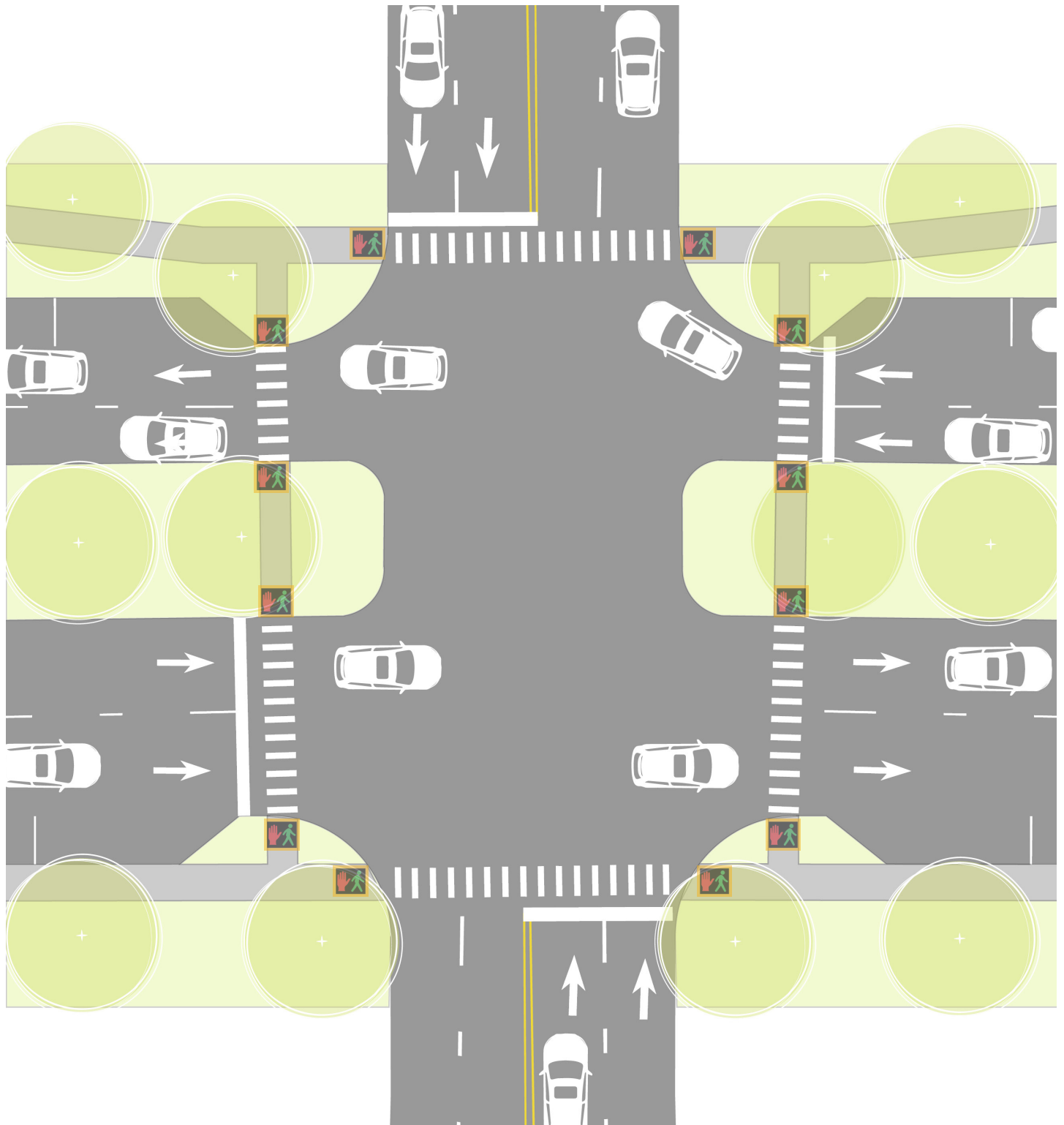
This typology incorporates bulb-outs at the corners creating a safer pedestrian crossing and achieving a shorter crossing width.



B. Four Directional Crossing with Parallel Parking

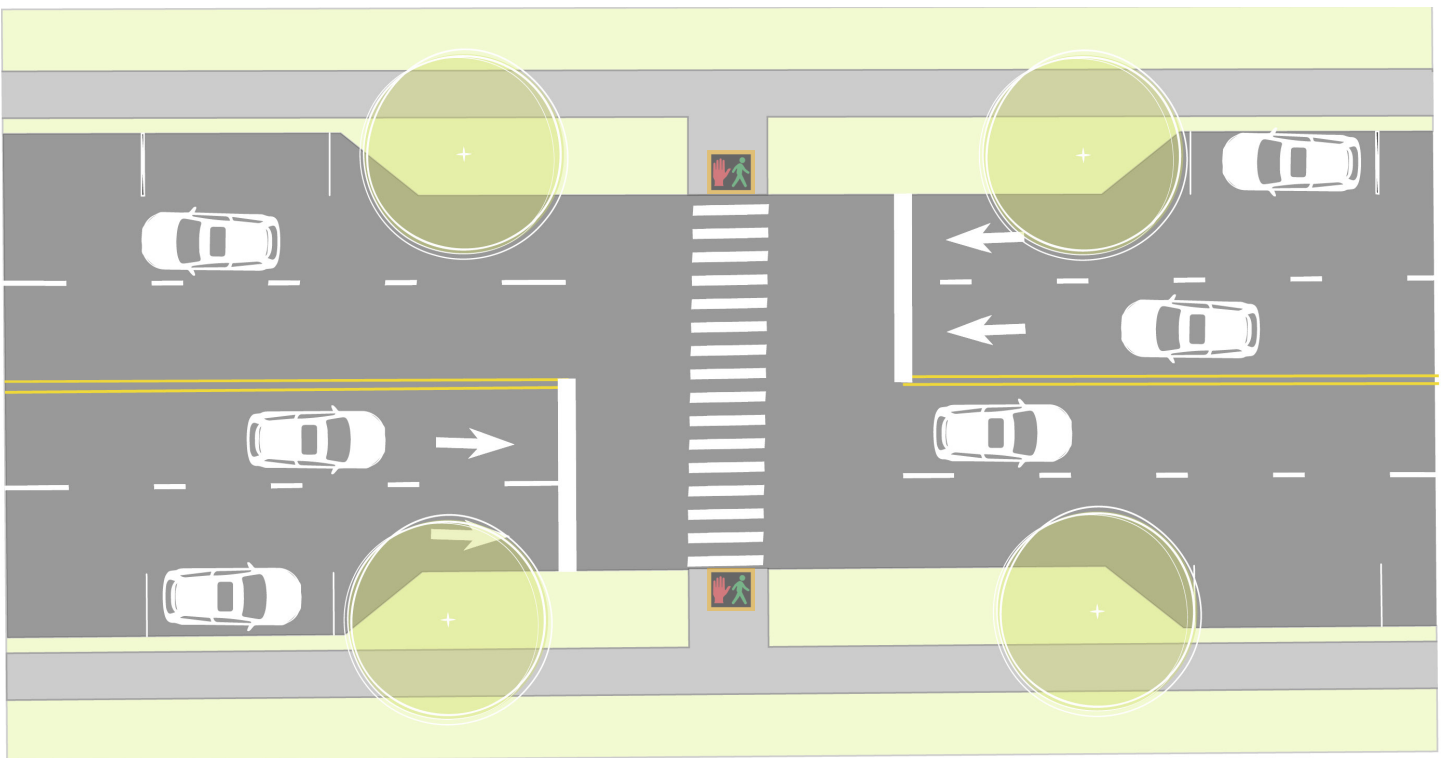
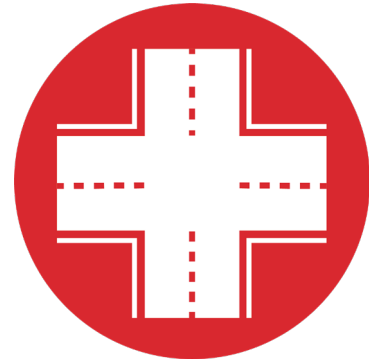
Like the previous option A, this alternative also incorporates bulb-outs at the corners and visually defines the intersection.

INTERSECTION TYPOLOGIES



C. Safety Island Crossing

In situations where there is a greater distance for pedestrians to cross, this solution provides a possible resting spot in the median for pedestrians to safely pause crossing midway through Platte Ave. It also features bulb outs at the corners.



D. Mid-block Crossing

For longer stretches where there are no intersections, the Mid-block Crossing creates a way to increase safe north-south pedestrian mobility and connectivity along Platte Ave.

STORMWATER MANAGEMENT TYPOLOGIES

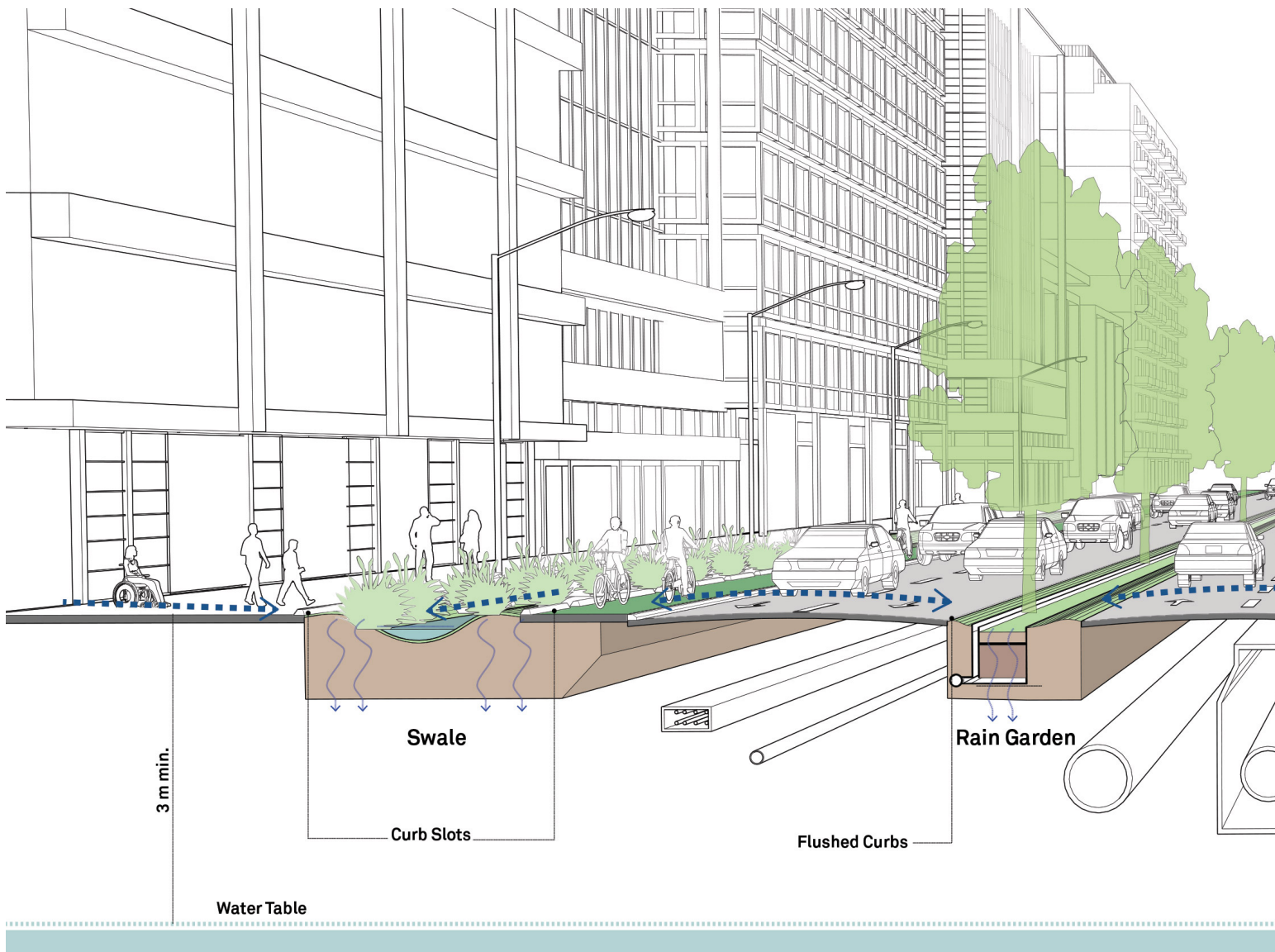
Stormwater management is a major consideration for any city, Colorado Springs included. The Streetscape Toolbox provides a variety of recommendations for better ways to deal with stormwater runoff to fit the diverse needs of the Platte Ave. Corridor. As an additional positive, many of these strategies can also positively enhance the pedestrian experience of the Corridor.

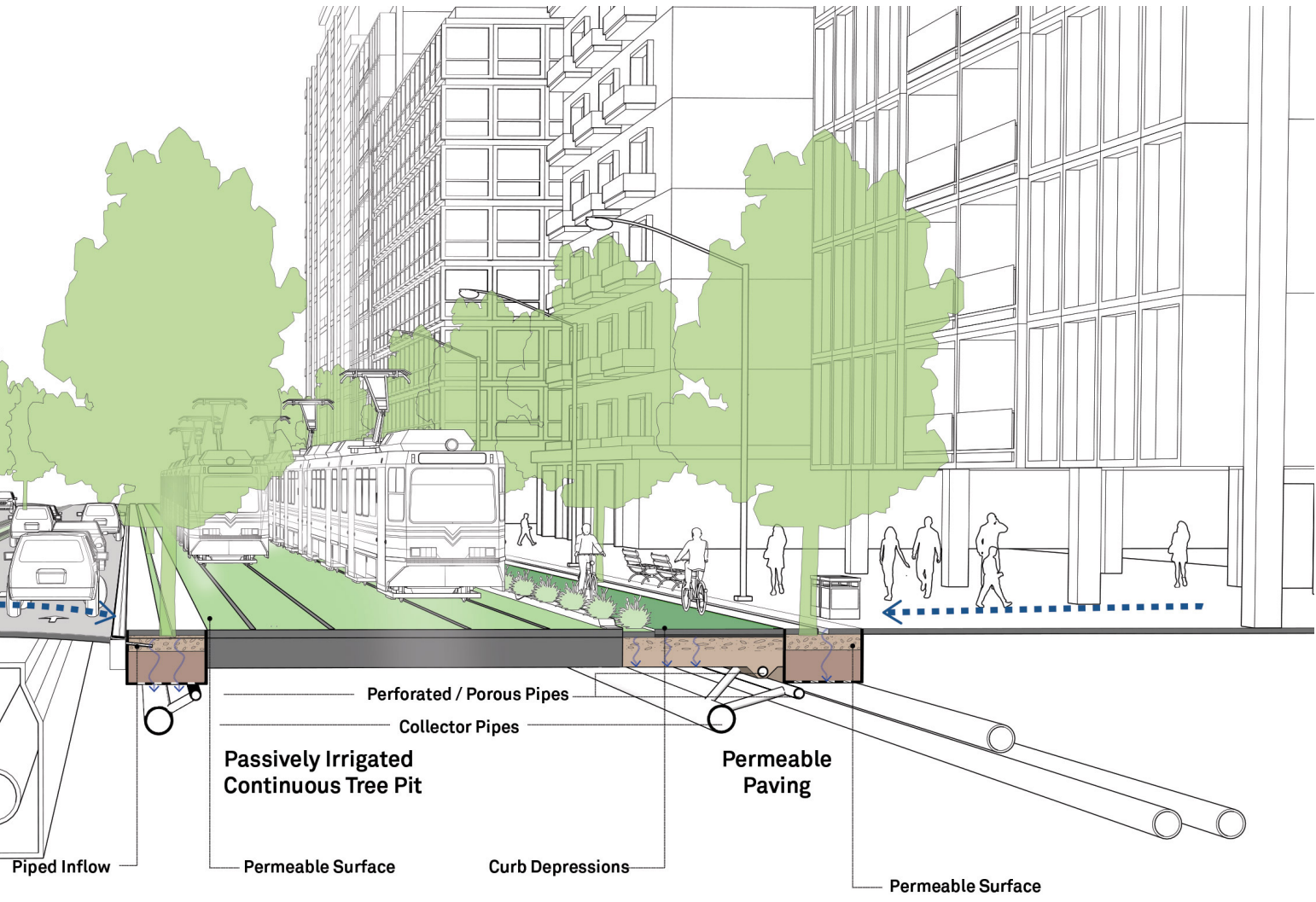
Stormwater management practices help reduce the amount of stormwater runoff created by impervious surfaces. This is achieved by involving a variety of

tactics such as slowing the flow and increasing the level of infiltration. Incorporating these types of practices can help reduce the risk of flooding and protect downstream waters.

However, not every stormwater management strategy, is appropriate for every situation or context. Therefore several different stormwater management typologies are recommended for the varying contexts along the Platte Ave. Corridor.

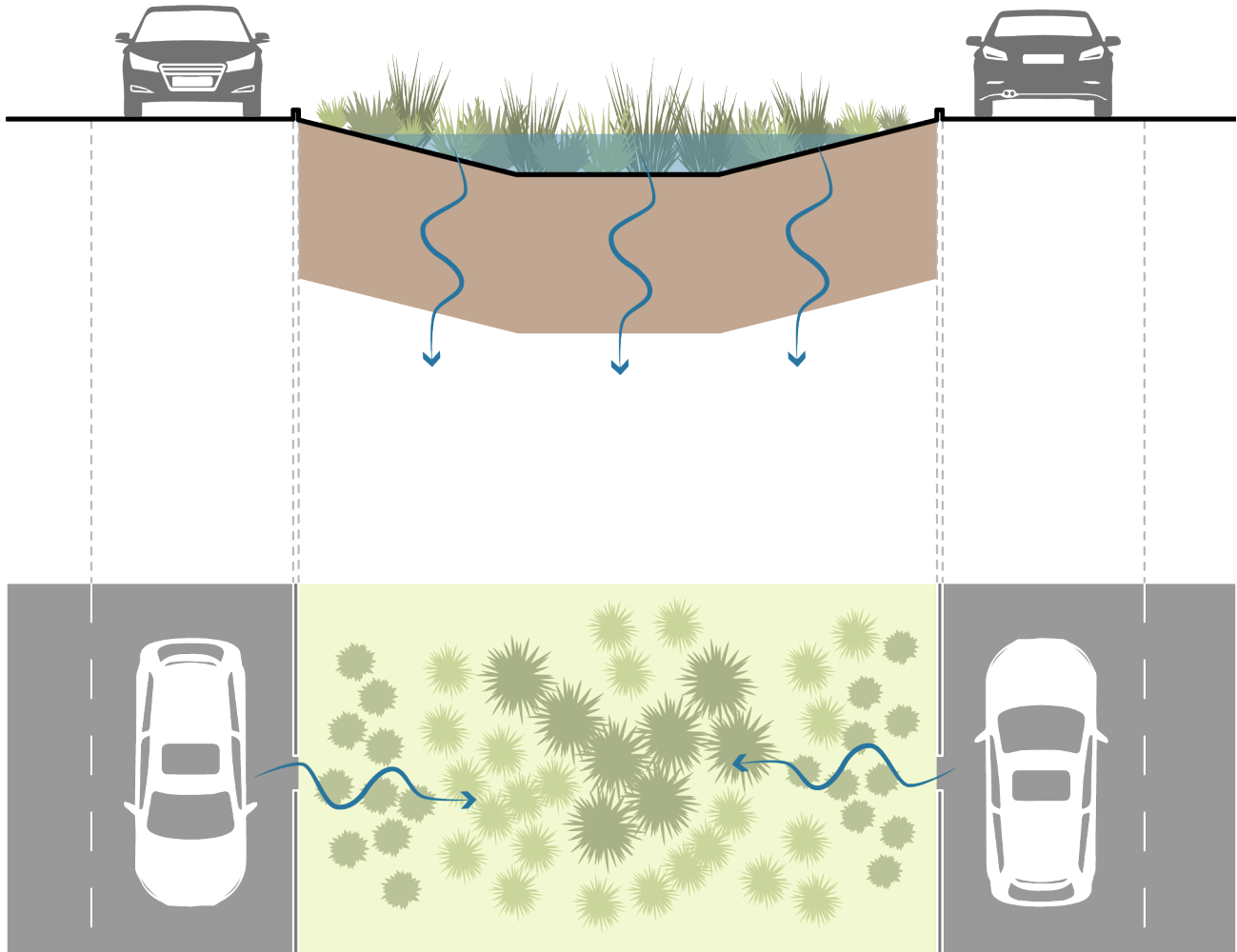
Types of Stormwater Infrastructure Strategies





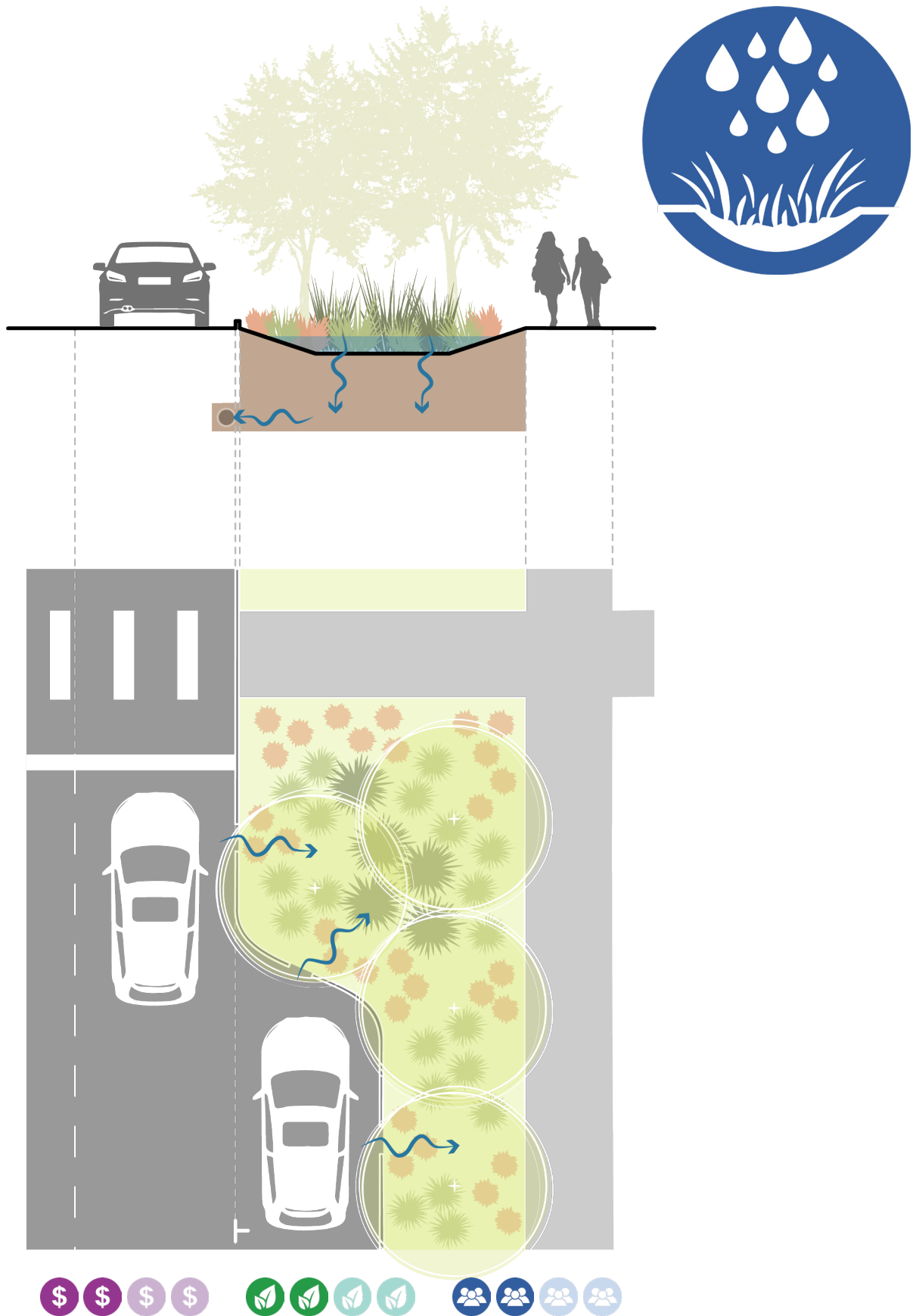
STORMWATER MANAGEMENT TYPOLOGIES

The goal of the proposed stormwater management typologies is to reduce the amount of stormwater runoff and increase stormwater infiltration. Depending on the species used, they can also help improve stormwater quality. There are opportunities to incorporate some of these strategies in new planting areas in Downtown and Knob Hill, and also in larger green areas on the Eastern Reaches segment of the Corridor. Maps showing potential locations where these typologies can be applied are shown in the following chapter.



A. Bioswale

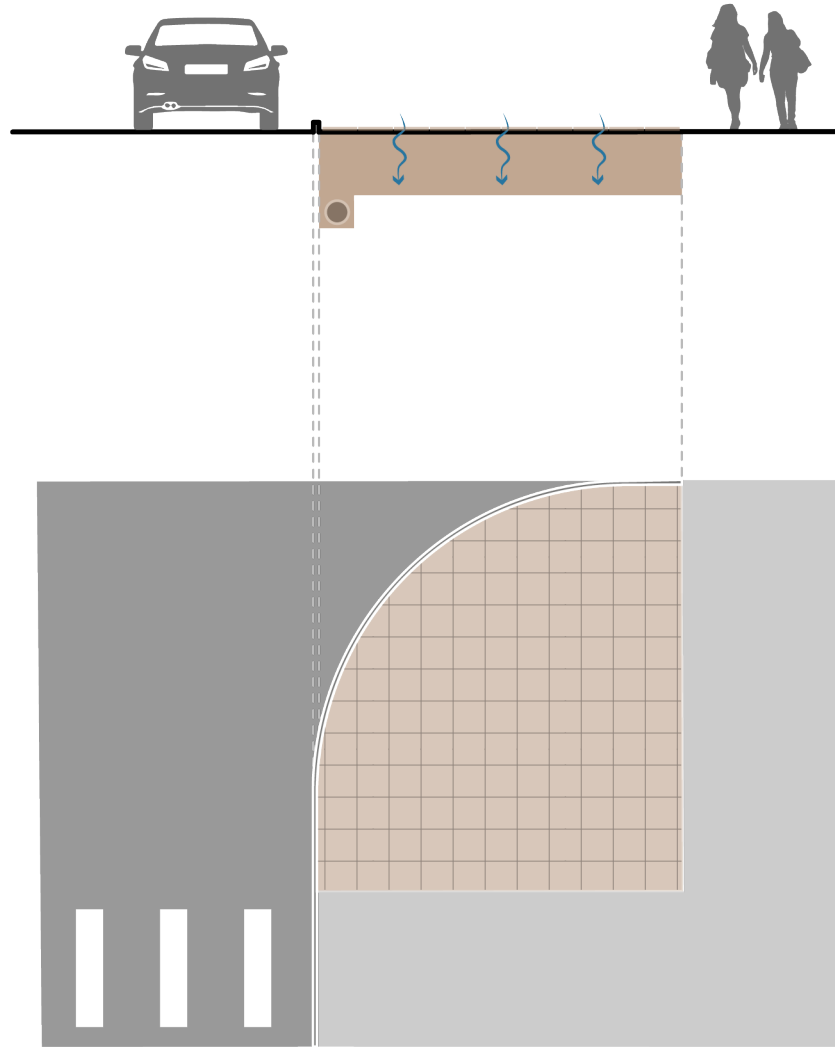
In situations where there is a wider median or long stretches of landscaped area a bioswale is a way to convey and capture larger flows of water and infiltrate them into the ground. The graded contours and vegetation contributes to the bioswale function.



B. Rain Garden

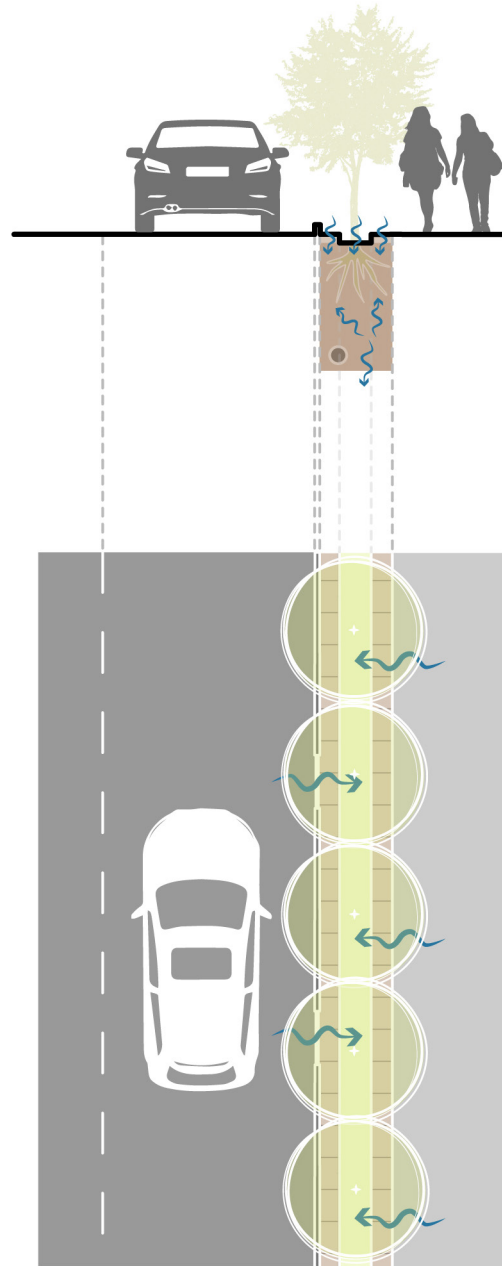
For situations where there are smaller areas that can be landscaped such as a bumpout at an intersection, a rain garden provides an opportunity to capture and infiltrate smaller amounts of water. Rain gardens offer a more defined design and can also support educational goals in the community

STORMWATER MANAGEMENT TYPOLOGIES



C. Permeable Paving

In situations where planting cannot be incorporated, hardscape areas can be designed with permeable paving solutions that help infiltrate stormwater and manage runoff.



D. Passively Irrigated Continuous Tree Pit

For situations where there is a narrower space, between the road and a sidewalk, this stormwater management technique can be used to infiltrate more water and serve as a better way to irrigate trees.

PLANTING STRATEGIES

In 1871, General William Jackson Palmer founded Colorado Springs. From the start, he had a clear vision of what the city could be and the desire to make it the most attractive place for people to live and work in the west. To help achieve his goal, he started the city's urban forest. This forest has been sustained and further developed for over 150 years and what started off as 600 cottonwood trees has become approximately 350,000 various street and park trees.

During this time, Colorado Springs as a city has grown and changed dramatically, just as the climate and our understanding of the effects of climate change have evolved. Now more than ever, it is imperative that planting strategies are mindful of their context. Therefore the developed typical planting strategies were developed around several concepts.

- Following Colorado Spring's existing Approved Street Tree List.
- Selecting recommended plants from sources such as the Colorado State University Extension's El Paso County Master Gardener Lists, Colorado Spring's Utilities' Water Wise Plant database, and more.
- Focusing on plants that are native to Colorado and, or adapted to a dry climate.
- The existing character and plants of the Corridor's segment in question.
- Physical space constraints and opportunities

DOWNTOWN

The Downtown character area of the Platte Ave. Corridor has a well developed historic character that should be respected and celebrated. It is a highly trafficked area by both pedestrians and cars and therefore special attention should be given to plantings and selected plants within this area. Plantings should have extended periods of interest, if possible year-round interest. This is a location where selecting plants that have additional attributes, such as attracting butterflies or bees would be

a benefit, and an educational opportunity for the general public.

MIDDLE SHOOKS RUN

Similar to the Downtown character area, Middle Shooks Run character area is a well established historic neighborhood of Colorado Springs. One of the defining and beloved aspects of this neighborhood are the arching mature trees and grassy boulevard that runs through majority of the area. However numerous trees are reaching the end of their lifespan in this area, and many of these trees varieties, such as cottonwoods, ash, silver maple, willow, and fruit-bearing crabapples are not permitted to be planted any longer within the right-of-way in Colorado Springs. Despite not being able to replace trees with the exact same species, it is still possible to select trees that can maintain and create a similar aesthetic to the existing one. To help further maintain the character of the area, perennial and shrub plantings in this area should be limited.

KNOB HILL

Knob Hill character area is an area where the large scale character of the Eastern Reaches transitions to the well established areas to the west. It has the opportunity to become a designated Arts District for the City and incorporate a aesthetic that is unique and recognizable. However, currently there is very limited existing planting through most of this area. Of the existing planting, a great deal of it is young. Plantings in this area have the opportunity to be bold and vibrant to help celebrate and enhance this area as a gateway and an arts district. There is also the opportunity and need to improve the comfort level of the pedestrian.

EASTERN REACHES

The Eastern Reaches character area is a large scale area that currently functions as and will continue to function as a highway. Despite being a large scale area, there is little to define this area, providing a unique opportunity. Due to these factors, selected plants should be low maintenance once they are established. This area has a great opportunity to provide an ecological benefit to various butterfly, bee, and bird species because of its existing wide existing medians that stretch through large portions of the corridor.

PLANTING LISTS

DOWNTOWN

Western Catalpa | *Catalpa speciosa*
Red Oak | *Quercus rubra*
Kentucky Coffeetree | *Gymnocladus dioicus*
Thornless Honeylocust | *Gleditsia triacanthos var. inermis*
Callery Pear | *Pyrus calleryana*
American Linden | *Tilia americana*
Pin Oak | *Quercus palustris*
Prairie Rose Crabapple | *Malus 'Prairie Rose'*
Spring Snow Crabapple | *Malus 'Spring Snow'*
Amur Maple | *Acer ginnala*
Princess Kay Plum | *Prunus nigra*

Nearly Wild Rose | *Rosa 'Nearly Wild'*
Summer Wine Ninebark | *Physocarpus opulifolius 'Seward'*
McKay's White Potentilla | *Potentilla fruticosa 'McKay's White'*

Prairie Dropseed | *Sporobolus heterolepis*
Blonde Ambition Blue Grama Grass | *Bouteloua gracilis 'Blonde Ambition'*
Shenandoah Switchgrass | *Panicum virgatum 'Shenandoah'*

Johnson's Blue Geranium | *Geranium 'Johnson's Blue'*
Rocky Mountain Penstemon | *Penstemon strictus*
Purple Coneflower | *Echinacea purpurea*
Purple Sensation Allium | *Allium hollandicum 'Purple Sensation'*
Little Trudy Catmint | *Nepeta 'Psfike'*
Wood's Blue Aster | *Aster 'Wood's Blue'*
Shasta Daisy | *Leucanthemum x superbum*
White Yarrow | *Achillea millefolium*
Furman's Red Sage | *Salvia greggii 'Furman's Red'*
Orange Carpet Hummingbird Trumpet | *Epilobium canum ssp. garrettii*
Blanket Flower | *Gaillardia aristata*

MIDDLE SHOOKS RUN

Elm hybrid, sp. | *Ulmus sp. hybrids*
Bur Oak | *Quercus macrocarpa*
Kentucky Coffeetree | *Gymnocladus dioicus*
Thornless Honeylocust | *Gleditsia triacanthos var. inermis*
Western Catalpa | *Catalpa speciosa*
Red Maple | *Acer rubrum*
Norway Maple | *Acer platanoides*
Red Oak | *Quercus rubra*
Littleleaf Linden | *Tilia cordata*
Japanese Tree Lilac | *Syringa reticulata*
Prairie Rose Crabapple | *Malus 'Prairie Rose'*
Spring Snow Crabapple | *Malus 'Spring Snow'*
Goldenrain Tree | *Koelreuteria paniculata*

PLANTING LISTS

Tatarian Maple | *Acer tataricum*

Newport Plum | *Prunus cerasifera*

Nearly Wild Rose | *Rosa 'Nearly Wild'*

McKay's White Potentilla | *Potentilla fruticosa 'McKay's White'*

Snowberry | *Symphoricarpos albus*

Blonde Ambition Blue Grama Grass | *Bouteloua gracilis 'Blonde Ambition'*

Blue Oat Grass | *Helictotrichon sempervirens*

Johnson's Blue Geranium | *Geranium 'Johnson's Blue'*

Rocky Mountain Penstemon | *Penstemon strictus*

Purple Coneflower | *Echinacea purpurea*

Wood's Blue Aster | *Aster 'Wood's Blue'*

Shasta Daisy | *Leucanthemum x superbum*

White Yarrow | *Achillea millefolium*

Snow-in-Summer | *Cerastium tomentosum*

KNOB HILL

Western Catalpa | *Catalpa speciosa*

Red Oak | *Quercus rubra*

Kentucky Coffeetree | *Gymnocladus dioica*

Prairie Rose Crabapple | *Malus 'Prairie Rose'*

Spring Snow Crabapple | *Malus 'Spring Snow'*

Goldenrain Tree | *Koelreuteria paniculata*

Tatarian Maple | *Acer tataricum*

Amur Maple | *Acer ginnala*

Princess Kay Plum | *Prunus nigra*

Summer Wine Ninebark | *Physocarpus opulifolius 'Seward'*

McKay's White Potentilla | *Potentilla fruticosa 'McKay's*

White Snowberry | *Symphoricarpos albus*

Prairie Dropseed | *Sporobolus heterolepis*

Blonde Ambition Blue Grama Grass | *Bouteloua gracilis 'Blonde Ambition'*

Shenandoah Switchgrass | *Panicum virgatum 'Shenandoah'*

The Blues Little Bluestem | *Schizachyrium scoparium 'The Blues'*

Johnson's Blue Geranium | *Geranium 'Johnson's Blue'*

Rocky Mountain Penstemon | *Penstemon strictus*

Purple Coneflower | *Echinacea purpurea*

Little Trudy Catmint | *Nepeta 'Psfike'*

Wood's Blue Aster | *Aster 'Wood's Blue'*

Shasta Daisy | *Leucanthemum x superbum*

White Yarrow | *Achillea millefolium*

Silver Sage | *Salvia argentea*

Furman's Red Sage | *Salvia greggii 'Furman's Red'*

Orange Carpet Hummingbird Trumpet | *Epilobium canum ssp. garrettii*

Blanket Flower | *Gaillardia aristata*
Fringed Sage | *Artemisia frigida*
Silver Blade Evening Primrose | *Oenothera macrocarpa subsp. incana*
Chocolate Flower | *Berlandiera lyrata*

EASTERN REACHES

Western Catalpa | *Catalpa speciosa*
Bur Oak | *Quercus macrocarpa*
Red Oak | *Quercus rubra*
Kentucky Coffeetree | *Gymnocladus dioicus*
Red Maple | *Acer rubrum*
Goldenrain Tree | *Koelreuteria paniculata*
Tatarian Maple | *Acer tataricum*
Amur Maple | *Acer ginnala*

Nearly Wild Rose | *Rosa 'Nearly Wild'*
Summer Wine Ninebark | *Physocarpus opulifolius 'Seward'*
McKay's White Potentilla | *Potentilla fruticosa 'McKay's White'*
White Snowberry | *Symphoricarpos albus*

Prairie Dropseed | *Sporobolus heterolepis*
Blonde Ambition Blue Grama Grass | *Bouteloua gracilis 'Blonde Ambition'*
Shenandoah Switchgrass | *Panicum virgatum 'Shenandoah'*
The Blues Little Bluestem | *Schizachyrium scoparium 'The Blues'*

Purple Coneflower | *Echinacea purpurea*
Wood's Blue Aster | *Aster 'Wood's Blue'*
Shasta Daisy | *Leucanthemum x superbum*
White Yarrow | *Achillea millefolium*

STORMWATER MANAGEMENT PLANTING STRATEGIES

As seen earlier in the Streetscape Toolbox, some of the stormwater management strategies require the use of plants. However, due to the nature of a bioswale and rain garden, it is imperative to account for the dry and wet periods of these strategies. Not all plants are able to withstand these fluctuations. Therefore, in addition to the considerations that were made for the previous planting lists, additional ones had to be made. These include the following:

- A plant's ability to withstand the varying conditions of a rain garden or bioswale.
- A plant's natural growth nature to help ensure a bioswale or rain garden's success.
- How aggressive a plant may or may not be in given situations
- Additional plant attributes such as its ability to attract butterflies or bees.

DIFFERENT SCALES

Two different lists have been developed for the Streetscape Toolbox called Type A and Type B. This has been due to the various scales that part of the proposed stormwater management solutions.

Type A's planting list was developed for smaller areas such as a bumpout, where a rain garden is being installed and will experience higher levels of pedestrian traffic. With these areas trafficked by pedestrians, attributes, such as a plants ability to attract pollinators, can be of greater importance in addition to their ability to survive in a rain garden. The combination of being a rain garden plant and a pollinator, as an example, creates an educational opportunity while benefiting the local ecology. Type A's planting list will generally be more appropriately used within the Downtown, Middle Shooks Run, and Knob Hill segments.

Type B's planting list was designed for larger areas, with greater vehicular traffic, and to be lower maintenance once after it is fully established. The

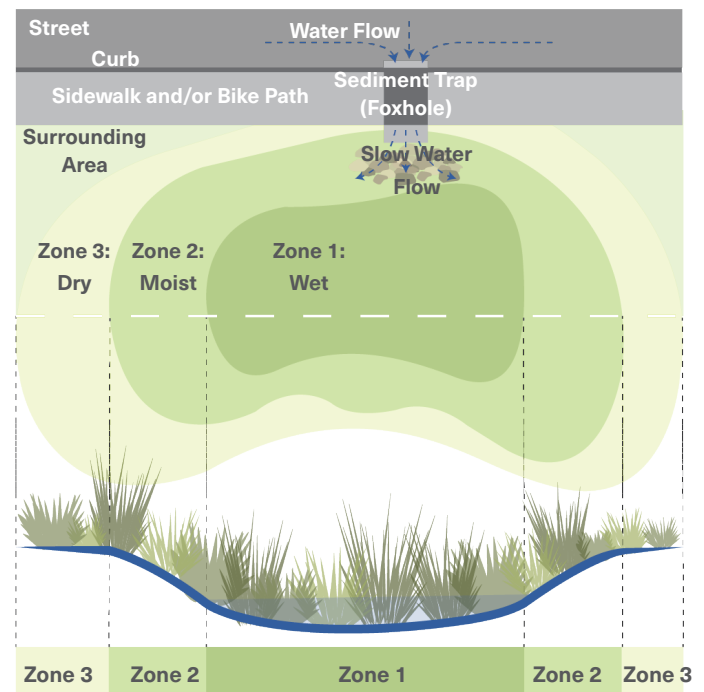
plants listed, in addition to serving as a way to handle stormwater runoff, have a great ecological benefit for butterflies, various species of bees, and birds, that can also be viewed and enjoyed by cyclists. This list was developed mostly with the Eastern Reaches in mind, which has vast medians, and mostly vehicular traffic.

Note that there is purposely overlap between the two lists. This is to limit the number of plants that need to be able to be recognizable and cared for by maintenance crews.

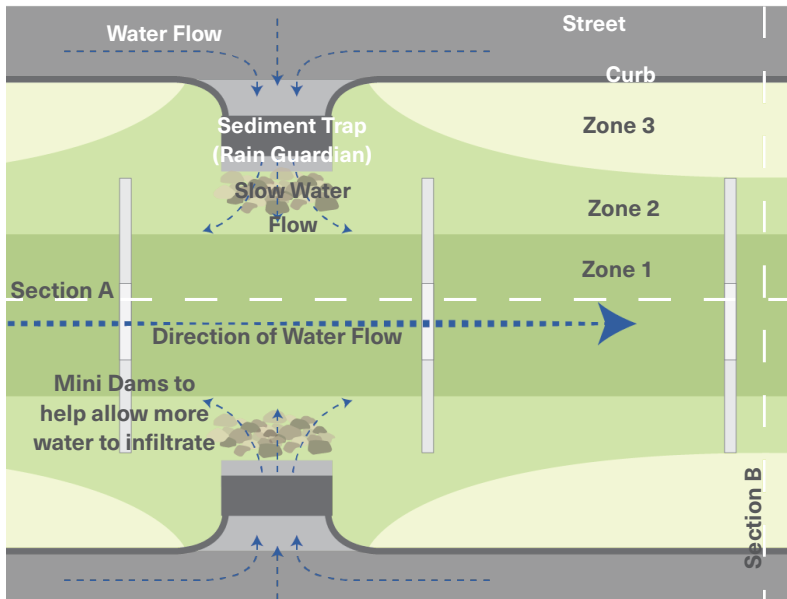
ZONES OF A RAIN GARDEN AND BIOSWALE

The following diagrams show plan views and cross sections through a rain garden and a bioswale. Both of these diagrams depict the three different typical zones that they are divided up into: Wet, Moist, and Dry. Correct placement of plants based on their ability to handle standing water or lack of standing water is critical to the success of a rain garden or bioswale.

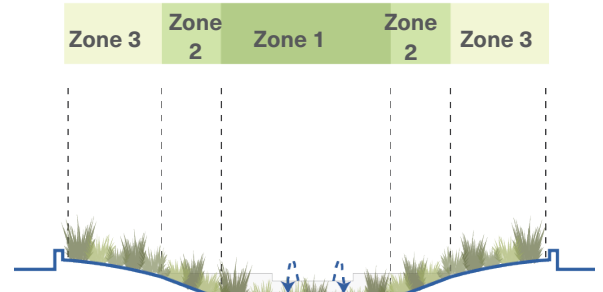
Rain Garden



Bioswale



Section A



Section B

STORMWATER MANAGEMENT PLANTING LISTS

Type A

Common Name	Botanical Name	Type	Zone	Attracts
Indian Ricegrass	<i>Oryzopsis hymenoides</i>	Ornamental Grass	3	Birds & Butterflies
Sand Dropseed	<i>Sporobolus cryptandrus</i>	Ornamental Grass	3	
Blanket Flower	<i>Gaillardia aristata</i>	Perennial	3	Butterflies & Native Bees
Purple Prairie Clover	<i>Dalea purpurea</i>	Perennial	3	Butterflies, Native, Bumble, and Honey Bees
White Yarrow	<i>Achillea lanulosa</i>	Perennial	3 & 2	
Golden Columbine	<i>Aquilegia chrysantha</i>	Perennial	3 & 2	Butterflies And Bumble Bees
Sulphur Flower	<i>Eriogonum umbellatum</i>	Perennial	3	Butterflies And Native Bees
Swamp Milkweed	<i>Asclepias incarnata</i>	Perennial	2 & 1	Butterflies, Native, Bumble, and Honey Bees, Hummingbirds
Bluejoint	<i>Calamagrostis canadensis</i>	Grass	2 & 1	
Rocky Mountain Iris	<i>Iris missouriensis</i>	Perennial	1	Hummingbirds
Arctic Fire Red Twig Dogwood	<i>Cornus sericea 'Farrow'</i>	Shrub	2 & 1	Birds & Butterflies

Type B

Common Name	Botanical Name	Type	Zone	Attracts
Indian Ricegrass	<i>Oryzopsis hymenoides</i>	Ornamental Grass	3	Birds & Butterflies
Prairie Sandreed	<i>Calamovilfa longifolia</i>	Ornamental Grass	3	
Sand Dropseed	<i>Sporobolus cryptandrus</i>	Ornamental Grass	3	
Western Wheatgrass	<i>Pascopyrum smithii</i>	Turf	2 & 1	Birds
Blanket Flower	<i>Gaillardia aristata</i>	Perennial	3	Butterflies & Native Bees
Prairie Coneflower	<i>Ratibida columnifera</i>	Perennial	3 & 2	Native Bees, Butterflies, Birds
Purple Prairie Clover	<i>Dalea purpurea</i>	Perennial	3	Butterflies, Native, Bumble, and Honey Bees
White Yarrow	<i>Achillea lanulosa</i>	Perennial	3 & 2	
Sulphur Flower	<i>Eriogonum umbellatum</i>	Perennial	3	Butterflies And Native Bees
Swamp Milkweed	<i>Asclepias incarnata</i>	Perennial	2 & 1	Butterflies, Native, Bumble, and Honey Bees, Hummingbirds
Bluejoint	<i>calamagrostis canadensis</i>	Grass	2 & 1	
Spotted Trumpetweed	<i>Eupatoriadelphus maculatus</i>	Perennial	1	Birds, Native Bees
Rocky Mountain Iris	<i>Iris missouriensis</i>	Perennial	1	Hummingbirds
Prairie Ironweed	<i>Vernonia fasciculata</i>	Perennial	2 & 1	Butterflies, Native Bees
Prickly Rose	<i>Rosa acicularis</i>	Shrub/	3, 2 & 1	Birds, Native Bees, Bumble Bees
Common Elderberry	<i>Sambucus nigra ssp. canadensis</i>	Shrub	1	Birds, Native Bees
Arctic Fire Red Twig Dogwood	<i>Cornus sericea 'Farrow'</i>	Shrub	2 & 1	Birds & Butterflies

STREET FURNISHINGS

Street furnishing and lighting are a vital part of any urban landscape. In the most basic sense, they provide a needed functionality within the pedestrian realm. They also create opportunities for people to engage, linger, meet and can make a space a place. Additionally, they have the ability to create and enhance the overall character of an area. The following pages show overall recommendations for street furnishings and lighting in each one of the four character areas

DOWNTOWN

The Downtown segment of the Platte Ave. Corridor has a rich historic character and precedents for site furnishing, the color of said furnishings, and lighting that should be continued. Near the border of Middle Shooks Run and the Downtown area, the fixtures and street furnishings turn from being a green color to a black color, and remain this way throughout the rest of the corridor. This quality should be reflected. This distinction of color helps set apart the Downtown Segment from the rest of the Corridor.

MIDDLE SHOOKS RUN

As a historic neighborhood, Middle Shooks Run, there is an opportunity to draw some inspiration from the Downtown segment. For the most part the segment's site furnishing and lighting should remain based more on need within the area, for instance providing pedestrian lighting, benches and trash reciprocals rather. Then towards the western end of the Middle Shooks Run area, where there starts to be some businesses, then introduce bike racks, as an example.

KNOB HILL

Knob Hill as previously mentioned is both a gateway point and there is the desire to make this area into an arts district. This segment provides a great opportunity to deviate from some typical norms to highlight and celebrate this area as an arts district and a gateway. This could take many forms. It could be something as simple as, for example, instead of having a black bench, that the bench is a bright orange. Continuing with this example, another way

is to allow for local individuals or groups to paint the benches. Another possibility would be to allow local artists to design and create custom benches. Allowing local artists or organizations to showcase their work, whether it be through sculpture, art installations, murals that are either on the sides of buildings, sidewalks, or site furnishings is a great way to engage the community. There is the potential to transform area from one that people pass through quickly to one that becomes a destination.

EASTERN REACHES

The Eastern Reaches will continue to function in large part as a highway with a multi-modal path running along side it. The site furnishing and lighting here should be focused primarily around need and providing intervals of rest for those who may need to stop for a short period of time to rest.

INSPIRATION IMAGERY

Downtown



Middle Shooks Run



Knob Hill



Eastern Reaches

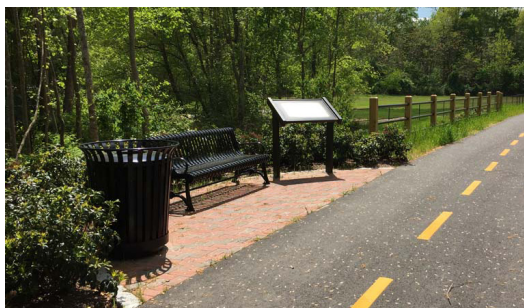




Photo Location: Platte Ave. and N. Academy Blvd.

CHARACTER AREAS AND TOOLBOX IMPLEMENTATION

Overview of Project Character Areas

Downtown Character Area Recommendations

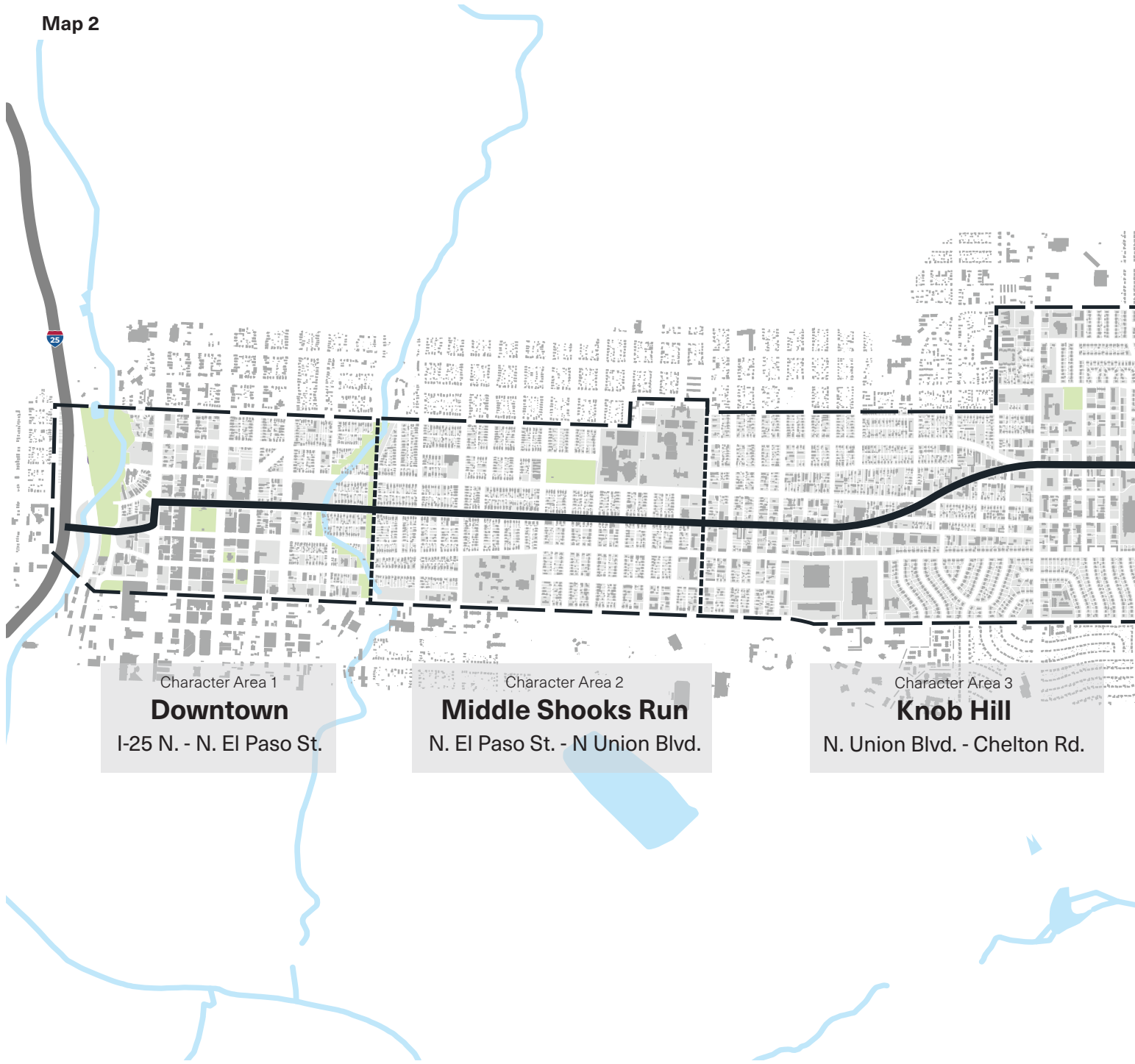
Middle Shooks Run Character Area Recommendations

Knob Hill Character Area Recommendations

Eastern Reaches Character Area Recommendations

PLATTE AVE. CORRIDOR STUDY | OVERVIEW OF PROJECT CHARACTER AREAS

Map 2



Legend

- Platte Avenue Corridor
- Project Boundary
- Character Area Boundary



Character Area 4
Eastern Reaches
Chelton Rd. - Peterson Blvd.



DOWNTOWN CHARACTER AREA RECOMMENDATIONS | PUTTING SOLUTIONS WITH THE CONTEXT

Map 3



Legend

--- Project Boundary

----- Character Area Boundary



Intersection Typologies

A

Four Directional Crossing with Diagonal Parking



Sidewalk Typologies

A

Plaza Sidewalk

B

Widened Sidewalk



A



Median Typologies

Large Planted Median



Stormwater Management Typologies

B

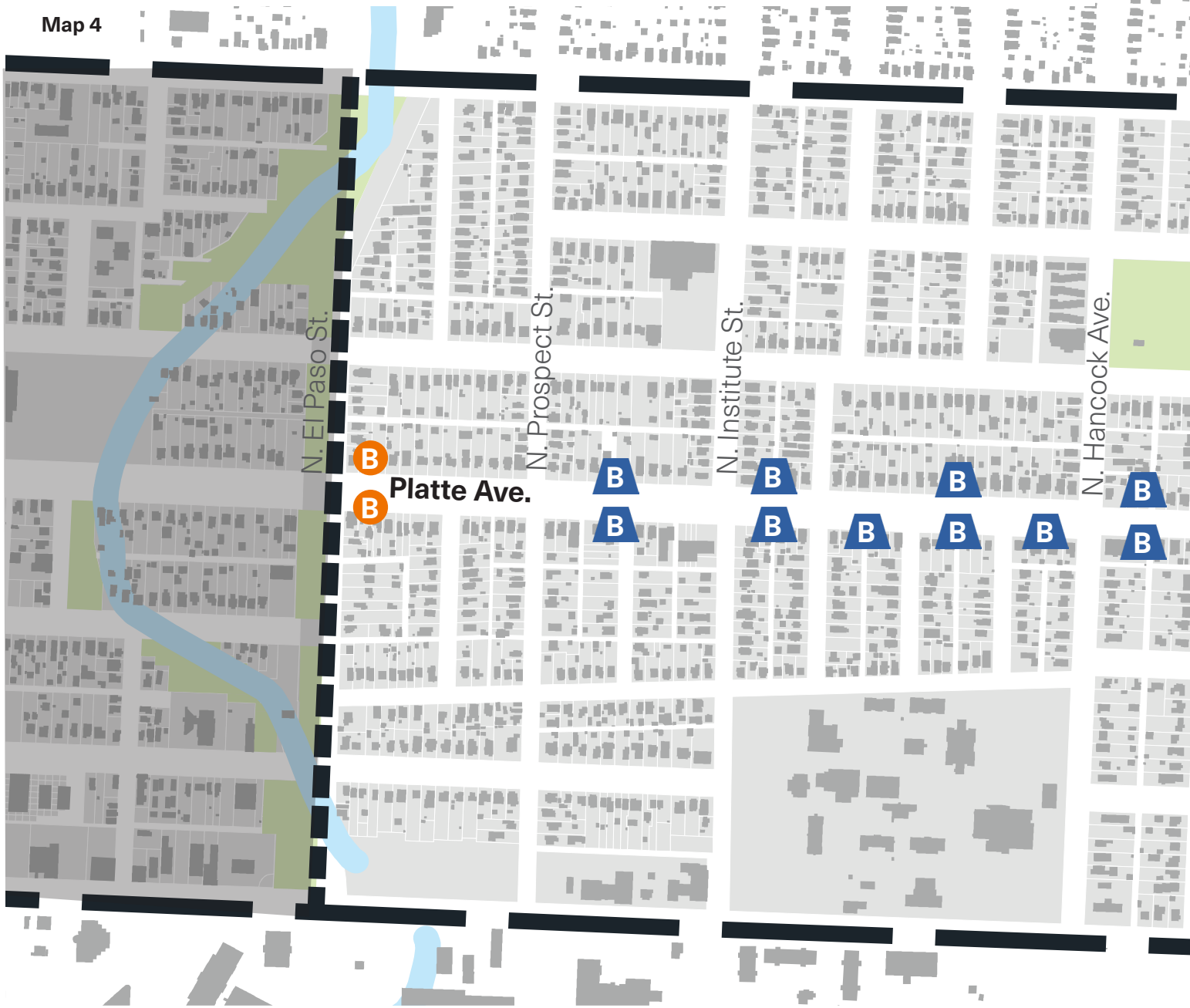
Rain Garden

C

Permeable Paving


MIDDLE SHOOKS RUN CHARACTER AREA RECOMMENDATIONS | PUTTING SOLUTIONS WITH THE CONTEXT

Map 4





Legend

- Project Boundary


----- Character Area Boundary
- 


Intersection Typologies




Safety Island Crossing
- 

Sidewalk Typologies



Widened Sidewalk
- 

Sidewalk Typologies



Widened Sidewalk



Median Typologies

Stormwater Management Typologies

Planted Median

 Rain Garden



KNOB HILL CHARACTER AREA RECOMMENDATIONS | PUTTING SOLUTIONS WITH THE CONTEXT



Legend

--- Project Boundary

----- Character Area Boundary



Intersection Typologies



Four Directional Crossing with Parallel Parking



Mid-block Crossing



Sidewalk Typologies






Widened Sidewalk



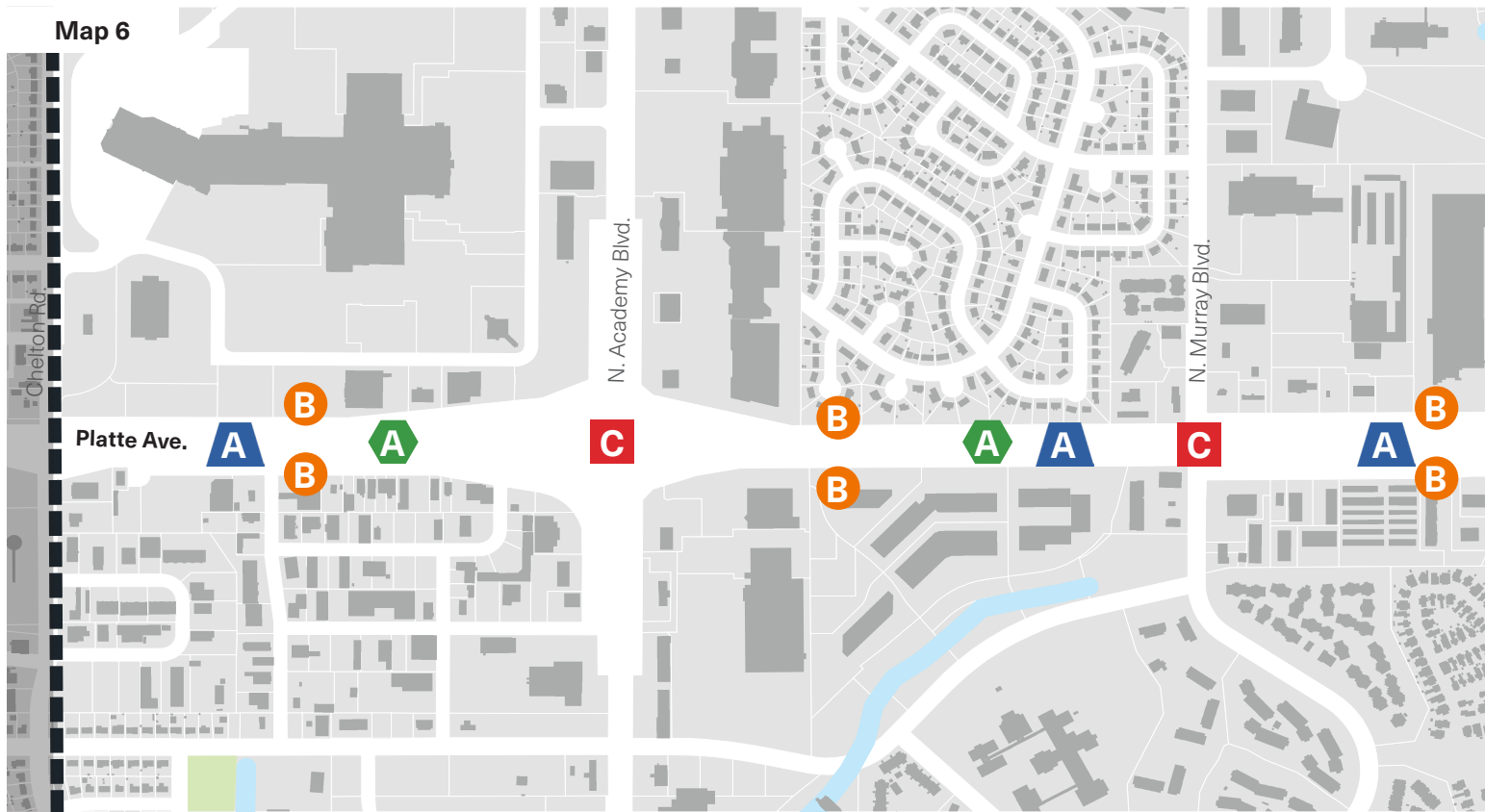
Flexible Sidewalk





- Median Typologies
-  Stormwater Management Typologies
 -  Rain Garden
 -  Passively Irrigated Continuous Tree Pit
 - Planted Median
 - Art Median

EASTERN REACHES CHARACTER AREA RECOMMENDATIONS | PUTTING SOLUTIONS WITH THE CONTEXT



Legend

--- Project Boundary

----- Character Area Boundary



Intersection Typologies



Four Directional Crossing with Parallel Parking



Safety Island Crossing

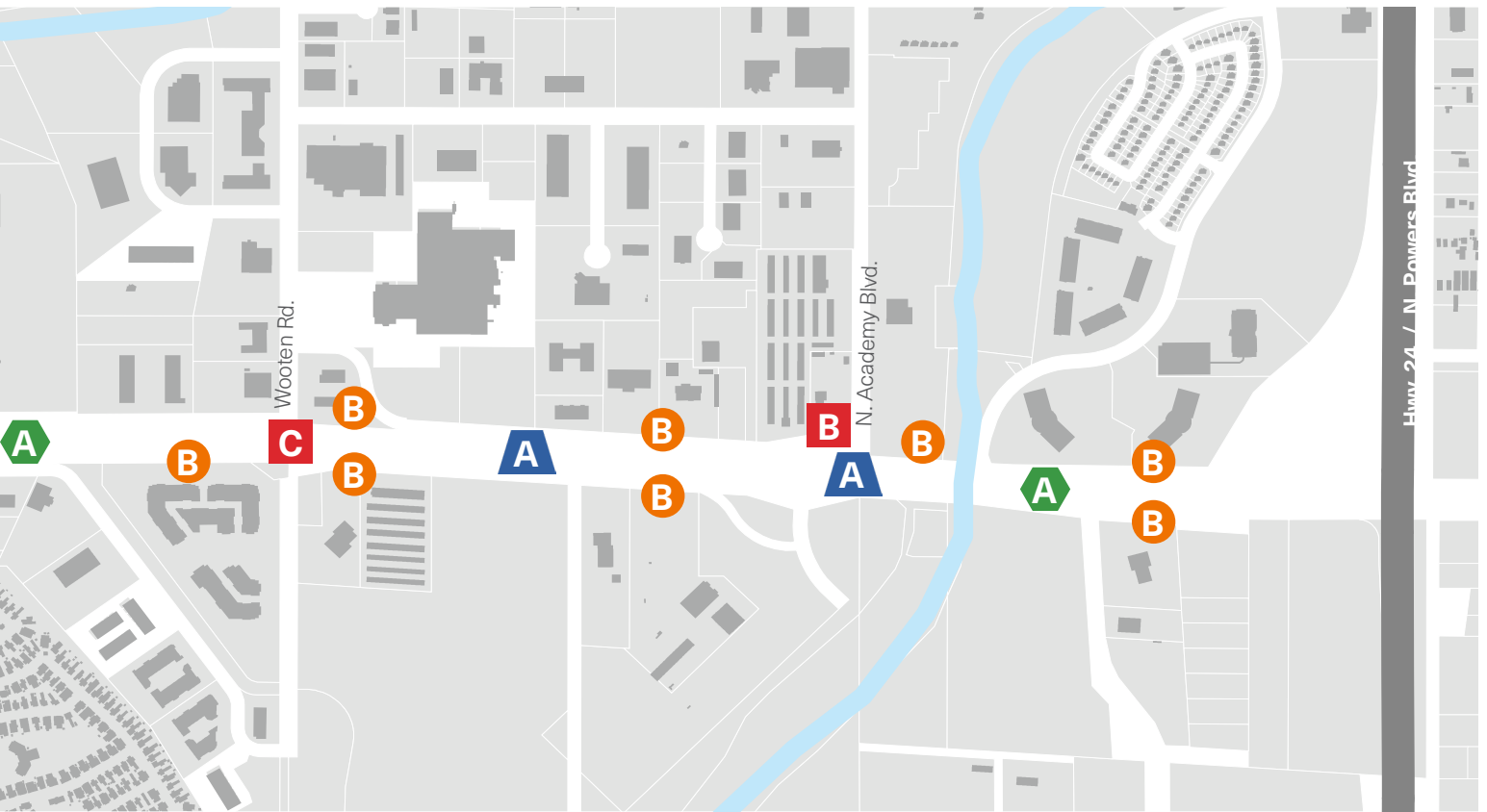


Sidewalk Typologies



Widened Sidewalk







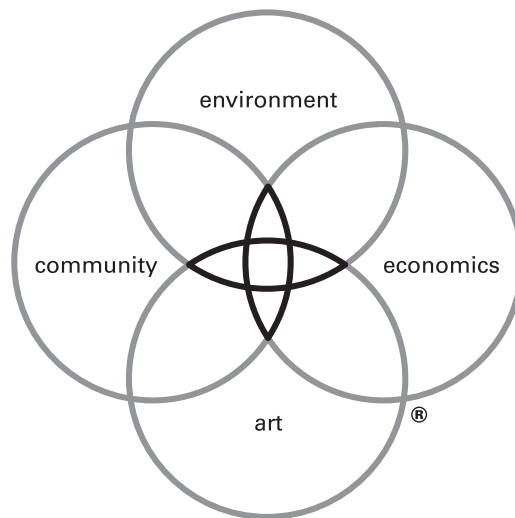
Median Typologies

Stormwater Management Typologies

Large Planted Median

 Bioswale





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