

Fast Forward FORT LAUDERDALE

design + construction manual

FOR A SUSTAINABLE AND RESILIENT
COMMUNITY AND COHESIVE
PUBLIC REALM



CITY OF FORT LAUDERDALE



The design and construction manual provides a set of guidelines and principles for development of a sustainable, resilient and a cohesive public realm.

The DCM addresses open spaces, streets, building frontage, and city-owned parcels to bridge the city's goals and current planning documents.



The DCM is a tool that helps the city achieve its vision and to help communicate its objectives with designers, engineers, developers and neighbors.

The DCM was developed collaboratively with input from multiple city departments and external stakeholders.



manual organization

1 *prioritize your*
goals

why?

*decision making
framework based on
context*

2 *choose your*
tactics

how?

*implementation through
transect methodology*

3 *select your*
tools

what?

*elements and assemblies
that make a public realm*

coordination checklist

- ensure all departments are included and part of the process
- align with manual organization
- help develop design or scope of a project

step

4. project type

Select project type based on where in the public realm it is located and/or which aspects of the public realm will be affected (see DCM page 50).

☐ open space

☐ streets

☐ frontage

☐ parcel

additional comments:

step

5. project collaboration

cross-department information that is applicable to the project location or context, i.e. are there any design opportunities that have been brought to light through collaborative discussions with other departments?

department + contact:	project + date:	budget + time impact:
<input type="checkbox"/> sustainable development <ul style="list-style-type: none">urban designbuilding services		
<input type="checkbox"/> parks and recreation <ul style="list-style-type: none">lightinglandscapesanitation		
<input type="checkbox"/> transportation + mobility <ul style="list-style-type: none">engineeringparking		
<input type="checkbox"/> public works <ul style="list-style-type: none">engineeringutilitiessustainability		

26

[example
from p26]

step

5. project collaboration

cross-department information that is applicable to the project location or context, i.e. are there any design opportunities that have been brought to light through collaborative discussions with other departments?

department + contact:

☐ fire department

☐ federal

☐ state

☐ county

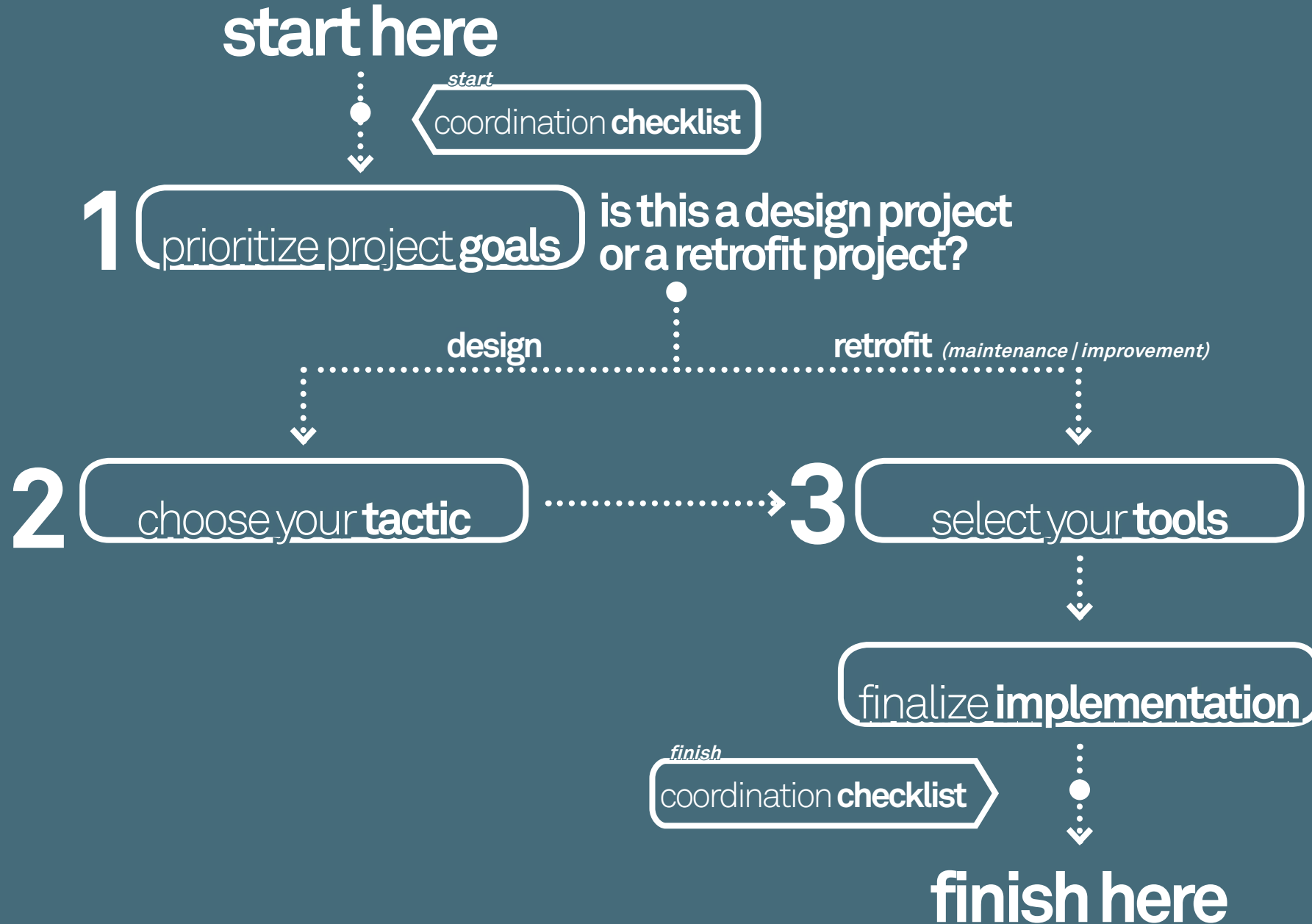
☐ private development

☐ private development

☐ private development

department + contact:	project + date:	budget + time impact:
<input type="checkbox"/> sustainable development <ul style="list-style-type: none">urban designbuilding services		
<input type="checkbox"/> parks and recreation <ul style="list-style-type: none">lightinglandscapesanitation		
<input type="checkbox"/> transportation + mobility		

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1. goals

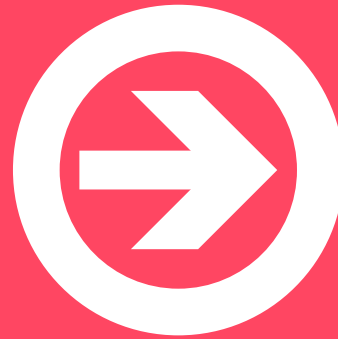
The goals section helps to outline design principles that address context-related issues and opportunities.



**PLACE +
IDENTITY**



**HEALTHY + ACTIVE
LIFESTYLE**



**FOCUSED
DEVELOPMENT**



**FLOOD
PROTECTION**

prioritize your goals

- prioritize goals based on checklist
- some projects may include all four goals
- each goal will influence decisions made when choosing tactics or selecting tools

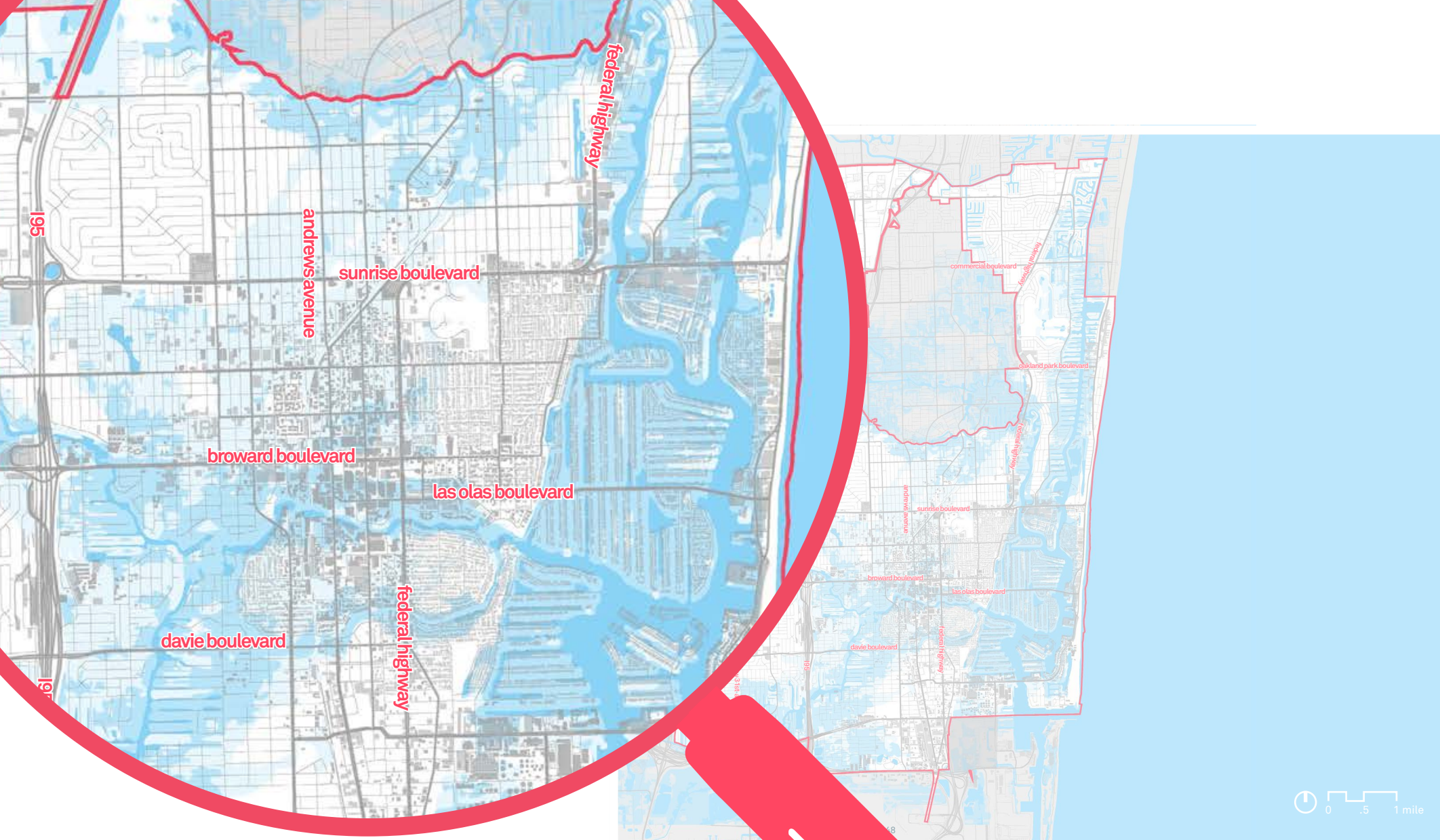
Using a project site as a means for connecting a viable way to stimulate economic growth in the community.

alist will assist in determining
ake priority for a project based
ic issues. Place a check mark
ation that is answered "yes", and
or each project goal category to
project goal categories that have
n others, this indicates a high
nt for consideration in project
ent. Each category has its own
ned in the following pages.

100

100

CAM #0788
Exhibit 1
Page 11 of 29



flood protection

Regional flooding is an ongoing climatic phenomenon that continues to put coastal populations at risk. Flooding following extreme storms and king tide events where sea water inundates low-lying areas serves as a precursor of future flooding that will become an increasing challenge due to sea level rise. This is a critical concern, since Fort Lauderdale is a coastal city. Hence, much of the local economic activity is tied to coastal communities and industries.

In order to better prepare for these conditions, it is important to understand if a project site is affected by regional flooding due to precipitation, king tides or sea level rise. The map on the left illustrates sea level rise projections, indicated in the legend below. It also demonstrates urban areas highly concentrated with impervious surfaces shown in gray. To address some of the issues around regional flooding, the City must:

- 1 understand how we flood
- 2 armor against storm surge and sea-level rise
- 3 mitigate stormwater runoff

- existing sea level
- sea level at 3 feet
- sea level at 6 feet



[example
from p44]

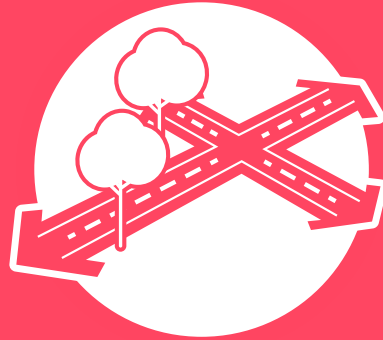
2. tactics

The tactics provide design principles and strategies for various project types that address issues and opportunities defined in the goals section.



OPEN SPACE

+



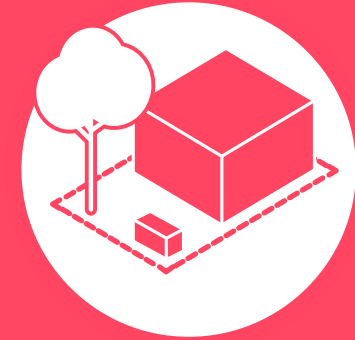
STREETS

+



FRONTAGE

+



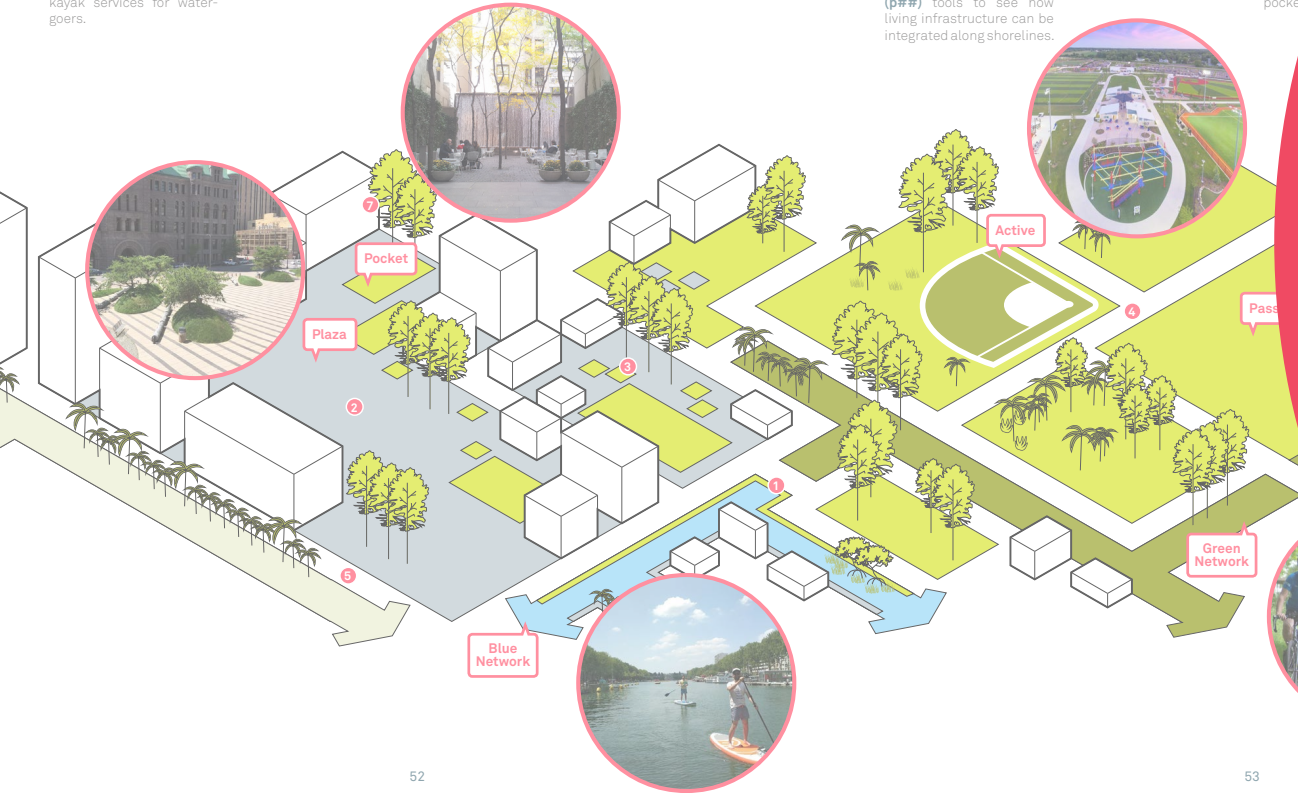
PARCELS

choose your tactic

- identify appropriate transect or transects within public realm
- each transect provides design principles and guidelines

open space design principles

- 1 Fort Lauderdale is known as the "Venice of America" because of its vast network of canals. Consider mapping out blue networks within the City to connect public parks, and provide stand-up paddleboard and kayak services for water-goers.
- 2 Urban plazas are usually defined by multiple buildings on at least two edges. Plazas are typically paved in all or most areas. Review **Hardscapes p188**.
- 3 Plan to incorporate floodwater management tools in low-lying areas that experience flooding. Refer to the **Floodwater Management** tools on p230 to choose the right tool type for the right space.
- 4 Look at ways to have passive and active parks engage with one another thematically, through either **Landscape p###**, **Hardscape p###** or **Lighting p###**.
- 5 Open spaces that abut beaches or shorelines should be designed so that **Landscape (p##)**, **Lighting (p##)**, and **Furnishings (p##)** do not disrupt natural ecology. Go to the **Shoreline Infrastructure (p##)** tools to see how living infrastructure can be integrated along shorelines.
- 6 Allow green networks, or multipurpose trails, to move through larger passive parks. Review the **Bicycle Facilities (p##)** to appropriately design bike paths.
- 7 Pocket plazas occupy residual or unoccupied areas of land within developed areas. They provide a place for people to connect with nature and water-

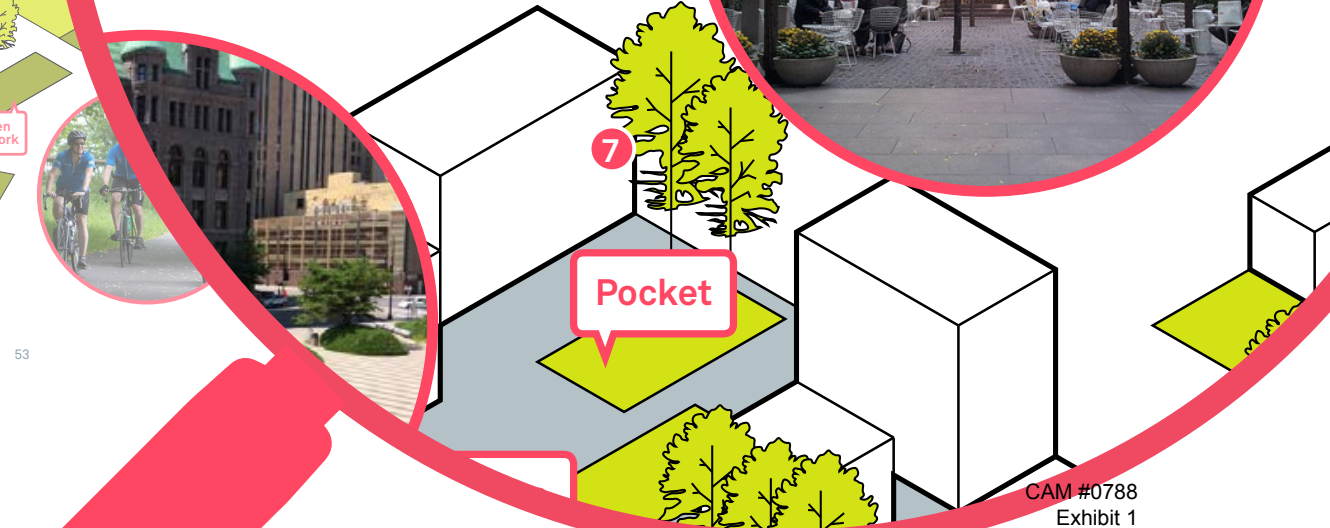


52

Urban plazas are usually defined by multiple buildings on at least two edges. Plazas are typically paved in all or most areas. Review **Hardscapes p188**.

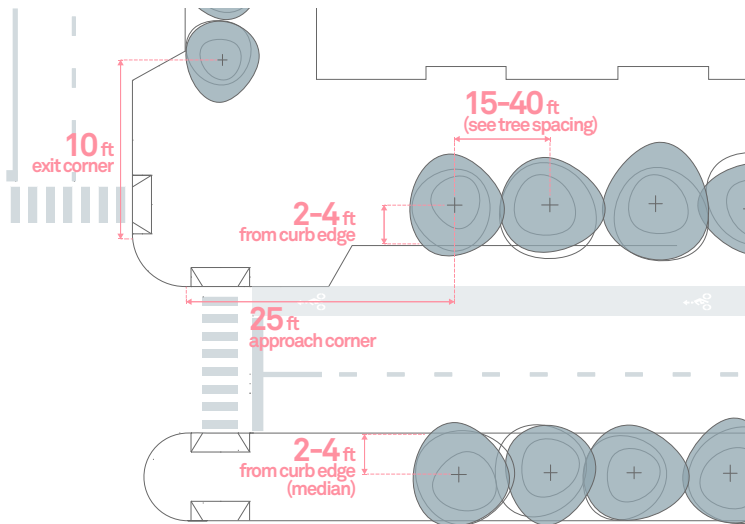
3

Plan to incorporate floodwater management tools in low-lying areas that experience flooding. Refer to the **Floodwater Management** tools on p230 to choose the right tool type for the right space.



53

[example
from p52]



street trees

Street trees provide both environmental and urban benefits. Selecting the appropriate tree for the appropriate location can ensure healthy growth and longevity while enhancing the streetscape and achieving the City's goals. Not all trees are appropriate for planting along streets since their roots may be destructive, their canopies may impede on utilities or roadway clearance, or they may not thrive in that type of environment. Selecting the appropriate tree may require additional input based on context and available space.

tree spacing

Small trees (less than 20' mature crown) spacing should be 15'-20' on-center between trees.

Medium sized tree (less than 45' mature crown) spacing should be 20'-30' on-center between trees.

Large tree (more than 45' mature crown) spacing should be 25'-40' on-center between trees.

tree coordination

2-4 ft	DISTANCE FROM CURB EDGE TO TREE
5 ft	DISTANCE FROM LIGHT POLE TO TREE
10 ft	DISTANCE FROM INTERSECTION TO TREE (EXIT)
25 ft	DISTANCE FROM INTERSECTION TO TREE (APPROACH)
6 ft	DISTANCE FROM BUS STOP TO TREE
50 ft	MINIMUM SETBACK FROM UTILITY LINES FOR LARGE TREES
30 ft	MINIMUM SETBACK FROM UTILITY LINES FOR MEDIUM TREES
0 ft	SMALL TREES LESS THAN 14 FT TALL MAY BE PLANTED ADJACENT TO UTILITY LINES

root environment

Open Tree Trenches

An open tree trench is an area of soil connecting a sidewalk to a tree. It is covered with either mulch, groundcover, or grass. The sidewalk should be pitched towards the tree trench to aid in stormwater management. Open trenches are suited for local and collector streets with a typical size of 4' wide and 3' deep. In constrained areas, they may be as little as 2.5' wide.

Covered Tree Trenches

A covered tree trench is a linear channel covered with pavement. It is designed to provide structural support to sidewalks while accommodating root growth. Covered trenches should permit passive irrigation to reach the soil. Alternative coverings may include pervious pavement or flexible, perforated pipes beneath the pavement. Covered tree trenches are appropriate for areas with pedestrian traffic and high turnover parking. The trench should be at least 5' wide and 3' deep. A 2' by 2' opening needs to be provided around the tree trunk.

Tree Well

Tree wells or tree pits are in-ground box housing for a tree. Tree wells can have walled sides, modular suspended pavement systems (e.g. Silva Cell) or structural soil systems to protect soil from compaction and retain stormwater. Tree wells should be used where space or resources do not permit the use of open or covered tree trenches. The tree well should be made as large as possible or setback from the curb edge to provide maximum rooting volume without impeding the Pedestrian Zone. An ideal tree well size is at least 4' by 10' and 3' deep with an opening around the trunk of 2' by 2'. Smaller tree wells can be as narrow as 2'-6".

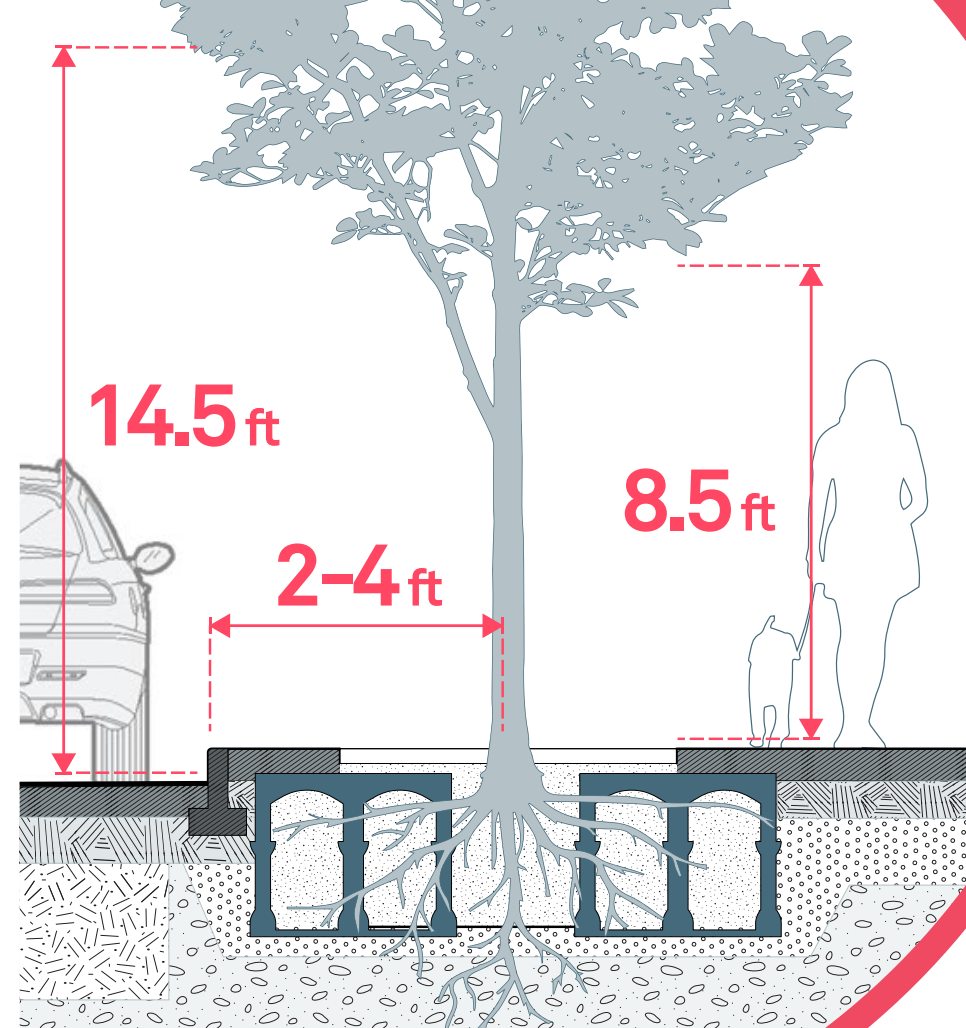
Raised Tree Beds

Raised tree beds contain much of the soil volume in structures above grade to accommodate trees in areas where subsurface conditions might prohibit other methods (e.g. saltwater intrusion). The tree growth is limited by the size of the raised bed and is appropriate for smaller trees. Heights of the tree bed may vary between 1' and 2' but is preferred at 18" if seating is a consideration. Tree beds should be sized as large as needed to provide enough rooting volume while maintaining appropriate sidewalk clearances. If subsurface space is available for root growth a shallow layer of structural soil should be added below the adjacent pavement.

street tree options:

- GUMBO LIMBO
- PIGEON PLUM
- SILVER BUTTON WOOD
- RED MAPLE
- RED MULBERRY
- EVERGLADES PALM
- CABBAGE PALM
- ROYAL PALM
- QUEEN PALM

see Landscape p###



Root environment for street trees

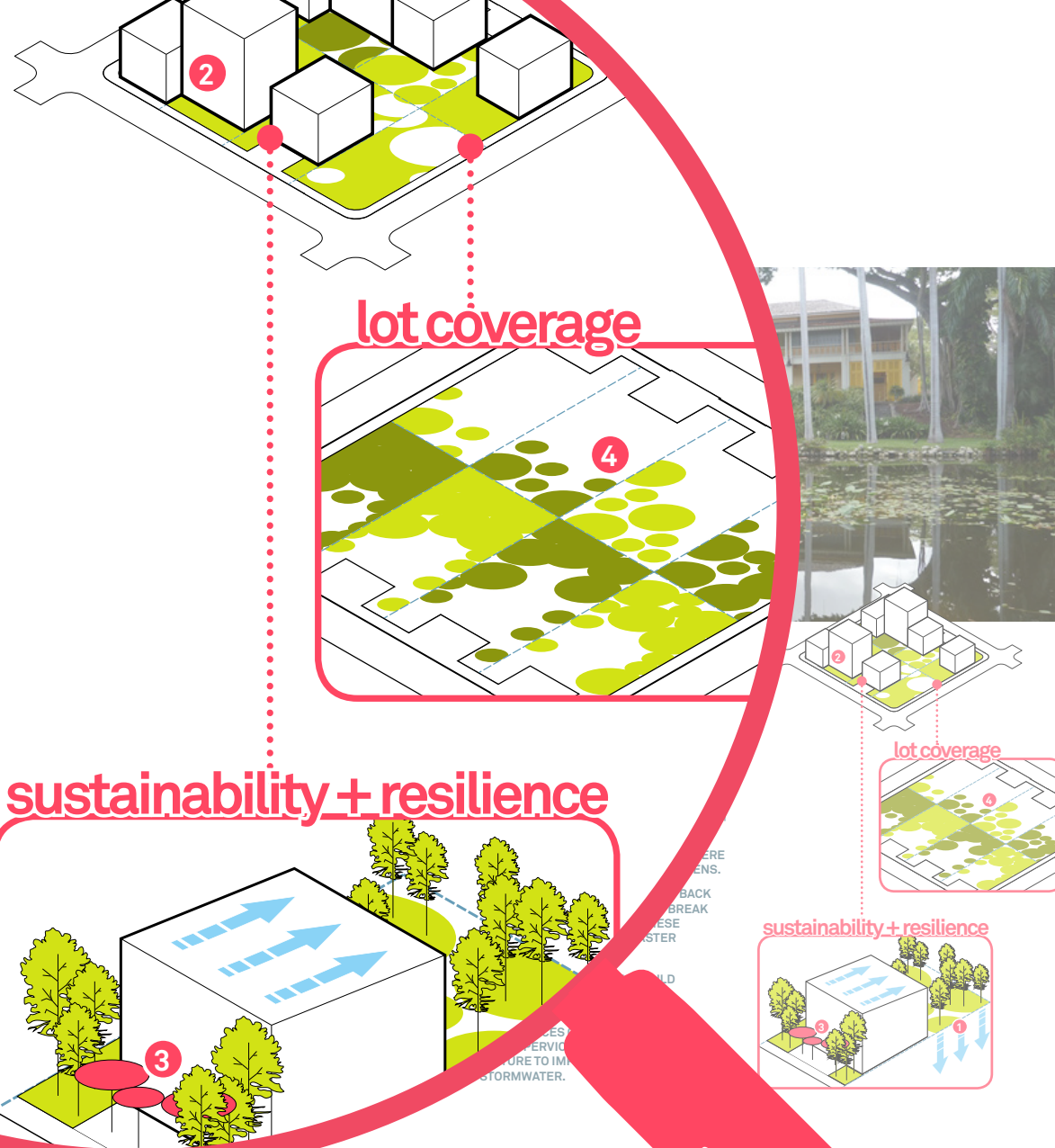
[example
from p68]

ing sits within
public realm. Lot
sistent; this includes
us surfaces, protect
he site, and increase
etation (for appropriate
e, visit the Tools section).
h a reduced driveway
erials and use pervious
hould be minimized in
and existing vegetation.

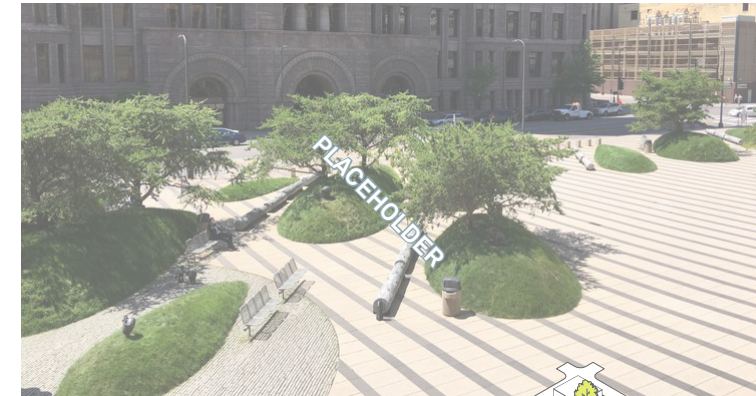
GREEN STORMWATER
AR OF THE LOT, WHERE
S AND RAIN GARDENS.

SHOULD STEP BACK
N ORDER TO BREAK
STREET. THESE
THE MASTER

SHOULD
S OR

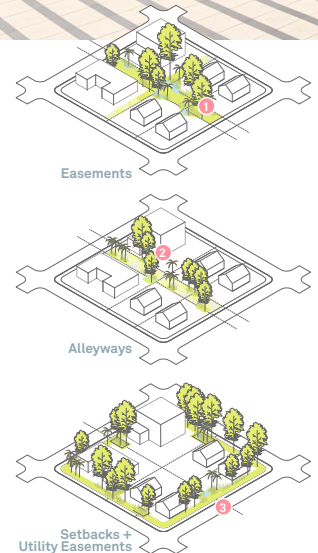


block design



Block design looks at how a series of buildings can work together to address sustainable and resilient practices across a larger scale, consisting of multiple lots many times. Connecting lots with sustainable and resilient practices in the public realm can provide better ecosystem services, stormwater management and other attributes since the practices create an interconnected system.

- 1 CONNECTING MULTIPLE PROPERTIES TO EASEMENTS THROUGH LIVING INFRASTRUCTURE SUCH AS BIO-SWALES CAN DELIVER MULTIPLE ECOLOGICAL SERVICES FOR STORMWATER MANAGEMENT.
- 2 ALLEYS CAN BE RETROFITTED WITH LIVING INFRASTRUCTURE OR CONVERTED TO GREEN ALLEYS. WITH LOW TRAFFIC USAGE ALLEYS ARE GOOD CANDIDATES FOR PERVIOUS PAVING TO HELP INFILTRATE STORMWATER.
- 3 SETBACKS OR EASEMENTS AT THE FRONT OF PROPERTIES CAN INCORPORATE BIO-SWALES AND CONNECT THEM ACROSS SEVERAL PROPERTIES TO CREATE A NETWORK OF LIVING INFRASTRUCTURE WHILE ADDING CHARACTER AND CANOPY TO THE STREET.



3. tools

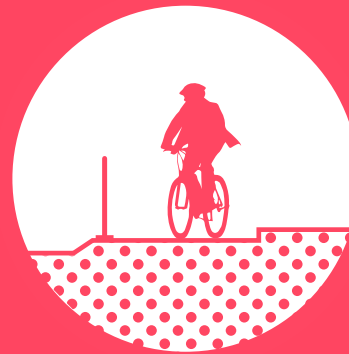
The tools are a set of key elements and assemblies that are used in projects for creating a sustainable and resilient public realm.

ASSEMBLIES

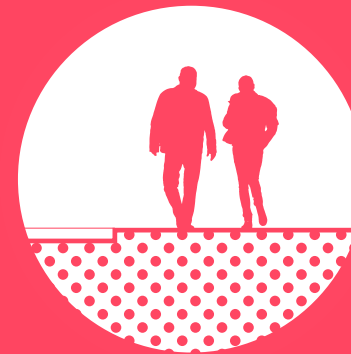
page 130



**TRAFFIC
CALMING**
page 132



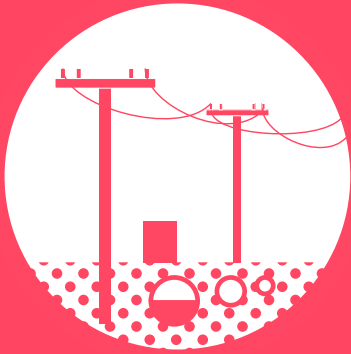
**BICYCLE
FACILITIES**
page 144



**PEDESTRIAN
FACILITIES**
page 158

ELEMENTS

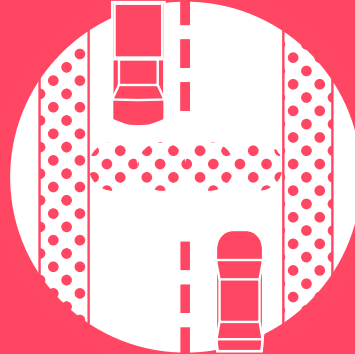
page 164



UTILITIES
page 168



**SIGNAGE +
WAYFINDING**
page 184



HARDSCAPE
page 188



LANDSCAPE
page 196



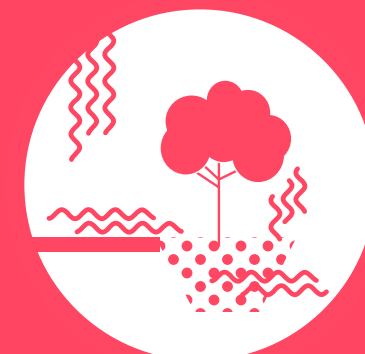
LIGHTING
page 172



FURNISHINGS
page 178



PUBLIC ART
page 192



**FLOODWATER
MANAGEMENT**
page 230



**SHORELINE
INFRASTRUCTURE**
page 242

HARD

ARTIFICIAL INFRASTRUCTURE

SOFT

LIVING INFRASTRUCTURE

CAM #0788
Exhibit 1

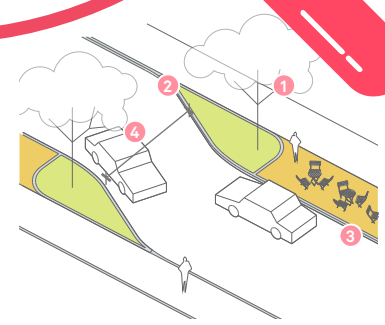
select your tool

- assemblies provide considerations and general specifications
- each element category provides design considerations within the public realm
- elements provide specifications and requirements to help selection process

●●●●● LEVEL OF SAFETY
○○○○● UPFRONT AFFORDABILITY
○○●●● COST EFFECTIVE LIFE CYCLE



APPROPRIATE FOR THESE STREET TYPES:



- 1 TREE PLACEMENT IS CRITICAL IN RELATIONSHIP TO THE CURB AND POURED-IN-PLACE SURFACES. SEE LANDSCAPE SECTION ON P###
- 2 DEFLECTION ANGLE RANGE: MINIMUM OF 45 DEGREES, DEPENDING ON TRAFFIC SPEED
- 3 CHICANES MAY HAVE CURBS OR BE CURBLESS. FOR CURB DETAILS. SEE FLOODWATER TOOLS P##
- 4 MINIMUM/MAXIMUM WIDTHS: 20'-22'



●●●●● LEVEL OF SAFETY
○○○○● UPFRONT AFFORDABILITY
○○●●● COST EFFECTIVE LIFE CYCLE



APPROPRIATE FOR THESE STREET TYPES:

[example
from p130]

chicane

Chicanes are artificial curves in the roadway, using curb extensions or islands to slow down motorists as they navigate through the street.

CONSIDERATIONS

Chicanes provide opportunities for additional sidewalk width, landscaping, bicycle parking, furniture, and drainage. On-street parking may be used to create a chicane by alternating parking spaces from one side of the road to the other. Low-growing vegetation and trees that don't have low-hanging canopies are recommended to preserve visibility.

IMPLEMENTATION

Chicanes are recommended for local streets with a posted speed limit of 35 mph or lower. Use chicanes on two-way streets with single lanes in each direction, or use on one-way streets with single or double lane only.

TOOL ELEMENTS THAT MAY BE INCORPORATED:



pinch point

Pinch points narrow the roadway mid-block by using curb extensions to slow down motorists, as they are required to yield to each other or maneuver through the area.

CONSIDERATIONS

Pinch points provide opportunities for additional sidewalk width, landscaping, bicycle parking, furniture, and drainage. These extensions also provide the opportunity for mid-block crossing, especially along longer blocks. Low-growing vegetation and trees that don't have low-hanging canopies are recommended to preserve visibility for motorists and sight lines for crossing pedestrians.

IMPLEMENTATION

Pinch points are recommended for local streets with a posted speed limit of 35 mph or lower that serve between 450 and 3,500 vehicles per day. Use chokers on two-way streets with single lanes in each direction, or use on one-way streets with single or double lane only.

TOOL ELEMENTS THAT MAY BE INCORPORATED:

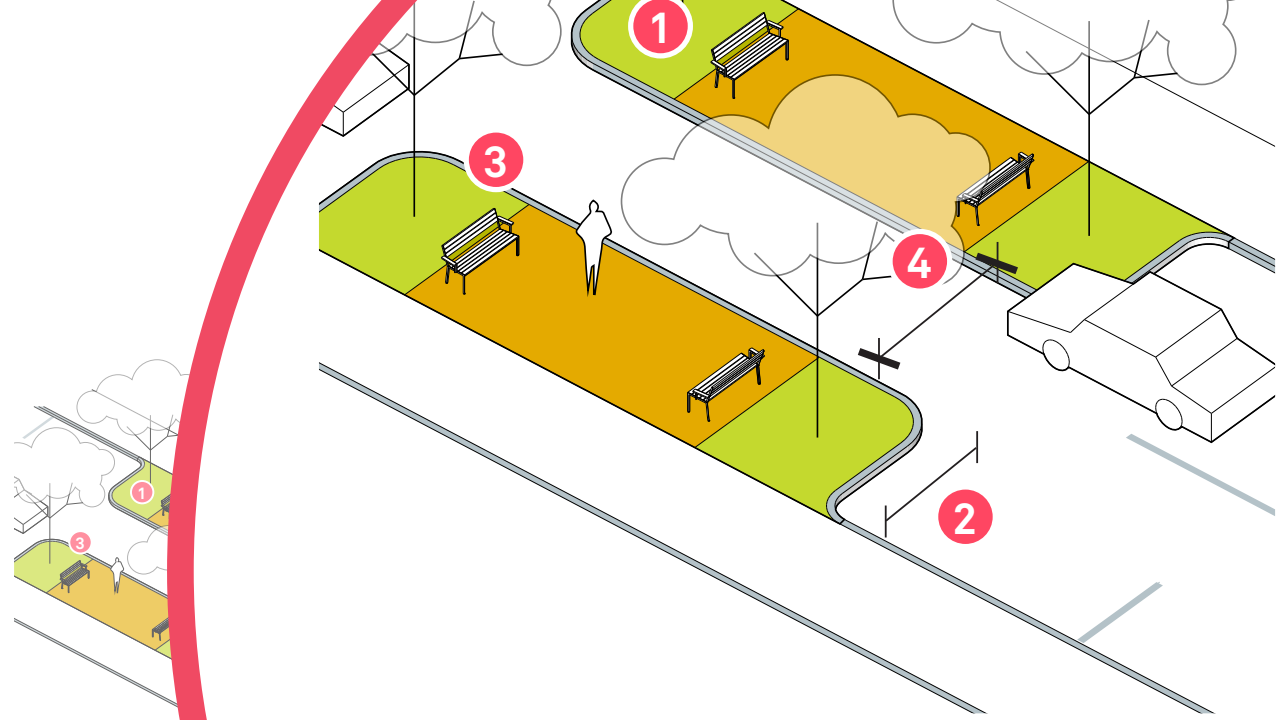


pinch point

Pinch points narrow the roadway mid-block by using curb extensions to slow down motorists, as they are required to yield to each other or maneuver through the area.

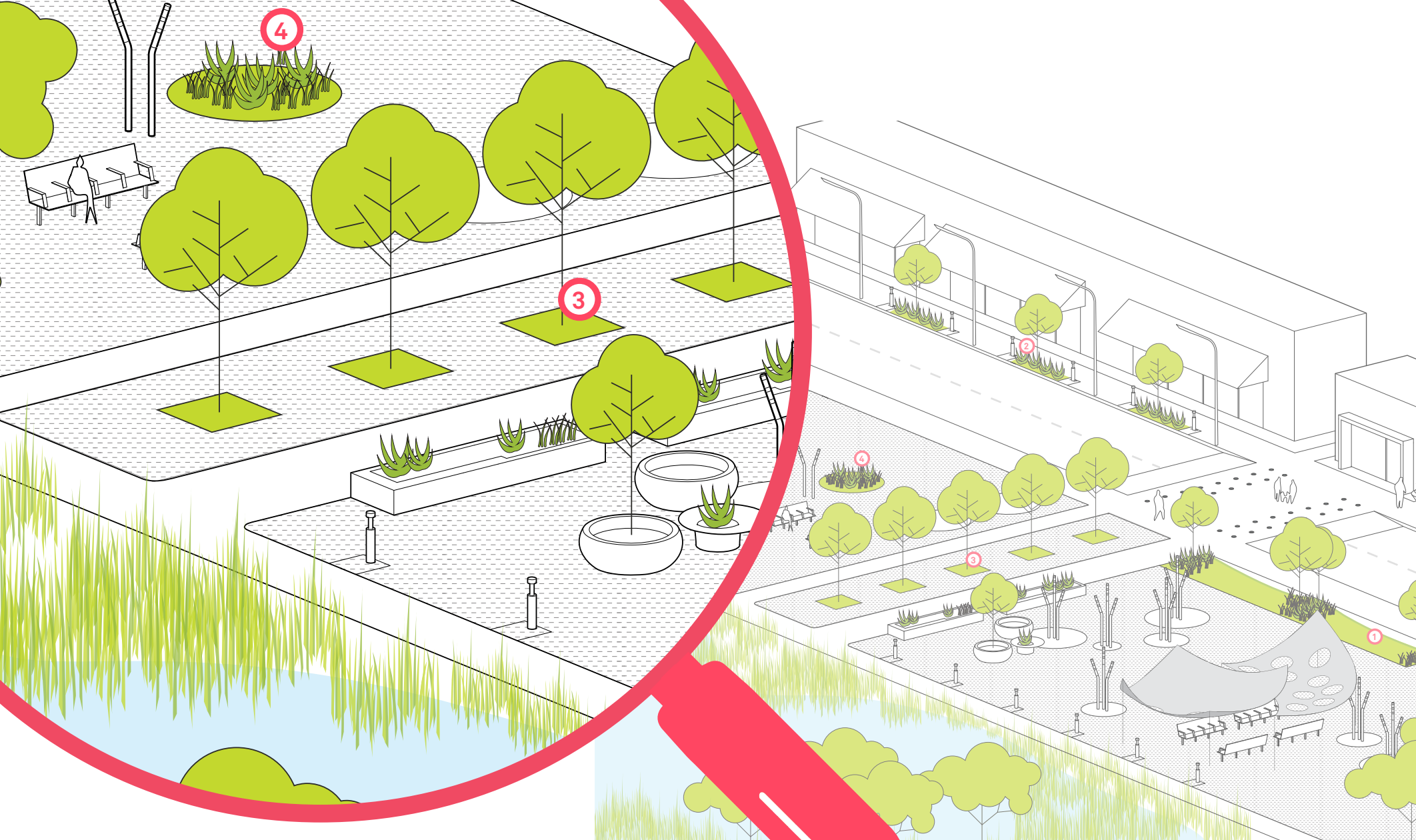
CONSIDERATIONS

Pinch points provide opportunities for landscaping, bicycle parking, furniture and drainage. These extensions also provide the opportunity for mid-block crossing, especially along longer blocks. Low-growing vegetation and trees that don't have low-hanging canopies are recommended to preserve visibility for motorists and sight lines for crossing pedestrians.



- 1 TREE PLACEMENT IS CRITICAL IN RELATIONSHIP TO THE CURB AND POURED-IN-PLACE SURFACES. SEE LANDSCAPE SECTION ON P###
- 2 CURBS SHOULD BE DESIGNED TO ACCOMMODATE THE MINIMUM/MAXIMUM WIDTHS: 20'-22'
- 3 CHOKERS MAY BE USED TO NARROW THE ROADWAY MID-BLOCK BY USING CURB EXTENSIONS TO SLOW DOWN MOTORISTS, AS THEY ARE REQUIRED TO YIELD TO EACH OTHER OR MANEUVER THROUGH THE AREA.
- 4 MINIMUM/MAXIMUM WIDTHS: 20'-22'



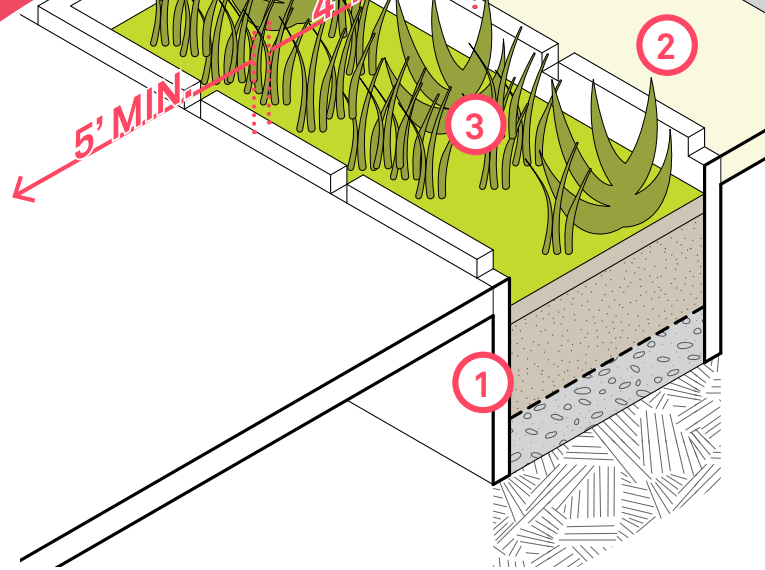


floodwater management

Stormwater challenges are dramatically increased with high amounts of impervious surfaces. Managing floodwater with low-impact development (LID) strategies along streets, sidewalks and public spaces will not only reduce standing water, but it will contribute to groundwater recharge and treat polluted water before reaching waterways. It can also alleviate water flow in the City's stormwater system, saving the City money on upgrades or repairs to existing

- 1 Bio-retention swales (page 128) are open, gently sloped, vegetated depressions designed to capture, treat, and filter stormwater runoff. They should be placed within the furniture zone and act as a buffer between sidewalks and traffic.
- 2 Bio-retention planters (page 126) are planted depressions with walled sides and a permeable, flat bottom designed to capture and treat stormwater runoff. They should be placed within the furniture zone and allow for pedestrians to pass through every 20 to 40 feet.
- 3 Stormwater trees (page 232) should be spaced according to species used.
- 4 Planters can collect stormwater runoff from multiple directions if in an open space.

[example
from p240]



bio-retention planter



Purpose
filtration/infiltration/treatment



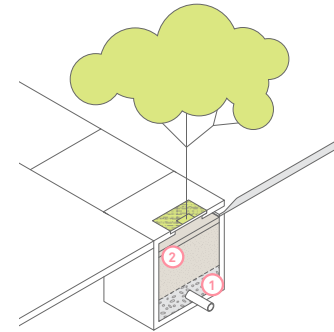
Placement
sidewalk furnishing zone, medians, pedestrian boulevards, along property line



Minimum Requirements

- 4' wide
- cells well-drained within 72 hrs of rain event
- temporary ponding depth 2-12"

[example from p244]



stormwater tree



Purpose
filtration/infiltration



Placement
sidewalk furnishing zone, medians



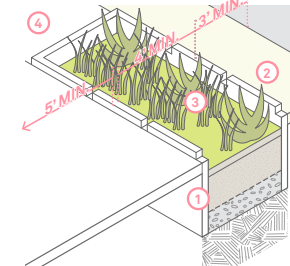
Minimum Requirements
requirements for substrate and opening sizes will vary depending on the tree species

Considerations
See landscape palette (p###) for proper tree types.

Tree box filters and wells can be incorporated into urban retrofits with the added benefits of water quality improvement and reduction of the urban heat island effect. As with other filtration devices, tree box filters require occasional inspection to remove large debris and/or trash.

Notes:

- 1 PROVIDE ENOUGH CLEARANCE FROM THE PERFORATED PIPE TO COLLECT TREATED RUNOFF. PROPER CLEARANCE VARIES BASED ON TREE SPECIES. DEPENDING ON THE SOIL TYPE (PERCOLATION ABILITY) AT THE BASE OF THE TREE BOX THE UNDER-DRAIN PIPE MAY NOT BE REQUIRED.
- 2 120 CUBIC FEET OF SOIL FOR 10' CANOPY
500 CUBIC FEET OF SOIL FOR 20' CANOPY
1000 CUBIC FEET OF SOIL FOR 30' CANOPY



bio-retention planter



Purpose
filtration/infiltration/treatment



Placement
sidewalk furnishing zone, medians, pedestrian boulevards, along property line



Minimum Requirements

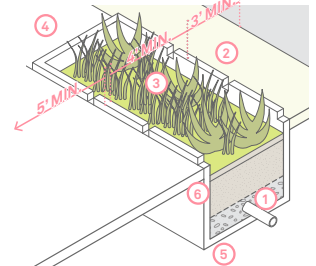
- 4' wide
- cells well-drained within 72 hrs of rain event
- temporary ponding depth 2-12"

Considerations
See landscape palette (p###) for proper plant types.

New planters often need irrigation during an establishment period of 1-3 years, and are generally low maintenance after that time.

Notes:

- 1 VERTICAL WALLS ARE TYPICALLY CONCRETE BUT OTHER MATERIALS MAY BE USED.
- 2 A RAISED DRAIN OR CURB CUT ALLOWS OVERFLOW TO DRAIN BACK IN TO THE GRAYWATER SYSTEM.
- 3 MAXIMIZE SURFACE FOOTPRINT TO LOWER EROSION RISK.
- 4 PROVIDE PEDESTRIAN CUT THROUGH EVERY 20-40 FEET.



bio-filtration planter



Purpose
stormwater runoff filtration/treatment



Placement
sidewalk furnishing zone, medians, pedestrian boulevards, along property line



Minimum Requirements

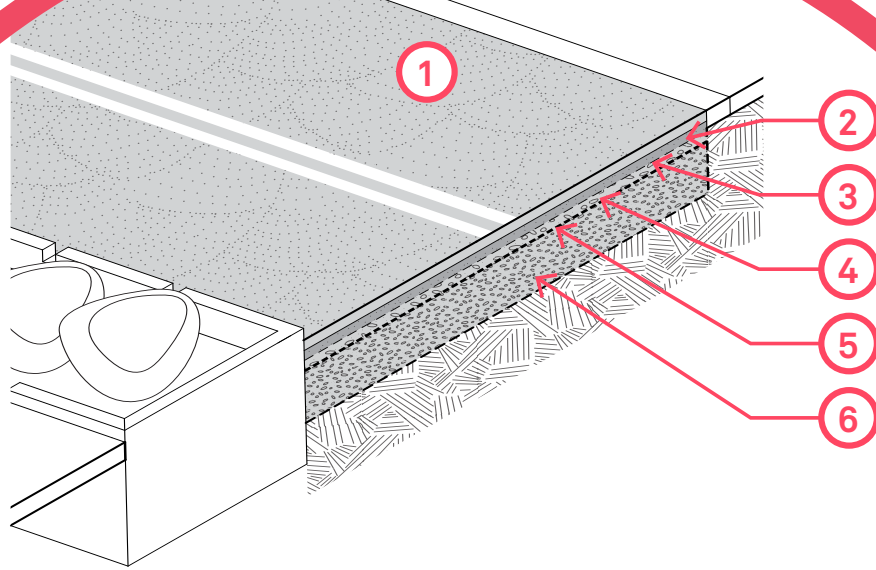
- 4' wide

Considerations
See landscape palette (p###) for proper plant types.

New planters often need irrigation during an establishment period of 1-3 years, and are generally low maintenance after that time.

Notes:

- 1 INSTALL PERFORATED PIPE TO COLLECT TREATED RUNOFF.
- 2 A RAISED DRAIN OR CURB CUT ALLOWS OVERFLOW TO DRAIN BACK IN TO THE GRAYWATER SYSTEM.
- 3 MAXIMIZE SURFACE FOOTPRINT TO LOWER EROSION RISK.
- 4 PROVIDE PEDESTRIAN CUT THROUGH EVERY 20-40 FEET.
- 5 BOTTOM OF THE PLANTER CAN BE CONCRETE OR HAVE AN IMPERVIOUS LINER TO PREVENT WATER FROM INFILTRATING.
- 6 VERTICAL WALLS ARE TYPICALLY CONCRETE BUT OTHER MATERIALS MAY BE USED.



permeable pavement



Purpose

filtration/infiltration/treatment



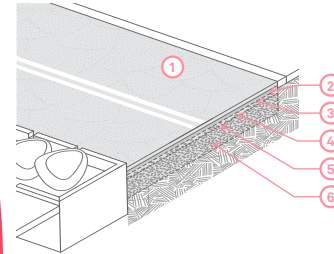
Placement

low vehicle traffic zones; parking, bike lanes, shared-use paths

Considerations

Use high albedo, lightly colored systems or "reflective/cool pavement" to reduce the heat island effect. Asphalt concrete pavement in South Florida, due to the light coloring of the Oolite Limestone used for aggregate, has a solar reflectivity surface similar to concrete surface after 6 months to a year of wear.

[example from p248]



permeable pavement

Purpose
filtration/infiltration/treatment

Placement
low vehicle traffic zones; parking, bike lanes, shared-use paths

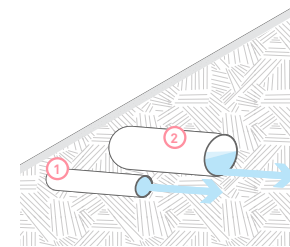
Considerations
Use high albedo, lightly colored systems or "reflective/cool pavement" to reduce the heat island effect. Asphalt concrete pavement in South Florida, due to the light coloring of the Oolite Limestone used for aggregate, has a solar reflectivity surface similar to concrete surface after 6 months to a year of wear.

Large scale vacuums must be used to clean out gravel, paver, and porous systems.

*For permeable pavers, see modulated hardscapes on page ###.

Notes:

- 1 PERMEABLE PAVEMENT (CONCRETE OR ASPHALT)
- 2 AGGREGATE BEDDING
- 3 FILTER FABRIC
- 4 OPEN GRADED BASE (DEPTH VARIES BASED ON LOADS)
- 5 REINFORCING GRID FOR HEAVY LOADS
- 6 OPEN GRADED SUB-BASE (DEPTH VARIES BASED ON LOADS)



oversized pipes

Purpose
flow control

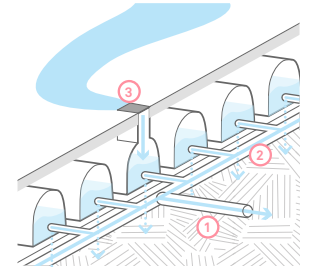
Placement
utilize where piping can not be avoided, under impervious surfaces like driveways and sidewalks

Minimum Requirements
use non-corrosive materials

Considerations
As with any pipe infrastructure, oversized pipes require trash and sediment removal annually.

Notes:

- 1 PROPERLY-SIZED PIPE
- 2 OVERSIZED PIPES ELIMINATE LARGER PRESSURE DROPS AND HIGHER VELOCITIES THAT OCCUR IN PROPERLY SIZED PIPES DURING STORM EVENTS.



underground detention

Purpose
detention/infiltration

Placement
use in areas where on-grade storage is minimal; optimally placed after filtration facilities to prevent excessive sedimentation

Minimum Requirements
maximum watershed runoff area is 25 acres

Considerations
Though at first costly, underground detention systems are easy to access and maintain.

Notes:

- 1 RUNOFF MAY INFILTRATE THE GROUND BENEATH IF THE SOIL IS PERMEABLE.
- 2 OUTLET PIPES FACILITATE THE SLOW RELEASE OF STORMWATER RUNOFF.
- 3 DRAIN COVERS FOR INLETS SHOULD BE BIKE SAFE.

implementation

- navigating regulatory and jurisdiction
- construction best practices
- operations + maintenance best practices
- tactical urbanism



PLACE +
IDENTITY



HEALTHY + ACTIVE
LIFESTYLE



FOCUSED
DEVELOPMENT



JURISDICTION +
REGULATION



REGIONAL
FLOODING

DESIGN WIDTHS

3'	furniture zone: signage, public art, planters, lighting, aboveground utilities	planters, minimum sidewalk pinch point for all residential street typologies, street trees, utilities	furniture zone: lighting, planters, waste receptacles, aboveground utilities	CITY: n/a COUNTY: bike buffer width next to on-street parking STATE: n/a	stormwater trees
4'	furniture zone: custom seating, wayfinding	minimum functional bike lane width adjacent to buffer, minimum sidewalk pinch point for commercial streets and avenues	minimum functional bike lane width adjacent to buffer	CITY: bike lane adjacent to buffer, sharrow distance from curb COUNTY: door zone next to bike lane, median for access control, bike lane with 2' buffer STATE: landscape for 40-45mph design speed, bike lane	planters (bio-retention, bio-filtration, hybrid)
5'	furniture zone: custom planter with incorporated seating	recommended bike lane width, minimum clear sidewalk width if set back from curb	recommended bike lane width, minimum sidewalk width if set back from curb, minimum sidewalk pinch point on all street typologies	CITY: minimum clear sidewalk, recommended tree belt between street and sidewalk, bike lane next to on-street parking COUNTY: bike lanes on principal arterial streets, bike lane next to on-street parking, local streets sidewalk STATE: sidewalk, bike lane adjacent to guardrail	tree/planter belt, paved sidewalks
6'	minimum sidewalk width if at curb edge	minimum sidewalk width if at curb edge	minimum sidewalk width if at curb edge	CITY: n/a COUNTY: preferred bike lane, one-way cycle track, median for access control, pedestrian refuge, trees and lighting, sidewalk width except local streets STATE: bike lanes adjacent to parallel parking, median for pedestrian refuge, sidewalks adjacent to curb	paved sidewalks
7'	minimum parallel parking width from the edge of curb	minimum parallel parking width from the edge of curb	minimum parallel parking width from the edge of curb	CITY: n/a COUNTY: parallel parking for avenues and streets STATE: parallel parking, buffered bike lane	paved parallel parking
8'	entryway islands or midblock islands furniture zone: seating, (sculptures) public art parklet	bike median	minimum chicane width, minimum bioswale width, parallel parking width adjacent to bike lane furniture zone: seating, bike racks	CITY: desired on-street parking width, sidewalks in high pedestrian volume areas COUNTY: recommended pedestrian refuge median, shared-use paths, minimum parallel parking STATE: small sections of shared-use paths, minimum parallel parking (C4, C5, C6)	minimum width of bio-retention swale
9'	minimum travel lane for avenues and streets	minimum travel lane for avenues and streets	minimum travel lane for avenues and streets	CITY: n/a COUNTY: min. lane width for local streets and residential avenues and streets STATE: perpendicular parking	minimum travel lane for avenues and streets
10' and greater	sculpture or other public art, minimum travel lane for boulevards	multi-use trail, bike boulevard including buffers, minimum travel lane for boulevards	chicane, mid-block curb extension furniture zone: shade structures, bike parking, minimum travel lane for boulevards	CITY: crosswalks outside of City Center, median for left-hand turn, shared-use paths COUNTY: lane width for residential collector & above, commercial avenues and streets, boulevard design speeds of 30-35 mph, painted medians, refuge islands STATE: lane width for urban local streets or design speeds of 25-35 mph (C3, C4, C5, C6), sidewalks on C5, shared-use paths	minimum travel lane for boulevards, recommended width of bio-retention swales



next steps

- present to City Commision
- draft implementation report