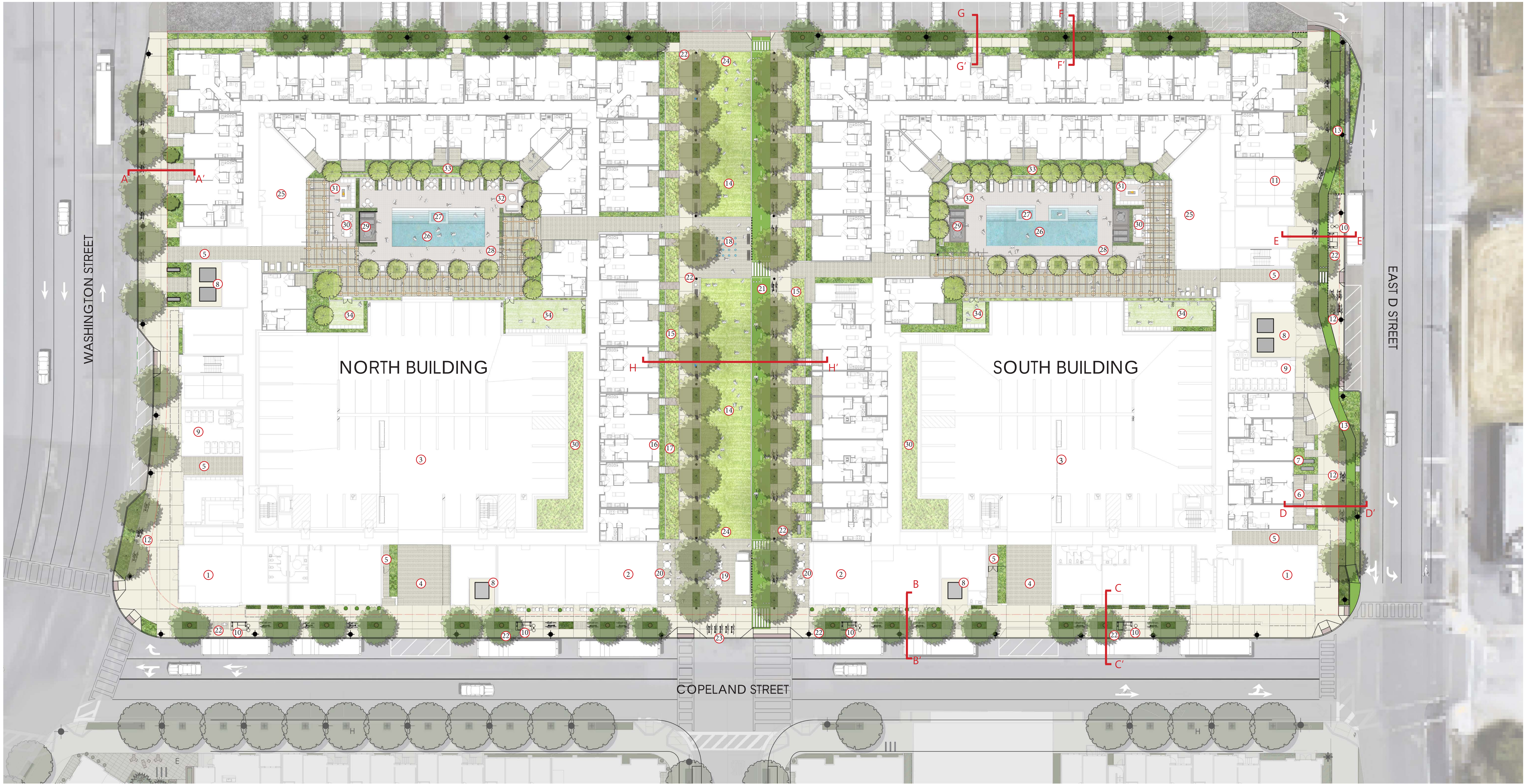




LANDSCAPE LEGEND

- PISTACIA CHINENSE - CHINESE PISTACHE, MAX. 25' HEIGHT FOR PFD LADDER ACCESS AND UNDER PG&E HIGH VOLTAGE LINE

- ACER BUERGERIANUM - TRIDENT MAPLE, MAX. 25' HEIGHT FOR PFD LADDER ACCESS AND UNDER PG&E HIGH VOLTAGE LINE

- PATIO TREE

- COURTYARD TREE

- SHRUB & GROUND COVER PLANTING AREA

- BIORETENTION PLANTING

- LAWN

- POOL DECK/COURTYARD PAVING - INTEGRAL COLOR CONCRETE OR CONCRETE UNIT PAVERS

- ENHANCED PAVEMENT - CONCRETE UNIT PAVERS

- STANDARD CONCRETE PAVING - CITY APPROVED

- PATIO BRIDGE

- 42" HIGH D STREET BUS STOP BARRIER FENCE

- 42" HIGH WALL/BOARD FORMED CONCRETE WALL AND METAL/ WOOD FENCE AT SMART PROPERTY LINE

- METAL BIKE RACKS

- 5'-0" HIGH POOL METAL/WOOD/GLASS FENCE - NO OPENING GREATER THAN 4" WITH SELF-LATCHING GATES.

-STREET LIGHT - PETALUMA STANDARD SPACING TBD.

-DECORATIVE LIGHT POLE IN PEDESTRIAN/BIKE THOROUGHFARE

PERIMETER OF BUILDING

1 LEASING

2 RETAIL

3 RESIDENTIAL PARKING

4 GATED GARAGE ENTRY

5 GATED PEDESTRIAN ENTRY

6 RESIDENTIAL PATIO

7 DOOR YARD

8 TRANSFORMER FENCED

9 ENCLOSED TRASH

10 BUS SHELTER

11 INDOOR SECURED BIKE PARKING

12 OUTDOOR UNSECURED BIKE RACK

13 RAISED CYCLE TRACK

PEDESTRIAN/BIKE THOROUGHFARE

14 SOCIAL LAWN

15 BIORETENTION PLANTER

16 RESIDENTIAL PATIO

17 RESIDENTIAL ENTRIES

18 PLAZA/SPLASH PAD FOUNTAIN

19 FOOD TRUCK PLAZA

20 RETAIL DINING

21 TWO-WAY CYCLE TRACK

22 DRINKING FOUNTAIN/BOTTLE FILTER

23 BIKE SHARE

24 POTENTIAL PUBLIC PARK LOCATION

RESIDENTIAL COURTYARD

25 CLUB

26 POOL

27 JACUZZI

28 POOL FENCE

29 CABANA

30 OUTDOOR KITCHEN/DINING

31 FIRE TABLE LOUNGE

32 LOUNGE

33 BIORETENTION PLANTER

34 DOG AREA- SYNTHETIC LAWN

PETALUMA STATION

PETALUMA, CA 94952

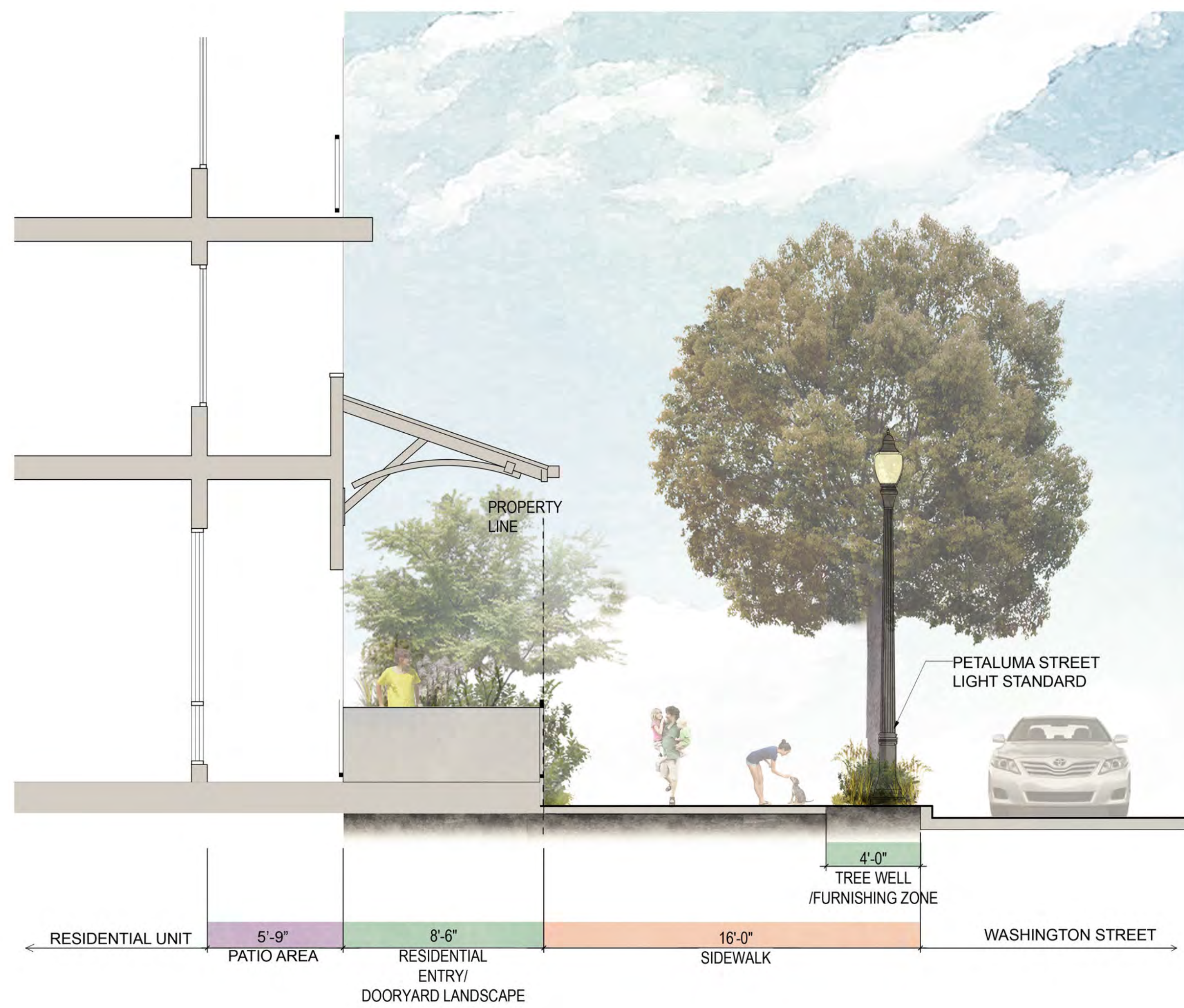
LANDSCAPE PLAN

LEMON BROOKE

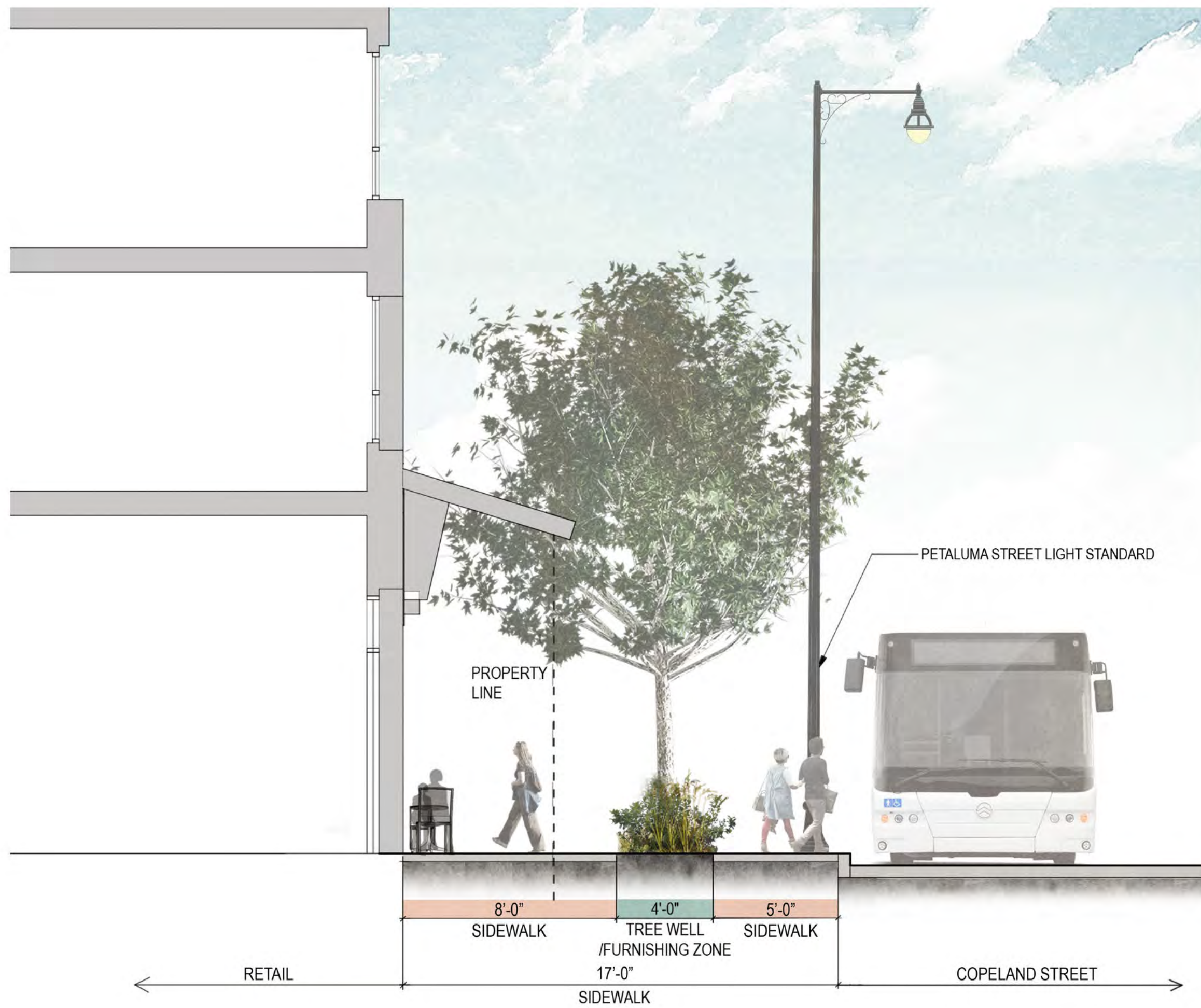
L2.0

Scale 1" = 20'

Date 2020-08-21



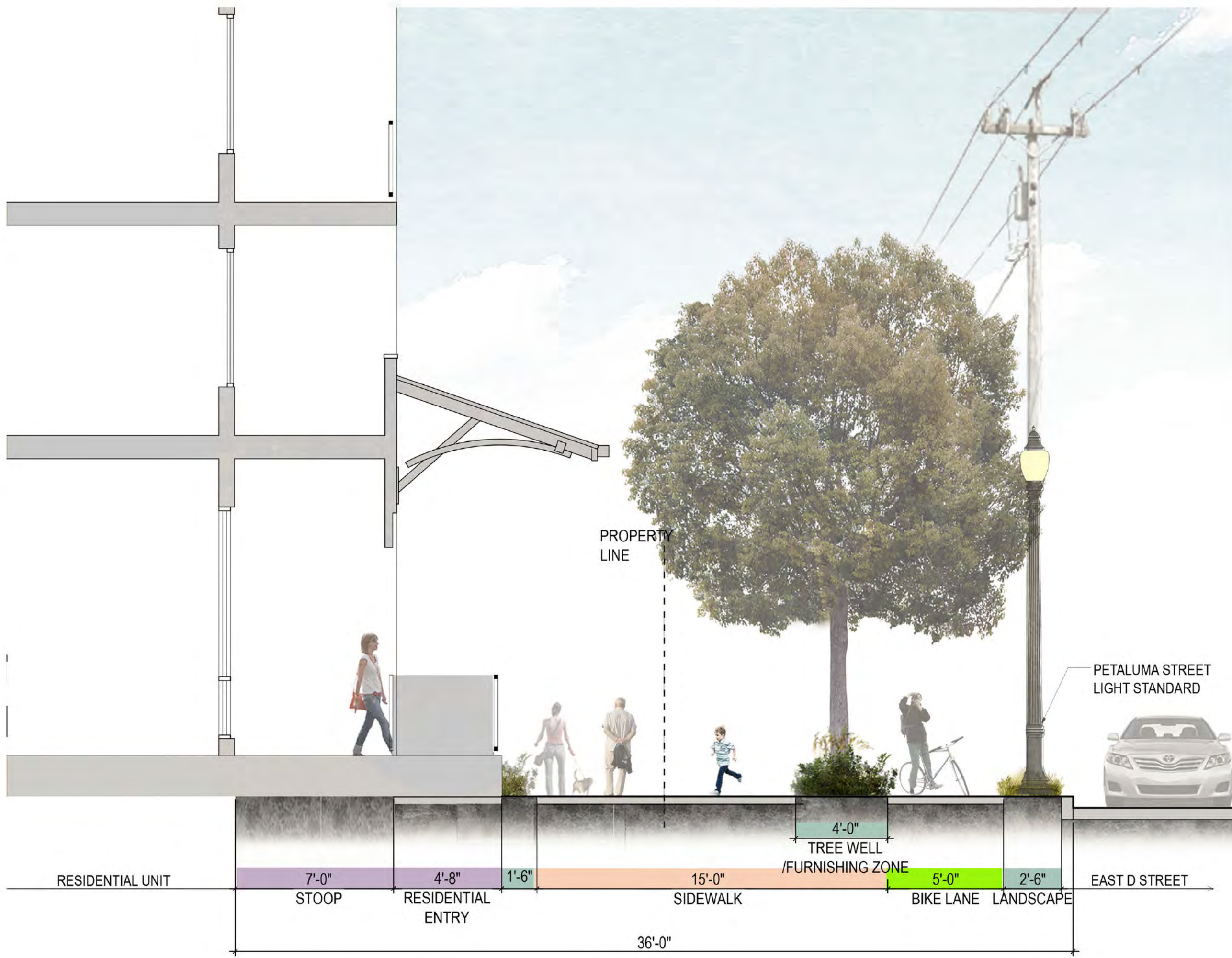
Section A-A' WASHINGTON STREET



Section B-B' COPELAND STREET



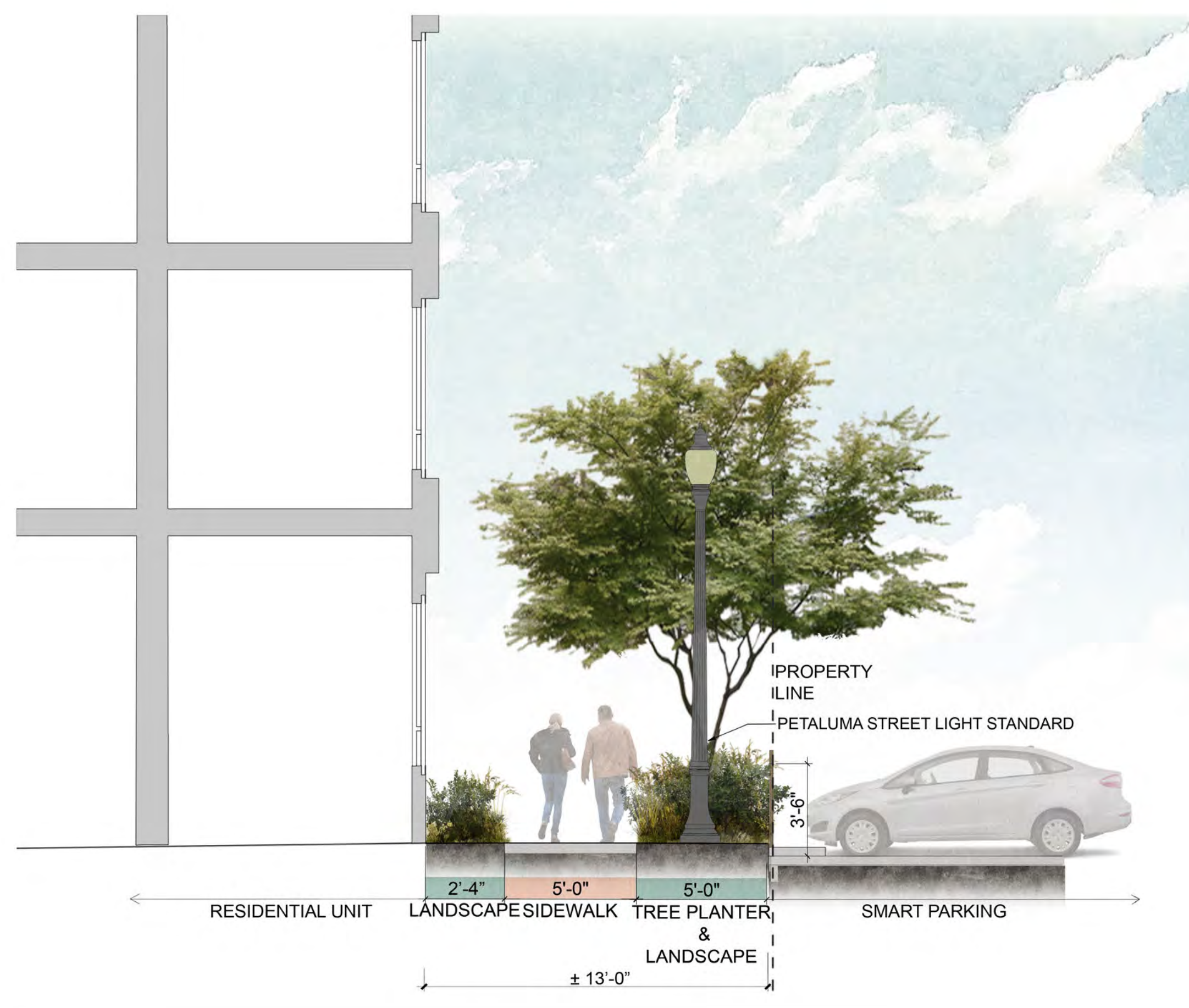
Section C-C' COPELAND STREET



Section D-D' EAST D STREET



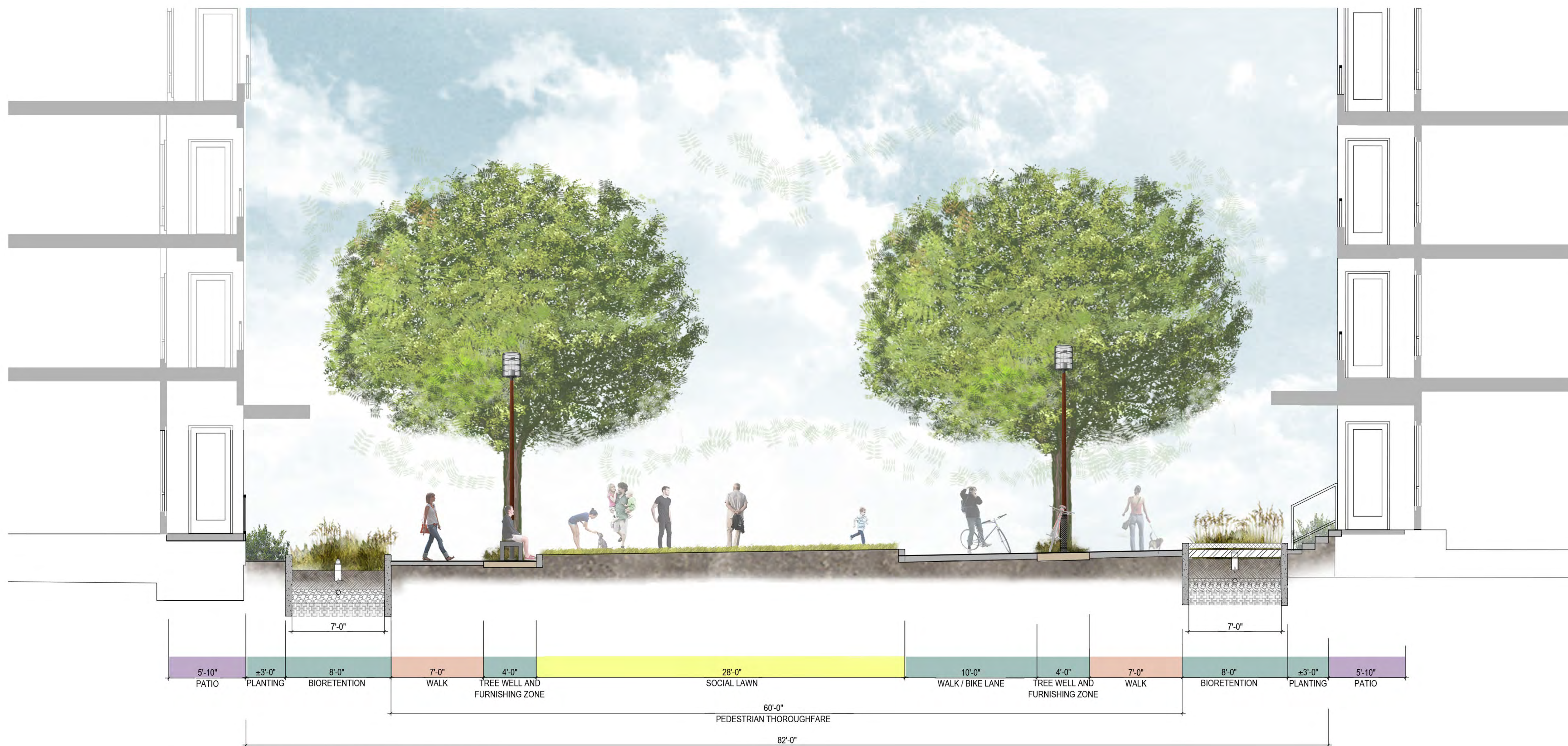
Section E-E' EAST D STREET



Section F-F' SMART STATION



Section G-G' SMART STATION



Section H-H' PEDESTRIAN/BIKE THOROUGHFARE

FENCE



TREE WELL



PAVING - FURNISHING ZONE



LOW WALL



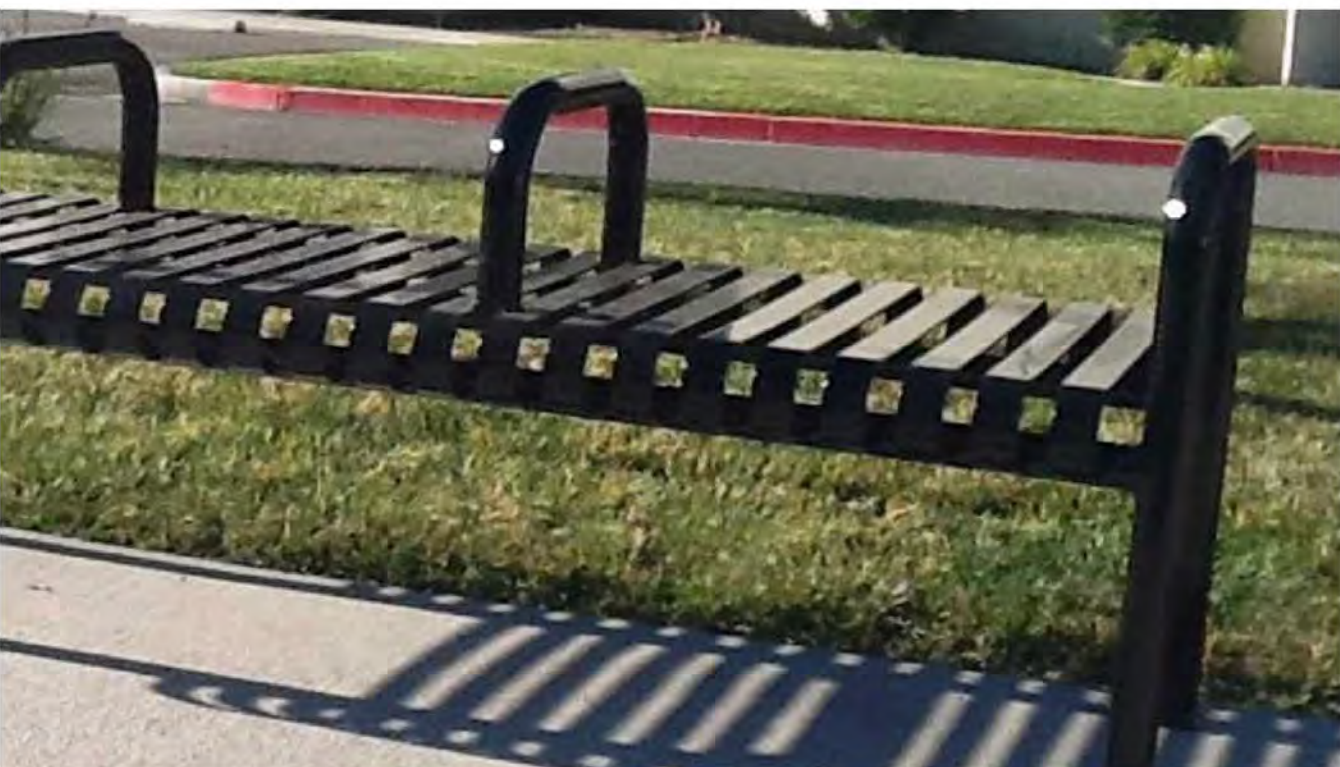
RAISED PLANTERS



BUS SHELTER - TOLAR SIERRA



BUS SHELTER BENCHES - TOLAR



BUS SHELTER TRASH CAN - TOLAR



BIKE LANE



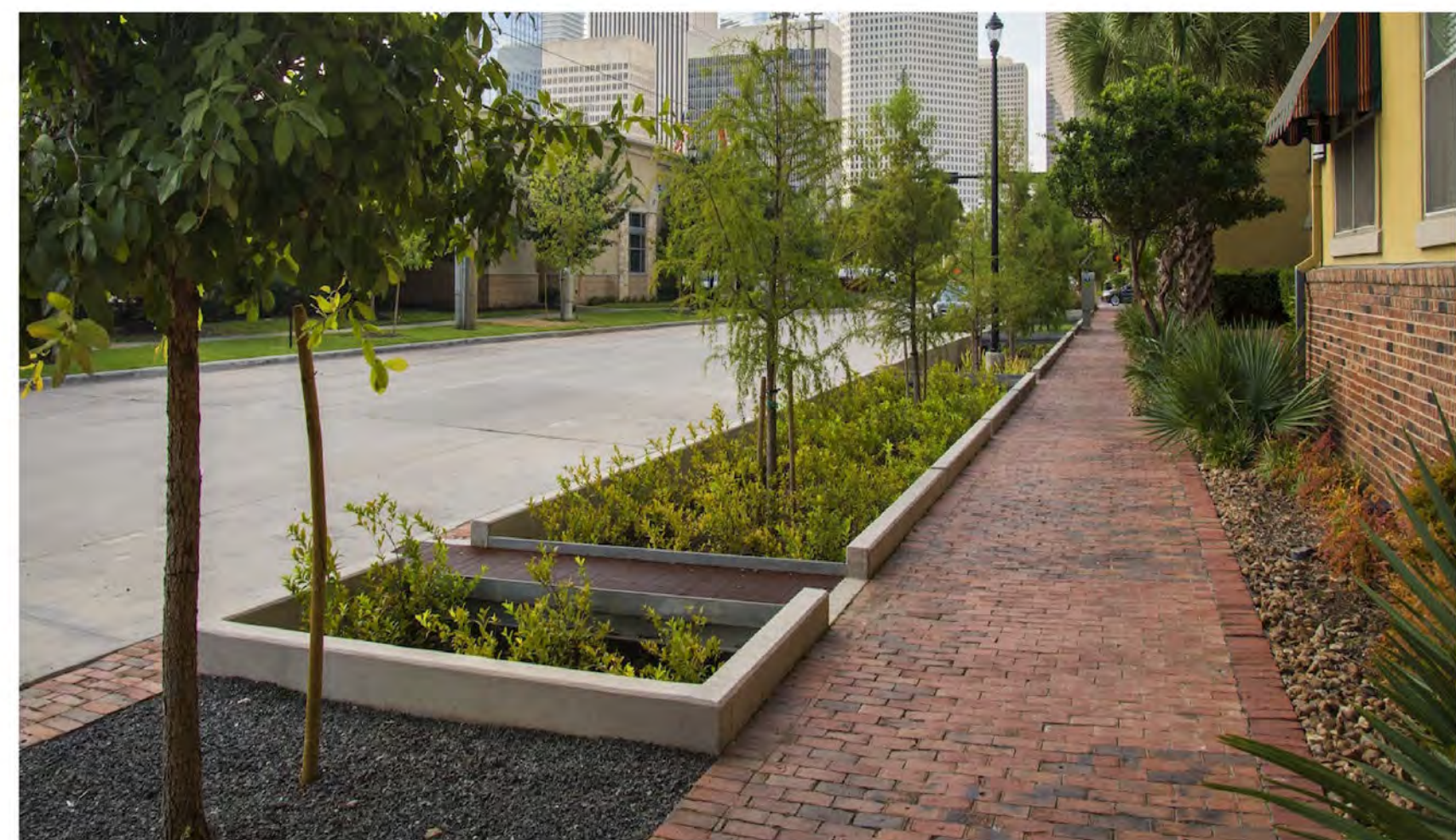
BIKE RACK - DERO HOOP



DRINKING FOUNTAIN/BOTTLE FILLER



BIORETENTION



PEDESTRIAN BIKE WALK



SOCIAL LAWN



CRAFT FAIR + FARMERS MARKET



FOOD TRUCK



SEATING



PAVING - FURNISHING ZONE



POOL



POOL FENCE



TRELLIS



OUTDOOR DINING



RAISED PLANTERS



FIRE TABLE



DOG AREA



Candidate Plant Schedule- Perimeter Landscape

Street Trees

Botanical Name	Common Name	Size	Water Use
Acer buergerianum	Trident Maple	36" Box	Medium
Pistacia chinensis	Chinese Pistache	36" Box	Low

Trees

Acer rubrum	Red Maple	24" Box	Medium
Arbutus marina		24" Box	Low
Arbutus unedo	Strawberry Tree	24" Box	Low
Cercis occidentalis	Western Redbud	24" Box	Low
Ginkgo biloba	Maidenhair Tree	24" Box	Medium
Lagerstroemia indica	Crape Myrtle	24" Box	Low

Shrubs

Agave bracteosa	Candelabrum Agave	2 Gal.	Low
Arctostaphylos densiflora	Manzanita	5 Gal.	Low
Callistemon viridiflorus	Green Bottle Brush	5 Gal.	Low
Choisya ternata 'Sundance'	Mock Orange	5 Gal.	Medium
Garrya elliptica 'James Roof'	Western Silktassel	5 Gal.	Low
Myrtus communis 'Compacta'	Compact Myrtle	5 Gal.	Low
Nandina d. 'Lemon Lime'	Heavenly Bamboo	5 Gal.	Medium
Rhamnus californica	Coffeberry	5 Gal.	Low
Sarcococca hookeriana var. digyna	Sweetbox	5 Gal.	Medium
Yucca filamentosa	Adam's Needle	5 Gal.	Low

Perennials

Achillea millefolium	Yarrow	1 Gal.	Low
Arthropodium cirratum	Renga Lily	1 Gal.	Medium
Bulbine frutescens	Snake Flower	1 Gal.	Low
Dianella sp.	Blue Lily	1 Gal.	Low
Echinacea pallida	Coneflower	1 Gal.	Medium
Hesperaloe p. 'Brake Light'	Red Yucca	1 Gal.	Low
Iris douglasiana	Pacific Coast Iris	1 Gal.	Low
Kniphofia thompsonii	Red-Hot-Poker	1 Gal.	Low
Penstemon heterophyllus 'Electric Blue'	Sierra Penstemon	1 Gal.	Low
Ratibida pinnata	Prairie Coneflower	1 Gal.	Low
Zauschneria sp.	California Fuchsia	1 Gal.	Low

Grasses

Aristea inaequalis	Blue Aristea	1 Gal.	Low
Astelia ch. Silver Spear	Silver Spear	1 Gal.	Medium
Beschomeria yuccoides	Mexican Red Lily	1 Gal.	Low
Bouteloua gracilis 'Blonde Ambition'	Hair Grass	1 Gal.	Low
Calamagrostis brachytricha	Korean Feather Grass	1 Gal.	Moderate
Carex testacea	Orange Sedge	1 Gal.	Moderate
Chondropetalum 'El Campo'	Chondropetalum	1 Gal.	Low
Juncus patens	Elk Sedge	1 Gal.	Low
Muhlenbergia dumosa	Bamboo Muhly	1 Gal.	Low
Muhlenbergia rigens	Deer Grass	1 Gal.	Low
Sesleria autumnalis	Autumn Grass	1 Gal.	Moderate

Ground Cover

Achillea millefolium	Yarrow	1 Gal.	Low
Grevillea juniperina 'Gold Cluster'	Juniper Grevillea	1 Gal.	Low
Euphorbia 'Dean's Hybrid'	Spurge	1 Gal.	Low

Vine

Akebia quinata	Five Leaf Akebia	5 Gal.	Moderate
Vitis californica x vinifera 'Roger's Red'	California Grape	5 Gal.	Low



Myrtus communis 'Compacta'



Iris douglasiana



Zauschneria sp.



Yucca filamentosa



Achillea millefolium



Sesleria autumnalis



Acer buergerianum



Pistacia chinensis



Arbutus Marina



Cercis occidentalis



Arctostaphylos densiflora



Bulbine frutescens



Dianella sp.



Grevillea juniperina 'Gold Cluster'

Candidate Plant Schedule- Pedestrian/Bike Thoroughfare Landscape

Trees

Botanical Name	Common Name	Size	Water Use
Pistacia chinensis	Chinese Pistache	36" Box	Low

Shrubs

Agave bracteosa	Candelabrum Agave	2 Gal.	Low
Arctostaphylos densiflora	Manzanita	5 Gal.	Low
Callistemon viridiflorus	Green Bottle Brush	5 Gal.	Low
Choisya ternata 'Sundance'	Mock Orange	5 Gal.	Medium
Garrya elliptica 'James Roof'	Western Silktassel	5 Gal.	Low
Myrtus communis 'Compacta'	Compact Myrtle	5 Gal.	Low
Nandina 'Lemon Lime'	Heavenly Bamboo	5 Gal.	Medium
Rhamnus californica	Coffeberry	5 Gal.	Low
Sarcococca hookeriana var. digyna	Sweetbox	5 Gal.	Medium
Yucca filamentosa	Adam's Needle	5 Gal.	Low

Perennials

Achillea millefolium	Yarrow	1 Gal.	Low
Arthropodium cirratum	Renga Lily	1 Gal.	Medium
Bulbine frutescens	Snake Flower	1 Gal.	Low
Dianella sp.	Blue Lily	1 Gal.	Low
Echinacea pallida	Coneflower	1 Gal.	Medium
Hesperaloe p. 'Brake Light'	Red Yucca	1 Gal.	Low
Iris douglasiana	Pacific Coast Iris	1 Gal.	Low
Kniphofia thompsonii	Red-Hot-Poker	1 Gal.	Low
Penstemon heterophyllus 'Electric Blue'	Sierra Penstemon	1 Gal.	Low
Ratibida pinnata	Prairie Coneflower	1 Gal.	Low
Zauschneria sp.	California Fuchsia	1 Gal.	Low

Grasses

Aristea inaequalis	Blue Aristea	1 Gal.	Low
Astelia ch. Silver Spear	Silver Spear	1 Gal.	Medium
Beschomeria yuccoides	Mexican Red Lily	1 Gal.	Low
Bouteloua gracilis 'Blonde Ambition'	Hair Grass	1 Gal.	Low
Calamagrostis brachytricha	Korean Feather Grass	1 Gal.	Moderate
Carex testacea	Orange Sedge	1 Gal.	Moderate
Chondropetalum 'El Campo'	Chondropetalum	1 Gal.	Low
Juncus patens	Elk Sedge	1 Gal.	Low
Muhlenbergia dumosa	Bamboo Muhly	1 Gal.	Low
Muhlenbergia rigens	Deer Grass	1 Gal.	Low
Sesleria autumnalis	Autumn Grass	1 Gal.	Moderate

Ground Cover

Achillea millefolium	Yarrow	1 Gal.	Low
Grevillea juniperina 'Gold Cluster'	Juniper Grevillea	1 Gal.	Low
Euphorbia 'Dean's Hybrid'	Spurge	1 Gal.	Low

Vine

Akebia quinata	Five Leaf Akebia	5 Gal.	Moderate
Vitis californica x vinifera 'Roger's Red'	California Grape	5 Gal.	Low
Trachelospermum jasminoides	Star Jasmine	5 Gal.	Moderate

Bioretention

Bouteloua gracilis	Blue grama	1 Gal.	Low
Carex barbarea	Santa Barbara sedge	1 Gal.	Low
Carex nudata	California black sedge	1 Gal.	Low
Carex obnupta	Slough sedge	1 Gal.	Medium
Chondropetalum tectorum	small cape rush	1 Gal.	High
Festuca californica	California fescue	1 Gal.	Low
Juncus pallidus	giant rush	1 Gal.	Low
Juncus patens	blue rush	1 Gal.	Medium
Muhlenbergia rigens	deergrass	1 Gal.	Low
Sisyrinchium bellum	blue eyed grass	1 Gal.	Medium
Asclepias fascicularis	narrowleaf milkweed	1 Gal.	Low
Epilobium canum	California fuchsia	1 Gal.	Low
Iris douglasiana	Douglas iris	1 Gal.	Low
Lotus scoparius	deerweed	1 Gal.	Low
Mimulus aurantiacus	common monkeyflower	1 Gal.	Low
Mirabilis multiflora	Giant four o'clock	1 Gal.	Low
Oenothera hookeri	Hooker's evening primrose	1 Gal.	Low
Rudebeckia californica	California coneflower	1 Gal.	Low
Sisyrinchium californicum	yellow eyed grass	1 Gal.	Medium
Verbena lasiostachys	Western vervain	1 Gal.	Low
Verbena lilacina	Cedros Island verbena	1 Gal.	Low



Iris douglasiana



Zauschneria sp.



Achillea millefolium



Sesleria autumnalis



Pistacia chinensis



Choisya ternata 'Sundance'



Nandina 'Lemon Lime'



Yucca Filamentosa



Arctostaphylos densiflora



Bulbine frutescens



Dianella sp.



Grevillea juniperina 'Gold Cluster'

Candidate Plant Schedule- Courtyard Landscape

Trees

Arbutus unedo	Strawberry Tree	24" Box	Low
Cercidium x 'Desert Museum'	Palo Verde	24" Box	Low
Cercis occidentalis	Western Redbud	24" Box	Low
Magnolia grandiflora 'Little Gem'		24" Box	Medium
Ginkgo biloba	Maidenhair Tree	24" Box	Medium
Olea europaea 'Swan Hill'	Olive	24" Box	Low
Prunus yedoensis	Cherry	24" Box	Medium
Parrotia persica	Persian Ironwood	24" Box	Medium
Vitex agnus chastus	Chaste Tree	24" Box	Medium

Shrubs

Arctostaphylos densiflora	Manzanita	5 Gal.	Low
Atriplex lentiformis breweri	Brewers Salt Bush	5 Gal.	Low
Callistemon viridiflorus	Green Bottle Brush	5 Gal.	Low
Choisya ternata 'Sundance'	Mock Orange	5 Gal.	Medium
Garrya elliptica 'James Roof'	Western Silktassel	5 Gal.	Low
Grevillea victoriae	Victoria Grevillea	5 Gal.	Low
Melanthus villosus 'Purple Haze'	Honeybush	5 Gal.	Low
Rhamnus frangula 'Asplenifolia'	Narrow leaf Buckthorn	5 Gal.	Low
Sarcococca hookeriana var. digyna	Sweetbox	5 Gal.	Low
Schefflera delavayi	Hardy Schefflera	5 Gal.	Medium
Yucca desmetiana 'Blue Boy'	Blue boy yucca	2 Gal.	Low
Yucca filamentosa 'Hairy'	Adam's Needle	5 Gal.	Low

Perennials

Achillea millefolium	Yarrow	1 Gal.	Low
Agave ovatifolia	Peruvian Lily	1 Gal.	Low
Alstroemeria 'Indian Summer'	Whale Tongue Agave	5 Gal.	Low
Arthropodium cirratum	Renga Lily	1 Gal.	Medium
Asclepias fascicularis	Narrowleaf Milkweed	1 Gal.	Low
Dianella sp.	Blue Lily	1 Gal.	Low
Heuchera maxima	Alum Root	1 Gal.	Medium
Kniphofia caulescens	Red-Hot-Poker	1 Gal.	Low
Labelia laxiflora	Mexican Cardinal Flower	1 Gal.	Low
Polystichum munium	Western Sword Fern	1 Gal.	Medium
Woodwardia fimbriata	Giant Chain Fern	5 Gal.	Medium

Grasses

Aristea inaequalis	BlueAristea	1 Gal.	Low
Astelia ch. Silver Spear	Silver Spear	1 Gal.	Medium
Beschomeria yuccoides	Mexican Red Lily	1 Gal.	Low
Bouteloua gracilis 'Blonde Ambition'	Hair Grass	1 Gal.	Low
Calamagrostis brachytricha	Korean Feather Grass	1 Gal.	Medium
Carex testacea	Orange Sedge	1 Gal.	Medium
Chondropetalum 'El Camp'	Chondropetalum	1 Gal.	Low
Festuca californica 'Phil's Silver'	California Fescue	1 Gal.	Low

Ground Cover

Arctostaphylos 'Pacific Mist'	Pacific Mist Manzanita.	1 Gal.	Low
Grevillea lanigera 'Jade Mound'	Jade Mound	1 Gal.	Low
Grevillea juniperina 'Gold Cluster'	Juniper Grevillea	1 Gal.	Low
Euphorbia 'Dean's Hybrid'	Spurge	1 Gal.	Low

Vine

Akebia quinata	Five Leaf Akebia	5 Gal.	Medium
Vitis californica x vinifera 'Roger's Red'	California Grape	5 Gal.	Low
Parthenocissus tricuspidata	Boston Ivy	5 Gal.	Medium

Bioretention

Artemisia douglasiana	grassland sedge	1 Gal.	Medium
Artemisia ludoviciana	mugwort	1 Gal.	Low
Carex divulsa	White sagebrush	1 Gal.	Low
Carex divulsa	Indian rhubarb	1 Gal.	High
Darmera peltata	stream archid	1 Gal.	Medium
Epipactis gigantea	beach strawberry	1 Gal.	Low
Fragaria chiloensis	alum root	1 Gal.	Low
Heuchera micrantha	hairy alum root	1 Gal.	Low
Heuchera pilosissima	cardinal flower	1 Gal.	Medium
Labelia cardinalis	Giant four o'clock	1 Gal.	Low
Mirabilis multiflora	California polypody fern	1 Gal.	Low
Polypodium californicum	California honeysuckle	1 Gal.	Medium
Lonicera hispidula	twinberry honeysuckle	1 Gal.	Medium
Lonicera involucrata	California holly grape	1 Gal.	Medium
Mahonia pinnata	western azalea	1 Gal.	Medium
Rhododendron occidentale	coast black gooseberry	1 Gal.	Low
Ribes diversifolium	salmonberry	1 Gal.	Medium
Rubus spectabilis	California blackberry	1 Gal.	Medium
Rubus usinus	common snowberry	1 Gal.	Low
Symphoricarpos albus	whipplevine	1 Gal.	Medium
Whipplea modesta			



Woodwardia fimbriata



Carex testacea



Astelia ch. Silver Spear



Euphorbia 'Dean's Hybrid'



Olea europaea 'Swan Hill'



Ginkgo biloba



Prunus yedoensis



Callistemon viridiflorus



Grevillea victoriae



Alstroemeria 'Indian Summer'



Calamagrostis brachytricha



Akebia quinata

Instructions

Cells with pale blue background are for entering data

Results show in cells with tan background

Messages and warnings are displayed in cells with yellow background

- 1) Select city by clicking on blue cell and choosing a city from the drop down menu ET_o appears in the tan cell below the name of the city
- 2) Enter square footage of overhead spray irrigated landscape area
- 3) Enter square footage of drip irrigated landscape area
- 4) Enter square footage of Special Landscape Area (SLA)

5) MAWA results appear in the tan cells

6) If you are considering effective precipitation (Eppt), enter total annual precipitation.

7) Eppt

8) For comparison, MAWA without effective precipitation is displayed below

MAWA without Eppt (Gallons)

357,224.23

Maximum Applied Water Allowance Calculations for New and Rehabilitated Residential Landscapes

Enter value in **Pale Blue Cells**

Tan Cells Show Results

Messages and Warnings

Click on the blue cell on right to Pick City Name

ET_o of City from Appendix A

Results:

$(ET_o) \times (0.62) \times [(0.55 \times LA) + (1.0 - 0.55) \times SLA]$

MAWA calculation incorporating Effective Precipitation (Optional)

Precipitation (Optional)

ET_o of City from Appendix A

Total Landscape Area

Special Landscape Area

Enter Effective Precipitation

Results:

$MAWA = [(ET_o - Eppt) \times (0.62)] \times [(0.55 \times LA) + ((1.0 - 0.55) \times SLA)]$

Petaluma	Name of City
39.60	ET _o (inches/year)
12545	Overhead Landscape Area (ft ²)
13909	Drip Landscape Area (ft ²)
0	SLA (ft ²)
26,454.00	Total Landscape Area
-	Gallons
-	Cubic Feet
-	HCF
-	Acre-feet
-	Millions of Gallons
39.60	ET _o (inches/year)
26,454.00	LA (ft ²)
0.00	SLA (ft ²)
31	Total annual precipitation (inches/year)
7.75	Eppt (in/yr)(25% of total annual precipitation)
287,312.93	Gallons
38,408.28	Cubic Feet
384.11	HCF
0.88	Acre-feet
0.29	Millions of Gallons

The ETWU (249,923) is less than MAWA (287,313), therefore this design complies with the California Code of Regulations Title 23, Waters - Model Efficient Landscape Ordinance.

The irrigation design for Haystack will meet or exceed the City of Petaluma Water Efficient Ordinance. Onsite irrigation will be served by a separate domestic irrigation meter and will consist of drip irrigation and bubblers. We do not anticipate any spray irrigation.

- Weather based, self-adjusting irrigation controller with a weather sensor.
- Emitters to include-subsurface drip irrigation and tree bubblers.
- Trees to be placed on separate valves.
- Isolation valves to be installed at point of connection and before each valve or manifold.
- Pressure regulation to be installed.
- Separate valves to be installed to irrigate zones of med and low water-use plantings.
- Check valves will be installed to prevent low point drainage.

Estimated Total Water Use						
Equation: ET _W = ET _p x 0.62 x [(PF x HA)/IE] + SLA; Considering precipitation ET _{WA} = (ET _o -Eppt) x 0.62 x [(PF x HA)/IE] + SLA						
Enter values in Pale Blue Cells						
Tan Cells Show Results						
Messages and Warnings						
Irrigation Efficiency Default Value for overhead 0.75 and drip 0.81.						
Plant Water Use Type		Plant Factor				
Very Low				0 - 0.1		
Low				0.2 - 0.3		
Medium				0.4 - 0.6		
High				0.7 - 1.0		
SLA				1		
Hydrozone	Select System From the Dropdown List click on cell below	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft ²) Without SLA	Irrigation Efficiency (IE)	(PF x HA (ft ²))/IE
Zone 1	Overhead Spray	Medium	0.50	1,058	0.75	705
Zone 2	Overhead Spray	Medium	0.50	1,058	0.75	705
Zone 3	Overhead Spray	Medium	0.50	1,642	0.75	1,095
Zone 4	Overhead Spray	Medium	0.50	1,781	0.75	1,187
Zone 5	Overhead Spray	Medium	0.50	415	0.75	277
Zone 6	Overhead Spray	Medium	0.50	305	0.75	203
Zone 7	Overhead Spray	Medium	0.50	6,286	0.75	4,191
Zone 8	Drip	Low	0.25	873	0.81	269
Zone 9	Drip	Low	0.25	930	0.81	287
Zone 10	Drip	Low	0.25	1,691	0.81	522
Zone 11	Drip	Low	0.25	1,876	0.81	579
Zone 12	Drip	Low	0.25	861	0.81	266
Zone 13	Drip	Low	0.25	237	0.81	73
Zone 14	Drip	Low	0.25	201	0.81	62
Zone 15	Drip	Low	0.25	359	0.81	111
Zone 16	Drip	Low	0.25	493	0.81	152
Zone 17	Drip	Low	0.25	1,722	0.81	531
Zone 18	Drip	Low	0.25	964	0.81	298
Zone 19	Drip	Low	0.25	1,445	0.81	446
Zone 20	Drip	Low	0.25	344	0.81	106
Zone 21	Drip	Low	0.25	1,598	0.81	493
Zone 22	Drip	Low	0.25	315	0.81	97
SLA				0		12,656
Sum				26,454		0
Results		#N/A				
MAWA = 287,313		ET _W = 249,923		Gallons		
		33,410		Cubic Feet		
		343		HCF		
		1		Acre-feet		
		0		Millions of Gallons		