

MERCED AVENUE GREENWAY

A MULTI-BENEFIT GREEN INFRASTRUCTURE PROJECT



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PROJECT OVERVIEW

MERCED AVE GREENWAY

LOCATION: South El Monte, CA

PROJECT EXTENT: 0.65-mile street right-of-way

DESCRIPTION: Multi-benefit stormwater capture green street that reduces the number of lanes from four to two and promotes the use of active transit.



KEY COMPONENTS

- 6,830 ft² of bioretention BMPs
- 10,420 ft² of permeable pavement
- 1,907 ft² of Focal Point biofiltration areas with high-infiltration media
- 25.91 ft³ of infiltration chambers
- 11,078 ft² of planting areas
- 132 native or California-friendly trees
- 1.3 miles of 5-ft wide raised bike lanes

SCWP SCORING DETAILS

- **Water Quality: 31** out of **50** (benefited from long-term performance of treatment train)
- **Water Supply: 0** out of **25** (difficultly reaching minimum capture threshold as a distributed NBS project)
- **Community Investment: 10** out of **10** (diverse amount of community benefit around connection, habitat, and UHI)
- **Nature-based Solution: 10** out of **15** (incorporates several NB solutions, but impervious reduction didn't meet threshold because it is a street)
- **Leveraged Funds: 10** out of **10** (diverse funding resources and comprehensive engagement strategies)

TOTAL SCORE: 61/100



STORMWATER BENEFITS

Drainage Management Area: 45.71 acres
85th Percentile Capture Provided By Project: 68,599 ft³
Portion of DMA Managed For The Full 85th Percentile: 100%
Total Average Annual Volume Captured And Treated: 21.5 AFY
Total Average Annual Volume Infiltrated: 10.26 AFY



COMMUNITY BENEFITS

New landscaped areas: 57,345 ft²
Canopy cover increase: 71,750 ft²
Carbon sequestration: 532,740 lbs
GHG O₃ removed: 3,831 lbs
GHG NO₂ removed: 833 lbs
GHG SO₂ removed: 22.7 lbs
PM_{2.5} removed: 43.3 lbs
Electricity saved: 278,570 kWh
Temperature reduction: 1-2 °C

CONTACT:

Rene Salas, Deputy City Manager, City of South El Monte
rsalas@soelmonte.org | (626) 579-6540 Ext. 3040

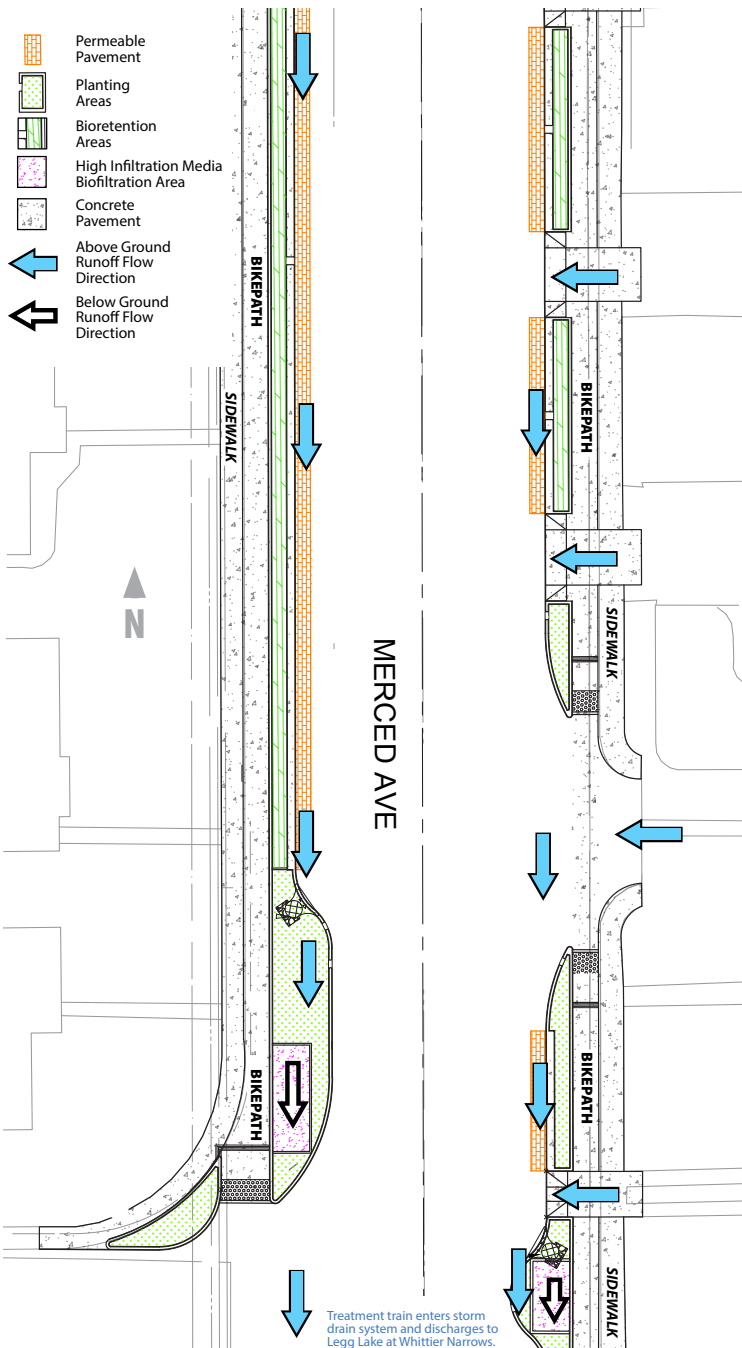


MERCED AVE GREENWAY

Process Flow Schematic
Safe Clean Water Program

Existing Conditions: The drainage management areas (45.71 acres) along the 0.65-mile Project site generate 68,600 ft³ of runoff in an 85th percentile, 24-hr storm event. Land use varies throughout the project area where impervious surfaces make up 89% of the north commercial/industrial end and 41% of the south residential end. Water runs off properties into a traditional curb/gutter system along Merced Avenue and flows in a southern direction into conventional catch basins that are connected to the City's storm drain system, discharging into Legg Lake at Whittier Narrows Recreation Area.

Project Improvements: Sample section of the Greenway delineates treatment train and flow of street runoff. See 100% design plans for sizing specifications and construction details.



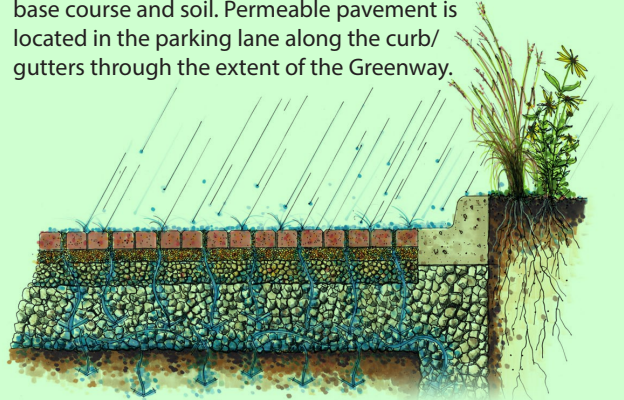
Treatment Train Storm Water BMPs:

- 4,187 ft² - Bioretention Areas (conventional)
- 2,643 ft² - Bioretention Areas (with underdrain)
- 1,907 ft² - High Infiltration Media Biofiltration Areas
- 10,420 ft² - Permeable Pavers (with infiltration chambers)
- 11,078 ft² - Planting Areas (sump 6" stormwater)
- 132 new street trees

TOTAL DESIGN VOLUME CAPTURED: 21.5 AFY



Permeable pavement is the first line of treatment, intercepting sheet flow from adjacent properties and infiltrating runoff into the underlying reservoir base course and soil. Permeable pavement is located in the parking lane along the curb/gutters through the extent of the Greenway.



USDA-NRCS (Natural Resources Conservation Service); illustration by Doug Adamson.



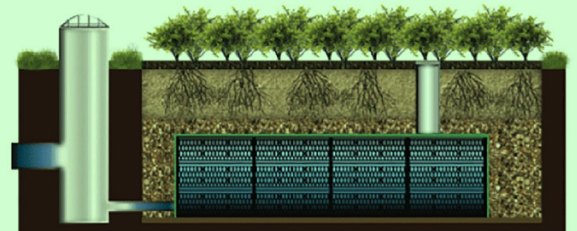
Once the permeable pavement is saturated, excessive water flow will be diverted into a second line of treatment through the gutter and into **planting areas** (6" sump) and larger **bioretention areas** from a series of curb cuts. Depth to groundwater goes from 45 ft on the north end of the street down to 6 ft on the south end; therefore, there are a combination of both offline and online bioretention areas depending on the location.



Rendering: Alta Design + Planning, Inc.



High infiltration media biofiltration areas are placed on eight select street corner bulbs-outs to capture and treat larger flows before the water enters the storm drain system and discharges to Legg Lake at Whittier Narrows. The FocalPoint System media is highly porous and allows for infiltration rates at 100 in/hr.



Rendering: ACF Environmental

COMMUNITY ENGAGEMENT

MERCED AVE GREENWAY

Examples of engagement activities implemented during the design phase.

- Tabling at a community Easter Breakfast - March 30, 2018
- Tabling at a SEM Family Health Fair - April 14, 2018
- Tabling at a community Cinco de Mayo Event - May 5, 2018
- Bike Tour - June 2, 2018
- Tabling at a SEM Open House - June 9, 2018
- Community Canvassing - early June 2018
- Community Workshop #1 - June 14, 2018
- Community Walking Tour - September 22, 2018
- Volunteer Bike/Pedestrian Count - October 4, 2018
- Street Pop-up Workshop and Demo #2 - October 13, 2018
- SEM High School Focus Group - October 23, 2018
- Youth Focus Group - November 5, 2018
- Door-to-Door Surveys - February 2019
- City Council Presentation - February 12, 2019
- City Council Presentation - March 26, 2019
- Community Workshop #3 - April 13, 2019
- City Council Presentation - January 28, 2020
- Community Mailer - Project Design Update - May 2020

