

A layered approach to sustainability including green roofs, facade shading and mid-block passages.

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Sustainability

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Overview

7.1 Vision

Downtown West is a climate-positive, Environmental Leadership Project. It goes beyond code to strive for optimized environmental sustainability through infrastructure, building, and public realm design. The Project aims to improve the health for people and the planet, through commitments ranging from providing energy efficiency and renewable energy generation to designing comfortable outdoor public spaces and creating a micro-mobility network that encourages walking and biking.

Sustainable principles have been integrated into all aspects of Downtown West. From the district-scale to the details, sustainability strategies referenced in this chapter demonstrate a Project-wide commitment to stewardship of a thriving natural and urban ecosystem. Downtown West demonstrates circularity principles of resource use — aiming to move away from a linear extract-use-discard model toward a limited-waste, closed-loop system. Downtown West is a model of sustainability innovation, enabling healthy, and climate-positive living and working.

This chapter presents the overall environmental sustainability, resiliency, and climate adaptation strategy for the Project followed by references to the sustainability-related commitments throughout the other chapters of the DWDSG.

A subsequent Downtown West District Sustainability Plan will be created following the approval of the Project.



FIGURE 7.1: Illustrative examples of sustainable design strategies

7.2 Supporting San José Goals

The City of San José has laid the groundwork to address sustainability city-wide. First Envision San José 2040 (2011) initiated land use policy that promotes sustainability. Then Climate Smart San José, adopted in 2018, set out a clear path forward to address climate change and reduce greenhouse gas (GHG) emissions. Downtown West propels San José’s sustainability and climate initiatives forward, demonstrating how to achieve a low environmental impact with a high quality of life.

Envision San José 2040

The goal of the General Plan is to accommodate employment and housing growth while minimizing environmental impacts by promoting transit use and walkability. Downtown West embodies the spirit of Envision San José 2040, particularly emphasizing the following Envision San José 2040 goals:

- Create higher density, mixed-use urban districts near transit;
- Improve access to public transportation;
- Increase transportation efficiency;
- Improve walkability and bike-ability;
- Increase the square footage of green buildings;
- Increase energy efficiency and the use of renewable energy sources;
- Incorporate native landscape;
- Provide parks and open spaces.

Climate Smart San José

Climate Smart San José is a city-wide initiative to reduce air pollution, save water, and improve quality of life. Climate Smart is one of the first city plans striving to reach the targets of the international Paris Agreement – an agreement adopted by the United Nations in 2015 to combat climate change. To do so, Climate Smart San José sets ambitious goals for energy, water, transportation, and local jobs. The Downtown West Sustainability Plan will be aligned to the Climate Smart San José, with particular emphasis on the following Climate Smart San José goals:

- Increase energy efficiency and the use of renewable energy sources;
- Reduce potable water consumption;
- Improve stormwater management;
- Incorporate native landscaping;
- Encourage people to live near a regional transit hub;
- Provide safe biking and walking infrastructure;
- Improve logistics efficiency.

Sustainability and Resilience Framework

7.3 Environmental Leadership Project (AB 900)

In December 2019, Governor Gavin Newsom certified Downtown West as an Environmental Leadership Project pursuant to Assembly Bill No. 900 (AB 900). Downtown West qualifies as a project located on an urbanized infill site and a priority development area near transit. Infill sites and urbanized areas are defined in Public Resources Code Sections 21061.3 and 21071, respectively. Downtown West will also meet the requirements in Plan Bay Area 2040.

To be certified by the Governor as an Environmental Leadership Project under AB 900 projects must demonstrate, among other things, “that the project [will] create high-wage, highly skilled jobs and not result in any net additional emission of GHG, including GHG emissions from employee transportation”. AB900 provides certified projects with streamlined judicial review for the California Environmental Quality Act.

The following standards and guidelines document sustainability commitments through AB900.



LEED GOLD CERTIFICATION



MICRO-MOBILITY



CONSTRUCTION TECHNOLOGY



STORMWATER MANAGEMENT

FIGURE 7.2: Illustrative examples of AB 900 strategies

Standards

S7.3.1 No net additional GHG emissions.

The Project shall result in no net additional GHG emissions from building construction and operations or from transportation. Emissions reduction may be achieved through a combination of strategies, including but not limited to energy efficiency and fuel switching, on- and off-site renewable energy, and high-quality carbon offsets. Emissions shall be measured through AB900-approved modeling.

S7.3.2 LEED ND Gold. The Project shall achieve minimum LEED Gold Certification under the LEED for Neighborhood Development rating system. The Project shall be registered under LEED ND with the US Green Building Council — and verified through AB900 — and will produce a LEED ND scorecard of targeted credits for the Project adding up to the 60 or more points required for Gold level.

S7.3.3 Transportation efficiency. The Project shall achieve 15 percent greater transportation efficiency as compared to a similar conventional project. Transportation efficiency is defined as the number of vehicle trips by employees, visitors, or customers to the project divided by the total number of employees, visitors, and customers. Efficiency shall be verified through AB900 modeling.

S7.3.4 San José waste requirements.

The Project shall comply with the commercial and organic waste recycling requirements of the City of San José and the State of California.

7.4 Additional Sustainability and Resilience Measures

Urban Design Framework

The Project sustainability commitments expand beyond the traditional focus on environmental metrics; Downtown West also prioritizes vibrant and healthy places to improve the collective social, physical and mental wellbeing. The Project transforms an urban brownfield site into an animated place of live, work and play - from what is currently predominantly surface parking lots to a high-density mix of office, active, residential uses, and open space.

The Project’s high-density, mix of office, active, residential and open space uses will deliver tens of thousands of new jobs and up to 5,900 units of new, high-quality housing next to Diridon Station and connected to the greater San Francisco Bay Area. The Project’s affordable housing commitment as set forth in the Memorandum of Understanding and through compliance with the City of San José’s Inclusionary Housing Ordinance will accommodate a wide range of potential residents. The new downtown residents, employees and business will extended activity throughout the day and week.

For more information, see *Chapter 3: Land Use*.

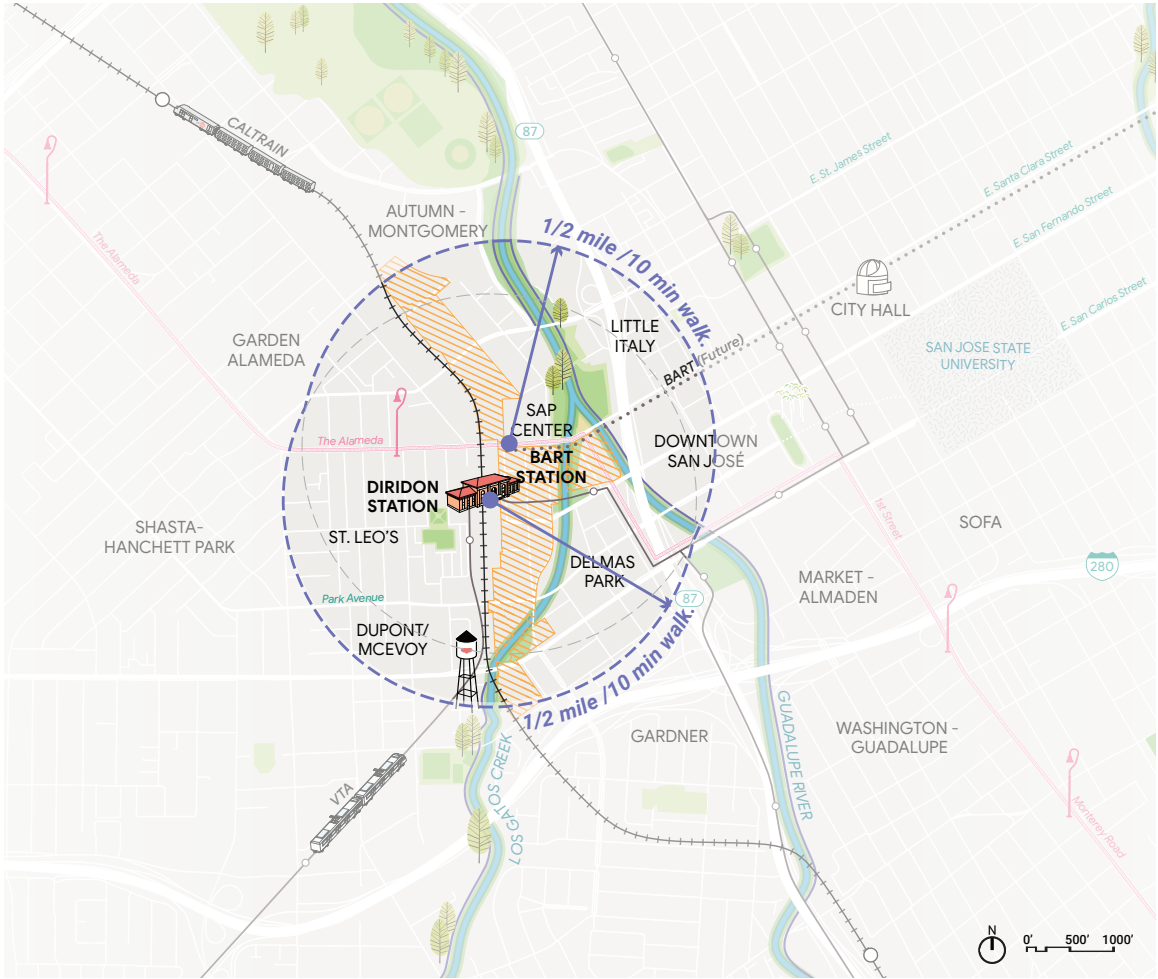


FIGURE 7.3: Downtown West transit proximity to Diridon station and future BART station

Downtown West Area

Standards

- S7.4.1 Transit-oriented development.** An entry to each new building within the Project shall be located within one-half mile of Diridon Station or the future BART station as shown in Figure 7.3.

- S7.4.2 Transportation Demand Management.** The Project shall follow practices outlined in the Transportation Demand Management (TDM) plan provided as part of the Local Transportation Analysis (LTA) guiding street improvements and shifting trips from single-occupant vehicles to public transit and micro-mobility.

- S7.4.3 Surface parking.** The Project shall eliminate off-street surface parking — which currently occupies nearly 40 percent of the Project area— for all new development. Exemptions include any ADA-accessible parking required for existing and rebuilt structures and temporary/interim surface parking during the Project buildout.

- S7.4.4 Open space accessibility.** A park or plaza shall be located within one-quarter mile of an entry to each new building within the Project.

Guidelines

- G7.4.1 Mixed-use activity.** A mix of land uses — particularly on the ground floor — is encouraged to support appropriate activity levels in public spaces and rights of way throughout the day. For more information on ground floor uses, see Section 3.2.

Infrastructure and Systems

Downtown West offers a district-scale opportunity to improve resource efficiency and resilience. By leveraging the implementation of district infrastructure and systems in combination with a high-density mix of land uses, the Project achieves outstanding environmental performance intended to advance multiple objectives including:

- Increasing the use of renewable energy;
- Reducing potable water consumption;
- Reducing GHG emissions;
- Increasing buildings' operational efficiency.

District systems build upon municipal utility systems and add resilience. Existing systems are maintained and improved as necessary to support the Project development and aligned City goals.

For more information, see Downtown West District Infrastructure Plan.



CENTRAL UTILITY PLANT - EXTERIOR



CENTRAL UTILITY PLANT - INTERIOR



STORMWATER SYSTEM



RENEWABLE ENERGY

FIGURE 7.4: Illustrative examples of district infrastructure components

Standards

- S7.4.5 Central Utility Plant.** The Project shall consolidate on-site utility services via the construction of one or more Central Utility Plans (CUPs).
- S7.4.6 Utility corridor.** The Project shall include utility corridors (“utilidors”) for the conveyance of private utilities to serve the Project area.
- S7.4.7 Logistics hubs.** The Project shall consolidate a Project-wide logistics strategy into one or more logistics hubs to facilitate deliveries with reduced truck circulation.
- S7.4.8 Stormwater management.** The Project shall at a minimum comply with all stormwater management requirements for both quantity and quality as provided by the City of San José Green Stormwater Infrastructure Plan (GSI) dated April 2019 and the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Green Stormwater Infrastructure Handbook, dated September 2019.
- S7.4.9 Water reuse.** Dual-plumbed buildings and irrigation systems shall be designed to utilize recycled water to meet non-potable water demands such as toilet-flushing, irrigation, and cooling.

Guidelines

- G7.4.1 CUP facilities.** Facilities included in the CUP may include, but are not limited to the following:
 - Water reuse facility to treat privately-collected wastewater and distribute recycled water for non-potable uses. This facility would meet California Code of Regulations Title 22 disinfected tertiary (unrestricted reuse) recycled water standards;
 - Heating hot water and chilled water. Equipment in this facility would comply with Title 24 energy code requirements;
 - An automated waste collection system (AWCS) with or without anaerobic digestion;
 - A proposed electrical substation and switching station;
 - Back-up facilities for resilience, including generators and battery storage.
- G7.4.2 Utility connections.** The Project shall connect the CUP facilities to all buildings within the Project boundary. However due to phasing and property ownership the scope of connections may be restricted in certain locations. In these areas business as usual systems shall be installed, including building level heating and cooling systems, sewer connections to the municipal network and direct connection to the existing electricity distribution network.
- G7.4.3 Educational opportunities.** CUP facilities fronting the public realm should make the district systems within visible, and also provide relevant educational signage and interpretive displays about resources and conservation.
- G7.4.4 Water demands.** Reduction in operational water demand is encouraged to provide additional resilience to Downtown West and the City of San José during drought conditions when water resources are limited. District water reuse infrastructure can complement these reductions by providing a local non-potable water source for Downtown West, which will remain accessible and usable during times of drought and restricted water use.

Resilience

Climate adaptation will be an increasingly significant consideration for designers, builders and operators at Downtown West. Hazard event predictions have traditionally been based on statistical future projections informed by past events. For hazards linked to climate conditions, however, the assumption that future events will follow historic patterns is no longer valid due to the increasing changes in our climate system.

As identified in the California Office of Emergency Management’s California Adaptation Planning Guide, the major climate hazards relevant to the state include “increased temperatures, sea level rise, a reduced winter snowpack, altered precipitation patterns, increases in wildfires, and more frequent storm events”. Santa Clara County has published an Operational Area Hazard Mitigation Plan, which outlines the threats attributable to climate change for the County. San José has not published a guide specifically responding to climate hazard mitigation at this time. For San José in particular, climate change hazards may include hotter and longer heat waves, an increase in cooling degree days, potable water demand shortages during drought conditions, altered potential of flooding events for the Guadalupe River and Los Gatos Creek, extended drought, and secondary effects of increased wildfire presence such as temporary high particulate matter in the outside air and Public Safety Power Shutoffs (PSPS).

The following guidelines set forth an approach to integrating climate adaptation at Downtown West.

Guidelines

- G7.4.5 Multi-hazard assessment.** Multi-hazard assessment should be conducted by hazard risk and resilience professionals to produce a report that refines the understanding of the site-specific credible threats induced by a changing climate and necessary interventions to mitigate hazard exposure.
- G7.4.6 Urban heat island mitigation.** High-albedo materials and finishes, particularly on hardscape and roofs, are encouraged to reduce urban heat island effect. Additional strategies include but are not limited to providing natural (vegetation canopies) and/or artificial (shade sails, awnings, etc.) shading in outdoor areas.
- G7.4.7 Mechanical, electrical, and plumbing stress-test.** Mechanical, electrical, and plumbing system design in each building should be stress-tested by design engineers with predicted future weather data to inform design. Use of predicted future weather data based on the Representative Concentration Pathway (RCP) 4.5 scenario is recommended. The second-most severe projected greenhouse gas scenario of the four RCPs identified by the Intergovernmental Panel on Climate Change.
- G7.4.8 Heat refuge areas.** “Heat refuge areas” are encouraged to serve all residents of the Project, at a minimum. Heat refuge areas are accessible common spaces conditioned with resilient cooling systems to provide relief during hot days.
- G7.4.9 Stormwater.** Stress-testing stormwater infrastructure with predicted future weather data to inform design is encouraged. Use of predicted future weather data based on the RCP 4.5 scenario is recommended.
- G7.4.10 Floodproofing.** Critical mechanical systems and infrastructure should be elevated above projected 100-year flood levels or located within floodproof basements. Basements should be designed for dry floodproofing (sealing basements to keep floodwater out) or wet floodproofing with safe failure (allowing floodwaters to infiltrate basement and designed to make sure this does not affect operations).
- G7.4.11 Heating, ventilation, and air conditioning.** Mechanical systems should be designed to account for increased smoke concentration in outdoor air that may occur during fire events.

G7.4.12 Public safety power shutoff. Energy systems should maintain partial operation during Public Safety Power Shutoff (PSPS) events.



FLOOD RESILIENCE



HIGH ALBEDO ROOFS



HEAT REFUGE AREAS

FIGURE 7.5: Illustrative examples of resilience strategies

Chapter Sustainability References

7.5 Open Space

The open space network contributes to human and ecological wellbeing. Parks and plazas are designed to include a variety of spaces and passive design strategies to optimize the use of outdoor space throughout the year. In addition to parks and other open spaces, the Project includes off-street, multi-use trail connections encouraging people to walk and bike to and from Downtown and Diridon Station. The overall public realm network increases recreational and fitness opportunities for all residents to connect throughout the greater Downtown area.

The local ecosystem is supported through a riparian corridor setback, native plants, reduced impervious surfaces, and improved stormwater management strategies. Downtown West currently has limited tree canopy cover and a narrow riparian corridor. The planting plan enhances local native ecosystems and riparian habitat expansion and improvements.

Standards and guidelines related to sustainable open space strategies are referenced on the facing page. For more information, see *Chapter 4: Open Space*.



INCREASED SURFACE PERVIOUSNESS



STORMWATER MANAGEMENT



INTERPRETIVE PUBLIC ART



CREEKSIDE ACCESS

FIGURE 7.6: Illustrative examples of open space sustainability

References

Project-Wide Requirements

- S4.4.2 Riparian setback.
- S4.4.8 Direct sunlight.
- S4.4.10 Surface Perviousness.
- G4.4.2 Variety of programmatic elements.
- G4.4.4 Outdoor public spaces.
- G4.4.5 Improved access to nature.
- G4.4.6 Support fitness and wellbeing.
- G4.4.7 Shaded areas.
- G4.4.8 Pedestrian thermal comfort.
- S4.6.2 Public art within riparian setbacks.
- G4.6.3 Art as nature education.

Location-Specific Requirements

- S4.7.1 Interpretive nodes, creek overlooks, and viewing platforms.
- S4.7.2 Pedestrian and cycle bridges.
- S4.7.3 Engineered edge of river setback.
- S4.7.4 Controlled features within the engineered edge of river setback.
- S4.7.5 Los Gatos Creek riparian setback.
- S4.7.6 Controlled features within the 50-foot Los Gatos Creek riparian setback.
- S4.7.7 Ecological enhancement zone.
- G4.7.2 Riparian corridor pathways.
- G4.7.3 Controlled features within the ecological enhancement buffer zone.

Performance and Palettes

- S4.21.1 Native planting requirement.
- S4.21.2 Permitted species.
- G4.21.1 Vegetation in riparian setback.
- G4.21.2 Ecological species.
- G4.21.3 Planting placement.
- G4.21.4 Recommended planting strategies.
- G4.22.1 Stormwater planter species.
- G4.22.2 Building stormwater management.
- G4.22.3 Stormwater management for at-grade plazas and open spaces.
- S4.23.3 Play and recreation surfaces.
- G4.23.1 Preferred material selection.
- G4.24.1 Preferred materials.

7.6 Buildings

Buildings in Downtown West optimize efficiency and comfort through passive design strategies suitable to the climatic conditions of San José. They utilize technology and materials to minimize environmental impact and increase building performance both inside and out.

All office buildings will achieve, at minimum, LEED Gold certification through a variety of strategies, including energy and water efficiency, sustainable materials and resources, indoor environmental quality and innovation. All other buildings will achieve, at minimum, LEED Silver certification through similar strategies.

Biophilic design, which integrates nature with design to create habitats where people thrive is encouraged. Biophilia is our inherent affinity for nature and contributes to our physical and psychological wellbeing. Building design and technology may also respond to the San José *microclimate* through measures to maximize comfort and expand use of indoor and outdoor spaces.

Additionally, a number of existing and historic structures will be adapted and reused to preserve cultural assets and foster a sense of place authentic to San José while reducing material waste from building demolition and new building construction emissions.

Standards and guidelines related to sustainable building design are referenced on the facing page. For more information, see *Chapter 5: Buildings*.



PERFORMATIVE FACADE SYSTEMS



ADAPTIVE REUSE



BIOPHILIC DESIGN



GLARE MITIGATION

FIGURE 7.7: Illustrative examples of building sustainability

References

Building Envelope

- S5.5.2 Lot size.
- S5.5.5 Riparian setback.
- S5.5.6 Rehabilitation of existing buildings within 50-foot riparian setback.
- S5.5.8 Flexible buildable zones.

Project-Wide Building Design

- G5.9.2 Commercial ground floor lobbies.
- G5.9.4 Range of uses.
- G5.12.6 Environmental comfort.
- S5.13.1 LEED Gold for commercial buildings.
- S5.13.2 LEED Silver for other buildings.
- S5.13.3 Green roofs.
- G5.13.1 Concave facades.
- G5.13.2 High reflective roof materials.
- G5.13.4 Ground-level wind comfort.
- G5.13.5 Building stormwater management.
- G5.13.6 Food waste.
- G5.14.1 Visible systems.
- S5.15.1 Ornithologist consultation.

Location-Specific Building Design

- S5.16.1 Existing non-historic structures.
- G5.16.1 Adaptive reuse of Project resources.
- S5.19.1 Open space solar access.
- G5.19.1 Buildings south of public open space.
- G5.19.3 Shade structures.

Long Facade Skyline and Massing

- G5.20.3 Wind environment.

7.7 Mobility

Downtown West reduces carbon emissions and seeks to improve health and wellbeing by leveraging mass transit, reducing the number of vehicles passing through the neighborhood, and fostering alternative transportation options through quality bike and pedestrian infrastructure. DISC and BART projects immediately adjacent to the Project mark a significant transition to increased transit ridership, which aims to reduce energy consumption and GHG emissions to create a healthier community.

Complete streets and trails promote walking and biking throughout the Project. The micro-mobility network connects people with nature along Los Gatos Creek and the Guadalupe River, and between Diridon Station and Downtown.

Commitments in the *Chapter 6: Mobility* include streetscape improvements to prioritize active mobility, logistics efficiency from on-site consolidation of deliveries and waste, and a commitment to minimal parking. Standards and guidelines related to sustainable mobility strategies and street design are referenced on the facing page.



SHARED STREETS



TRANSIT ACCESS



EV CHARGING STATIONS

FIGURE 7.8: Illustrative examples of mobility sustainability

References

Mobility Network

- G6.3.1 Vision Zero.
- S6.4.10 Shared street.
- S6.4.12 Design for slow vehicle speeds.
- S6.6.1 Bikeway requirements.
- S6.6.2 Raised bikeway buffers.
- G6.6.3 Intersection treatments.
- S6.7.1 Transit access.
- G6.7.2 Vision Zero design principles.
- S6.8.1 Shuttle access.
- G6.9.1 Minimize curb-to-curb.
- G6.9.2 Traffic calming treatments.
- G6.9.3 Reduced speed.
- G6.11.1 Raised intersections and crossings.
- G6.11.2 Enhanced pedestrian crossings.
- G6.11.3 Bicycle design treatments.
- S6.12.1 Adaptable future.

Streetscape Elements

- S6.14.2 Street trees and planting locations.
- G6.14.1 Street tree species.
- G6.14.2 Native plant species.
- G6.14.3 Planting type.
- S6.15.1 Infrastructure plan.
- G6.15.1 Stormwater planters.
- G6.15.1 Pervious paving.
- S6.17.1 Streets.
- S6.17.2 Dynamic lanes.
- G6.17.2 Raised bikeways.
- G6.19.1 Supportive amenities and elements.
- G6.19.2 Mobility hub adaptability.

Parking and Loading

- S6.19.1 Location.
- G6.19.1 Bicycle parking access.
- G6.19.2 Station design.
- G6.19.3 Scooter corrals.
- S6.20.1 Car share.
- G6.2.1 Access.

- G6.20.2 Storage facilities.
- G6.20.3 On-street locations.
- G6.20.4 Electric vehicle readiness.
- S6.21.2 Passenger loading.
- G6.21.1 Curb extension.
- G6.21.2 Parklets.
- G6.21.3 Shared streets.
- G6.21.4 Freight loading.
- G6.21.6 Combined gutter design.
- S6.22.2 Parking supply.
- S6.22.3 District parking.
- S6.22.5 Electric vehicle charging.
- G6.22.1 Managed parking.
- G6.22.2 Design for future change of use.
- S6.23.3 Refuse and recycling.
- S6.23.4 Logistics and services.

7.8 Lighting and Signage

Lighting in the public realm and buildings within and adjacent to ecologically sensitive zones is designed to minimize the disturbance to natural habitat and promote “dark sky” benefits for circadian rhythms and star visibility. Lighting is designed and sited to avoid spill and glare, and to be consistent with public safety considerations. Lighting is shielded and directed away from the creek and the riparian corridor. Standards and guidelines related to sustainable lighting strategies are referenced on the facing page. For more information, see *Chapter 8: Lighting and Signage*.



DARK-SKY SENSITIVE OPEN SPACE LIGHTS



PATH LIGHTING



SUBTLE BUILDING LIGHTS



ENERGY EFFICIENT LIGHTING FIXTURES

FIGURE 7.9: Illustrative examples of lighting sustainability

References

Lighting

- S8.3.1. Lighting in riparian setbacks.
- G8.3.6 Lighting in ecological enhancement zones.
- S8.4.1 Lighting levels.
- S8.4.2 Lighting pollution, lighting trespass, and glare.
- S8.4.3 Uplighting.
- S8.5.1 Prohibited lighting.
- S8.5.2 Los Gatos Creek Trail lighting.
- G8.5.3 Lighting in open space near residential areas.
- S8.6.1 Building lighting standards.
- S8.6.3 Building lighting along the riparian corridor.
- S8.6.4 Podium and pedestrian level lighting.
- S8.6.5 Skyline level lighting.
- G8.6.2 Building interior lighting.
- G8.7.1 Street lighting trespass.

Signage

- G8.8.2 Performance driven signage material.
- G8.10.1 Interpretive signage.