

3 STREETScape AND URBAN DESIGN

Downtown environments must be designed with people in mind. The experience each person will have with the street, the sidewalk, the buildings, and the surrounding environment is what helps define the unique character of a place. Dover's streetscape should be of a traditional style and respect the City's unique industrial past as a historic mill town.

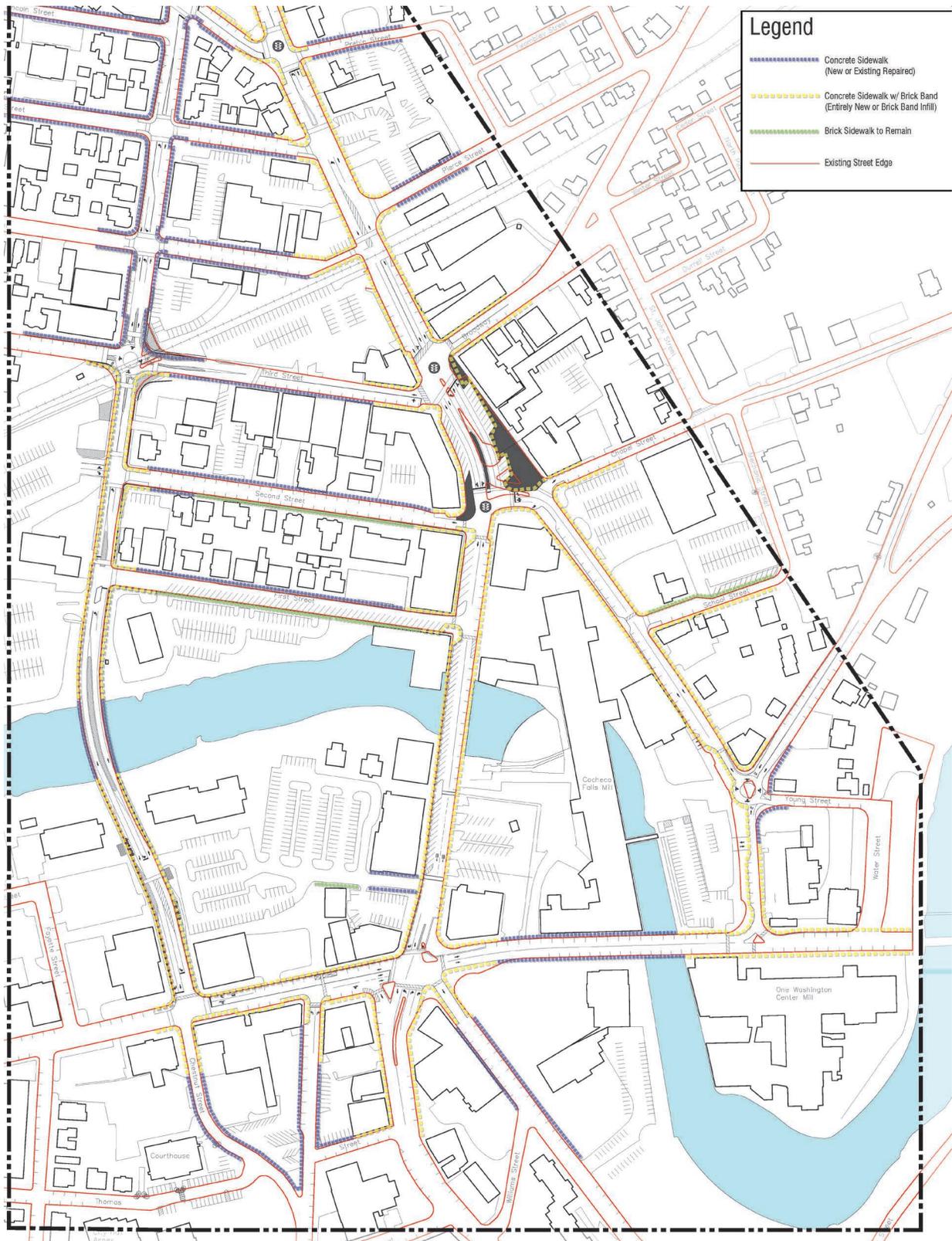
Paving, landscaping, lighting and public art are all crucial design elements that should be integrated into a comprehensive vision for a downtown. The streetscape and urban design of the downtown should not only be attractive, but safe and convenient for pedestrians and bicyclists. Traffic calming measures, amenities, and wayfinding strategies ensure that a downtown and its businesses are easily accessible by locals and visitors alike.

Downtown Dover is composed of a unique mix of architecture, plazas and parks that together constitute the character inherent within Dover. The selected streetscape materials and components should respond to these unique areas, but should also share similar stylistic elements so that they form a cohesive theme throughout the downtown. The variety of streetscape treatments and elements selected as part of this report are all of a similar family stylistically, but have subtle differences that vary by the unique context of the location.

3.1 Paving Materials and Treatments

The preferred design puts forth specific design recommendations to build upon the existing paving framework to create a network of sidewalks and plazas that are safe, accessible, and of a unified aesthetic. The streetscape paving should consist of a combination of concrete, brick, and brick banding as shown in **Figure 17**. The upper and lower squares should have larger areas dedicated to brick paving to help distinguish them apart as public spaces of interest, as shown in **Figure 18**.

Figure 17: Ornamental paving opportunities



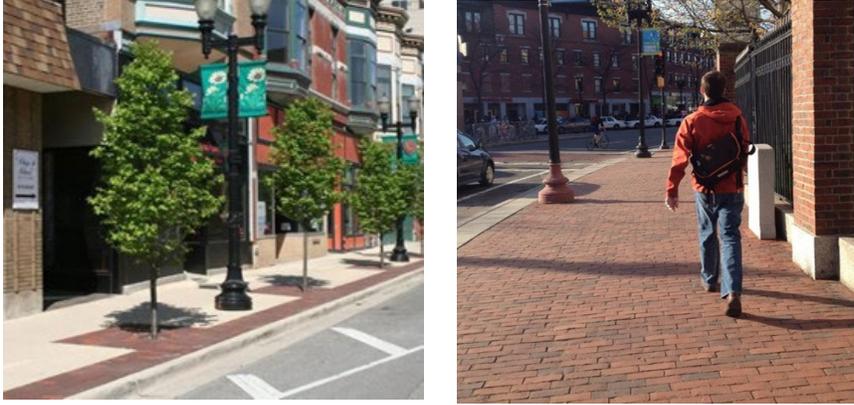


Figure 18: Sidewalk paving improvements

3.2 Traffic Calming

Traffic calming is a system of design and management strategies that aim to balance traffic on streets with other uses. In general, they help reduce traffic speeds and improve pedestrian safety which is paramount to creating a thriving accessible downtown environment. The following traffic calming measures are recommended as part of the preferred plan:

- Changing one-way streets to two-way streets flanked by parking when possible decreases the speed of traffic and creates less driving in general to get to a destination. This creates a circulation network that is safer for pedestrians. As noted earlier, this plan recommends changing the one-way sections of Central Avenue, Main Street, and Washington Street to two-way configuration.
- Narrowed streets and traffic lanes help reduce traffic speed and allow for more of the right-of-way to be dedicated to pedestrian use and landscaping. This plan recommends reducing the street widths of Chestnut Street, Washington Street and Main Street.
- Marked crosswalks (see [Figure 19](#)) at intersections and mid-block crossings provide for the safe crossing of pedestrians by giving vehicular users a cue to yield to potential crossing pedestrians. The crosswalks should be accessible and positioned in preferred locations that are convenient to pedestrians and highly visible to vehicular traffic. In addition to crosswalks, pedestrian refuge islands in traffic medians allow for shorter crossing distances and provide a resting area. The plan gives recommendations for locating several crosswalks and refuge islands in strategic locations.
- Mini-roundabouts (see [Figure 20](#)) help slow traffic through intersections and remind drivers that they must proceed with caution. This plan recommends locating mini-roundabouts at the intersection of Portland Avenue and Main Street and Third and Chestnut Street.

- Curb extensions at intersections, (see **Figure 21**) create a shorter crossing distances for pedestrians, deflect traffic at corners, define parking bays, and also serve as ideal areas for streetscape amenities. The plan recommends curb extensions at several key intersections.
- Reduced curb corner radii help inhibit the speed of turning vehicles and allows pedestrians to see and be seen by approaching traffic. This plan recommends reduced curb corner radii where possible.
- Well-spaced street trees help reduce the “optical width” of streets and therefore reduce the likelihood of speeding. The plan recommends augmenting the existing trees with new trees where possible to create a more consistent street tree pattern throughout the downtown.



Figure 19: Example crosswalk paving patterns and materials



Figure 20: Typical mini-roundabout configuration



Figure 21: Curb extensions at intersections

3.3 Signage and Wayfinding

Providing a comprehensive system of clear and concise wayfinding helps inform pedestrians and vehicular users of surroundings in a downtown environment and ultimately allows for logical decisions. Effective wayfinding and signage design is strongly correlated with human behavior and the wayfinding system should be comprised of a hierarchical family of signs that are comprehensive, clear, and consistent in graphic design. In addition to providing valuable information, the graphic design of the signage provides an opportunity for branding that relates to Dover’s downtown identity.

Vehicular and pedestrian signage should be provided to designate landmarks and places of specific importance, and to orient people towards these landmarks and established key routes.

- **VEHICULAR SIGNAGE** – In a two-way traffic system is critical for vehicular users to efficiently determine directions to their destination. Signage should be provided to designate the location of and directions to key places in the downtown that include the Transit Center, Children’s Museum, and central parking structures.
- **PEDESTRIAN SIGNAGE** – Should be provided at key junctures within the downtown and give pedestrians information and direction to additional destinations including transit, public spaces and buildings, and business clusters. An example of successful wayfinding signage can be seen in **Figure 22**.



Figure 22: Wayfinding and Street Signage Examples

The location and design of the signage should fit the context of the intended user (see **Figure 23**). Vehicular signs should be located in areas, such as intersection, that are clearly visible from the roadway. The fonts and graphic design of vehicular signs should be of a sufficient size and distinguishable color so that it easily visible from a distance. Pedestrian signage should be located at key pedestrian nodes, such as plazas or crossings, and should be of a height and graphic design that relates to a pedestrian. When appropriate, signage should be attached to light fixture poles or building faces to reduce the appearance of clutter within the streetscape.



Major wayfinding signage



Approach signage, secondary signage



Figure 23: Wayfinding and Signage Suggested Locations

3.4 Lighting

Proper street lighting can improve the appearance of the downtown and enhance safety for pedestrians and vehicular users. Light poles should be placed in regular patterns and should fit within the spatial context of the streetscape. Poles should be placed between trees and positioned to avoid excessive dark or bright spots over areas. Fixtures should be compliant with the recommendations of the International Dark-Sky Association or meet Illuminating Engineering Society of North America (IESNA) guidelines. Additionally, the light pole heights and fixture illumination should fit the context and needs of the specific area.

Lighting in the study area should be full-spectrum, low-wattage lamps on poles that are pedestrian scaled. Lighting levels should be achieved by altering the spacing between lamps, rather than increasing the wattage or height whenever permissible. The Hancock series light poles from Spring City Electrical with a traditional lantern luminaire have been selected for use along Silver Street, and this model or similar is recommended for use throughout downtown improvements (see **Figure 24**). The selected light pole should be specified to have electrical outlets to accommodate holiday lighting needs and also provide for an option of attachments for banners that could be used in the Upper and Lower Square areas. As a long-term strategy, LED lighting sources will provide lower operating costs. The fixtures used for street lighting should have the capability to use retrofitted LED luminaires in the future, if LED technology is not employed in the initial installations.



Figure 24: Pedestrian Scale Lighting

Bollard lights are excellent for use in areas where low level lighting is needed, such as lighting near an entryway or within a plaza. The Annapolis model from Landscape Forms or a similar model that is stylistically adaptable to different locations is recommended.

Some streets and intersections may require fixtures lights that are taller, higher wattage and spaced further apart. If supplemental lighting is required, the City should first consider double luminaire configurations. However, if additional lighting is required a simple, tall contemporary pole and high-cut-off luminaire could be used that would not visually compete with the more traditional and ornate pedestrian-scaled fixtures. The need for such lighting can be determined as part of the technical evaluations and development of the concept designs.

3.5 Landscape

Trees and landscaping provide numerous benefits, and street trees are a critical component of a downtown environment. They provide numerous benefits, including shelter for pedestrians, traffic speed reduction, ecological enhancement and the establishment of a sense of place. They can also help identify and delineate areas of interest or entries.

Downtown Dover has a wide variety of tree species that are mature and generally in good health. It is the purpose of this plan to provide new trees where there is opportunity because of construction and to preserve existing trees wherever possible. The selection of trees should complement the downtown's traditional appearance and be composed of trees that thrive in a New England urban environment. [Figure 25](#) shows suggested street trees.

Chestnut Street serves as a major thoroughfare through the downtown and is also bordered by several expansive parking lots. This stretch of roadway has a relatively small amount of trees and therefore is a prime candidate for the establishment of a single large canopy trees species to help define the corridor. *Zelkova serrata* is a hardy specimen that has an upward branching pattern that would eventually form a canopy of the roadway. It is recommended that these trees be planted on both sides of the roadway no more than 50 feet apart when possible. The location of the trees should not interfere with the utility poles and/or lighting. Adequate distance should be left at the intersections to ensure the sight lines for the drivers.

Upper and Lower Squares are areas of special interest within the downtown. These areas are surrounded by numerous shops and have a fair amount of pedestrian traffic. The selection of trees planted along the street and within the larger landscape areas should provide adequate shade for pedestrians, require little maintenance, and highlight the significance of the area. *Gleditsia triacanthos* var. *inermis* is recommended as a shade tree along the street and *Pyrus calleryana* 'Chanticleer' is recommended as a shade tree within the larger landscaped beds. These shade trees should be planted no more than 40 feet apart along the street and should also be planted in landscaped areas adjacent to seating. *Amelanchier Canadensis* is an ornamental flowering tree that is native and recommended for planting in the larger landscaped beds.



Ulmus americana 'American Liberty'



Pyrus calleryana 'Chanticleer'



Amelanchier canadensis



Zelkova serrata



Zelkova serrata



Ulmus americana 'American Liberty'



Gleditsia triacanthos var. *inermis*



Pyrus calleryana 'Chanticleer'



Acer rubrum



Acer rubrum

Figure 25. Recommended street tree types

There are a healthy number of existing mature trees along Central Street, Main Street, Washington Street and First through Sixth Streets. These trees should be preserved and infilled with appropriate tree species where there is a sufficient gap or a dying tree needs replaced. *Quercus rubra*, *Ulmus americana* 'American Liberty' and *Acer rubrum* are recommended species that are adaptable and well suited to filling in voids within the composition of trees along a street.

Placement of street trees should complement the architecture and should not block important views of businesses. **Figure 26** indicates potential locations for tree placement as filled green circles.

In some locations, seasonal planting might be provided within containers that could be removed during winter months. In many communities, seasonal plantings of this sort are sponsored and maintained by local businesses or organizations. Locations could include broad street corners in Upper and Lower Squares, along the approaches or in the center island of the mini-round about at Portland Avenue, and along the sidewalks or approaches to the bridges within the downtown.



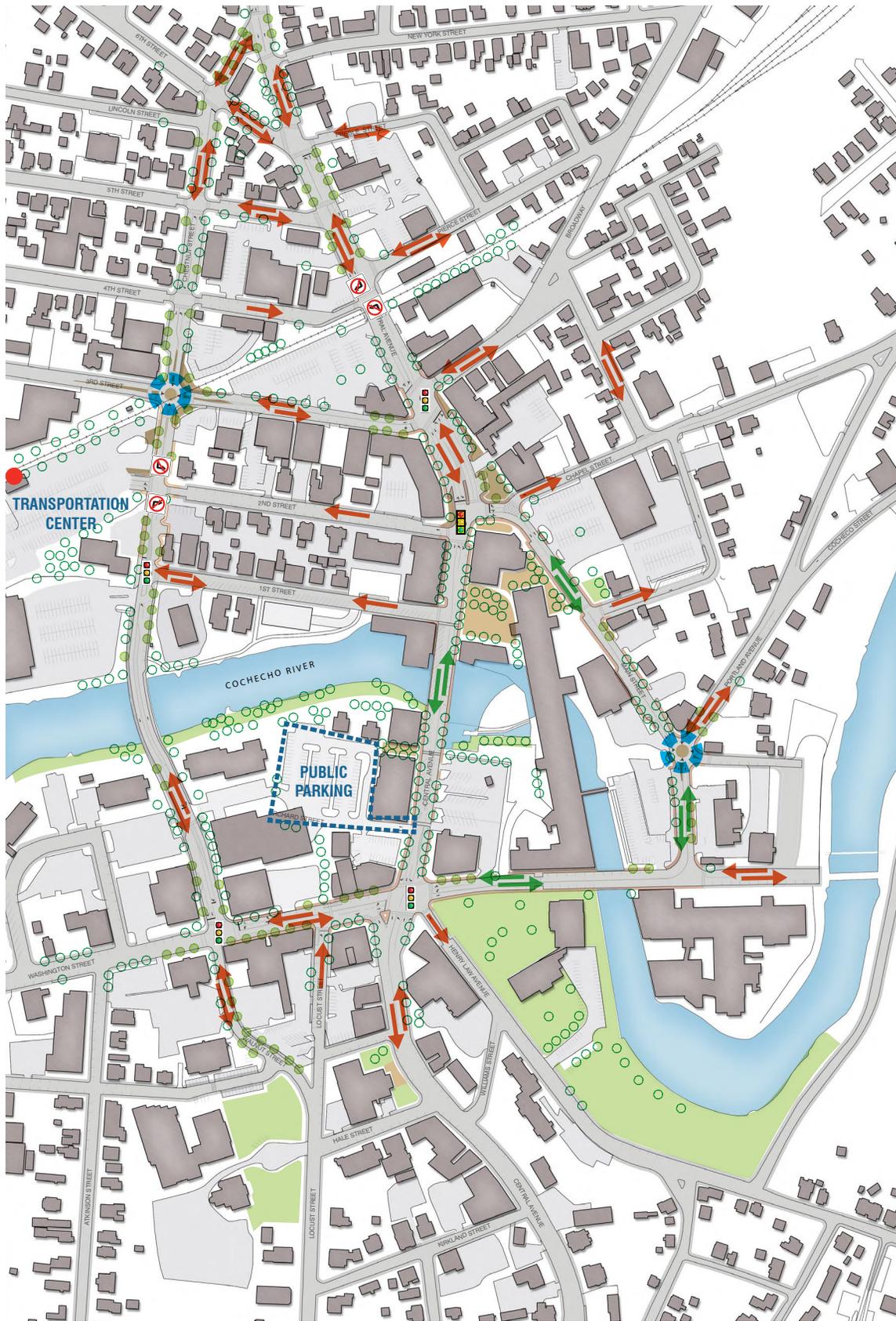


Figure 26: Opportunities for Enhanced Landscape

3.6 Amenities

Public amenities such as benches, bike racks, and trash receptacles are a necessity in a downtown environment. They not only serve functional needs, but provide pedestrians with an opportunity to engage and interact with others in the immediate area. This engagement helps create a vibrant and lively downtown environment.

The City has begun reconstructing a span of Silver Street from the Spaulding Turnpike Exit 8 ramp to Central Avenue. As part of this reconstruction, the City has selected furnishings (new lighting, benches, trash receptacles and bike racks) for use in this area. The general style and character of these furnishings is appropriate to continue throughout downtown. These amenities have a style that compliments Dover's traditional downtown aesthetic and collectively form a family of elements to thematically build from throughout the downtown environment. Accordingly, the following suggested amenities for streetscape improvements within the downtown include selected furniture from the Silver Street improvements, as well as other selections that are similar stylistically.

- **BENCHES** – Pedestrians should have the opportunity to rest, socialize, and experience their immediate environment. Benches should be placed in locations that are convenient and comfortable for pedestrians, such as near entrances and key nodes. A variety of bench positioning and arrangements provides users with options that suit their particular need. A variety of benches has been recommended that are similar in style and fit the traditional character of the downtown, as shown on in [Figure 27](#). The selected bench model should fit the need and aesthetic of the specific location. The Scarborough Bench or Parc Vue Bench is recommended at Upper and Lower Squares. Models RB-12 and RB-28 from Victor Stanley are recommended for use along street segments and Model C-140 is an excellent choice for park perimeters or heavily landscaped areas.
- **BIKE RACKS** – Storage for bicycles is a key accommodation for users that access the downtown via bicycle. Storage facilitates this alternative means of transportation and are a key ingredient towards making a street complete for a variety of mobility means. Bike racks should be placed in visible areas near public parking, public facilities, parks, and businesses. The style of the bike rack should be simple, provide adequate security, and fit the traditional aesthetic of the City. Suggested examples are shown in [Figure 28](#). Bike hitches, such as the model from Dero, are useful in narrow or busy areas where space is crucial. Larger capacity bike racks, such as the 5 Loop Bike Rack from Victor Stanley, are best located near public facilities, parking and park areas.
- **TRASH RECEPTACLES** – To discourage littering, trash and recycling receptacles should be placed at key intersections and near public spaces. The receptacle should be of a traditional style and allow for easy trash removal by City maintenance workers, similar to those shown in [Figure 29](#).



Model C-140, Victor Stanley



Model RB-12, Victor Stanley



Model RB-28, Victor Stanley

Figure 27. Benches



Scarborough Bench, Landscape Forms



Parc Vue Bench, Landscape Forms



Figure 28. Bicycle Racks

Bike Hitch, Dero



5 Loop bike Rack, Victor Stanley



Scarborough Receptacle, Landscape Forms



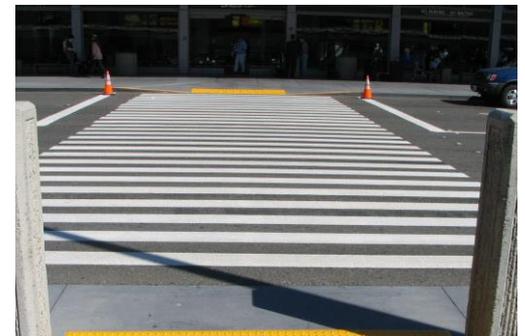
S-42 Receptacle, Victory Stanley



SD-242 Recycling Receptacle, Victory Stanley

Figure 29. Trash and Recycling Receptacles

Streetscape Character : Ornamental Paving Materials



Sidewalks

Crosswalks

Streetscape Character : Landscape



Maple



Elm



Linden



Zelkova



Pear



Serviceberry



Japanese Lilac Tree



Cherry



Redbud

Streetscape Character : Lighting



Streetscape Character : Signage / Wayfinding



Streetscape Character : Amenities



Bike Racks

Trash / Recycling

Benches

Streetscape Character : Public Art

