DESIGN STANDARDS AND GUIDELINES - SITE IMPROVEMENTS, FURNISHINGS, LANDSCAPE, AND LIGHTING

The design of sites is an integral part of any development. Aspects of site design include site improvements such as grading, paving and materials choices; site furnishings such as benches, walls, kiosks and other architectural elements; landscape elements and plant materials, and lighting. All elements of site design should contribute to the overall character of Downtown Livermore, conveying both its urban-ness as well as its relationship with nature.

All elements of site design should follow the guidelines below to ensure their design is a part of the overall fabric of Downtown. The Design Standards and Guidelines are divided into multiple components related to building design, with objectives identified in the left hand column and standards and guidelines identified in the central column. The pictures at right are provided to illustrate the concepts being presented. All projects are required to comply with identified objectives and standards and are strongly encouraged to follow the established guidelines.

SITE IMPROVEMENTS

SURFACE GRADING

The natural topography of the City should be maintained wherever possible. Alteration of the landscape through grading should be minimized.

Guidelines:

- Where grading is unavoidable, consider the following guidelines:
  1. Cross slopes should not exceed two (2) percent in landscaped or sidewalk areas. Optimum slope for paved areas is one point five (1.5) percent, depending on roughness of paving surface.
  2. Follow the natural contours as much as possible, and contour slopes to blend with the existing terrain.
  3. Large manufactured slopes should be avoided in favor of several smaller slopes.
  4. Significant natural vegetation should be incorporated and retained into the project.
  5. Graded slopes should be landscaped for aesthetic and slope stability purposes.
  6. "Berming" earth against the side of buildings is not recommended.

PARKING LOTS

All parking areas should be planted and landscaped to avoid an overall appearance of asphalt. They should be designed with convenient safe and efficient pedestrian connections to buildings entry areas, transit stops, and to other pedestrian routes.

Standards:

- Swales shall be provided for the drainage of all surface parking lots. Swales should be used in combination with an adequate underdrain system to prevent ponding. See City specifications for Grass Swale Design Guidance.
- Trees shall be planted in surface parking lots at a minimum of 1 tree per 4 spaces.

Guidelines:

- No more than ten (10) parking spaces should be located in a row without a landscaped planter strip, with a tree, provided parallel to the parked vehicles. The planter strip should have minimum dimensions equal to one parking space.
- Trees in parking areas should generally have a high-branching, broad-headed form to create maximum shade. Larger trees are encouraged.

Parking lot, with planted aisles.

Aerial view of an "orchard planted" lot.

PARKING LOTS (CONTINUED)	<u>Guidelines (continued):</u> ▪ Wheel stops should be used adjacent to tree wells and planter areas to protect landscaping from car overhangs. ▪ Curbed planting areas should be provided at the end of each parking aisle to protect parked vehicles from turning movements of other vehicles. ▪ Landscaping in parking lot interiors and at entries should not obstruct driver's clear sight lines to oncoming traffic. ▪ Pedestrian systems should provide a clear route to the main building entrance and be designed to include sidewalks and walkways of a minimum 5' width, separated from vehicle areas by curbing and trees. ▪ The main pedestrian route from parking to building entrance should be easily recognizable and accessible for patrons, designated by special landscaping, such as a shaded promenade. ▪ Pedestrian routes should be designed to enhance and connect pedestrian and transit facilities, e.g. plazas and courtyards at building entries, seating areas, shaded transit stops, public art, fountains and information kiosks.

PAVED SURFACES

Pedestrian surfaces should convey a sense of detail and care, especially at special locations such as public plazas, pedestrian allees, and entrance walkways. Similarly, driveway surfaces at key points, such as entrance drives or other road surfaces that may be traversed by pedestrians, should be ornamented with special pavings to contribute to the public realm.

Guidelines:

- Pedestrian areas and crossings should be clearly demarcated, and may be emphasized by any of the following:
  1. Special paving.
  2. A recognizable scoring pattern.
  3. "Bands" of pavers along the crosswalk edge.
  4. Inset decorative elements.
- Recommended materials for pedestrian surfaces are listed below.
  1. Stone, such as slate or granite.
  2. Brick pavers.
  3. Concrete unit pavers.
  4. Poured-in-place concrete with any of the following treatments: integral pigment color; decorative aggregate; closed mold decorative scoring or stamped pattern; or ornamental insets, such as tile. An integral color pigment or dust-on hardener pigment is recommended.
  5. Decomposed granite.
- Any of the pedestrian surface materials mentioned above are recommended for driveway paving, except decomposed granite. For large areas, plain or pigmented asphalt and concrete are also acceptable.

Combination of brick banding and slate on First Street.

Special materials for pedestrian surfaces.

Special pavers used to create an intricate pattern.

WALLS AND FENCES

FRONTAGE FENCES AND WALLS

Front yard fences and walls serve to mediate between the public street and the private development that lies beyond. They allow views into the yard and minimize the overall visual impact of the fence, while ensuring a sense of safety and privacy for the development.

Standards:

- Overall height of frontage fences and walls (within front or side yard setbacks or separating parking from pedestrian areas) shall not exceed three (3) feet in height.
- For residential projects, no fences or walls over three (3) feet in height shall be permitted between the primary structure and the primary street frontage.
- For residential projects on corner lots, fences and walls on the secondary frontage are permitted up to six (6) feet in height, provided they are set back five (5) feet from the pedestrian walkway and do not exceed 50 percent of the lot frontage. The area between the fence and the pedestrian walkway must be improved with landscaping and an irrigation system. Such fences shall be located on the rear 50 percent of the lot and adequate corner sight distance must be provided.

Guidelines:

- Front yard fences are recommended to maintain an open character. For visual interest, a combination of thick and thin structural elements is recommended, with thicker elements for supports and/or panel divisions. Fence posts and/or support columns may be built up with additional trim, caps, finials, and/or moldings for this purpose.
- Frontage walls may occur as garden walls, planter walls, seat walls, or low retaining walls.
- Wall openings, material change, or design elements should be used to break up long expanses of uninterrupted fences and walls. Wall expanses should be broken at a minimum of every 20 feet. Support piers, pilaster or posts can be emphasized at regular intervals.
- Walls should generally have a cap and base treatment. A distinctive cap of different width, material or texture should occur within the top eight (8) inches.
- Entrances and pedestrian "gateways" should be announced by pilasters, trellises, special landscaping, public art or other special features.

Low frontage fence should permit visibility.

Low walls and planter walls may be provided along front yards.

Screening Fences and Walls

Screening devices are intended to enclose private spaces, shielding private activities and objects from public view. At the same time, screening devices must give attention to the impression they make upon the public realm, and not create "fortress" -like design.

Standards:

- Overall height of screening fences and walls shall not exceed six (6) feet in height.
- Screening fences and walls are prohibited between commercial buildings and the street along primary and secondary street frontages. Screening fences and walls are permitted on internal side and rear property lines.

Guidelines:

- The length of screening fences and walls adjacent to public right-of-ways should be minimized to the maximum extent feasible.
- Screening fences located to the sides and rear of properties may be simple and relatively unornamented. However, they should be visually compatible with adjacent ornamental fence designs and adjacent building architecture. Related colors, a cap or top articulation, and related post spacing should be used at screening fences to enhance compatibility.
- Adjacent to residential properties, screening fences should maintain a character and scale appropriate to residential neighborhoods; more detailed fencing types and additional ornamentation are recommended.
- Screening walls should be designed in accordance with City Engineering "Standard Specifications" - see City Standard Details.
- Design elements should be used to break up long expanses of uninterrupted walls, both horizontally and vertically. Walls over three feet (3') in height should include design elements such as textured concrete block, interlocking "diamond" blocks, formed concrete with reveals, or similar materials. Landscape materials should also be used to provide surface relief.
- Mechanical equipment, trash and recycling bins, and meters should be provided with architectural enclosures or fencing, sited in unobtrusive locations, and screened by landscaping. Colors and finishes of mechanical enclosures and equipment should be coordinated with colors and finishes of streetlights, fencing and other painted metal surfaces to be used on site, or with the associated building's material and color scheme.

Screening fences may not front streets.

Top articulation, such as wall caps, should be used.

Screening fences in neighborhoods should maintain a "residential" character, like this wood slatted fence.

SECURITY FENCES

Use of security fences should be minimized, and limited to locations where additional security is necessary, such as adjacent to the railroad tracks.

Standard:

- Security fences, designed to provide a higher level of security for certain uses, should not exceed ten (10) feet in height.
- Barbed wire, razor wire or similar wire, or deterrent security devices are not permitted.

Guidelines:

- Security fences should be designed to maintain an open character. This may be accomplished by using iron railings or by mounting wrought iron railings on top of a low wall.

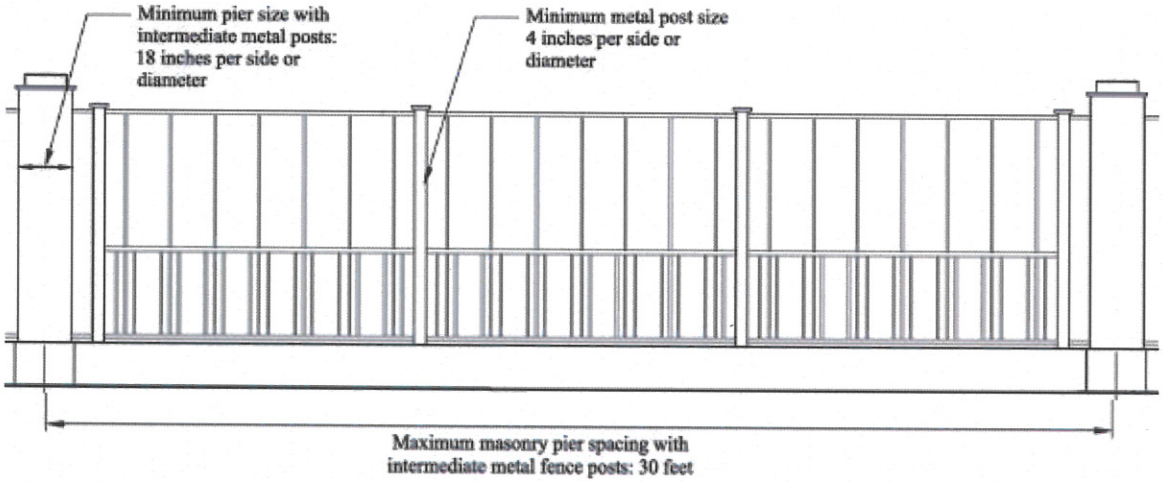
Iron fence creates a privacy screen.

PIERS

Piers serve as architectural elements that can add interest to and break up long expanses of wall or fence.

Guidelines:

- Piers are recommended to have a base, shaft and cap composition. Larger piers may be specially designed for gateway or other special locations, and these may incorporate ornamental plaques or signs identifying the building or business; public art such as panels or sculptural elements; and /or light fixtures. Piers may be topped by ornamental finials, light fixtures, or roof caps.
- Recommended dimensions for masonry piers are approximately eighteen (18) inches per side or diameter, and the maximum spacing between piers should be 20 feet. Metal posts should be a minimum of four (4) inches per side or diameter, as shown below.



MATERIALS AND COLORS

All fences and walls should be built with attractive, durable materials that are compatible with the residential character of Livermore.

Standards:

- Chain link fencing and corrugated metal fencing shall not be permitted.

Guidelines:

- Appropriate fence materials include wood, concrete formed wood (such as in split-rail designs), wrought and cast iron fences.
  1. For painted wood picket fences, a protective coating should be applied. White and light colors are recommended.
  2. For iron or metal fences, recommended materials include wrought iron, cast iron, welded steel or aluminum. Metal fences should be mounted on a low masonry wall, and/or between masonry piers. Galvanizing pretreatment beneath recommended paint (a "duplex" system) is recommended for maximum finish life and rust resistance of steel. A powder-coat system is also acceptable, though it will generally not be as durable as the recommended wet paint system.
  3. A UV-protectant clear coat over paint is recommended for prevention of fading of dark or fugitive colors.

- Appropriate wall materials include precast concrete, textured concrete block, or formed concrete with reveals, stucco, stone and brick.
  1. Exposed block walls may be constructed with a combination of varied height block courses and/or varied block face colors and textures (e.g. a combination of split-face and precision-face blocks).
  2. Plain gray precision-face concrete block walls are not recommended. Design treatments and finishes previously described should be applied to these walls for improved visual compatibility with building architecture.
  3. An anti-graffiti coating is recommended for exposed wall surfaces.

Chain link shall not be used!

Low wood fences are appropriate in Livermore.

Concrete block in combination with metal fencing.

MATERIALS AND COLORS (CONTINUED)	▪ Piers and posts should be constructed of the same or a compatible material as the principal building(s). ▪ Support post or pier materials may differ from fence materials; e.g. metal fence panels combined with masonry piers. Recommended materials include brick (yellow is preferable), terra cotta, and stone, colored or decoratively treated cast-in-place concrete, precast concrete or concrete block, or stucco-faced concrete or concrete block. ▪ Bollards are recommended to be cast iron, cast aluminum, and precast concrete. An anti-graffiti protective coating is recommended for precast concrete.	 Concrete piers separating metal fencing.
SITE FURNISHINGS AND EQUIPMENT		
SITE FURNISHINGS AND EQUIPMENT Public gathering places and other publicly accessible areas should be detailed with site furnishings and equipment to encourage public activity.	<u>Standards:</u> ▪ Seating, freestanding planters, ornamental trash and recycling receptacles, drinking fountains, bollards, information kiosks, transit shelters and bicycle racks are required in areas designated by City Standard Details. ▪ Newspaper vending and distribution racks (boxes) shall be located in areas as designated by City Standard Details, and configured along racks to make them visible and accessible to pedestrians. Rack equipment shall be considered a coordinated part of the streetscape, and consistent with City Standard Details. ▪ All benches, freestanding planters, ornamental trash and recycling receptacles, drinking fountains, bollards, information kiosks, transit shelters and bicycle racks located within the public right-of-way shall comply with City Standard Details.	 Locations for information kiosks shall be designated by the City.  Newsracks shall be considered a coordinated part of the streetscape.

SITE FURNISHINGS AND EQUIPMENT (CONTINUED)	<u>Guidelines:</u> ▪ The design, materials and colors of manufactured furnishings within private open spaces should be coordinated with the principal building(s) and/or other site and streetscape furnishings. Design and selection of furnishings should attempt to reinforce visual relationships to create a "family of objects" within the immediate project vicinity. This should in turn reinforce Plan Area character. ▪ Components should be made of durable high quality materials such as painted fabricated steel, painted cast iron, painted cast aluminum, and integrally colored precast concrete. Recycled materials may be used so long as the finish or look of the material is consistent with or similar to the finishes prescribed above. Masonry surfaces should be treated with an anti-graffiti coating. Metal surfaces should be coated with highly durable finishes, such as aliphatic polyurethane enamel. An ultraviolet protectant clear coating is strongly recommended for dark or fugitive colors.	 All site elements should be considered together to create a "family of objects".
OPEN SPACE, LANDSCAPE AND PLANT MATERIALS		
OPEN SPACE Open space areas should be designed to accompany a multitude of public activities, allowing for recreation and play within green spaces while providing alternative gathering areas in the form of plazas or courts. It will also ensure access for people of all abilities to and through open spaces.	<u>Standards:</u> ▪ Open space is required to be a part of an overall open space network, accessible and visible to the public. It must connect to adjacent public streets and sidewalks via interior walkways, and must line up with and connect to adjacent open spaces. It should be designed to be visible from the street, using views into the site, tree-lined walkways, or a sequence of design elements to draw people into the space. ▪ A minimum of seventy-five percent (75%) of the open space must be usable surface area, constructed of any combination of surface materials such as grass, unit pavers or decomposed granite. ▪ Open space areas may not include setback areas, sidewalks, or other required right-of-ways. ▪ Required elements for open space areas include shade, night lighting and seating areas.	 Open spaces should accommodate many types of activities.

OPEN SPACE (CONTINUED)

Guidelines:

- Open spaces should be defined by buildings, low walls, fences, or linear buffer landscaping (e.g. hedges or rows of trees) on a minimum of two sides. Open space should not be bordered by surface parking areas on more than one side.
- Recommended elements include focal points such as fountains, interpretive displays, murals or artwork, ornamental detailing such as ornamental gates, trellises, etc. These should be used in combination with the required elements, above, to create a sequence for pedestrians along this system; for example, an ornamental gate at the sidewalk leading to a passage lined with columns, then arrival at a courtyard.
- For residential areas, open space areas should contain both landscaped areas and hardscape areas, as follows:
  1. Common landscaped green and/or garden space should comprise a larger proportion of the common outdoor area, and be centrally located to serve all related buildings or units.
  2. Common hardscape space should comprise a smaller proportion of the common outdoor area, and may include common roof deck space. Hardscape space should be connected directly to landscaped areas by stairs, walks, and/or ramps where necessary.

Open space should include both landscape and hardscape areas.

Existing open space in Downtown.

PLANT MATERIALS

Plant and landscape materials should be selected and sited to reflect both ornamental and functional characteristics. Full-headed shade trees, greenery and brightly colored flowering materials all add to the overall impression of Livermore.

Standards:

- Street trees and other plant materials within public right of way shall be consistent with the Specific Plan and City Standard Details.

Guidelines:

- Both seasonal and year-round flowering shrubs and trees should be used where they can be most appreciated - adjacent to walks and recreational areas, or as a frame for building entrances and stairs.
- Evergreen shrubs and trees should be used for screening along rear property lines (not directly adjacent to residences), around trash/recycling areas and mechanical equipment, and to obscure grillework and fencing associated with subsurface parking garages.
- In general, deciduous trees with open branching structures are recommended to ensure visibility to retail establishments, and more substantial shade trees are recommended in front of private residences.

Part of Downtown's landscape palette.

LIGHTING – INTENT:

DESIGN

Lighting in the public right-of-way and on private development should be compatible, and work together to create a cohesive aesthetic for the Downtown.

Standards:

- Lighting design within public right-of-ways and public plazas shall be consistent with Specific Plan and City Standard Details.
- Pedestrian-oriented areas, including walkways and paths, plazas, parking lots, and parking structures shall be illuminated to provide clear views both to and within the site.

Guidelines:

- All on-site and building-mounted lighting design should be compatible with building design, and with the character of the Downtown.
- Unnecessary glare should be avoided. Commercial buildings and landscaping can be illuminated indirectly by concealing light features within buildings and landscaping to highlight attractive features and avoid intrusion into neighboring properties.

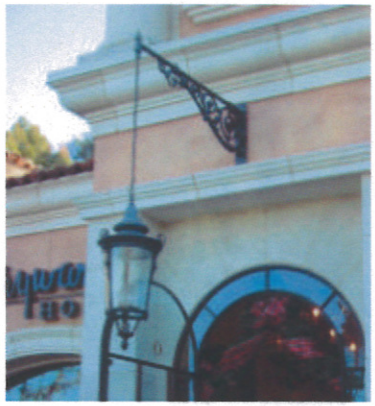
Street lighting with banners in the Downtown Core.

MATERIALS AND COLOR

The color and finish of lighting materials should be compatible with the character of the Downtown, and with the building architecture.

Guidelines:

- Color and finish of lighting metalwork should match that of other site furnishings, and/or of the building's metalwork or trim work.
- Recommended paint finishes for metal include:
  1. Galvanizing beneath paint (a "duplex" system) is recommended for maximum finish life and rust resistance of steel.
  2. A UV-protectant clear coat over paint is recommended for prevention of fading of dark or fugitive colors.



Lighting that is coordinated with the building trim and metalwork.

LUMINAIRE TYPES

Luminaires should be selected to provide lighting that is of a quality and intensity appropriate to the Downtown.

Guidelines:

- New fixtures should use a reflector and/or a refractor system for efficient distribution of light and reduction of glare.
- New fixtures should not cause glare or reflect into upper stories of buildings. House side shields and internal reflector caps should be used to block light from illuminating residential windows.
- Cut-off shields are recommended, to prevent light from being emitted above the horizontal relative to the light source. Small decorative "glow" elements are permitted to emit light above the horizontal. Alternatively or in addition, fixtures should use a refractive prismatic diffuser globe to direct light downward and focused in a pattern as desired.

Fixtures should use refractors to reduce glare into the night sky.

- Recommended globes include clear borosilicate prismatic glass globes; clear acrylic globes with optical diffusing (prismatic) patterns; translucent clear (frosted) or white acrylic globes. Polycarbonate globes are not recommended. Clear, smooth surface finish acrylic or polycarbonate globes are not recommended as they tend to show scratches and wear after several years.
- For pedestrian-oriented area lighting, energy efficient sources with warm white color and good color rendition are recommended. Recommended lamp types include:
  1. Color-corrected metal halide [two thousand nine hundred (2900) to three thousand two hundred (3200) degrees Kelvin],
  2. Color-corrected fluorescent [two thousand seven hundred (2700) to three thousand two hundred (3200) degrees Kelvin],
  3. Color-corrected ("white") high pressure sodium (H.P.S.). Standard ("peach") high pressure sodium [two thousand two hundred (2200) degrees Kelvin]
  4. Low pressure sodium, standard mercury vapor, and cool white fluorescent are not recommended.
  5. For accent lighting, halogen incandescent and standard incandescent are also recommended.

Poles And Mounting Height

Lighting should be oriented toward the pedestrian, installed at a human scale. They should work to create a pleasant and safe atmosphere in all outdoor areas.

Standards:

- For building-mounted lights, mounting height shall be a maximum of eighteen (18) feet, measured from the finished grade.
- For pole-mounted lighting at pedestrian plazas, walkways, and entry areas, a pedestrian-height fixture of twelve (12) to fifteen (15) feet in height from grade to light source is required. At major intersections or entry points, a mounting height of up to eighteen (18) feet may be acceptable.

Guidelines:

- Bollard mounted lighting and stair lighting is also recommended for low-level illumination of walkways and landscaped areas. Bollard illumination should be shielded or kept at a sufficiently low level to prevent glare impacts for passing motorists.
- In general, light sources should be kept low to maintain pedestrian scale and prevent spill light from impacting adjacent properties.

Lighting on bollards can be used to illuminate pedestrian areas.

Uplighting

Uplighting can create a dramatic Downtown effect; however, care should be taken to prevent unwanted spill into private areas.

Standards:

- Building facade uplighting, roof "wash" lighting, and landscape uplighting should be operated on timers that turn off illumination entirely after 2 a.m. nightly.

Guidelines:

- Shielding and careful placement should be used to prevent spill light from visibility by pedestrians, motorists, and nearby residential dwelling windows. Adjacent to single family homes, a combination of mounting height and luminaire shields should be used to protect residences from glare.
- Illumination levels of facade uplighting, roof wash lighting and landscape uplighting should use lower brightness levels where illuminated facades, roofs and landscaping face residential buildings, except across wider streets or boulevards with landscaped medians and street trees.