# STREETSCAPE DESIGN GUIDELINES

## FOR THE CITY OF LANCASTER PENNSYLVANIA

JUNE 7, 2004

DERCK & EDSON ASSOCIATES

BRINJAC ENGINEERING

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**CITY OF LANCASTER**

**STREETSCAPE DESIGN GUIDELINES**

## I. Overview and Primary Goals

In November 2003, the City of Lancaster authorized the creation of these Streetscape Design Guidelines intended to assist those who will plan for our City's future public spaces. Input and guidance was sought from many individuals representing both public and private sectors who share a common goal of addressing Lancaster's current assortment of incongruous streetscape components. Comments and suggestions from these individuals were then combined with design concepts developed by Derck & Edson Associates and its lighting consultant, Brinjac Engineering, to form these Guidelines intended to improve the quality of life in Lancaster City.

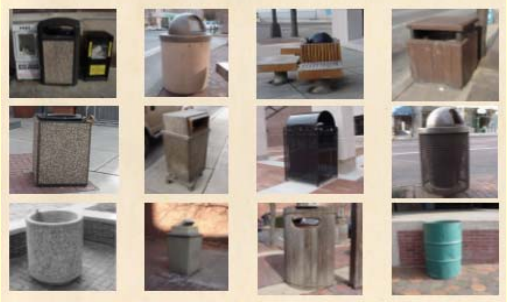
The primary goal of these Streetscape Design Guidelines is as follows:

***Create a durable, safe, and attractive streetscape to withstand the test of time, to celebrate our unique heritage and distinctive neighborhoods, to reinforce a sense of place and economic vitality, and to promote visual continuity of quality streetscape components throughout Lancaster City in an effort to enhance desirable destinations for visiting, working, playing and living.***

Revitalized streetscapes will assist with attracting new residents, businesses, and visitors to the richness of our urban landscape. With careful implementation, Streetscape Design Guidelines will help to advance this revitalization process, while creating more safe public spaces and generating a greater sense of community pride.

The streetscape recommendations noted on the following pages are also a conscious effort to a distill our City's historic design precedents, building traditions, and generally low-key, functional, and common-sense style into a design 'vocabulary' for future enhancement of our public spaces. To avoid replacement of Lancaster's diverse urban landscape with strictly standardized, theme park-like improvements, implementation of these guidelines should prove to be an exercise in balancing uniformity with diversity, rather than an exercise strictly focused on 'beautification' and homogenization.





A few of Lancaster's many existing litter receptacles

An assortment of Lancaster's existing benches

*Streetscape recommendations reference some of Lancaster's existing urban landscape components*

# CITY OF LANCASTER

# STREETSCAPE DESIGN GUIDELINES

## II. Streetscape Definition and Specific Components

The term 'streetscape' as utilized throughout these Streetscape Design Guidelines typically refers to exterior *public* spaces located *between* street curbs and building facades. Inclusion of pedestrian crosswalks and traffic calming measures located within vehicular spaces are two exceptions to this definition, however. Basic streetscape components addressed by these Streetscape Design Guidelines are as follows:

- Paving
  - Sidewalks
  - Curbs
  - Accessible Sidewalk Ramps
  - Traffic Calming Measures
  - Crosswalks

- Plantings
  - Street Trees
  - Other Supplemental Plantings
  - Container Plantings

- Street Furnishings
  - Benches
  - Litter and Ash Receptacles
  - Movable Tables and Chairs
  - Bollards
  - Bicycle Bollards
  - Bus Shelters
  - Parking Meters
  - Sign Poles
  - Fences
  - Utility Covers
  - Banners
  - Planters
  - Lighting

These Streetscape Design Guidelines do not address objects mounted to building facades such as signs, canopies, awnings, window boxes, railings, and other architectural features. If proposed within a local Historic District, such items typically intended to enhance *private* property are subject to review and

Brick and iron details enhance many of Lancaster's existing streetscapes

approval by the City's Historical Architectural Review Board and City Council.

While greater visual continuity will be achieved through use of similar specified streetscape components throughout the City, replication of *identical* paving patterns, street tree species, site furnishings and lighting are not intended for *all* areas of the City. For example, site furnishings selected for the Central Business District may not be appropriate for use on some predominantly residential streets.

Specific streetscape enhancement budgets, coupled with a desire to maintain distinctive identities of Lancaster's diverse neighborhoods, require slight variations on common streetscape objectives. For this reason, these Guidelines provide several options for many of the basic streetscape components noted above. Requested variations on proposed standard streetscape components may be permissible with proper City review and approval as future enhancement projects are implemented.

## III. Designated Areas for Streetscape Variation

Recognizing the need for variation within these Streetscape Design Guidelines, City representatives have identified three streetscape types requiring three distinctive approaches to future enhancement planning. These designated areas are depicted on the following page. The first of these three streetscapes is the City's Central Business District (the CB1 Zone as depicted on the City's current Zoning Map). All such proposed Central Business District streetscape components will also extend outward from this District to City limits along key corridors. These corridors are defined as Harrisburg Avenue, Prince Street, Queen Street, Orange Street, King Street/Columbia Avenue, and South Duke Street. Other highly traveled corridors (e.g. Manor Street, New Holland Avenue, etc…) may incorporate some of the same streetscape features within gateway areas; however, such enhancements proposed for the Central Business District are not envisioned for these additional corridors.

Lancaster's Central Business District landscape

One of Lancaster's residential landscapes

Secondly, all residential areas within the City not included in the previous streetscape category will have a slightly different streetscape treatment which maintains some (but not all) of the same elements utilized for the Central Business District and the key corridors. Finally, all non-residential areas of the City not already addressed in the two previous categories will comprise a third area for streetscape design variation.

Beyond these three basic streetscape designations, subtle variations on common streetscape elements may also be used to celebrate distinctive neighborhoods/districts located within each of the broader areas (e.g. Arts District, Historic District, Churchtowne). Following further study and streetscape planning efforts, such unique places may be identified through the use of decorative banners, customized plaques on street furnishings, and distinctive public art incorporated into standard paving patterns, for example.

Throughout the Streetscape Design Guidelines, the three designated areas for streetscape variations are noted as follows:

Central Business District and Key Corridors – Streetscape 'A'

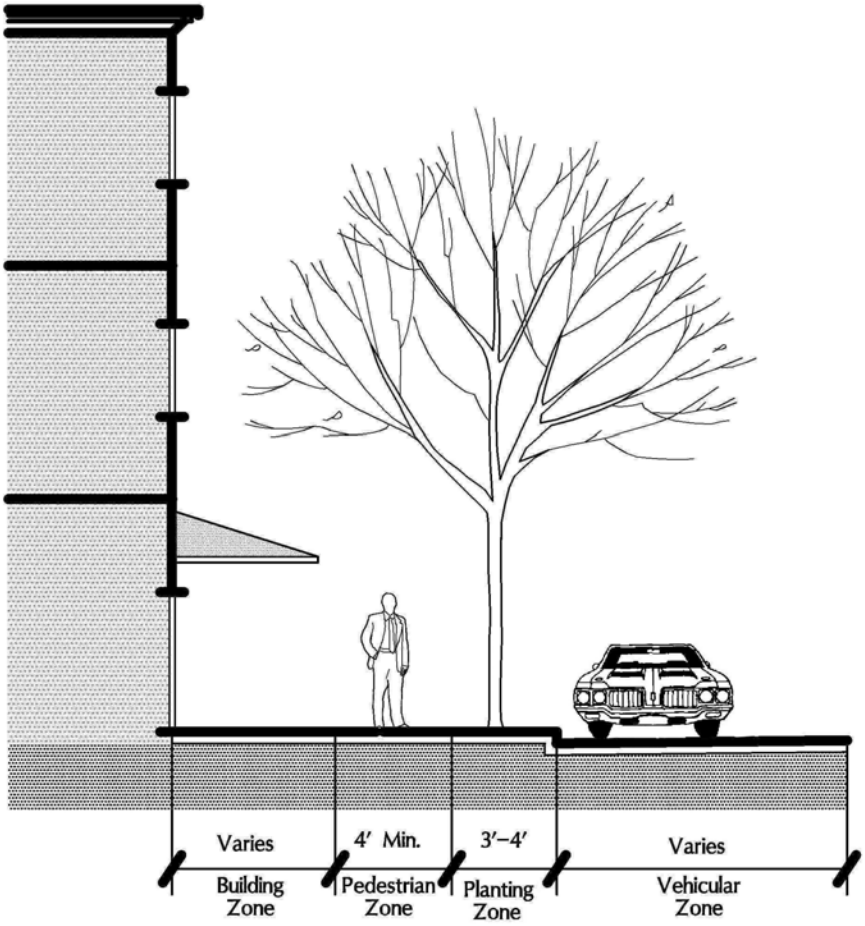
Residential Areas (exclusive of Streetscape 'A' area) – Streetscape 'B'

Non-Residential Areas (exclusive of Streetscape 'A' area) – Streetscape 'C'

Lancaster's existing brick architecture and paving

Within Streetscape 'A', decorative paving areas adjacent to curbs should fully accommodate pole-mounted streetscape elements such as lighting.

## IV. Sidewalk Zones




The specified streetscape materials and furnishings identified in the following sections of these Streetscape Design Guidelines require appropriate placement between street curbs and building facades. For the purpose of identifying appropriate locations, pedestrian areas immediately adjacent to the curbline will be defined as the Planting Zone. Progressing from the Planting Zone toward the building façade, the intermediate streetscape area will be referred to as the Pedestrian Zone. Finally, the streetscape area nearest the façade will be designated as the Building Zone (see Sketch A).

The actual dimensions of these three zones, defined by function and activity, vary greatly throughout Streetscapes 'A,' 'B,' and 'C' (as previously identified in Section III). Typically, the Planting Zone extends 3' to 4' from the curbline to accommodate street trees and pole-mounted site features, while the Pedestrian Zone shall be a minimum of 4' per City ordinance to permit safe, unimpeded circulation routes. Where additional sidewalk width exists within the remaining Building Zone, such spaces may accommodate seating areas,

sidewalk café uses, moveable container plantings (Streetscapes 'A' and 'C'), and/or permanently installed foundation plantings (Streetscapes 'B' and 'C'). A 5' clear path from any building entrance/exit shall remain within the Building Zone for all streetscapes.

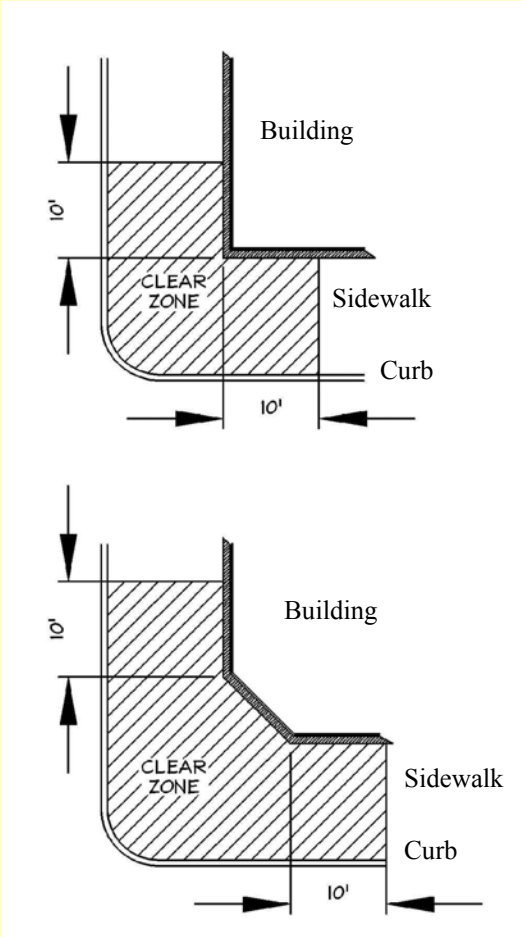
In addition to accommodating street trees, pole-mounted site features, and some pedestrian circulation needs, the Planting Zone functions as an effective buffer between the vehicular areas and the Pedestrian Zone. Items such as lighting, signs, bollards, and litter receptacles will be located here. During winter months, this zone will also typically accommodate snow removed from both Pedestrian and Building Zones.

In addition to the three previously noted sidewalk zones, Clear Zones must be maintained at all sidewalk intersections. Clear Zones are areas of the streetscape where only traffic signals, lighting, and street signs are permitted. Clear Zones accommodate higher pedestrian volumes that typically occur at sidewalk intersections, and permit safe viewing distances for both motorists and pedestrians. All Clear Zones include sidewalk intersection and a 10' area measured from building corners at street intersections (see Sketch B).

Where approved by the City and adjacent property owner(s), items such as mailboxes, newspaper boxes, and other literature dispensary containers must generally be located beyond the required Clear Zone and within the Building Zone. Due to safety and security concerns, such elements must never be placed within the Pedestrian Zone, or adjacent to a public building or outdoor gathering area. Where inadequate Building Zone area exists and where specifically approved by the City, such items may be considered within the Planting Zone, provided that they are located beyond the Clear Zone and at least 18" from the face of adjacent curb.

Regardless of location near an intersection or elsewhere, placement of all proposed streetscape components must meet the requirements set forth within the City's ordinances and the Americans with Disabilities Act (ADA). For example, minimum






Sketch B – Clear Zones

distances must always be maintained between all proposed site enhancements and items such as accessible ramps, fire hydrants, and vehicular access drives. While existing ordinances and laws govern placement of proposed enhancements, the following section of the Streetscape Design Guidelines provides a specific palette of streetscape materials to be incorporated into the future design of all public spaces throughout Lancaster City.

## V. Palette of Streetscape Materials

Lancaster's diverse streetscapes consist of an assemblage of (1) paving, (2) plantings, (3) street furnishings (e.g. litter receptacles, parking meters, benches), and (4) lighting fixtures. The following four sections of these Streetscape Design Guidelines address each of these four typical components.

### Paving

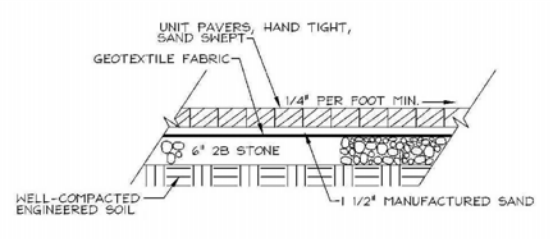
Brick has dominated Lancaster City's built landscape for centuries. Utilized in construction of our City's high-style, landmark buildings such as Central Market, in our more vernacular building stock consisting of tobacco warehouses and townhouses, and in some of our cherished outdoor spaces such as Steinman Park, brick is the material most identified with Lancaster's rich architectural heritage.

Brick has also been used over the past centuries to pave our City's sidewalks. Its naturally warm, terra-cotta coloration produces paved surfaces which are in harmony with most adjacent structures. Furthermore, a standard brick's normal size (4" x 8"x 2 ¼") lends a human-scaled, textural design element to expansive areas of paving. Flexibility to create a variety of pleasing paving patterns is yet another benefit of this material.

Wherever Lancaster's existing brick sidewalks remain in good condition, they should be preserved. Wherever brick sidewalks have fallen into disrepair





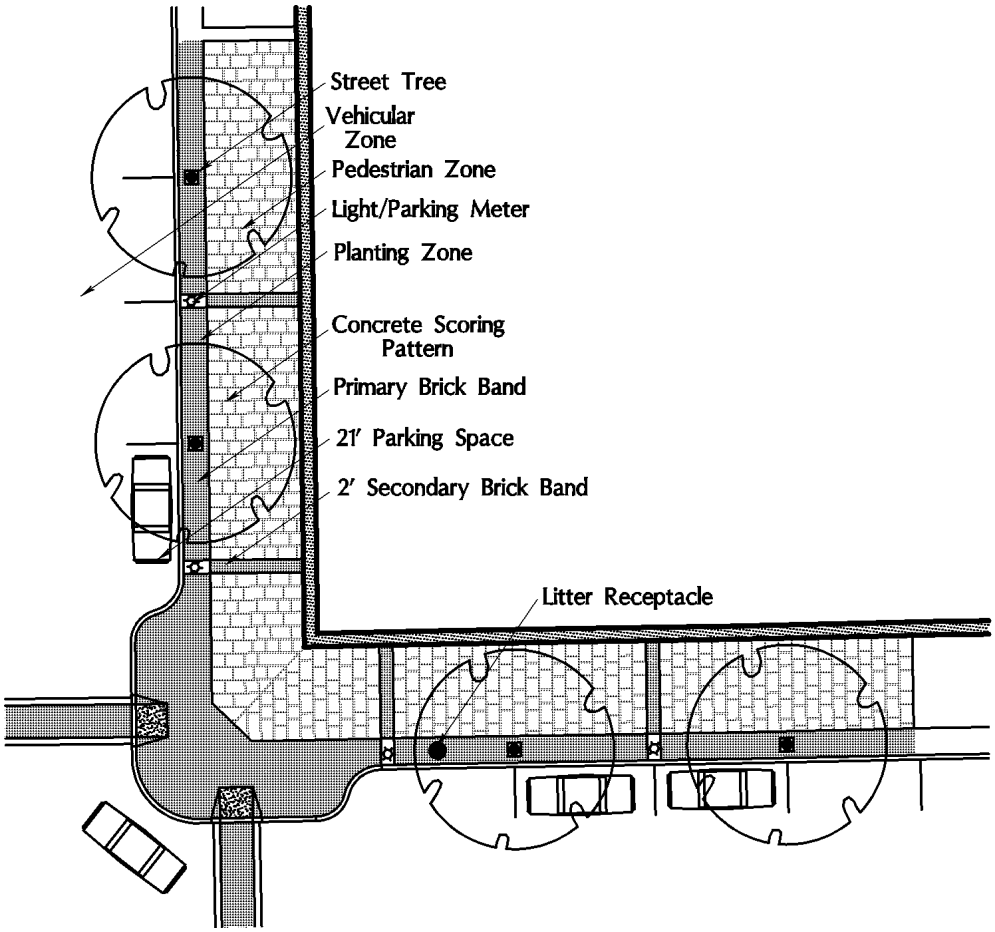



Sketch C – Brick paving on appropriate base material within Planting Zone

Brick and concrete (interlocking, rectangular pattern) sidewalk at Market Street, Philadelphia, PA

due to poor sub-grade conditions, every attempt should be made to lift and reset original bricks over a more stable, well-compacted base within the Planting Zone (see Sketch C). Base material for all brick sidewalks within Pedestrian and Building Zones should include concrete as required by City specifications.

Wherever concrete sidewalks currently exist within Streetscape 'A' and where future streetscape modifications are proposed, a 3' to 4' brick band must be installed adjacent to the curb as specified in these Streetscape Design Guidelines. The exact width of this band is to be determined by the overall sidewalk width, and should not be greater than approximately 40% of the overall width. This paving band width must be consistent throughout any given block (both sides of the street), however; width variation may occur between adjacent blocks depending upon existing sidewalk dimensions.




Sketch D – Streetscape 'A' paving pattern

Although durable and easy to maintain, concrete paving does not permit essential air and water to penetrate to the sub-surface root zones of street trees. Concrete is also a material which must be destroyed, thrown away, and replaced whenever access to underground utilities is required. While somewhat less snow shovel-friendly than concrete paving, continuous brick paving is only proposed within Streetscape 'A' Planting Zones – areas typically utilized

for the *piling* of snow during winter months. All other sidewalk areas may be paved with concrete as further defined below.

For practical reasons such as water and air penetration to tree roots, combined with the aesthetic objectives previously noted, non-mortared, wood-formed brick identical to Glen-Gery Corporation's Model #53-DD (or approved equal) will be incorporated throughout the Central Business District and along all key corridors. This specific brick model includes a subtle range of compatible colors, and was utilized in the 1979 construction of Steinman Park's paved surfaces. It is a less porous and more slip-resistant type of paving brick than many of the older bricks used in construction of Lancaster's earliest brick sidewalks.

Standard concrete *can* be an attractive material for sidewalks, street curbing, accessible ramps, and crosswalks when handled with a bit of creativity. For example, scoring patterns (prescribed paving joints where sidewalks shift during annual freeze-thaw cycles) can be used as an inexpensive, low-key design feature. Rather than utilizing a standard scoring pattern consisting of 4′ x 4′ or 5′ x 5′ squares, a pattern of simple, interlocking rectangular components intended to mimic stone pavers should be considered.

A paving material's inherent color should not be altered in an attempt to falsely replicate *another* paving material. Specifically, colored concrete and colored bituminous paving installed with the intent of producing durable, inexpensive faux cobblestone or brick paving patterns should not be used. The results of these attempts are usually disappointing, at best.

As sections of colored, heavily-textured bituminous or concrete paving are eventually removed to access sub-surface utilities, replicating original patterns and colors typically applied to the surfaces of these materials proves to be a great challenge. Simple, easily replicated, non-colored paving patterns (such as the previously noted interlocking, rectangular pattern) must be utilized wherever textured paving is desired,

Saw-cut expansion joints interrupt one of Lancaster's faux-brick paving patterns

but when the actual material replicated proves undesirable due to cost or durability. Selected paving patterns must be complementary to the overall streetscape, but must not be visually distracting.

Within this Paving Section of the Streetscape Design Guidelines, details for installation of Sidewalks, Curbs, Accessible Sidewalk Ramps, Traffic Calming Measures, and Crosswalks are provided. Some details apply to all Streetscapes 'A', 'B', and 'C', while others are specific to a particular area within Lancaster City.

***Sidewalks***

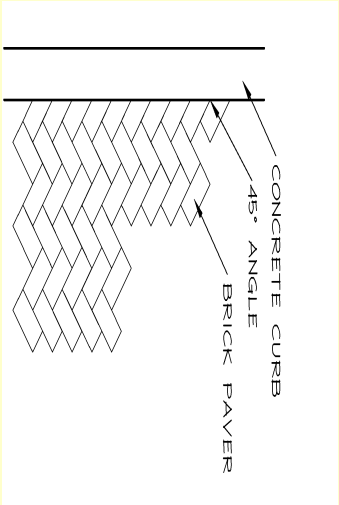
As previously noted for Streetscape 'A', sidewalk installations in these areas must include a 3' to 4'primary band of brick pavers laid adjacent to, and flush with, the inside face of street curb (within the Planting Zone). This brick band may only be interrupted approximately every 42' to coincide with light fixture locations set on a concrete base (see Sketch 'D').

In addition to the primary brick paving band located within the Planting Zone, secondary brick bands (2' width) are to be installed perpendicular to the curb approximately every 42' and aligned with new street light locations. Secondary brick bands are only required for the Central Business District portion of Streetscape 'A.'

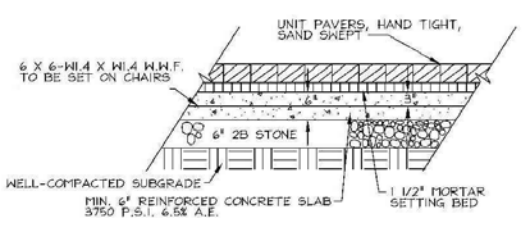
Typically, sidewalk paving for Streetscapes 'B' and 'C' will not include brick pavers, however, the combination of brick and concrete paving may be utilized where the majority of property owners on both sides of a given street favor these proposed paving enhancements, where original sidewalks comprised entirely of brick do not currently exist, and where adequate overall sidewalk width permits use of both concrete (Pedestrian Zone) and brick (Planting Zone) materials. Where the Planting Zone is currently maintained as a lawn area within Streetscapes 'B' and 'C', it is preferable to maintain this lawn rather than replace it with brick paving.








Sketch E – Herringbone paving pattern



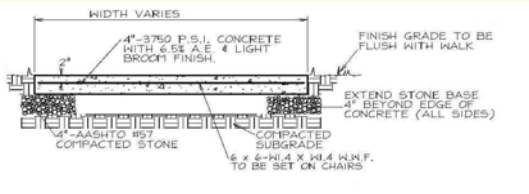

Sketch F – Brick pavers on concrete base in areas of vehicular sidewalk crossings

In areas where brick paving is prescribed for sidewalks, Glen-Gery Corporation's wood-formed brick Model #53-DD (or approved equal) must be utilized, and such pavers must be installed in accordance with Sketches C, D, E, and F. Herringbone paving patterns (set at a 45° angle) are to be used for all primary banding within Planting Zones, while Running Bond paving patterns are to be used for all secondary bands located perpendicular to curblines (where required). Where vehicular areas cross sidewalk areas (i.e. at access drives), brick pavers must be set on a reinforced concrete base (see Sketch F). Rather than interrupt brick/concrete sidewalk paving patterns with asphalt paving at access drives, streetscape plans should generally continue such brick/concrete patterns (with appropriate base materials) across access drive areas.

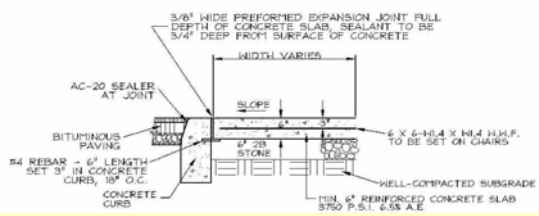
Concrete for sidewalks within Streetscapes 'A', 'B', and 'C' shall meet City requirements for concrete paving in pedestrian areas (see Sketch G). Where vehicular use crosses a sidewalk area (e.g. access drives), heavier, reinforced concrete paving must be used (see Sketch H).

Minor variations to required paving patterns in areas adjacent to a particular landmark building may also be considered by the City. For example, the secondary brick paving band locations previously noted may be slightly altered to emphasize unique architectural features of adjacent structures such as column or entrance locations.

To further identify and celebrate distinctive neighborhoods within Streetscapes 'A', 'B', or 'C,' customized, bas-relief sculptural pieces designed and crafted by artists and artisans may be integrated into proposed paving patterns, provided that such designs are first reviewed and approved by the City. For example, bronze or steel paving insets which are textured to provide some slip-resistance may be considered. Paving elements which commemorate historic figures (e.g. George Ross, General Edward Hand, and Lydia Hamilton Smith), or which depict stylized graphic icons related to street names (e.g.




Sketch G – Concrete sidewalk in areas of pedestrian use




Sketch H – Concrete sidewalk in areas of vehicular crossing

Lemon, Lime, and Chestnut) may be used. A series of inset sidewalk markers may also be used to delineate a specific urban trail or walking tour, if first reviewed and approved by the City. Such opportunities to include public art within otherwise mundane settings create a unique sense of place, while fostering artistic expression among Lancaster's extensive arts community.

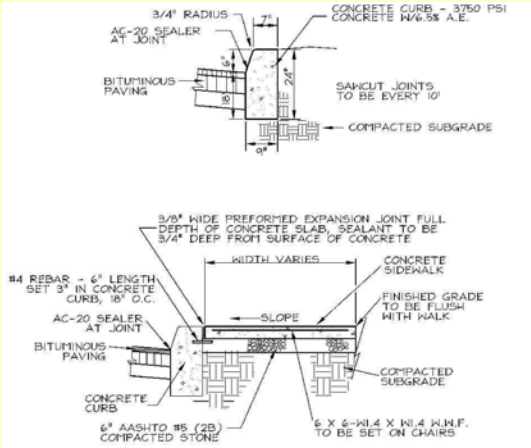
***Curbs***

Wherever original stone curbs exist within Lancaster City, such curbs should be preserved wherever possible. In all other areas (Streetscape 'A,' 'B,' and 'C'), concrete curb is to be installed in accordance with City specifications and Sketch I. Note the relationship between proposed concrete curb and adjacent concrete sidewalk. This detail prevents the sidewalk slab from sinking lower than adjacent curb elevations in an effort to minimize potential tripping hazards.

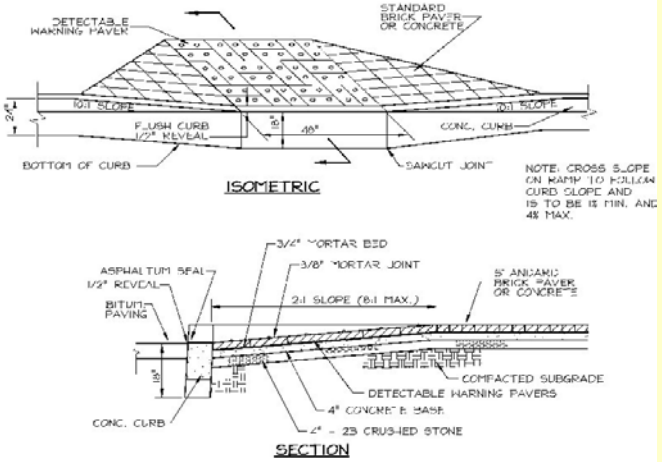
Some new curb elevations may require modification from existing elevations to ensure correct sidewalk slopes. City construction standards specify a 6" curb reveal, and minimal sidewalk slopes of ¼" vertically for each 1', horizontally. Proposed slope conditions must not exceed existing sidewalk slopes. Curb width must be 7" measured along the top curb surface.

***Accessible Sidewalk Ramps***

Within designs for Streetscapes 'A,' 'B,' and 'C', detectable warning strips which incorporate raised, truncated domes must be used for all accessible sidewalk ramps as required by the Americans with Disabilities Act. To comply with ADA requirements that detectable warnings contrast visually with adjoining pavement surfaces, warning strips are to be composed of brick pavers identical to Whitacre-Greer's Shade #32 and #33, wherever accessible sidewalk ramps adjoin concrete paving within the Planting Zone. Where such ramps are adjacent to brick paving, concrete pavers with raised truncated domes identical to Whitacre-Greer's Shade #52 are to be




Sketch I – Concrete curb

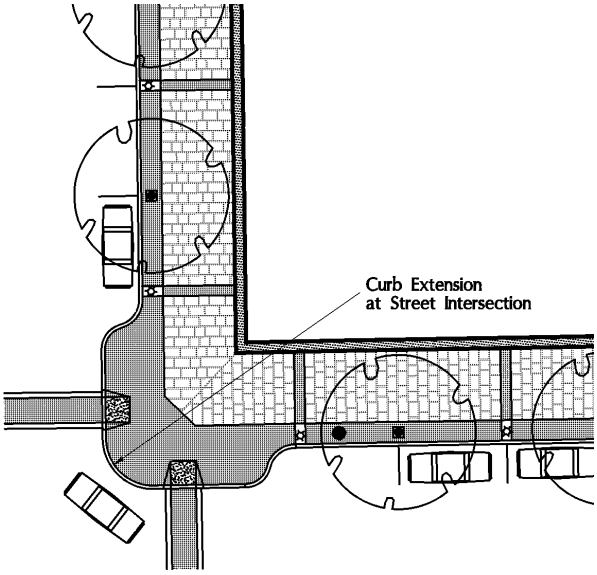



Sketch J – Accessible sidewalk ramp detail

used. All pavers are to be mortared securely to an appropriate concrete base.

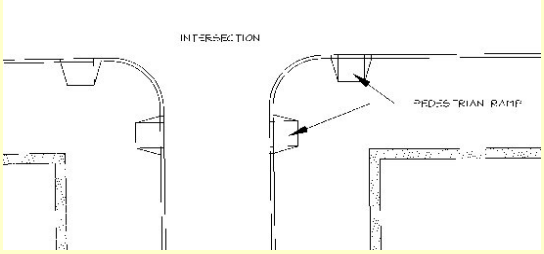
All ramps must have a minimum width of 4′ and a minimum length of 5′. Accessible ramps must slope upward from the inside edge of depressed concrete curbing (maximum reveal of ½″) toward the adjoining sidewalk elevation at a maximum slope of 8:1 (8′ of horizontal area for each 1′ of vertical ramp transition) for adjoining sidewalks less than 6′ in width. This slope may be decreased to 12:1 in locations with adjoining sidewalk widths greater than 6′. Width of transition areas on both sides of the concrete ramp must be 4 times the adjoining curb height (see Sketch J).

Two accessible sidewalk ramps are to be provided at all street corners. In addition to street intersection locations, accessible ramps are to be provided at all access drives, alleys, and any other locations where sidewalks intersect with vehicular zones and where existing grades require the use of ramps to maintain accessible routes. Ramps at intersections are to be aligned with existing or future opposing ramp locations on adjacent blocks.




*Traffic Calming Measures*






Sketch K – Accessible sidewalk ramp locations to be aligned with opposing ramps on adjacent blocks

Combinations of paving enhancements and curb extensions are proposed at street intersection to slow vehicle approach and turning speeds, while creating shorter crosswalks and more prominent staging areas for pedestrians preparing to cross our City's streets. The City of Lancaster has begun to extend paved pedestrian spaces into areas of street intersections previously utilized by vehicles. These extensions are commonly referred to as 'bump-outs" or "bulb-outs". Recent installations of this 'traffic calming' design feature may be seen at locations such as the intersection of N. Prince and W. Chestnut Streets.

Brick pavers on reinforced concrete base define a proposed street median area

Essentially, well-designed curb extensions effectively narrow the vehicular cartway and reduce vehicular turning radii in an effort to slow motorists' travel speed at street intersections. Space lost to vehicular use is gained for pedestrian use at street corners, and the pedestrian crossing distance at busy street intersections is minimized. Maintaining adequate curb radii is essential to provide larger vehicles with ample turning space without encroachment into designated pedestrian areas.

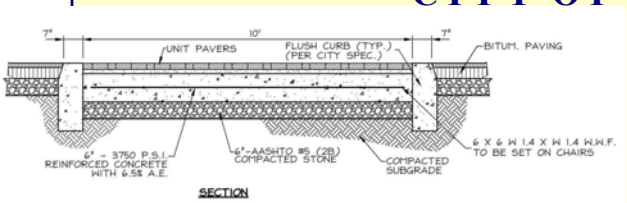
In the 1950's and 1960's, many of Lancaster's key corridors were designed to move vehicular traffic through the City as quickly as possible on wide street cartways with minimal on-street parking. As new streetscapes are designed, every effort should be made to regain pedestrian 'territory' at street intersections, and to restore parallel on-street parking to further buffer Pedestrian Zones from moving Vehicular Zones.

***Crosswalks***

To further accommodate pedestrians and cyclists, crosswalks are to be placed at all street intersections, connecting opposing accessible ramps on street corners. Textured paving consisting of the same brick utilized within the Planting Zone, but installed on a reinforced concrete base (see Sketch L) is one preferred approach to addressing aesthetic and safety issues related to crosswalks.

Proposed brick crosswalk

There is a concern, however, that brick pavers installed for vehicular use may not withstand heavy truck traffic. Within Streetscape 'A' where significant truck turning movements do *not* occur, and where approved by the City's Department of Public Works, brick crosswalks are to be used. Such crosswalks are to be edged with flush concrete curb (7"width) to create a visual and functional transition between brick pavers and adjoining bituminous paving of Vehicular Zones. Brick crosswalk pavers are to be set in a herringbone paving pattern (see Sketch E). Scored and reinforced concrete which replicates the interlocking rectangular appearance of proposed concrete sidewalks within Streetscape 'A,' may provide a viable alternative to brick crosswalks where significant truck turning maneuvers *do* occur.




Sketch L -Brick paver pedestrian crosswalk

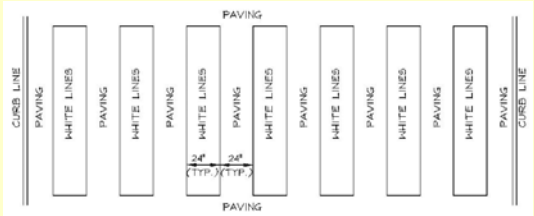
Painted crosswalks may be used for Streetscapes 'B' and 'C' (see Sketch M). Such crosswalks are to be immediately re-striped whenever removal of bituminous paving and subsequent street patching occurs within painted crosswalk areas. Applied striping must permit the texture of the bituminous street base material to remain, allowing for a more slip-resistant walking surface.

Scored, reinforced concrete defines a crosswalk area where significant truck turning maneuvers prevent use of brick crosswalks

## Plantings

More than any other streetscape component, plantings enliven our public spaces, define an identifiable pedestrian scale, and herald the changing seasons with natural vibrancy. Spring and summer flowers are typically followed with brilliant autumn foliage and ornamental winter fruit, bark, and seed pods. In addition to this seasonal succession of landscape interest, plantings may be used to buffer undesirable views, reduce detrimental effects of wind and noise, provide comfortable shade, lower energy consumption and reduce carbon dioxide levels through the photosynthesis process. In short, plants make cities such as Lancaster more livable.

These Streetscape Design Guidelines provide specific requirements for all street tree plantings. In addition,



Painted crosswalks - Philadelphia

recommendations for vegetative buffers, groundcovers beneath trees located in Streetscapes 'B' and 'C', and seasonal container plantings within Streetscape 'A' are provided.

Many trees planted in an urban environment struggle to survive due to environmental stress from soil compaction (required for standard concrete sidewalk construction) and low soil fertility combined with inadequate soil moisture, low levels of oxygen near root zones, limited soil volume, detrimental de-icing salts, pet urine, air pollution, and excessive solar heat reflected from surrounding paving and structures. Basically, paved areas are unfriendly to trees. Add detrimental human forces such as vandalism and poor tree species selection to this list of environmental stresses and the relatively short life span of many urban street trees becomes more understandable.

Lancaster's Streetscape Design Guidelines promote innovative tree planting methods, encourage the use of un-mortared brick pavers over tree root zones (Streetscape 'A') and provide recommendations for proper tree placement. A list of tree species proven to be more tolerant of urban environmental stresses is also provided.

***Existing Street Trees***

As new development occurs and existing streetscapes are modified, it is imperative that proper consideration first be given to the protection and preservation of *existing* street trees. Factors to consider when evaluating existing street trees for preservation or removal from new streetscapes include a specific tree's age, health, size, and overall form.

Some of Lancaster's streets were once planted with poor tree selections such as Bradford Pear (beautiful in the spring, but notorious for 'self-destructing' at maturity due to weak branching), while other streets contain a mixture of low-branched ornamental trees and high tree canopies adversely affected by past destructive pruning practices. In spite of this, we do have many valuable, healthy trees worthy of

Some of Lancaster's existing street trees

preservation for their inherent social, aesthetic and physical benefits. For assistance with evaluating existing street trees, contact Lancaster City's arborist at (717) 291-4846. Subsequent tree removal or pruning, if warranted, will require the permission of Lancaster's Shade Tree Commission.

Once a determination to preserve an existing tree during construction is made, certain construction procedures must be followed. Tree protection fencing must be installed around existing trees. Storage of construction materials and/or machinery will not be permitted beneath any tree canopy's drip line (edge of branch tips). Damage to any existing tree's canopy or root system during construction must be brought to the immediate attention of the City Arborist who will determine if corrective pruning is warranted. Harmful construction runoff to root zones must also be avoided.

When selecting new street trees for an entire block or for a more limited area, it is *not* essential to replicate the species of existing trees within the same area. It is imperative, however, that due consideration be given to the following Guidelines for correct tree species selection, size, placement, and planting practices.

***Proposed Street Tree Species***

To partially offset the numerous environmental stresses imposed upon City street trees, appropriate species selection for tolerance of urban conditions and ability to grow within confined areas (overhead utilities, nearby building facades, limited root zones) is essential when choosing a tree species. Consideration must also be given to a site's specific micro-climate resulting from the effects of shade and wind.

Tree species which naturally produce large surface roots that may damage pavements and trees with dense canopies that block store fronts landmarks should be avoided. Also, avoid trees that can litter the pavement with excessive fruit, branches, and large leaves. Trees which provide an ephemeral display of spring flowers, but offer little interest in other seasons,

Ascending branch pattern of a Zelkova tree planted on High Street

Hawthorn trees provide winter interest on W. Chestnut Street

and those which have high levels of susceptibility to pests and diseases must also be avoided. All installed street trees must meet the requirements of the *American Standard for Nursery Stock* (latest edition), as published by the American Association of Nurserymen.

The appropriate selection of tree species is critical to the health and longevity of Lancaster City's urban forest. A list of urban tolerant street trees to be used when selecting desirable height, form, and seasonal attributes is provided within the Appendix.

Consider establishing individual identities for neighborhoods within Streetscapes 'A', 'B', or 'C' by utilizing a distinctive palette of two or more species from the Street Tree List for each neighborhood's landscape. Maintain visual cohesiveness of a newly planted streetscape through repeated tree species throughout the blocks of a specific neighborhood. Plantings of a *single* species (monocultures) are to be discouraged because a single pest or disease could potentially eradicate entire plantings.

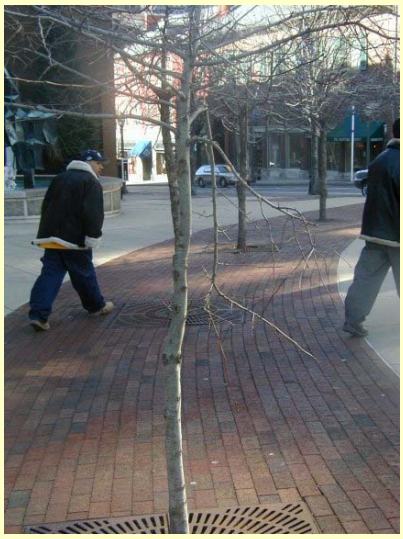
***Proposed Street Tree Size***

Select tree species with mature heights less than 30′ where trees could potentially conflict with overhead utility lines or building overhangs. Wherever feasible, overhead utilities located along key corridors should be relocated underground, or to adjacent alleys which parallel these key routes in an effort to reduce visual 'clutter' and to permit the use of larger, canopy-producing trees.

Following careful species selection, tree size must be the next important consideration. To comply with City ordinances and to minimize conflicts of lower tree limbs with Vehicular and Pedestrian Zones, bottom tree branches shall be at least 9′ above adjacent sidewalk elevations and at least 13′ above vehicular circulation areas at the time of tree installation. No street tree shall be smaller than a 2″ caliper size (the diameter of the trunk measured 4′ above grade) at the time of tree installation.

***Proposed Street Tree Placement***

Existing overhead utilities located on N. Prince Street currently prevent the use of larger, canopy-producing trees



Low-branched tree planting on Penn Square

Street tree placement may only occur within the center of the Planting Zone of all streetscape designations. Tree locations should generally be staggered on opposing sides of streets unless a street's width meets or exceeds 40', requiring alignment of proposed lighting and trees on opposite sides of these wider streets to obtain proper levels of illumination. Spacing along streets will typically coincide with proposed street light locations which, in turn, relate to locations of designated on-street parking spaces. Careful coordination of tree placement, lighting, and parked vehicles will prevent blocked lighting patterns and blocked access to car doors caused by poorly located street trees and light poles.

Please refer to the lighting section of these Guidelines for additional information related to spacing of street trees and street lighting. Generally, street trees are to be spaced approximately 42' apart (the length of two on-street parking spaces), however, specific tree placement is subject to existing locations of underground utilities, vaults, and/or basements which extend beneath sidewalk areas).

Trees must *not* be planted within the Clear Zone, within 5' of access drives, within 25' of preserved existing trees, within bus stop zones, below fire escape balconies, where blockage to building entrances presents safety concerns, or within 5' of hydrants, manhole covers, or permanent streetscape furnishings. When planting trees, visibility of traffic signals and way-finding signage (both vehicular and pedestrian forms) must always be maintained.

***Street Tree Installation***

For newly installed tree plantings in areas without lawn Planting Zones, continuous trenches of engineered soil should be provided under the Planting Zone's pavement. Such planting trenches located parallel to curblines and under non-mortared brick pavers will provide greater volumes of soil for root growth, while permitting air and water to reach critical

Tree planting trench

tree root zones. Individual tree planting pits are not permitted within paved Planting Zones unless only a single tree is to be installed due to a limited streetscape improvement area, or where existing tree and utility locations render continuous trenches impossible.

Where inadequate area for root growth exists, sidewalk pavements often fail. Forced into limited growth areas, shallow tree roots frequently grow laterally and cause sidewalks to crack and heave. Uneven displacement of adjoining concrete or brick paving sections typically follows. Resulting from this 'root vs. pavement' conflict, removal of street trees and repair of paved surfaces is often eventually required following conventional tree plantings in individual tree pits.

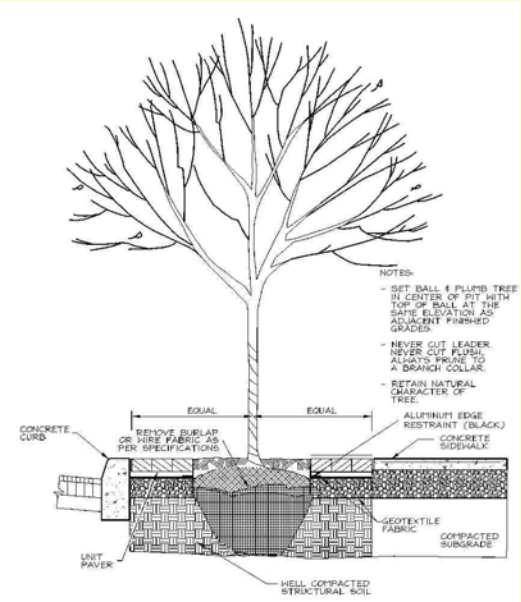
To provide un-compacted soil for root growth and compacted sub-surface base materials for sidewalk pavements, engineered soils are now being used for many urban plantings. Such soils contain a mix of soil loam, stone, water, and a moisture-retaining polymer so that weight-bearing loads are transferred from stone to stone, leaving the soil between the stones essentially unaffected by compaction. Larger volumes of soil with increased porosity, nutrient holding capacity and drainage are thereby created.

Tree planting height is critical. The base of the root collar (area where the trunk transitions to the tree's root mass) will be above surrounding soil backfill, if the tree root ball height has been properly established. If the collar is too low, the entire root ball must be raised and reset over compacted soil to the correct elevation.

Engineered soil should be installed around tree root balls for all tree plantings within Streetscapes 'A', 'B', and 'C' where lawn areas do not exist within the Planting Zone. Where unpaved areas will remain within the Planting Zone, soil loam amended with ample organic matter may be used in place of engineered soil.

***Covering of Tree Planting Areas***






Sketch N – Street tree planting detail with engineered soil and brick pavers

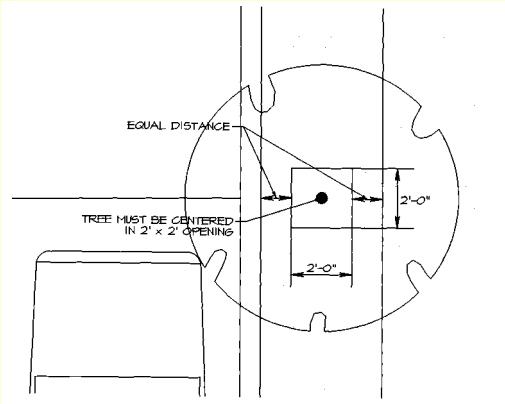
Following tree planting in areas with paved Planting Zones, brick or concrete paving may be placed over both engineered soil and a typical 4" stone paving sub-base which has been adequately compacted to minimize settling of Planting Zone areas, while simultaneously allowing enough void space in the soil-stone mix for air and water (see Sketch N). Planting trenches containing engineered soil must be approximately 30" deep to accommodate new trees, but must not negatively impact existing curbs which are to remain on undisturbed soil.

Due to associated costs and on-going maintenance requirements, tree grates are not recommended for any of Lancaster's streetscapes. Instead, tree plantings within Streetscape 'A' will be covered with un-mortared brick pavers, while most Streetscape 'B' and 'C' planting areas will be covered with either lawn and/or groundcover plantings. Both treatments permit some storm water to reach thirsty tree roots.

Pavers over street tree planting trenches within Streetscape 'A' will retain 2'x2' pavement openings centered on tree trunks (see Sketch O). This opening will include a sub-surface, paver edge restraint (carefully installed to avoid root ball damage) to keep brick pavers in place, and double-shredded hardwood mulch (2" depth) over the tree's root ball. Mulch must not be placed in direct contact with the tree trunk, however. As street trees grow and additional trunk area is required within the pavement opening, pavers may be removed in equal increments on each side of the original 2'x2' square before new paver edging is carefully installed.

Trees within Streetscapes 'B' and 'C' will typically not be located in trenches covered with brick pavers. More typically surrounded by lawn, such trees must be centered within a planting pit extending a minimum of 5' along the curbline. This planting area must remain free of concrete and lawn, but may be planted with one of the following five, low-maintenance, evergreen groundcovers to minimize planting area maintenance following groundcover establishment:

Philadelphia street tree planting trenches covered with pavers




Sketch O - Street tree placement in 2' x 2' opening in brick paved Planting Zones

- *Euonymus fortunei var. colorata* – **Winter Creeper**
- *Geranium cantabrigiense* 'Biokovo' – **Perennial Geranium**
- *Hedera helix* 'Baltica' – **Baltic English Ivy**
- *Liriope spicata* – **Creeping Lilyturf**
- *Vinca minor* – **Periwinkle**

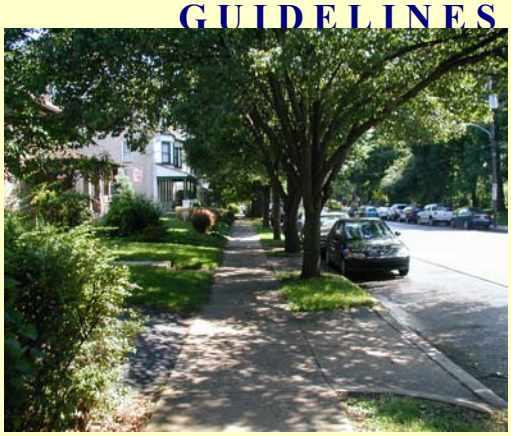
All groundcover must be planted at the time of tree installation to discourage foot traffic over tree root zones. Initially, all soil surrounding groundcover plantings (but not immediately adjacent to tree trunk) is to be covered with double-shredded hardwood mulch (2" depth) until the groundcover forms a continuous 'carpet' effect around the tree's base. As with street tree species selection, selected groundcovers may be repeated throughout a specific block or neighborhood to further distinguish a particular area from surrounding neighborhoods.

If residents of a particular neighborhood desire further distinction in their plantings, these suggested groundcovers may also be combined with minor bulbs including:

- *Anemone blanda* **'**Blue Star**' – Blue Star Grecian Windflower**
- *Chionodoxa forbesii* – **Glory-of-the-Snow**
- *Crocus tommasinianus* – **Species Crocus**
- *Galanthus elwessii* – **Giant Snowdrops**
- *Scilla siberica* – **'**Spring Beauty**' – Spring Beauty Scilla**







College Avenue street trees surrounded by unpaved Planting Zones

Minor bulbs such as Scilla may be combined with evergreen groundcovers at the base of trees within Streetscape 'B' and 'C'

The relatively short stems of these specified bulbs will be less tempting to pick than taller bulbs such as Daffodils and Tulips. Once established, these minor bulbs also thrive with little or no care, and will eventually colonize the tree planting area with a blanket of color in late winter or early spring.

***Other Supplemental Plantings***

Throughout Lancaster City, there are places which afford undesirable views to parking and service areas from adjacent streetscapes. Such places could be enhanced with supplemental plantings. Typically, these potential planting areas do not exist within the public streetscape area as defined in Section II, but are instead located on private property. The following 5 evergreen and semi-evergreen plant suggestions are provided to enhance such areas typically located at the perimeter of public streetscapes:

- *Euonymus kiautschovicus* 'Manhattan' – **Manhattan Spreading Enomymus**
- *Ilex x crenata* 'Chesapeake' – **Chesapeake Upright Japanese Holly**
- *Ilex x meserveae* 'Mesid' – **Blue Maid Holly**
- *Juniperus chinensis* 'San Jose' – **San Jose Juniper**
- *Taxus x media* 'Hicksii' – **Hicks Yew**

As with selection of appropriate street trees, micro-climatic conditions inherent to specific sites (sunlight, wind exposure, etc.) must be carefully considered for these supplemental plantings. With City approval, alternative plant materials may be utilized, however, all plantings must have a minimum height of 2' when installed.

Supplemental planting at W. Lemon Street parking area

Equally important to initial planting height is the height at which such plantings are maintained. To enhance public perceptions of safety and security, sight lines must remain *over* all proposed buffers such that undesirable views are only *partially* screened from pedestrian zones. To address perceptions of safety, no supplemental plantings may exceed a mature height of 3′ adjacent to parking areas and 5′ adjacent to service areas such as dumpster locations. All suggested plant materials noted above may be easily pruned to meet these height requirements.

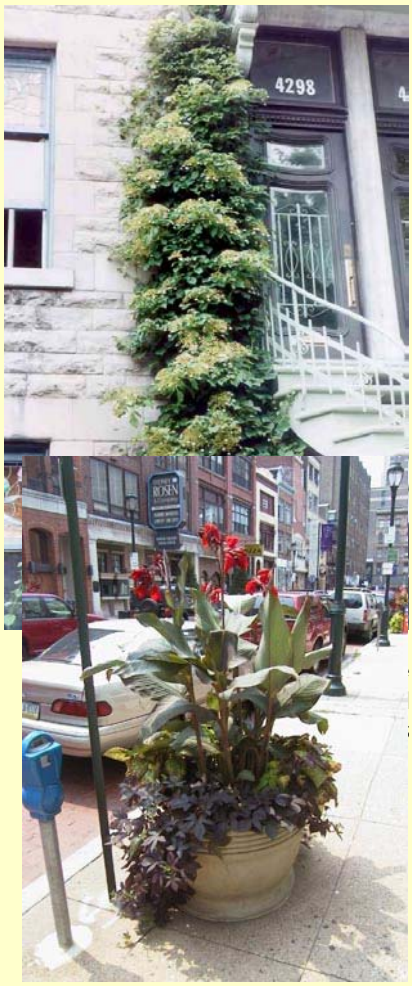
Where adequate support structures such as fencing or blank, feature-less building facades exist, vines may also be used as supplemental plantings intended to make Lancaster City 'greener,' while requiring only limited growing area. Although non-evergreen, and therefore only fully effective in non-dormant periods of the year, the following 5 perennial vines deserve greater use in Lancaster's urban landscape:

- *Campsis grandiflora* 'Morning Calm' – **Morning Calm Chinese Trumpetcreeper**
- *Clematis maximowicziana* – **Sweet Autumn Clematis**
- *Hydrangea anomala var. petiolaris* – **Climbing Hydrangea**
- *Parthenocissus henryana* – **Silvervein Creeper**
- *Parthenocissus tricuspidata* – **Boston Ivy**

Again, specific site conditions and available support structures must be carefully considered when selecting the best vine for a specific growing location.

***Container Plantings***

One of the greatest successes among recent efforts to improve our City's streetscapes is the container




Philadelphia's container plantings consisting of summer annuals

planting effort undertaken annually since 2000 by Lancaster's Economic Action for Downtown Success (LEADS). Each year in May, colorful annuals are added to designated areas of Streetscape 'A'. Unlike the more ephemeral seasonal color provided by some street trees, annuals installed and maintained by LEADS add a much needed colorful 'punch' to our urban landscape from mid-May through mid-October.

This section of the Streetscape Design Guidelines addresses the materials for inclusion within future container plantings proposed for Streetscape 'A.' The Site Furnishings section of these Streetscape Design Guidelines also provides information on proposed planting containers and container placement. Containers for planting must be large enough to accommodate sufficient soil volume to prevent soil from drying too quickly. Ideally, container plantings should be 3' to 4' in diameter.

Containers must have drainage holes in their bottom sides, and these holes must be covered with fine wire mesh (or fabric cover supplied by the container manufacturer) before planting mix is added.

Within appropriate planting containers, commercial grade soil-less potting mix containing ample organic matter such as shredded bark and/or peanut shells should be combined with a commercial grade, moisture retaining polymer product which is saturated prior to mixing into the soil-less medium. Soil-less mix in each container must be replenished once each year with fresh growing medium.

Seasonal annuals, bulbs, vines, and shrubs to be used in container plantings must be selected for drought tolerance and specific micro-climatic conditions such as wind and shade. Rather than continuing the practice of a one annual planting per year (leaving planting containers empty from mid-October to mid-May), a rotation consisting of three or four seasonal plantings each year is recommended, if possible. Following summer annuals, cold-tolerant annuals, bulbs, vines, and shrubs could be installed to continue a colorful,

Planted containers and hanging baskets provided by LEADS

seasonal succession of landscape interest throughout the entire year.

Where intense, seasonal color is not desired, containers may be planted with more permanent installations of evergreen materials with proven root hardiness and an ability to survive in containers through the winter months. Such permanent plantings are especially warranted on streets where extensive underground utilities and vaults render street tree plantings impossible.

Regardless of the permanent or temporary nature of container plantings, private plant maintenance sponsors such as LEADS must be sought wherever possible as an alternative to public maintenance of container plantings. Routine maintenance is essential during the summer months when container plantings will require watering and fertilization several times per week. Before extensive container plantings are implemented to enhance areas of Streetscape 'A', a detailed planting maintenance plan must be reviewed with the City of Lancaster.

A specific list of plants to be utilized in container plantings has been intentionally omitted from these Streetscape Design Guidelines. The advantage of colorful annuals is that they may be changed dramatically from year to year, and from season to season. In place of specific Guidelines, those desiring to implement streetscape container plantings should submit written lists of proposed annuals to the City of Lancaster for review and approval prior to plant acquisition and installation.

## Street Furnishings

The urban landscape of Lancaster City and surrounding communities maintains visible connections to the nearby iron industries of the 18th and 19th centuries. The legacy of ironmasters such as Lancaster's Grubb family may still be seen in preserved iron railings and various architectural details which comprise Streetscapes 'A', 'B', and 'C.' Proposed site furnishings including benches, litter receptacles, bollards, bike racks, bus shelters, parking meters, fences and sign poles (excluding existing vehicular way-finding signs) are to be black, powder-coated

Portland's container plantings with mixed evergreen materials

Iron railing at Lancaster's City Hall

metal to replicate the appearance of Lancaster's surviving ironwork.

In addition to the previously noted site furnishings, this section of the Streetscape Design Guidelines includes recommendations for moveable tables and chairs, utility covers, banners, and planting containers. In order to create consistency in both quality and appearance for Lancaster's public spaces, some standardized options for these site furnishings are provided. Suggested locations for site furnishings are also noted, and a summary of all furnishings may be found in the Guidelines Appendix.

***Benches***

Provision of benches within streetscape areas encourages social interaction, and such interaction is the very foundation for successful neighborhoods and commercial areas. To replace the City's current assortment of benches constructed from a variety of materials, benches for Streetscape 'A' will have a black, powder coat finish, and will be of a quality and style to match the horizontal, flat strap construction of Landscape Forms' Plainwell Bench (72" aluminum model without center arm).

Streetscapes 'B' and 'C' may utilize this same bench, or a vertical flat strap bench with a black powder coat finish like the one currently in use by the Inner City Group's South Duke Street improvement project. This bench is from BRP Enterprises' Manchester Collection (model # MC103-72 MF).

In some specific settings, available backless versions of the two benches cited above may be utilized to give pedestrians options with seating orientation. Typically, benches *with* backs should be provided for extra comfort and ease of use by the elderly and those with disabilities.

All benches should typically be located within the Building Zone and oriented toward the Pedestrian and Vehicular Zones of the adjacent street. They are best placed near street corners (but outside the established Clear Zones), mid-block spaces, bus stops, and other desirable resting locations. Locations in proximity to shade provided by street trees and buildings are also

Bench for Streetscape 'A'

Bench

Litter and ash receptacle for Streetscape 'A'

preferred. Bench locations must not create unsafe obstructions for such things as building entrances and fire hydrants. All benches located within public areas must be permanently mounted to sidewalk paving per the bench manufacturers' specifications. Use leveling hardware to compensate for sloping sidewalk conditions.

If desired, bronze plaques may also be installed to the backs of benches per bench manufacturers' instructions. Such plaques may be used to identify a specific neighborhood, or to acknowledge the hard work of local neighborhood leaders.

***Litter and Ash Receptacles:***

As with the bench options noted in the previous section, proposed litter and ash receptacle options presented in this section are constructed of flat metal straps with a black powder coat finish. Together, the benches and litter receptacles, which are often located in close proximity to each other, will appear visually coordinated.

Litter and ash receptacles which mirror the quality and appearance of Landscape Forms' Scarborough cylindrical receptacles (side opening, lockable door model) are required for Streetscape 'A.' Such receptacles have 30 gallon capacities and include removable black polyethylene liners. Only black trash bags may be installed within these removable liners.

For Streetscapes 'B' and 'C,' Victor Stanley's Ironsites (model numbers S-424 and S-35) litter receptacles may serve as additional models and acceptable alternatives to the previously noted Landscape Forms receptacle. These receptacles feature 36 and 24 gallon capacities respectively, and should also be lined with black bags for refuse collection. Such receptacles are currently in use within the James Street Improvement District.

All litter receptacles must be permanently mounted to sidewalk pavement per receptacle manufacturers' specifications. They must be located near street intersections (but outside the established Clear Zones), at mid-block crosswalks, and near proposed bench locations. Typically, two litter receptacles located on opposite corners of a street intersection will be

Litter receptacle alternative for

Existing litter receptacles with customized insignia, installed in along James Street

sufficient. Unlike the bench locations typically located within Building Zones, litter and ash receptacles are to be placed within Planting Zones of all streetscapes.

While commemorative bronze plaques may be less desirable on litter receptacles than on benches, litter receptacles may be customized with insignia which relates to a unique district or neighborhood within the City. Again, this suggestion is provided as a means to celebrate specific areas of the City. While such additions to litter receptacles are encouraged, these street furnishings may not be used to post advertising materials.

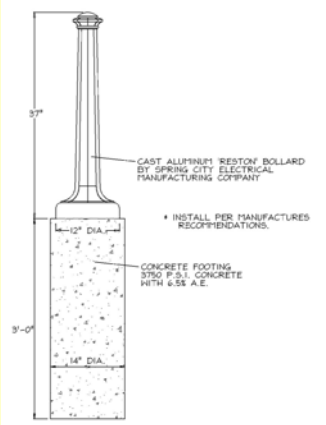
***Moveable Tables and Chairs:***

Lancaster City is fortunate to have several outdoor café spaces within Streetscape 'A'. Such outdoor gathering spaces enhance the quality of the pedestrian experience, reinforce a vibrant sense of place, and add to the City's economic vitality. Typically, moveable tables and chairs serving these establishments are located within Building Zones. Moveable furnishings must not encroach into the adjoining Pedestrian Zones. Clear, accessible pedestrian routes must be maintained at all times.

Because the installation of all such improvements is considered temporary in nature, and subject to the aesthetic preferences of business owners, specific table and chair selections for future use within Streetscape 'A' are not provided. All moveable furnishings must, however, be made of safe, sturdy, and durable materials such as wood, steel, plastic, or wrought iron. They must also be of commercial grade and specifically manufactured for outdoor commercial use. Tables may be no larger than 2 ½' wide, and they should visually complement adjacent chairs.

All moveable furnishings must be regularly cleaned and maintained. They must be stored indoors and/or out of the public rights-of-way beyond hours of business operation. Neither moveable tables nor chairs may be secured to sidewalk pavement, street lights, trees, benches or other public street furnishings. The owner of moveable furnishings must also supply a specified litter/ash receptacle noted in the previous

Existing moveable furnishings on North Duke Street




Sketch P - Reston bollard option

section of the Streetscape Design Guidelines, if such receptacle does not currently exist.

***Bollards:***

To replace the City's current assortment of bollards (excluding wooden bollards unique to the Central Market area) intended to delineate secure Pedestrian and Vehicular Zones, three alternative bollards are provided in these Streetscape Design Guidelines. The first two bollards are more decorative in nature, and are to be utilized within public areas. The third bollard option may be used only within privately-owned areas where views to bollard locations are intentionally buffered from public streetscapes by fences or plantings (e.g. loading areas, service drives).

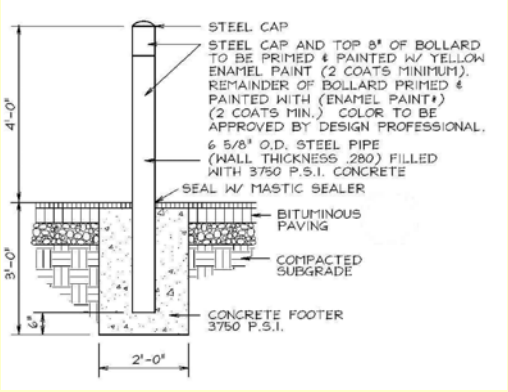
Decorative bollard options for public areas must match the quality and appearance of either Spring City's 37" Reston bollard (see Sketch P), or Trystan Site Furnishings' 43 ¼" Victorian bollard. The former option is a heavy, cast aluminum alloy product, while the latter is constructed of cast iron. Both must have a black finish and must be spaced 6' on center in areas where traffic separation and additional security are desired, but where optional chains connecting individual bollards are not provided. Where chains *are* utilized between bollards, recommended spacing may be increased up to 10' on center. All bollards must be anchored and installed per bollard manufacturers' specifications.

A less expensive bollard option for service areas (and one which may only be used in areas not directly visible from public streetscapes) is a hollow steel pipe (.280 wall thickness) filled with concrete and topped with a matching steel cap (see Sketch Q). Steel must be painted with a durable, black and yellow enamel finish. All intended applications of this bollard alternative must be approved by the City.

***Bicycle Bollards:***

Providing opportunities for the safe storage of bicycles promotes an alternate means of urban transportation. It also supplies an amenity for couriers, shoppers, and






Sketch Q - Service area steel pipe bollard

commuters who bike to downtown from surrounding areas. Bollards provide a better alternative to chaining bicycles to trees, streetlights, and signposts. Typically, one bicycle bollard per block will likely be sufficient for current use, however, the City may determine that more or fewer bicycle bollards are warranted, depending upon specific streetscape locations.

The previously noted Victorian bollard manufactured by Trystan Site Furnishings may be adapted slightly to serve as a visually compatible bicycle bollard for Streetscape 'A.' Anchor and install per manufacturer's specifications. Locate this bollard such that parked bicycles are parallel to the street and do not block Pedestrian Zones. Bicycle bollards should be located within the Planting Zone of Streetscape 'A' and near street intersection (but outside of established Clear Zones). Alternative, customized bicycle bollard designs will be considered by the City if the design is determined to be compatible with other streetscape furnishings.

***Bus Shelters:***

The Red Rose Transit Authority has identified a need for additional bus shelters throughout its service area. Such shelters provide improved waiting conditions for commuters who utilize public transportation in place of automobile use. New bus shelters also include lighted advertising displays which offset the maintenance and installation costs of these structures.

To complement other street furnishings, all future bus shelters (and eventual replacement of existing shelters) must have a black, powder-coated finish. Bus shelters must also match the quality and appearance of Daytech Manufacturing, Ltd.'s Classic Model #AHC04x08D. Safety stripes attached to a shelter's glass panels must be of a color compatible with the City's way-finding colors.

If an existing litter receptacle is not located within 20′ of a shelter, a new receptacle complying with these Guidelines must be provided. Likewise, any benches used to furnish future shelters must also comply with these Guidelines.

Safety markings must be color coordinated with City's way-finding colors

Typically, shelters will be located within the public rights-of-way. Where such locations are not feasible due to limited right-of-way area, permission must be obtained from the private property owner. In all cases, applicable permits must be obtained from PADOT, and/or the City of Lancaster prior to bus shelter construction.

Wherever possible, bus shelters must be located to avoid conflicts with existing street trees, street lights, utility poles, and other street furnishings. Shelters should also be placed with consideration of architectural features on adjacent building facades to avoid obstruction to building entrances. Ideally, shelter placement in front of existing structures should align with architectural features such as column locations, fenestration, or other façade treatments. Shelter locations must never be located within Clear Zones, nor interfere with any required sight distances intended to promote motorist and pedestrian safety.

Lighted advertising displays which are integral to the specified bus shelter must be monitored by the Red Rose Transit Authority and/or the City of Lancaster to ensure that no objectionable displays are posted. In addition, all posted displays must be removed and replaced in a timely manner.

***Parking Meters:***

Parking meters currently contribute to the visual 'clutter' of Lancaster's streetscapes. For this reason, consideration must be given to incorporation of Streetscape 'A' parking meters on new pole-mounted light fixtures wherever possible. Such consolidation effectively eliminates the need for 2 or 3 separate poles typically required for a light fixture and two adjacent meters. Where a separate pole is necessary, it must be of the same color as the meter component (preferably black).

Another alternative to the use of individual pole-mounted parking meters is the use of automated meter boxes which give timed receipts for purchased parking time. A receipt is placed by the motorist where it can be seen by the parking inspector. This system has some advantages beyond removing visual streetscape clutter; it also increases parking revenues since excess

Bus shelters must have a black finish and match the form of this shelter

Carlisle's parking meter combined with street light pole

meter time cannot be transferred to another vehicle. Although this automated system is currently in use in nearby cities such as Harrisburg, future proposed use in Lancaster is subject to review and approval by the City's Parking Authority.

The Streetscape Design Guidelines do not endorse the practice of installing ornate parking meter sleeves which strive to cosmetically enhance parking meters without effectively reducing the number of mounting poles currently in use on City sidewalks. If existing rusted parking meter poles must remain until meter consolidation (either on light poles or through an automated system) is feasible, the existing poles should be sanded, primed, and painted with a durable, enamel paint color which matches the actual meter component. As an additional alternative, simple black sleeve designs (completely devoid of ornamentation) may also be considered by the City.

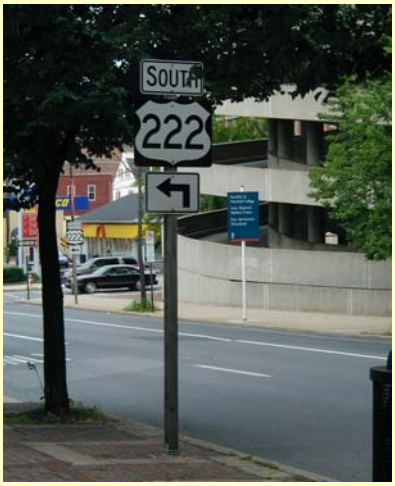
***Sign Poles:***

As with parking meter poles, sign poles within Streetscape 'A' must be consolidated wherever possible. For example, some 'No Parking' signs could be incorporated on pole-mounted street lights rather than on separate poles. Free-standing vehicular way-finding signs will continue to be installed on the previously adopted standard white sign pole, while street name signs will be incorporated on traffic signal mast arms. Until new mast arms are installed (see lighting section of Guidelines) existing traffic signal poles and extensions determined to be in a poor, rusty condition must be sanded, primed and covered with durable, black enamel paint. Future pedestrian way-finding signs should either be added to the vehicular way-finding poles, or attached to street lights in an effort to reduce the total number of required poles.

Wherever separate sign poles are necessary, these sign poles (excluding those for vehicular way-finding signs) must be of steel construction with a black, powder coat finish (see Sketch R). Only galvanized (inside and out) schedule 40 steel posts (2.375" O.D.) may be used, and such posts must include a galvanized flat cap (color to match) welded to the post's top surface. Wooden sign posts are unacceptable in all public streetscape areas of Lancaster City. It is suggested that sign pole designs be

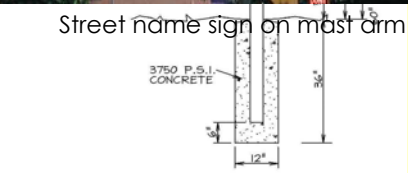







Existing wooden sign post on W. Orange Street

Street name sign on mast arm




Sketch R - Steel sign pole

reviewed with PADOT for all state routes through Lancaster City.

***Fences:***

Wherever fencing is used to separate adjacent site areas, wrought iron, steel, or aluminum fences with a black, powder coat finish should be used. Specifically, fencing which matches or exceeds the quality and appearance of Jerith's Style #202 or Monumental Iron Imperial Style 'B' is acceptable. Wooden fences, fences with barbed wire, and chains connecting wheel-mounted posts, and metal guide rails are not to be used within any streetscape area. Chain-link fence may only be used if it has a black finish and its proposed location is first reviewed and approved by the City. Wherever spatial separation is required due to safety issues rather than a desire for a visual buffer, one of the previously noted bollard options should be employed.

A delicate balance of adequate spatial separation and public surveillance must be met in order for proposed fencing to be beneficial. Fencing should be of an open picket construction (a specific picket design meeting BOCA or UBC code specifications may vary) and should not exceed a height of 42". Where adequate space for shrub buffer planting is unavailable, vines requiring only a 12" wide planting area may be grown in front of, and supported by fencing, provided that such vines are maintained at permissible heights.

Fences and railings also present excellent opportunities to exhibit the work of Lancaster County's many talented artists and artisans. Custom designed fences which serve utilitarian purposes while simultaneously adding public art to Lancaster's streetscape are encouraged. Such designs for fences visible from the public rights-of-way must be reviewed and approved by the City prior to construction.

***Utility Covers:***

Perhaps the lowliest of streetscape components, utility covers galore exist throughout all of Lancaster's streets served by public utilities. Where highly-visible covers exist within sidewalk areas or within crosswalks, their

Existing fence on W. King Street

Portland's Rose City electric vault cover

status could be elevated to the realm of public art with a bit of applied creativity.

Any customized vault or manhole cover must meet all standards of existing manhole covers. Following City and utility company review and approval, covers may also include designs which celebrate Lancaster's distinctive history, or which make an artistic statement rather than simply proclaiming 'SEWER' or 'ELECTRIC' to passing pedestrians.

***Banners:***

One colorful streetscape component currently in use on Lancaster's key corridors is the pole-mounted banner. Banners mark seasonal changes, holidays, special events, local history, City gateways and unique neighborhood distinctions. Repeated throughout a specific neighborhood, colorful banners further add to the appearance of a well-planned and executed streetscape enhancement project.

Banners and other seasonal decorations may be mounted to proposed light fixture poles. Their graphic designs must be clear and simple in order to quickly convey an intended message to both pedestrians and motorists. Banner colors should match colors previously selected for Lancaster's pedestrian and vehicular way-finding systems. Specific way-finding colors (or a slight variation thereof) may be used to identify unique neighborhoods and City districts. Any banners promoting particular events must be removed in a timely manner after the event occurs.

Lancaster City contains five geographic areas: the Northwest, Northeast, Southeast, Southwest, and the Downtown. By using an adopted background or border color established for each area, neighborhoods may form visual connections to a larger area, while leaving the design of the banner graphic flexible for each neighborhood's distinctive expression.

Like some previously noted streetscape furnishings, banners provide excellent opportunities for local artists to create urban landscape enhancements unique to Lancaster City. While banners may not contain advertising, they may note a specific sponsor or neighborhood association responsible for banner

Banners are proposed to mark one of Lancaster's northern gateways

Banners add distinction to major corridors in the City

acquisition. All designs for banners must be coordinated with the Lancaster Campaign and forwarded for review and approval by the City. Coordination of proposed banner colors with the colors of seasonal container plantings should be considered in an effort to visually unify areas of Streetscape 'A.'

All banners must contain at least one wind vent and be of a quality which matches or exceeds that of Eagle Flag and Supply, a manufacturer of high quality banners currently utilized by the City's Downtown Investment District. Banner mounting height must be at least 9' above sidewalk elevations and at least 13' above vehicular areas. No banners may block traffic signals, street lighting, and/or signage.

***Planters:***

Two containers of two different heights, but both constructed of durable, dry cast limestone, are suggested for Streetscape 'A.' Manufactured by Longshadow Planters, the International 36 (Model #LS9093) and International 60 (Model #LS9095) should be used within either Planting Zones, or within Building Zones where safe access to and from buildings is maintained. Avoid placing planters within Clear Zones and immediately adjacent to curbs where high levels of heat and vehicle exhaust are more prevalent. No planter may be used if planter widths exceed 25% of the entire sidewalk width.

A neutral stone planter color has been selected to harmonize with brick pavers, concrete sidewalks, most building facades, and the countless color combinations produced by annual plantings. Planter designs are simple and intentionally understated in character.

Planters must always be leveled with leveling shims when installed on sloped surfaces. Containers should be sited near street corners (with respect to previously noted location requirements), to flank entrances to landmark buildings, or to physically and visually define outdoor café spaces. Combined height of containers and plantings should not obstruct motorists' or pedestrians' views at street intersections and access drives.

Low, wide planter

Tall, narrow planter

In an effort to reduce potential vandalism, these container plantings should only be installed following implementation of other suggested streetscape enhancements such as adequate lighting. In addition, a plan for planting maintenance must be established and reviewed by the City as noted in the Container Plantings section of these Guidelines.

## Lighting

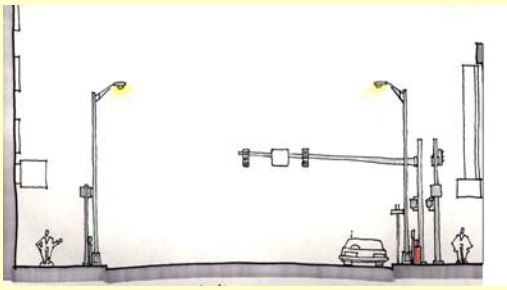
***Objectives:***

The basic objectives of street lighting can be grouped into four interrelated categories: safety, security, convenience, and aesthetics. Satisfaction of human needs in these four areas is the reason for the existence of lighting systems and the ultimate standard by which they should be judged. Attainment of these objectives requires that the lighting design go far beyond the simple satisfaction of quantitative criteria for illumination. The qualitative aspects of the design, while difficult to quantify and prescribe, are typically the most important.

*Physical Safety*

Safety is the ability of users, both drivers and pedestrians, to reach their destination without causing inadvertent physical harm to themselves or others. There is never a guarantee of safety, only the ability to increase or decrease the safety of an environment. A well designed streetscape with the inclusion of a properly implemented lighting system can help increase the relative safety of public spaces. In combination with other streetscape elements, a lighting system must provide adequate visual information to allow users to avoid stumbling, loss of orientation, collisions (with vehicles, pedestrians, or inanimate objects), and other causes of accidental physical harm. In most instances, over-illuminating an area does not statistically increase one's physical safety.

Easton planters used to define sidewalk zones



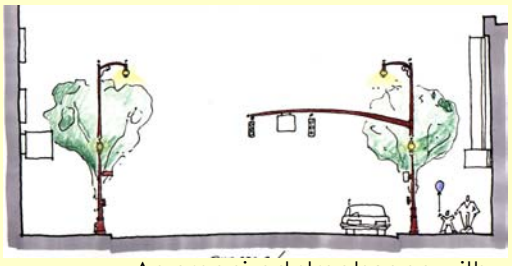
A cluttered streetscape is more difficult to navigate

*Security*

Security can be defined as perceived freedom from deliberate harm or threat by others. Unlike physical safety, security is primarily a subjective psychological matter, involving much more than the provision of adequate amounts of light. What needs to be created is really a *sense* of security, which may have only a secondary correlation to the actual likelihood of attack. The potential of being identified by key witnesses can be a major deterrent to many types of crime.

Because of slower speeds and relative vulnerability, security is primarily a matter of concern for pedestrians rather than motorists. While this seems obvious, it is common to find street lighting designed primarily for drivers. Fixtures that hang over driving lanes very commonly do not emit enough light to the adjacent pedestrian sidewalks. As with physical safety, over-illumination may not be the solution for security problems. Often, overly bright spaces are falsely perceived as high crime rate areas.

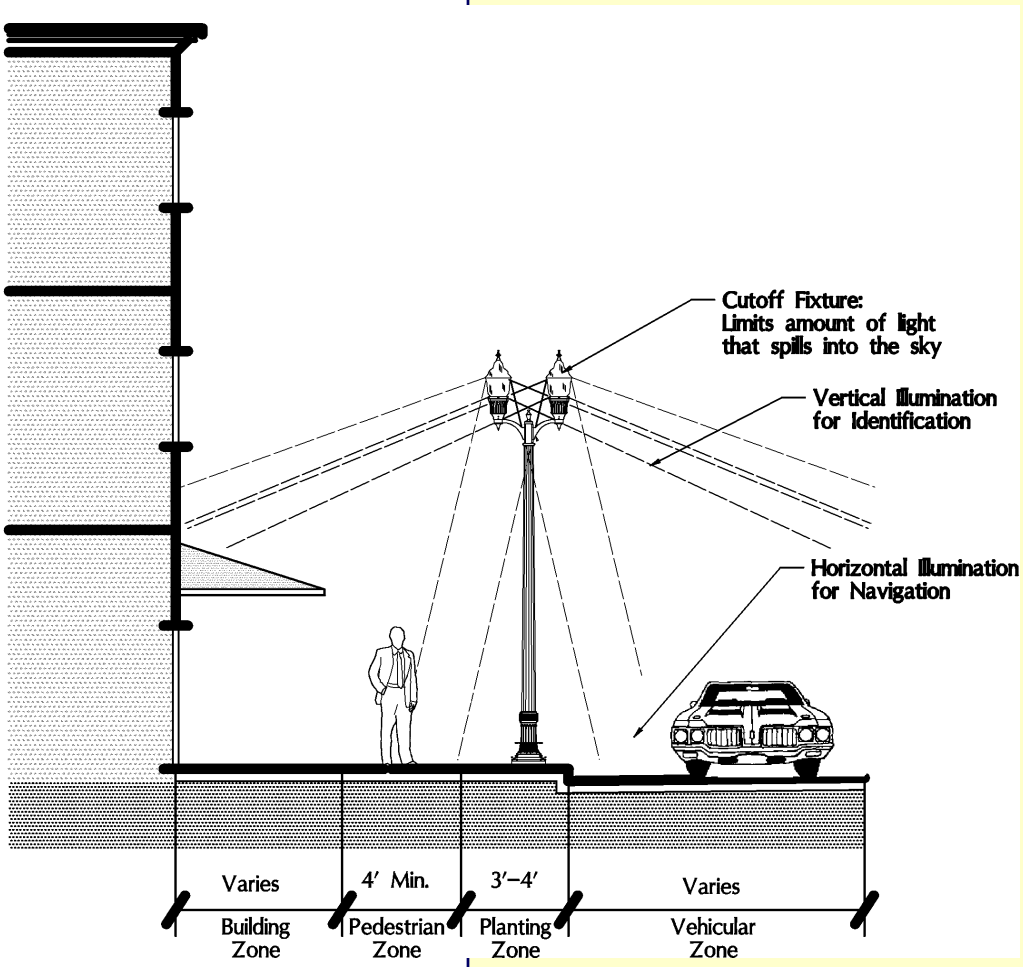




An organized streetscape with combined lighting and way-finding signage is more efficient, convenient, and user-friendly

*Convenience*

Convenience relates to a degree of ease associated with a person's ability to perform desired tasks. In city streets, tasks for drivers include navigation, understanding driving lanes and organization of streets, identifying obstacles such as pedestrians at street crossings, and locating street names, buildings, and places to park. For pedestrians, tasks include locating streets and buildings, finding one's parked car and identifying approaching vehicles when crossing streets. The ease of accomplishing these visual tasks is not so much dependent on the *quantity* of illumination, but rather the *quality* of visual cues and information provided or enhanced by the configuration of the lighting system. Convenience also includes the ability of the City to easily maintain its street lighting system to ensure a continued high quality of light.




Illumination patterns of pole-mounted light fixtures to be located within the Planting Zone

*Aesthetics*

Probably the most difficult objective to quantify is visual pleasure or appeal. It is also the easiest objective to compromise or denigrate. Visual appeal implies not only the satisfaction of all the foregoing objectives, but also the creation of a strong and positive image of the City, both by day and by night. This image should be

distinctive, recognizable, and memorable to Lancaster residents and guests.

***Design Principles:***

The general objectives previously outlined can be translated into a series of practical design guidelines or principles for the execution of future streetscape lighting designs. In formulating these principles, it is helpful to remember that a lighting system is a means to provide or transfer visual information. This information is the desired visual signal, and any factors which distract one's attention from this signal, making seeing more difficult, is considered to be visual noise. In general, design principles should lead to an enhancement of visual signals and to a reduction in visual noise. For example, a lighting system should not become a distraction by producing excessive glare or confusing light patterns.

*Illumination*

Based upon specific use patterns and distinctive characteristics of various streets, a lighting system must provide enough illumination in the technical sense of footcandles measured at some reference surface. Although a horizontal reference plane is typically chosen, a vertical reference plane is usually more relevant. For example, illumination required for safe driving is needed more on vertical surfaces such as potential vehicle obstructions and pedestrians than on horizontal paved surfaces. For pedestrian security, illumination of other pedestrians is of primary importance. Reflectances of target surfaces, such as the sidewalk or street, should also be considered, as surface brightness (the amount of light reflected from a surface) may be a more relevant criterion than the illumination (the amount of light striking a surface). The Illuminating Engineering Society of North America (IESNA) proposes not only standards for illuminance, but also for luminance, or brightness of roadways.

What is important for good vision is not necessarily the absolute quantity of light, but rather uniformity and appropriate changes in light levels. According to the IESNA, the recommended illumination uniformity ratios range from about 3:1 to 6:1 average to minimum. It is only in the change or anomaly in a regular pattern that attracts attention. It is therefore helpful, especially

Evenly distributed illumination-
Philadelphia's Broad Street

to a driver, to have higher illumination levels at node points, such as intersections or crosswalks, to alert the driver of potential conflict with other vehicles or pedestrians.

It should be noted that the actual quantity of illumination required for adequate vision may be quite low. Raising illumination beyond modest basic levels may not result in much noticeable improvement. However, illumination is the easiest criterion to quantify. It is therefore commonly relied upon disproportionately to its importance in establishing lighting standards. Care must be taken not to over-light areas, as this may have negative affects (crime implications, glare, etc.).

*Glare*

A common source of visual 'noise' is glare caused by luminaries with improper beam control. Independent of illumination level, glare makes the task of seeing more difficult, and produces a subtle sense of discomfort or annoyance. Lancaster City's lighting system should be designed to minimize glare – a condition which often causes attention to be drawn from the roadway to the lighting fixtures themselves. If a street or sidewalk surface is illuminated to required levels, yet light from overhead fixtures is shining directly into a person's eyes, he or she may be momentarily blinded, much like shining a flashlight into one's eyes while they are trying to read.

Selecting fixtures which have a visually pleasing aesthetic value and an acceptable light distribution requires careful consideration to find an appropriate balance. This balance is achievable through the use of the suggested light fixtures proposed in these Guidelines.

*Orientation*

Both drivers and pedestrians need quick and effective orientation to develop a visual sense of locations, destinations, and pathways. This is of clear importance for safety, security, and convenience. Highlighting of important features such as nodes, monuments, landmarks, paths, or edges can enhance

Comfortable, uniform low light levels

Glare from a poor quality light fixture

nighttime orientation. In addition to drawing attention to other features, lighting can be a valuable source of visual cues, both by day and by night.

***Fixture Palette and its Uses:***

Throughout the City, the light fixture palette, provided in these Streetscape Design Guidelines, includes several different types of fixtures selected for performance and aesthetics. The following section lists appropriate fixture types and configurations for various areas of the City as defined by these Guidelines.

*Streetscapes 'A' and 'C'*

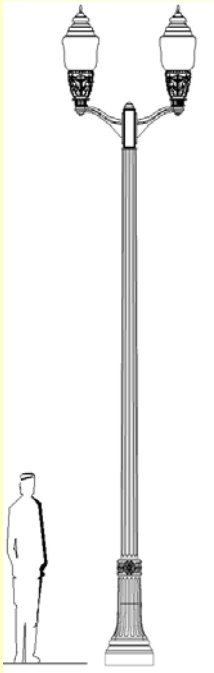
Throughout the core of Lancaster City and along its key corridors, a unified lighting theme should be prevalent, while peripheral, residential areas may adopt a slightly varied standard that differentiates from rest of the City. Single or double-headed acorn fixtures for Streetscapes 'A' and 'C', like those listed under the 'Fixture Description' headings in the next section of this document, are appropriate in these applications. These fixtures are pedestrian-scaled, yet provide sufficient light for motorists, while establishing an integrated appearance to the streetscape.

Key corridors are to have double-headed lighting fixtures, while less heavily traveled corridors are to have single-headed fixtures. Spacing and layout of all fixtures must follow recommendations listed on each fixture description sheet in the next section of this document. Exact fixture placement must be determined based upon street width and coordination with other streetscape elements such as street trees and parking meters.

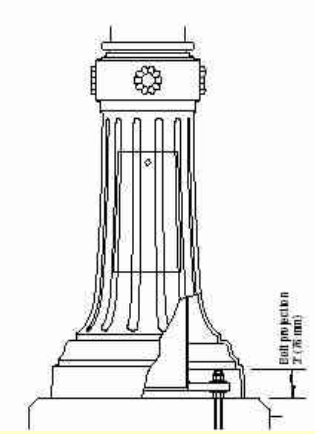
In commercial areas, a target illuminance on street surfaces should achieve 0.6 to 1.2 footcandles average, with a uniformity ratio of 4:1, or better. Sidewalks should target 0.6-1.0 footcandles average. Each of the target illuminances should be measured at the traveling surface, and vertical illuminance levels on pedestrian ways may vary from 1.1 to 2.2 footcandles average where security or safety is of particular







Typical double-headed fixture for use in key corridors



Typical light pole base detail

concern. These values are recommended IESNA design values. Key corridors should target the upper illuminance range, while less traveled streets may target the lower illuminance range.

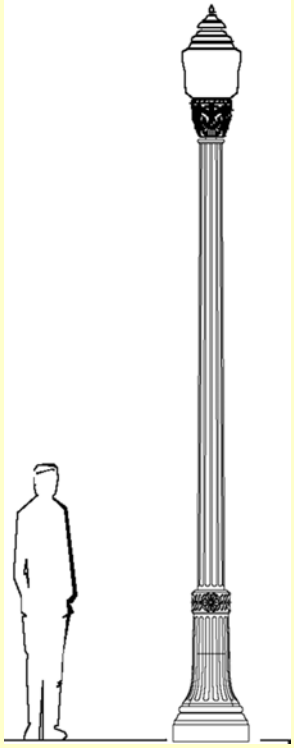
*Streetscapes 'B'*

In Streetscape 'B' areas, 0.3 to 0.5 footcandles average on street surfaces and 0.2 to 0.3 footcandles average on sidewalks is typical. While safety in these areas remains a priority, the suggested lower light levels are a function of relative use. A commercial district within Streetscape 'A' will naturally have more traffic and use than residential areas of Streetscape 'B'. Single-headed fixtures shall be used these residential areas. Relatively new, existing single-headed acorn fixtures already in use throughout the City's Streetscape 'A' areas can be reused and relocated to residential areas, many of which currently have no general street lighting.

The James Street lighting initiative which used City funds to supply wall mounted lights has been very successful. Under this initiative, building owners are responsible for the maintenance of light fixtures supplied by the City. This type of incentive should be continued throughout targeted residential districts, thus providing communities with additional lighting and a greater sense of community pride. Because new lighting programs are currently being developed, it is advisable to check with the City regarding lighting incentive programs available for a given neighborhood.

While increasing light levels in residential areas may increase safety levels, special attention must also be given to specific placement of fixtures in these neighborhoods. Light trespass is a typical problem that occurs when light projects from one property into adjacent properties. Locations of street lights must minimize light trespass, wherever possible.





Typical single-headed fixture

Base of existing light pole for use in Streetscape 'B'

*Intersections and Crossings*

Intersections and mid-block crosswalks require slightly elevated illumination levels to adequately allow for safe vehicle turning and crossing, as well as safe pedestrian crossing. A 50% increase in light levels at crosswalks is recommended to alert pedestrians and motorists of potential conflict areas ahead.

If light fixtures located on the sides of streets cannot provide enough illumination to meet added demands of crosswalk and intersection areas, supplemental fixture types may be needed or desired for aesthetic purposes. A post and cable system, similar to the systems used in Lancaster City during the early 20th century, can be implemented at key intersections and major crosswalks (see illustration). In an effort to maintain the appearance of continuity, the post and cable system should only be used to highlight a key junction or crossing.

Early 20th Century cable-supported fixture at N. Prince and W. Chestnut Streets

Sketch of potential cable-suspended fixture at a mid-block crosswalk on N. Queen Street

*Building Mounted and Alley Spanning Fixtures*

In tight spaces such as alleys and narrow streets, a pole-based lighting system may prove impractical due to limited streetscape area. It may be possible, with owner permission, to install building-mounted fixtures which complement the City's lighting standards. Not every structure should have its own fixture; however, lighting designs may incorporate a complimentary mix of fixture types.

Some alleys and pedestrian ways may also employ a custom decorative lighting system which spans the breadth of the alley. With owner permission, this fixture type could be used in narrow locations where adequate wall support is available, and where the City's residents and guests extensively use a particular corridor.

Supplemental streetscape lighting mounted to building façades

Illuminated, decorative arch spanning a narrow street or alley

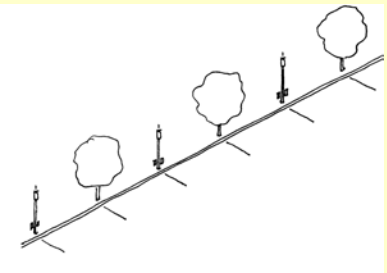
*General Fixture Spacing and Location:*

These general guidelines provide a starting point from which a lighting layout design may develop. As with any design, the entire scope of a streetscape enhancement project and all items therein should be taken into account. When considering specific placement of light fixtures and poles, the designer should address locations of existing or proposed trees, buildings, driveways, street furniture (benches, mailboxes, planters, etc.), roof overhangs, residential window heights, canopies over pedestrian areas, sub-street structures (vaults, manholes, gas and water valves, etc.), signs, and parking meters, among other items.

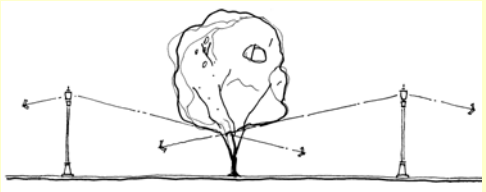
An effort should be made to space fixtures consistently based on the width of a given street and length of a given block. Incorporating existing or future trees into the light fixture spacing pattern is another important consideration. While most street trees are deciduous and lose their leaves in the winter, they produce foliage during the growing season which blocks light from inappropriately spaced fixtures.

The setback of each pole light from the curb edge must also be consistent to create visual alignment and to protect the poles from the bumpers of vehicles. Alignment of light poles with other streetscape elements, such as trees, must occur within the middle of the Planting Zone. Whenever possible, this alignment must be consistent along each street. Different poles may have different base sizes, but all can be centered along the same alignment. A minimum setback distance of 20" from curb face to pole center is required.

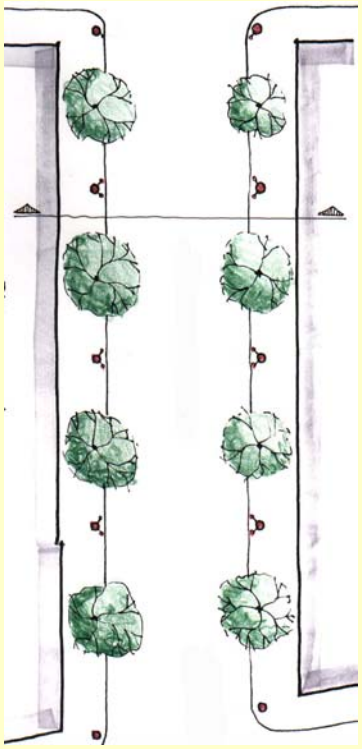
Two standard layout methods are provided for arrangement of light fixtures on both sides of a street. The first method staggers fixtures on one street side with those on the opposite side of the street, such that each fixture falls in-between two on the opposing street side. This layout may generally be best for distributing the light evenly along the length of a narrow street. The second arrangement pairs fixtures on opposing



Recommended light fixture relationship to street trees and on-street parking spaces



Light fixture spacing and light distribution under adjacent tree canopy



Plan view of typical tree and light fixture relationship on wide streets; trees and lighting on opposing sides of narrow streets must be staggered

street sides directly across from each other. This arrangement provides a better sense of symmetry, and should be used for wider streets.

Wherever possible, light poles and street trees should be intentionally placed in relation to on-street parking delineation in an effort to prevent conflict with vehicular doors. In all cases, existing 'cobra head' fixtures and all unused or abandoned lights must be removed and properly discarded during fixture streetscape enhancement projects.

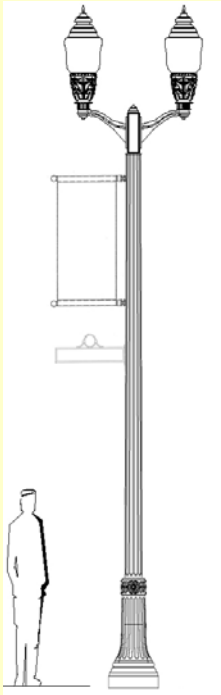
***Street Element Incorporation:***

By incorporating desirable streetscape elements such as signs, hanging planters, and banners into a lighting system layout, visual clutter is minimized. Relocating these items, if possible, to a streetscape component that must be there to provide a necessity, such as night illumination, reduces the number of overall streetscape components.

Frequently, signage can be attached to street light poles via semi-permanent or pre-installed hangers. Plant hangers and parking meters, in locations where a design dictates, can be mounted directly to light poles on pre-manufactured brackets. Through careful selection of light poles included in these Guidelines, provisions have been made for inclusion of these potential elements.

Common traffic signaling equipment can also be incorporated into the spacing and placement of light fixture poles, if not included directly on standard streetlight poles. More often than not, pedestrian crossing signals and equipment are independently mounted at each street corner. Maximizing use of all available pole space aids with elimination of visual streetscape clutter.





Banner and sign attachment to light pole

Failure to consolidate traffic signal poles, light poles, and banner poles produces unnecessary visual clutter

*Special Conditions:*

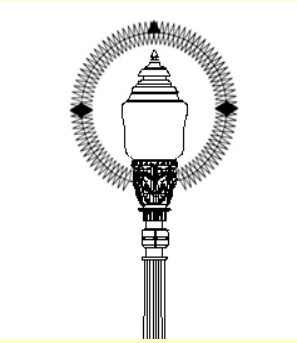
At various times of the year, it may be desirable to attach seasonal, decorative adornments to light fixtures. For inclusion of decorations requiring power such as holiday street tree lighting, GFI receptacles must be integrated into light poles to minimize additional wiring required for temporary installations.

Attachment points must be included on light poles to make such installations and removals easier for the City. An attachment with pins or bolts which fits into existing locking collars or holes at the appropriate heights must be provided where seasonal decorations are anticipated by the City.

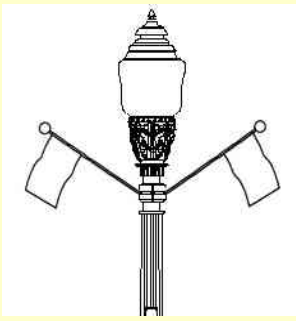
When attaching items such as banners, signs, signals, and holiday lighting, it is necessary to consider if light poles can support the additional weight of these features. The poles noted in these Guidelines can accommodate the addition of accessories; however, such anticipated additions must be noted to the manufacturer when ordering fixtures. For appropriate poles to be ordered, it is important to understand the City's desired uses for new light poles on a given street prior to installation.

Fixtures must be located in areas where accessible by standard service vehicles. Relamping, cleaning, banner and sign replacement, and other regular maintenance items should be considered. All items attached to a light pole must be secure enough to resist environmental stresses and vandal damage. The fixtures specified in these Guidelines have many unique maintenance-friendly features such as hinged relamping and tool-less ballast removal.





Attachment of seasonal decorations



*Selective Building Highlighting*

At times, it may be appropriate to illuminate privately or publicly-owned buildings at the request of the owner. In an effort to limit the amount of street clutter, it may be possible to incorporate separate, customized lighting systems into the street lighting pole system. There are various possibilities for fixture choices and applications, but each should be considered on an individual basis as each building selected for highlighting is addressed. Such customized lighting must be reviewed and approved by the City prior to installation.

Highlighting specific structures can make Lancaster City a festive, active destination while assisting with nighttime orientation and navigation for visitors and residents. It is recommended that a façade lighting plan be completed in an effort to select appropriate structures to be highlighted, and to define appropriate facade lighting techniques. Lighting of specific structures must achieve appropriate light levels while utilizing lighting which adds to the overall aesthetic of the public streetscape.

Façade lighting enhancements- Harrisburg's Kunkle Building

Lighting enhancements – Harrisburg's Market Street Bridge

*FIXTURE DESCRIPTION – Single-Headed Acorn*

*Use:* Streetscapes 'A', 'B', and 'C', on any street with a width of less than 40'

*Fixture Type:* Single Glass Acorn on cast aluminum pole

*Preferred Manufacturer:* Lumec with SealSafe system

*Catalog Reference #:* L51-Glass-100MH-SE3-volt-SF0-1-HS-finish

*Light Source:* 100 watts (ea) Ceramic Metal Halide for best performance, life, and color

*Optics:* Cutoff minimum, standard to minimize light pollution while maintaining high vertical footcandles; IESNA Type III, IV, or V optics

*Fixture Power Consumption:* Each fixture should consume no more than 150W of electricity

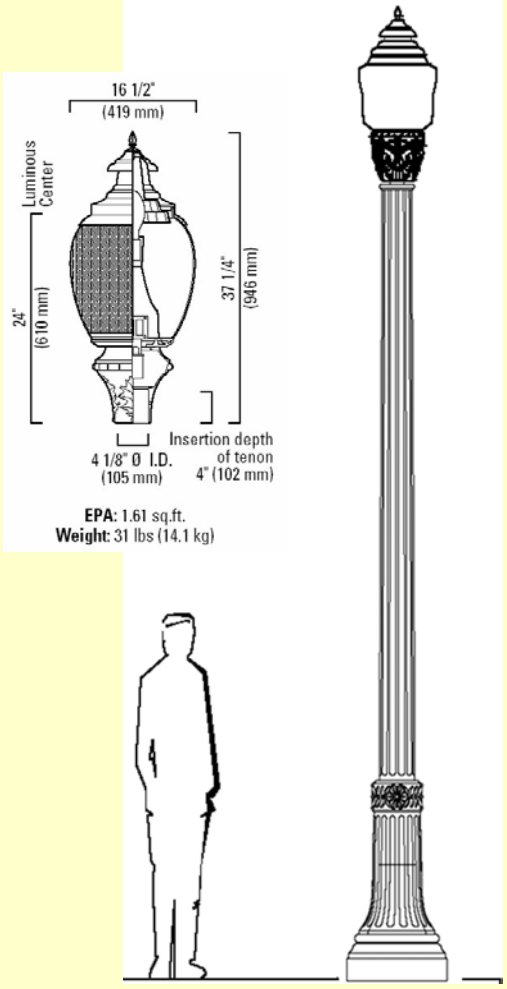
*Pole Type:* Cast aluminum; fiberglass is not acceptable

*Pole height:* 12'

*Catalog Reference #:* R120D-12-GFI-BABSXX(x2)-PSS16-SA1 (0º orientation for all attachments – each mounting height included in accessory listings)

*Optional Accessories:* Provisions for future attachments should be made when ordering poles; see accessories section or pole reference for specific catalog #'s

*Layout and Spacing:* Single-headed pole spacing may vary slightly from street to street; typical pedestrian-scale fixtures of this height may be spaced between 36' and 50'- about the length of 2 parallel parking spaces, or slightly more



*FIXTURE DESCRIPTION – Double-Headed Acorn*

*Use:* Streetscape type 'A' for streets 40' or greater in width, and at prominent intersections

*Fixture Type:* Double Glass Acorn on cast aluminum pole

*Preferred Manufacturer:* Lumec with SealSafe system

*Catalog Reference #:* L51-Glass-100MH-SE3-volt-SF0-2-CRF-HS-finish

*Light Source:* 100 watts (ea) Ceramic Metal Halide for best performance, life, and color

*Optics:* Cutoff minimum, standard to minimize light pollution while maintaining high vertical footcandles; both heads should use an IESNA Type III or IV optics

*Fixture Power Consumption:* Each fixture should consume no more than 150 watts of electricity (no more than 300 watts per pole)

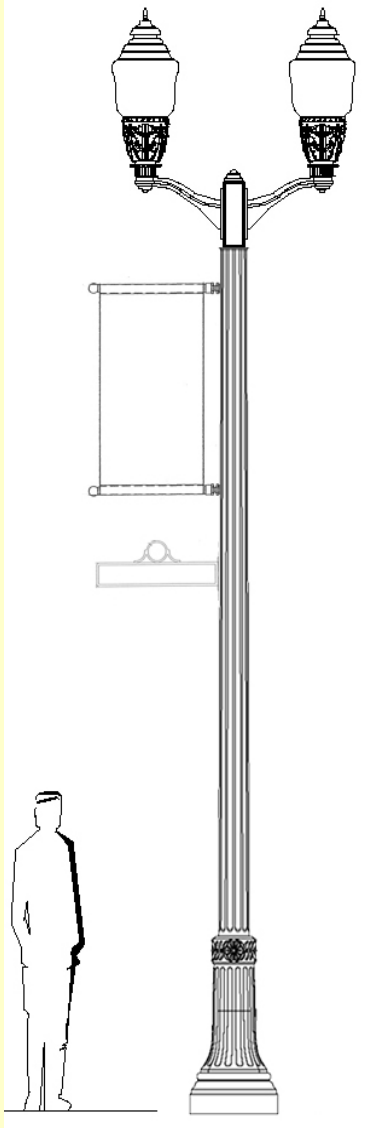
*Pole Type:* Cast aluminum; fiberglass is not acceptable

*Pole height:* 16'

*Catalog Reference #:* R120D-16-GFI-BABSXX(x2)-PSS16-SA1 ($0^o$ orientation for all attachments – each mounting height included in accessory listings)

*Optional Accessories:* Provisions for future attachments should be made when ordering poles; see accessories section or pole reference for specific catalog #'s

*Layout and Spacing:* Double-headed pole orientation should be such that arms are perpendicular to the street; spacing may vary slightly from street to street; typical pedestrian scale fixtures of this height may be spaced between 40' and 80', about the length of 2 to 4 parallel parking spaces



*FIXTURE DESCRIPTION – Wall-Mounted Acorn*

*Use:* Streetscape types 'A', 'B', and 'C' where pole-mounted light poles will create an obstruction, and where appropriate due to other streetscape elements

*Fixture Type:* Single Wall Mounted Glass Acorn

*Preferred Manufacturer:* Lumec with SealSafe system

*Catalog Reference #:* L51-Glass-100MH-SE3-volt-SF0-HS-finish

*Light Source:* 100watts (ea) Ceramic Metal Halide for best performance, life, and color

*Optics:* Cutoff minimum, standard to minimize light pollution; IESNA Type III or IV optics

*Fixture Power Consumption:* Each fixture should consume no more than 150 watts of electricity

*Wall Bracket Type:* Cast aluminum

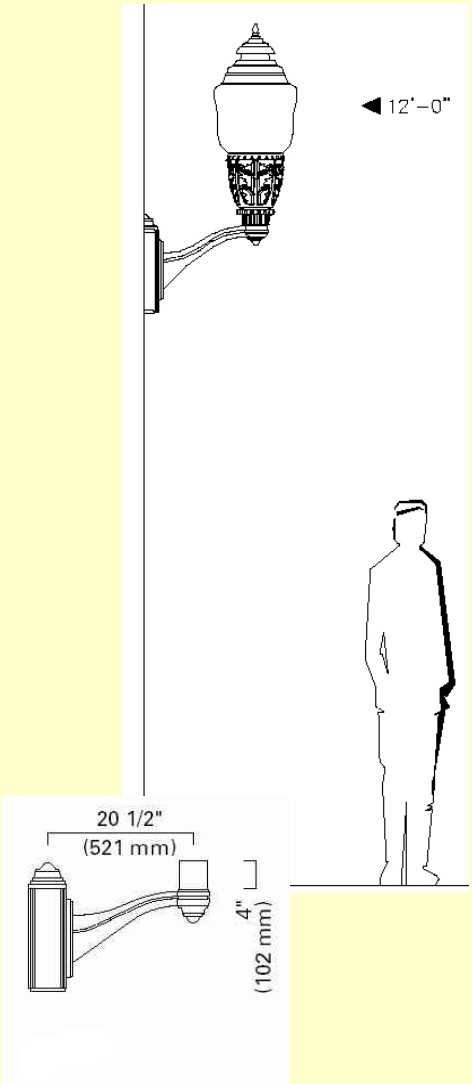
*Wall Bracket minimum height:* 12'

*Catalog Reference #:* CRF-M

*Optional Accessories:*

*Layout and Spacing:* Fixtures should be spaced at least 36' to 50' apart where 2 relatively adjacent fixtures are desired.

It should be noted that a smaller version of this wall-mounted fixture could be used under canopies and in other small-scale applications if such fixtures are lowered in height and wattage, and spaced more closely together; this smaller fixture would be privately owned and maintained.



*FIXTURE DESCRIPTION – Post and Cable-Mounted Teardrop*

*Use:* Crosswalks

*Fixture Type:* Single Glass Teardrop suspended from cables spanning posts on either side of a street

*Preferred Manufacturer:* Lumec with SealSafe system

*Catalog Reference #:* RN20-100MH-THB3-GL-volt-SM2-(custom)

*Light Source:* 100 watts Ceramic Metal Halide for best performance, life, and color

*Optics:* Cutoff minimum, standard to minimize light pollution while maintaining high vertical footcandles; IESNA Type V optic

*Fixture Power Consumption:* Each fixture should consume no more than 150W of electricity

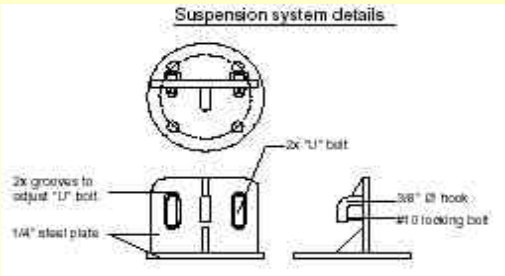
*Pole Type:* Cast aluminum; fiberglass is not acceptable

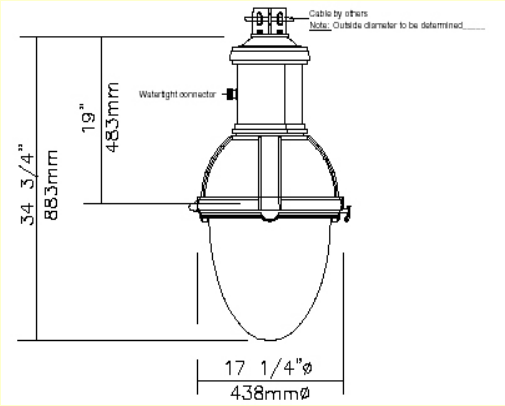
*Post height:* 27'

*Catalog Reference #:* R110V-27-GFI-BABSXX(x2)-PSS16-SA1 (0º orientation for all attachments – each mounting height listed in accessories listings)

*Optional Accessories:* Provisions for future attachments should be made when ordering poles; see accessories section or pole reference for specific catalog #'s

*Layout and Spacing:* Per specific street crossing design



*FIXTURE DESCRIPTION – Alley Fixture*

*Use:* Narrow alleys and pedestrian ways with heavy foot traffic or gathering spaces

*Fixture Type:* Custom fixture in structural support system spanning the breadth of the alley

*Preferred Manufacturer:* Lumec with SealSafe system

*Light Source:* 100 watts (ea) Ceramic Metal Halide for best performance, life, and color

*Optics:* Cutoff minimum, standard to minimize light pollution while maintaining high vertical footcandles; IESNA Type V optic

*Fixture Power Consumption:* Each fixture should consume no more than 150W of electricity

*Clearance height:* 20′

*Layout and Spacing:* Spacing must be determined by the specific conditions of an existing alley; these arches should be used as a celebration feature and intermixed with wall-mounted lighting; spacing can be 80′, or more

*Accessory Descriptions*

*Outlet*

*Use:* Accessory Power Outlet

*Accessory Type:* Ground Fault Interrupter Duplex Receptacle

*Preferred Manufacturer:* Lumec

*Catalog Reference #:* GFI

*Layout and Spacing:* One per pole

*Banner Arm(s)*

*Use:* Decorative Banner Support

*Accessory Type:* Top and Bottom Breakaway Banner Support

*Preferred Manufacturer:* Lumec

*Catalog Reference #:* BABSXX

*Layout and Spacing:* Two per pole (top and bottom) where banners are anticipated

*Plant Hanger*

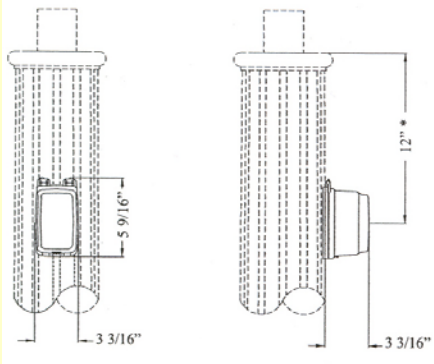
*Use:* Plant Support

*Accessory Type:* Single Plant Hanger

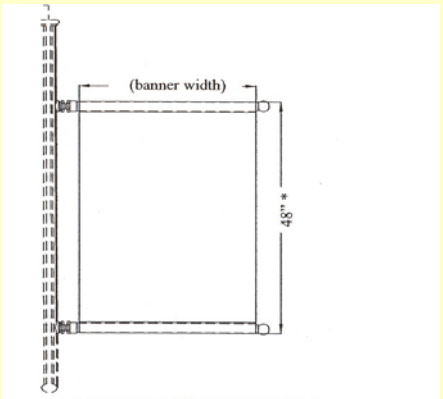
*Preferred Manufacturer:* Lumec

*Catalog Reference #:* PSS16

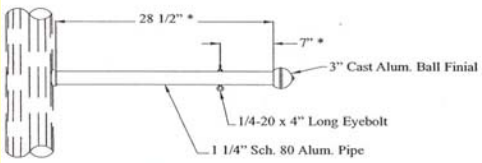
*Layout and Spacing:* One per pole where hanging planters are anticipated




GF/WI-V1
GFI Receptacle w/ Weatherproof In Use Cover-120 Volt




AARBN/BA35-SC8-FO2-RM
Aluminum Arms Banner Arms / Breakaway (banner width)-Banner Width- Schedule 80 pipe - 2" Ball finial - Removable




1 AARBK28.5-SC8-EB-FO3
1 Aluminum Arm Bracket 28 1/2" Arm length - Schedule 80 Pipe - Eyebolt - 3" Ball Finial

*FIXTURE DESCRIPTION – EXISTING Single-Headed Acorn*

*Current Use:* Downtown Lancaster

*Future Use:* Move to residential areas (Streetscape 'B')

*Fixture Type:* Single Acorn on fiberglass pole

*Manufacturer:* King Luminaire

*Catalog Reference #:* K199 – Black (Luminaire)
*Catalog Reference #:* K12 – Black (Post-top)

*Light Source:* 100W Standard HPS

*Optics:* IESNA Type V optic – Non Cutoff

*Fixture Power Consumption:* 120W +

*Pole Type:* Fiberglass (only acceptable for reuse of existing decorative poles); all new poles must be Aluminum

*Manufacturer:* Shakespeare

*Catalog Reference #:* AM1712.75FG1101

## VI. Implementation

Because specific streetscape enhancement budgets, coupled with a desire to maintain distinctive identities of Lancaster's diverse neighborhoods, may require slight variations on the common streetscape objectives noted in these Design Guidelines, a process for streetscape design review and approval has been established. Per Lancaster City ordinance requirements, requested variations on standard streetscape components as described in these adopted Streetscape Design Guidelines may be permissible with proper City review and approval as future enhancement projects are implemented.

All future designs for new streetscape enhancements within the City of Lancaster's public spaces must be reviewed by the City's Design Review Committee and the City's Department of Public Works for compliance with these Streetscape Design Guidelines. Plans for streetscape modifications are to be forwarded to the Bureau of Engineering located at 120 North Duke Street, Lancaster, PA 17602. The Bureau's office telephone number is (717) 291-4764. Where proposed improvements are to be located on private property within the City's Historic District, review and approval by the Historic Architectural Review Board and City Council are required.

The preceding pages specify the products that are to be used in each streetscape area as a general guide or reference. Manufacturers' names are used within these Streetscape Design Guidelines (including the following Appendix Reference List) to describe specific streetscape components. They are not meant, however, to be used as the single source. Alternate manufacturers are acceptable, provided they meet the aesthetic and functional criteria established by the products listed herein. The Design Review Committee and/or the Bureau of Engineering must approve any alternates to the products listed in these Streetscape Design Guidelines.

Through implementation of these Streetscape Design Guidelines, Lancaster will address current streetscape deficiencies and will effectively end the established

practice of permitting an incompatible assortment of streetscape paving patterns, tree planting practices, lighting, and street furnishings throughout the City. Our public spaces will appear more visually cohesive without the complete design homogeneity common to non-urban environments. These Guidelines have been adopted to ensure an appropriate measure of design uniformity, enhanced pedestrian safety, and elevated perceptions of security for the visitors, workers, and residents of Lancaster.

## VII. Conclusion

These Streetscape Design Guidelines have been produced by the City of Lancaster as part of a larger effort aimed at improving the visual quality and economic vitality of our City. The key to revitalization will be thoughtful implementation of these Guidelines combined with the many other current initiatives from both the public and private sectors. It is anticipated that these initiatives will build consistency and continuity of our urban landscape, while retaining some flexibility for neighborhood distinctions. Enhancement of these public spaces is one of the most tangible ways in which we are able to improve the quality of life for all Lancastrians.

## Images Credits:

GreatStreets.org website – pp. 15, 25, 34

James Street Improvement District – pp. 14, 28, 34

Philadelphia's Center City District – pp. 8, 20, 21, 24

Brown and Keener •Bressi –pp. 44

Lancaster Downtown Improvement District –pp. 28

Pennsylvania College of Art and Design –pp. 43

## VIII. Appendix

- List of Potential Street Trees
- Reference List of Noted Streetscape Products and Suppliers

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