



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

TECHNICAL MANUAL
STREETSCAPE CONCEPT, MATERIALS, DETAILS AND CONTRACTS
MAY 2007 DRAFT



BETHESDA STREETSCAPE PLAN





INTRODUCTION

The 1994 Sector Plan for the Bethesda Central Business District included a chapter of Streetscape based on a 1992 Bethesda Streetscape Plan of materials and standards. Much of the streetscape and undergrounding of utilities has been accomplished in the intervening 23 years. Today, the streetscape provides an attractive, unifying design element for a large part of the CBD. The 1994 Plan was complex, broken down into districts, and offered many alternatives related to street classification and budget.

The 2007 Bethesda Streetscape Plan has the same goals as the 1992 Plan, to provide shade, amenity and quality details for the Bethesda CBD, and most of the materials remain the same. The new Plan is simplified, and the construction details have been revised for clarity and to reflect changes in practice. The Department of Public Works and Transportation (DPWT) has provided their current specifications for the street lights. The Community Planning Division of the Maryland National Capital Park and Planning Commission (M-NCPPC) has worked closely with the DPWT's Lighting Division and the Bethesda Urban Partnership (BUP) to verify the suitability and the availability of the selected streetscape materials.

MATERIALS

Street Trees

The Bethesda CBD has around 1,000 street trees. They are the most important element of the streetscape, providing shade, variety in form, softness and contrast with the built environment. In general, street trees are planted at 30 feet on center and are aligned on either side of the streets. The list of street trees has been updated to gradually eliminate trees that are disease prone, like the Marshall's Seedless Ash, or that have excessive sticky flower or leaf drop, undesirable on the sidewalk, and to provide more shade, visual interest and variety. In many cases, alternative cultivars or species are permitted in coordination with M-NCPPC staff at the time of site plan review. We are reintroducing the American Elm cultivar 'New Harmony.' If an entire block is being planted and the 'New Harmony' is not available in sufficient quantity, the 'Frontier', 'Pioneer', 'Patriot' or 'Prospector' elms may be used with M-NCPPC staff approval at the time of site plan.

Some of the residential streets at the periphery of the CBD have healthy existing trees that should be retained and incorporated into the streetscape. The tree species named for most streets is meant to balance what already exists and to avoid large monocultures spread over many blocks. BUP maintains the street trees along the sidewalks and in the medians in the Bethesda CBD.



Tree Wells

The dimensions of the tree wells in the CBD will remain the same. Only the tree wells along Wisconsin Avenue will continue to have granite setts covering the surface in the tree pit for consistency in design and to extend the walking surface in high pedestrian traffic areas. The other tree wells in the CBD may be planted with turf, groundcover or seasonal flowers, as approved at the time of site plan review. In general, turf does not perform well under trees with a dense canopy or in high foot traffic areas. Ground covers such as vinca or liriope work well in sun or shade. Wintercreeper, junipers, cotoneaster and pyracantha are not recommended for tree wells. The additional moisture and cover from small plantings has proven beneficial to the tree roots.

Tree Irrigation

The irrigation detail in the previous plan is no longer used. Instead, a “gator bag” is provided by the developer and installed with each tree. The bag becomes property of the Bethesda Urban Partnership (BUP).

Amended Soil Panel

The amended soil panel has proven beneficial to the longevity of the street trees. While the initial expense of providing the soil panel is greater than in street tree plantings outside the CBD, the added benefit to the large specimen street trees required in the CBD makes this detail a good investment.

Sidewalks

The Watson town “Garden Blend” or approved equal remains a satisfactory and attractive sidewalk surface. The construction details for the brick sidewalks and the amended soil panel remain the same. Most of the brick sidewalks in the CBD have been provided through project plans where developers get additional density for providing public amenities. Concrete sidewalks remain in place along primarily streets at the edges of the CBD, and on parts of Arlington Road, Woodmont Avenue and Old Georgetown Road. Eventually, these roads will have brick sidewalks. All optional method of development projects and large residential projects in the TSR area must provide brick sidewalks.

Street Lights

Streetlights are generally planted 60 feet apart throughout the CBD. Corners are framed with street lights, and decorative lights needs to be coordinated with the spacing of the intersection lighting provided by the DPWT.



Specifications for all streetlights are included in this booklet. M-NCPPC staff will review street light poles and luminaries at the time of site plan review for consistency with the dimensions and standards described in this booklet.

Intersection and Woodmont Avenue Lighting

The lighting in Montgomery County is managed by the DPWT. Adequate lighting over the roadways and sidewalks is important to the CBD. These high rectangular Bronze light fixtures seen in many places in the CBD are usually located at corners and often double as traffic signal or walk signal poles. Several blocks of Woodmont Avenue have these lights, such as between Elm and Bethesda Avenues. The projects along this block were developed under the standard method of development. Future projects in the area may replace these rectilinear lights with decorative lamps and poles.

The Bethesda Lantern

The Bethesda lantern was specifically designed for the core of the Bethesda CBD. It is only used on Wisconsin Avenue, East West Highway, Montgomery Avenue, Old Georgetown Road, part of Woodmont Avenue, and small side streets within the core. Attractive, finely detailed, the Bethesda Lantern is more costly than other decorative lighting and has some design weaknesses that the manufacturer is trying to correct. For developments in the core area, it is important to closely follow the standards and dimensions noted in the details.

On Woodmont Avenue, The Bethesda Lantern extends from the intersection of Woodmont and Norfolk Avenues south to the intersection with Elm Street.

The Washington Globe

The Washington Globe streetlight is used on most streets in the CBD outside the core. When ordering the luminaire and the pole, close attention to the details is required to get the desired dimensions, the acorn shape and the alabaster ripple surface of the luminaire. The improved Washington Globe also has a Type III refractor.

The Norfolk Avenue Lamp

As this booklet is written, a Woodmont Triangle Main Street committee, composed of BUP, the Arts and Entertainment District, M-NCPPC staff and the local art community is selecting a modern street light for Norfolk Avenue, the main street of the Woodmont Triangle. All other streets in the Woodmont Triangle will use the Washington Globe. The Norfolk Avenue light will be reviewed by M-NCPPC, BUP, the Bethesda Arts and Entertainment District, and DPWT staff for attractiveness and compatibility with the modern architecture expected in the Woodmont Triangle as well as for adequate wattage, full cut-off capacity, and affordability.



Undergrounding of Utilities

All development projects in the CBD are expected to place utilities to and around their properties underground. In the case of modest, standard method projects, some exceptions may be made. The undergrounding of utilities has become one of the most expensive aspects of development in urban areas, but the added attractiveness and efficiency of having the utilities underground has become a goal of urban centers across the country.

Street Furniture

Benches

The Bethesda streetscape will continue to use the Warwick Bench found throughout the core of the CBD.

Trash Receptacles

The Victor Stanley “Bethesda” trash receptacle is placed throughout the CBD for the convenience of pedestrians, usually at both corners of street intersections, at building entrances or near open spaces. “Tavern Green” is close to the paint color of the Bethesda Lantern.

The Bethesda Urban Partnership or the Bethesda Arts and Entertainment District often use banners to mark events or district activities. Any ideas for new banners should be submitted to BUP and community based planning staff of the M-NCPPC.



Street Trees

Street trees provide many important benefits within the urban environment including shade for pedestrians and mitigation of heat build-up from hard surfaces. More than any other element, trees can create a memorable place through the vertical definition they provide the street corridor and by their modulation of light and the movement of their branches and leaves. Large-scale, widely-branched deciduous trees are preferred, because they provide effective shade in summer, light penetration in winter, and they can be limbed up above first floor retail windows and signage. Trees should be planted closely together for continuous canopy and species should be selected for wide and high branching to create the most effective visual impact, for pedestrian comfort, and to provide good visibility of signage and store windows.

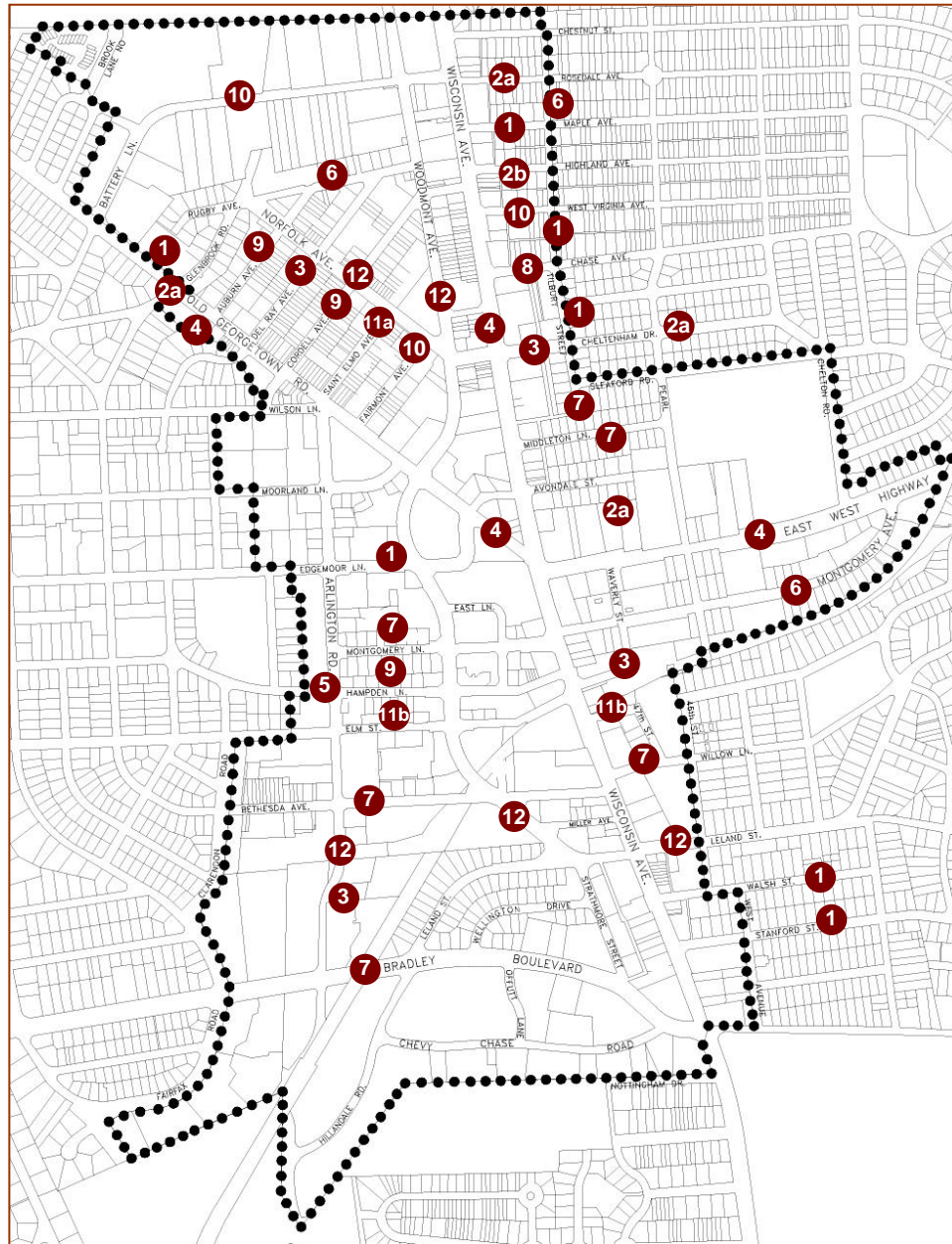
The minimum size of trees at the time of planting should be 3½ inches in caliper for the Standard Method of Development and 4 inches to 5 inches minimum caliper for the Optional Method of Development. It is not recommended that trees larger than 5 inches in caliper be planted because of the risk of transplant shock and the need to trim the root ball to fit into standard-sized tree cut-outs. The availability of desirable tree species at the appropriate caliper size for specific locations is discussed during the site plan review process.

Successful planting in urban environments requires special planting details in order to ensure adequate levels of oxygen, soil nutrients, and water to sustain vigorous growth and a mature canopy. Montgomery County's standard amended soil panel, which runs continuously along the back of the curb, should be used to provide the trees with an adequate volume of amended soil. The amended soil panel detail also contains a drainpipe that is connected to the public sewer system in order to avoid saturated soils. Good drainage is critical to tree survival, and tree "gators" for hand-watering are required rather than the irrigation boxes previously used. At the time of installation, developers may choose to equip each tree pit along Wisconsin Avenue with electricity for seasonal tree lighting.



BETHESDA STREETSCAPE PLAN

Street Tree Plan



- | | | | |
|-------|--|---------|--|
| 1 | <i>Acer rubum</i> , 'October Glory', Red Maple | 8 | <i>Quercus acutissima</i> , Sawtooth Oak |
| 2a/2b | <i>Acer saccharinum</i> 'Legacy', 'Bonfire', Sugar Maple | 9 | <i>Tilia cordata</i> , 'Greenspire', Little Leaf Linden |
| 3 | <i>Gleditsia triacanthos</i> var. <i>inermis</i> , Thornless Honeylocust | 10 | <i>Ulmus Americana</i> , 'New Harmony', other acceptable elms as alternatives, if planting a whole block or more, 'Frontier', 'Pioneer', 'Patriot', 'Prospector', American Elm |
| 4 | <i>Platanus x acerifolia</i> 'Bloodgood', London Planetree | 11a/11b | <i>Ulmus parvifolia</i> 'Bosque', 'Drake', Chinese Elm |
| 5 | <i>Quercus palustris</i> , Pin Oak | 12 | <i>Zelkova serrata</i> , "Village Green", Japanese Zelkova |
| 6 | <i>Quercus rubra</i> , Red Oak | | |
| 7 | <i>Quercus phellos</i> , Willow Oak | | |



BETHESDA STREETSCAPE PLAN

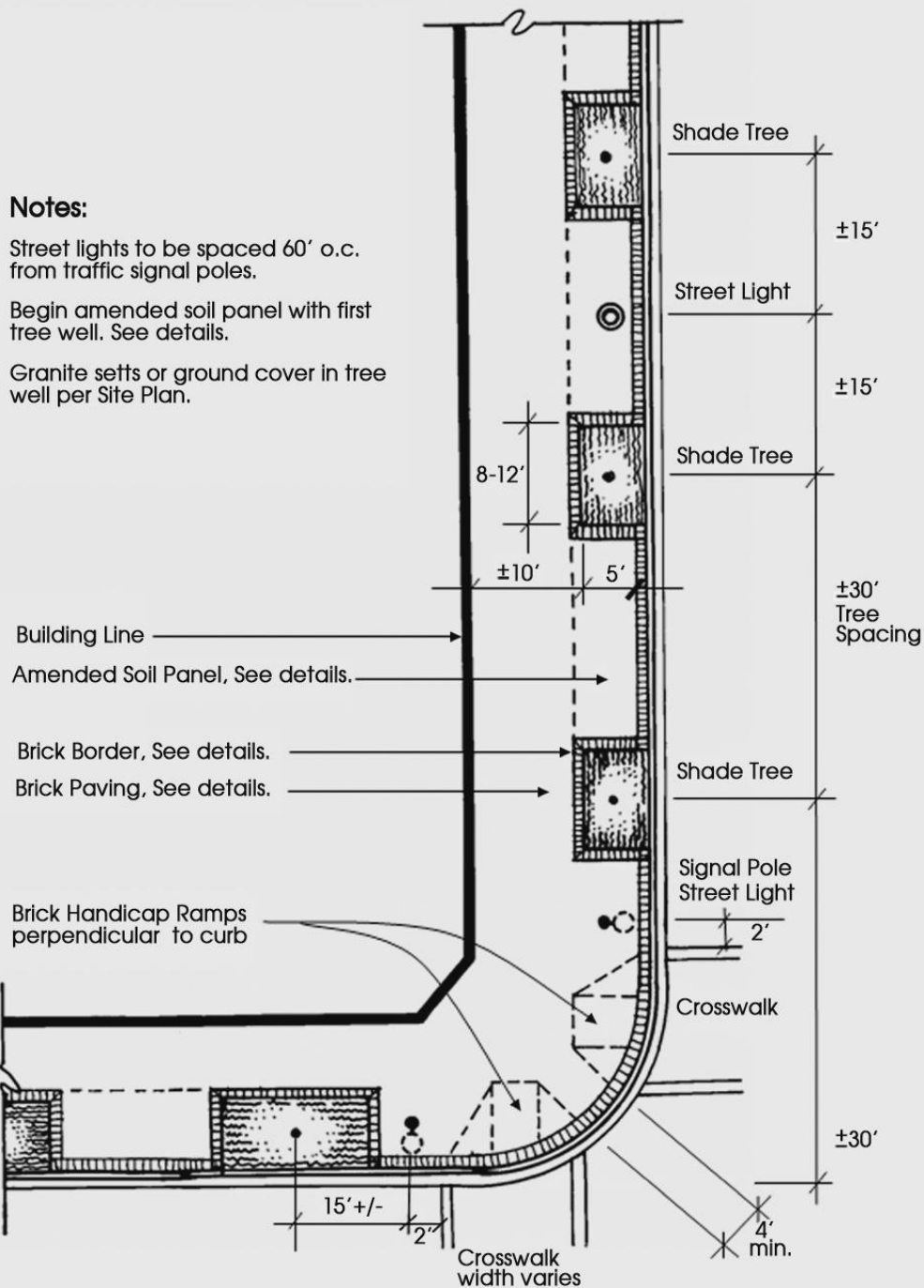
Single Row of Shade Trees in Lawn Panel

Notes:

Street lights to be spaced 60' o.c. from traffic signal poles.

Begin amended soil panel with first tree well. See details.

Granite setts or ground cover in tree well per Site Plan.





BETHESDA STREETSCAPE PLAN

Street Tree Planting Details

Notes:

Street lights to be spaced 60' o.c. from traffic signal poles.

Begin amended soil panel with first tree well. See details.

Plant ground cover or turf in lawn panel per Site Plan.

Paved path at approved drop-off locations.

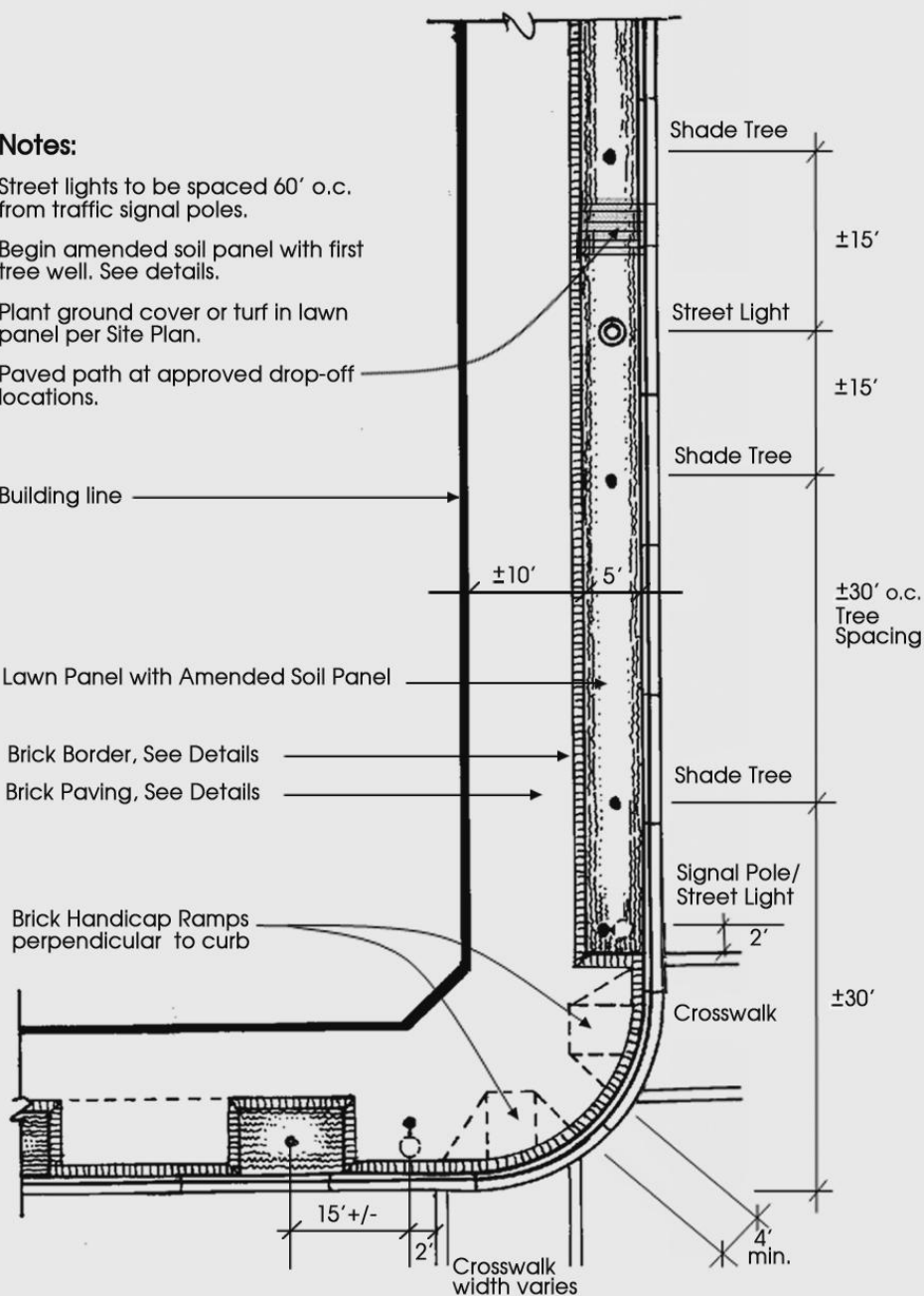
Building line

Lawn Panel with Amended Soil Panel

Brick Border, See Details

Brick Paving, See Details

Brick Handicap Ramps perpendicular to curb





BETHESDA STREETSCAPE PLAN

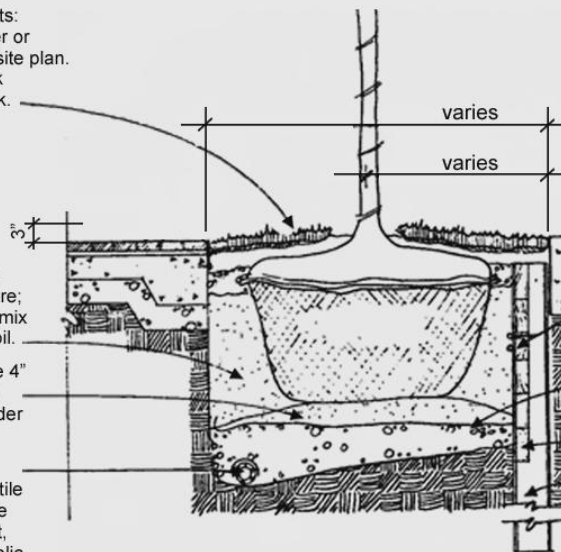
Street Tree Planting Details

Surface treatments:
Turf, ground cover or
granite setts per site plan.
Maintain turf back
from base of trunk.

Compacted 65%
backfill soil mixture;
specified topsoil mix
and 1/3 native soil.

Puddle and settle 4"
of soil mixture to
form platform under
rootball.

3" diameter
perforated drain tile
wrapped with see
through filter mat,
connected to public
storm drain.



Use MSHA type A curb
and gutter for all State
roads. Use DPW&T
Standard 10-A curb and
gutter for County streets.

Traffic and street light
conduit as per MCDPWT
Standards.

Filter fabric to run cont.
along soil panel over
gravel drain field.

6 - 2" x 8" x 8' - 0"
Timber Laggings

Soldier pile w/6 x 16 see
MCDPWT details.

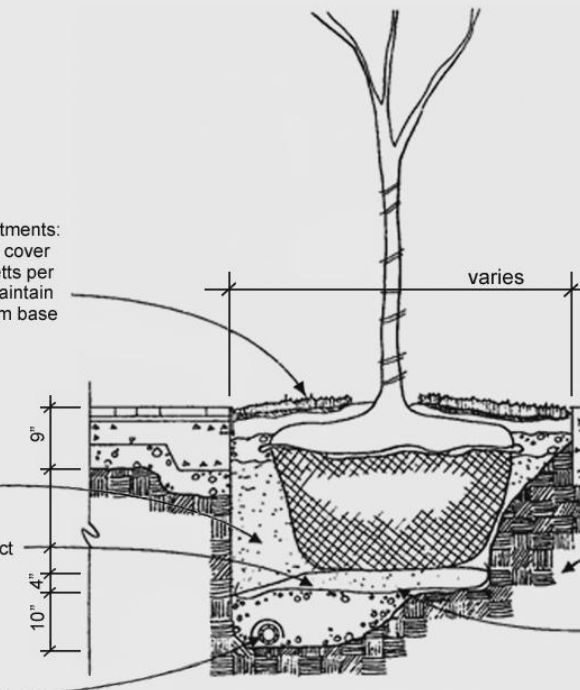
Tree Planting Details For Trees In Pavement Cut-Outs

Surface treatments:
Turf, ground cover or
granite setts per
Site Plan. Maintain
turf back from base
of trunk.

Amended soil mix;
water in during
installation; 65%
max. compaction.

Puddle and compact
(85% max) 4" of
amended soil to
form platform under
rootball.

3" diameter
perforated drain tile
wrapped with see
through filter cloth,
connected to public
storm drain.



Use MSHA type A
curb and gutter for
all state roads.
Use DPW&T standard
10-A curb and gutter
for all County roads.

Compacted soil
to meet roadway
compaction
standards

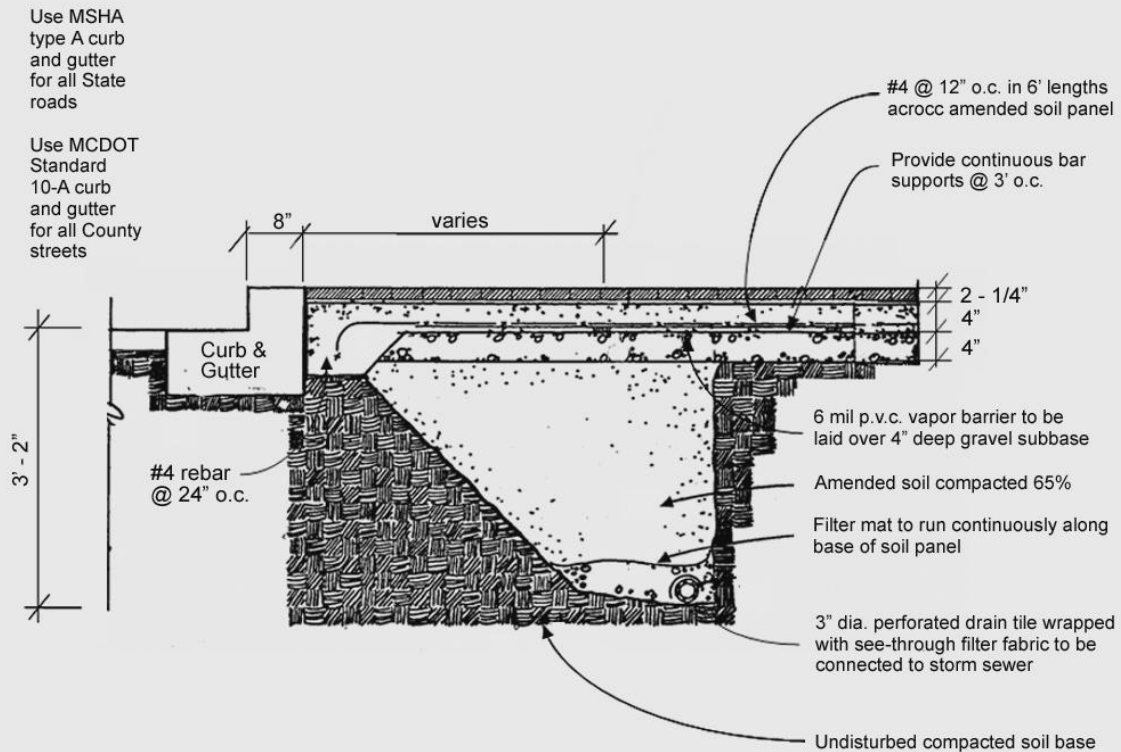
Filter fabric to run
continuous along
base of soil panel
over gravel drain
field.

Tree Planting Details For Trees In Lawn Panels



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Street Tree Planting Details

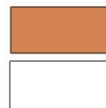
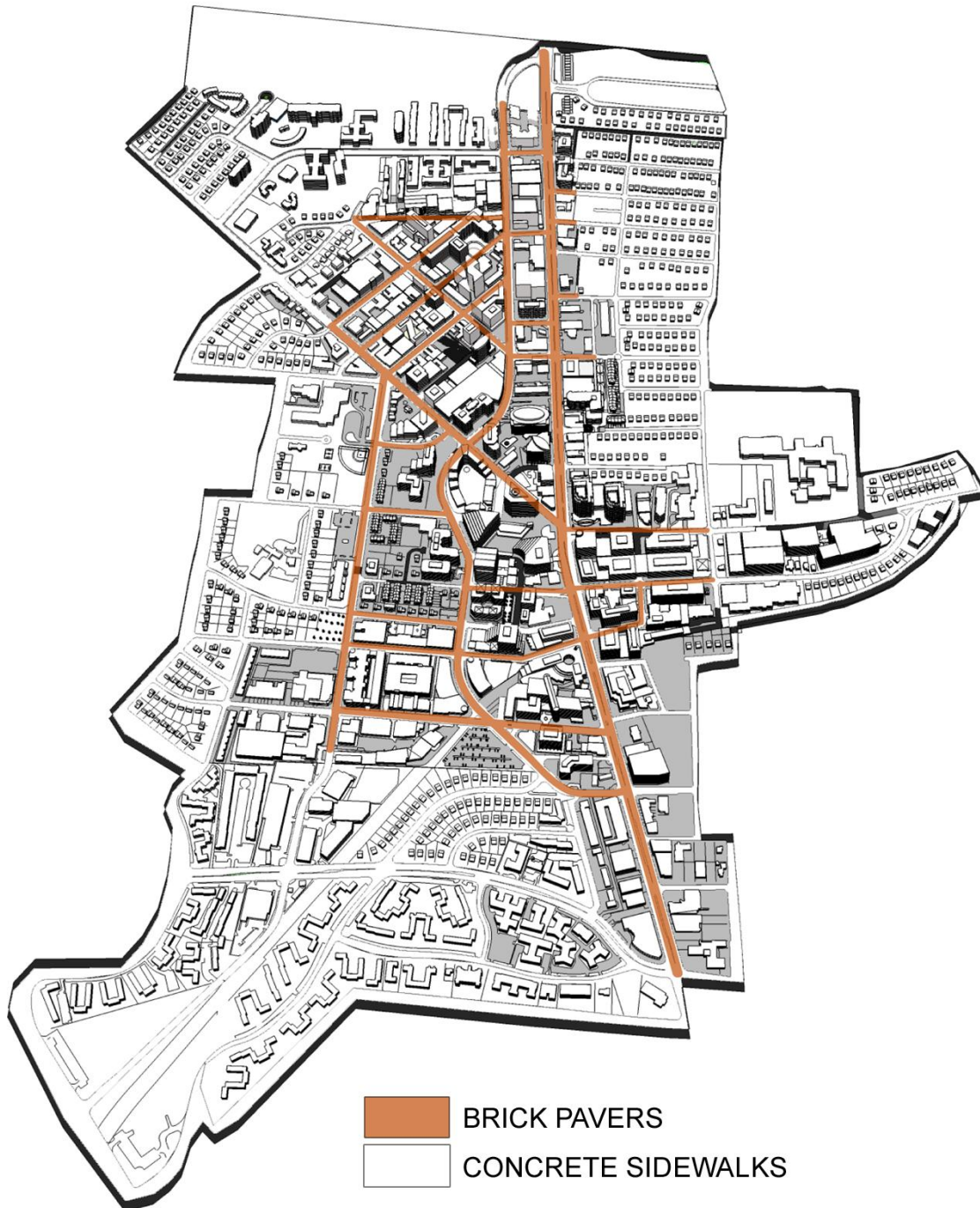


Amended Soil Panel



BETHESDA STREETSCAPE PLAN

Pavers



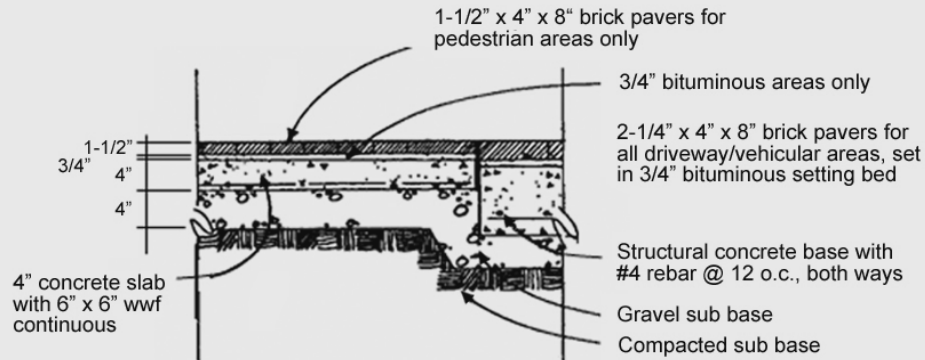
BRICK PAVERS

CONCRETE SIDEWALKS

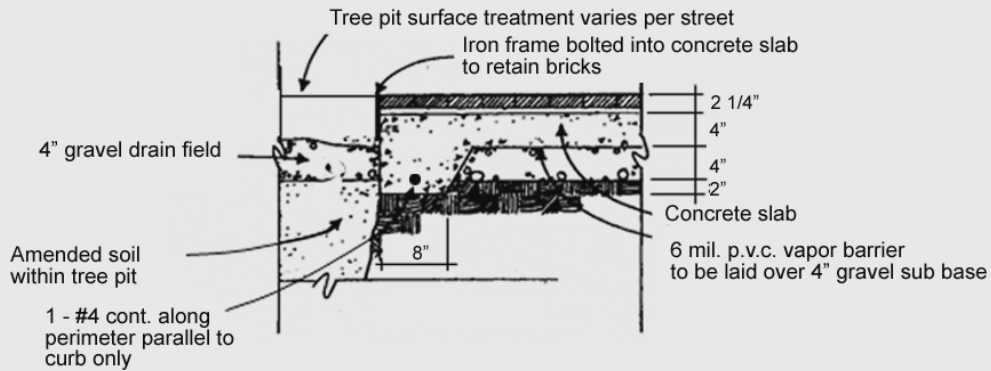


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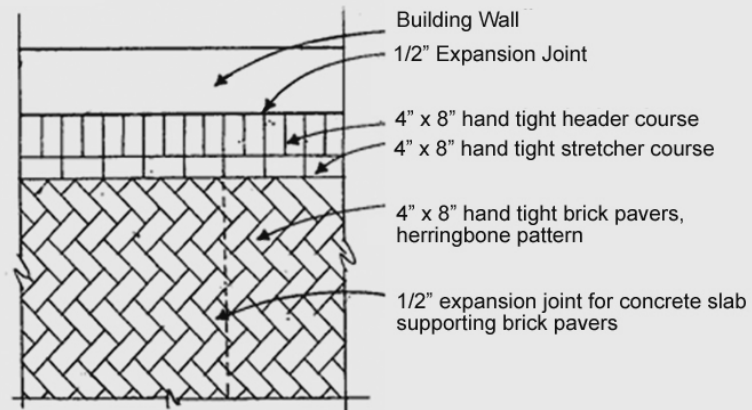
Sidewalk Paving Pattern and Details



Typical Paving Detail



Brick Detail at Tree Well Edge

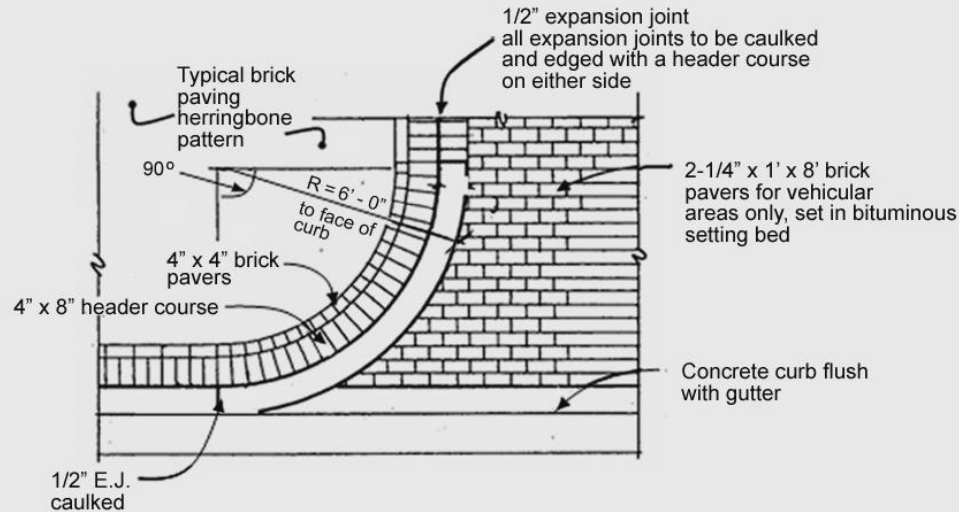


Brick Border/Building Edge



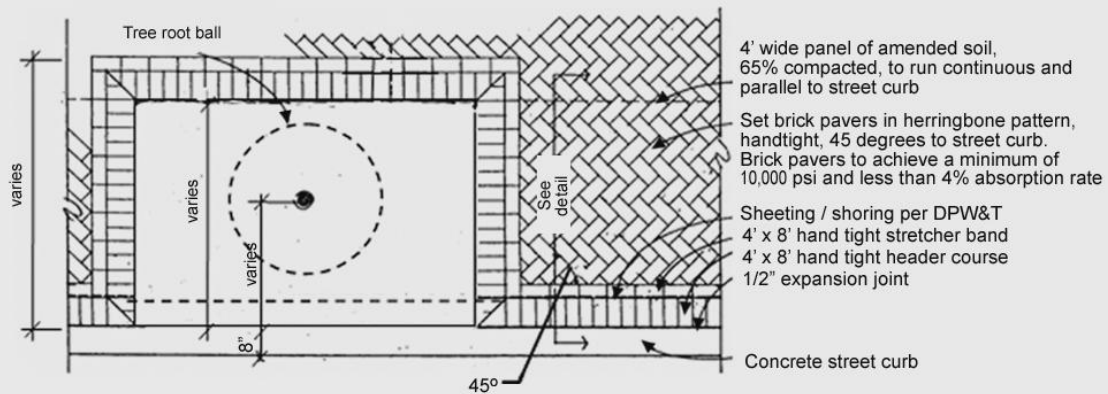
BETHESDA STREETSCAPE PLAN

Sidewalk Paving Pattern and Details



Curb Return and Brick Paving at Alley/Driveway Entrances

No Scale



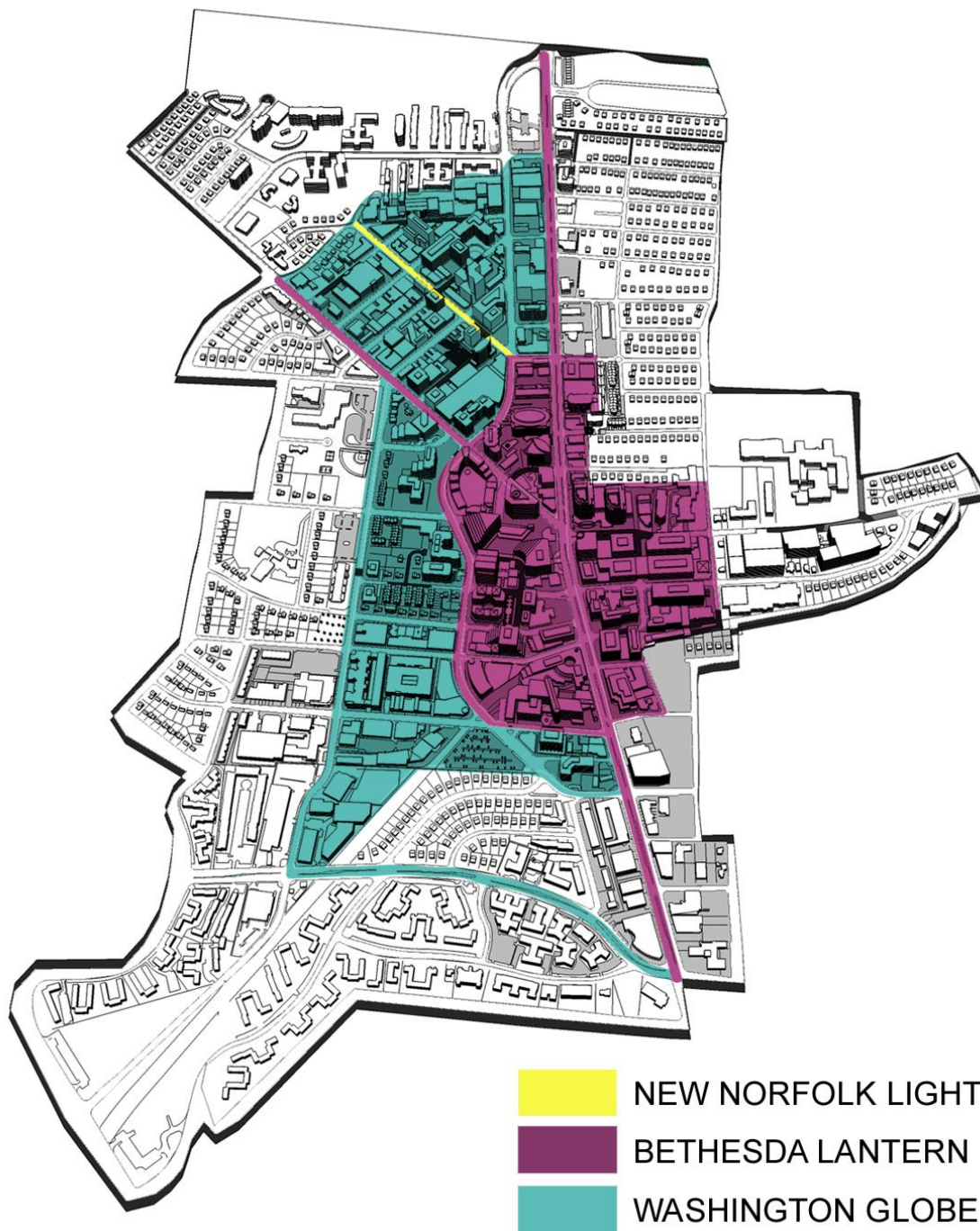
Typical Brick Paving Pattern and Brick Border

No Scale



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Light Plan



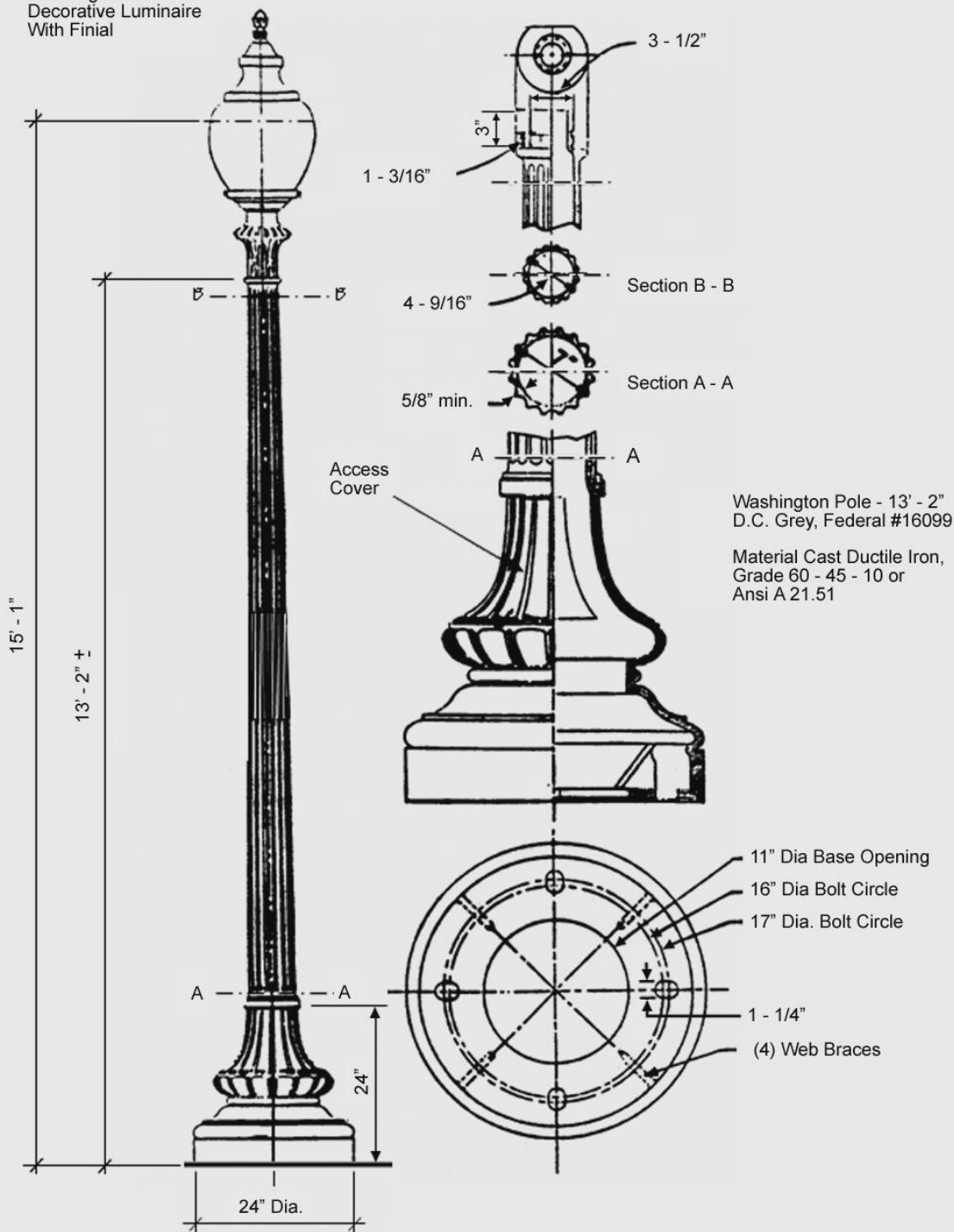


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Street Lighting Poles & Fixtures

A. & C.

Washington Globe:
Decorative Luminaire
With Finial

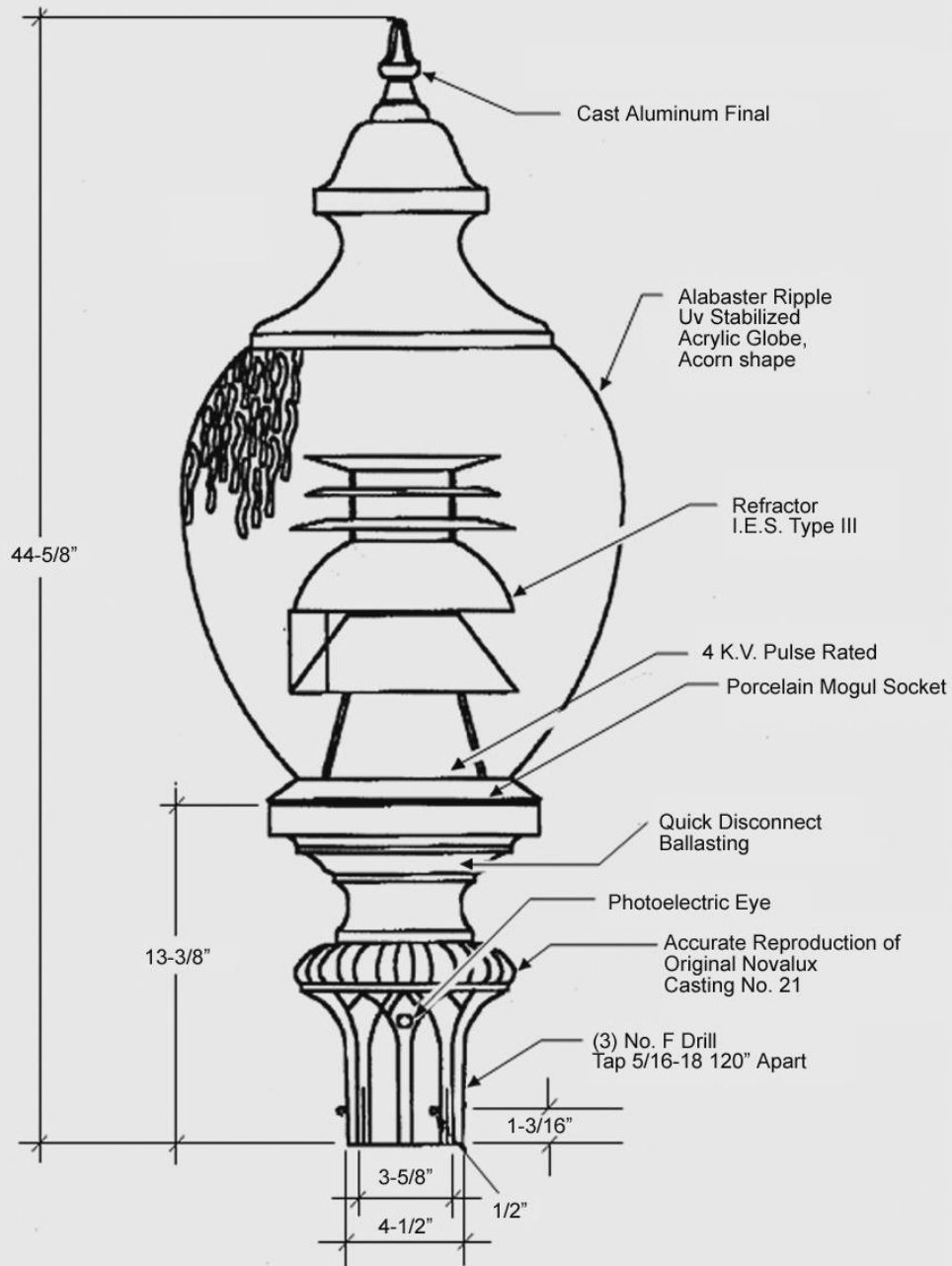




BETHESDA STREETSCAPE PLAN

Street Lighting Poles & Fixtures

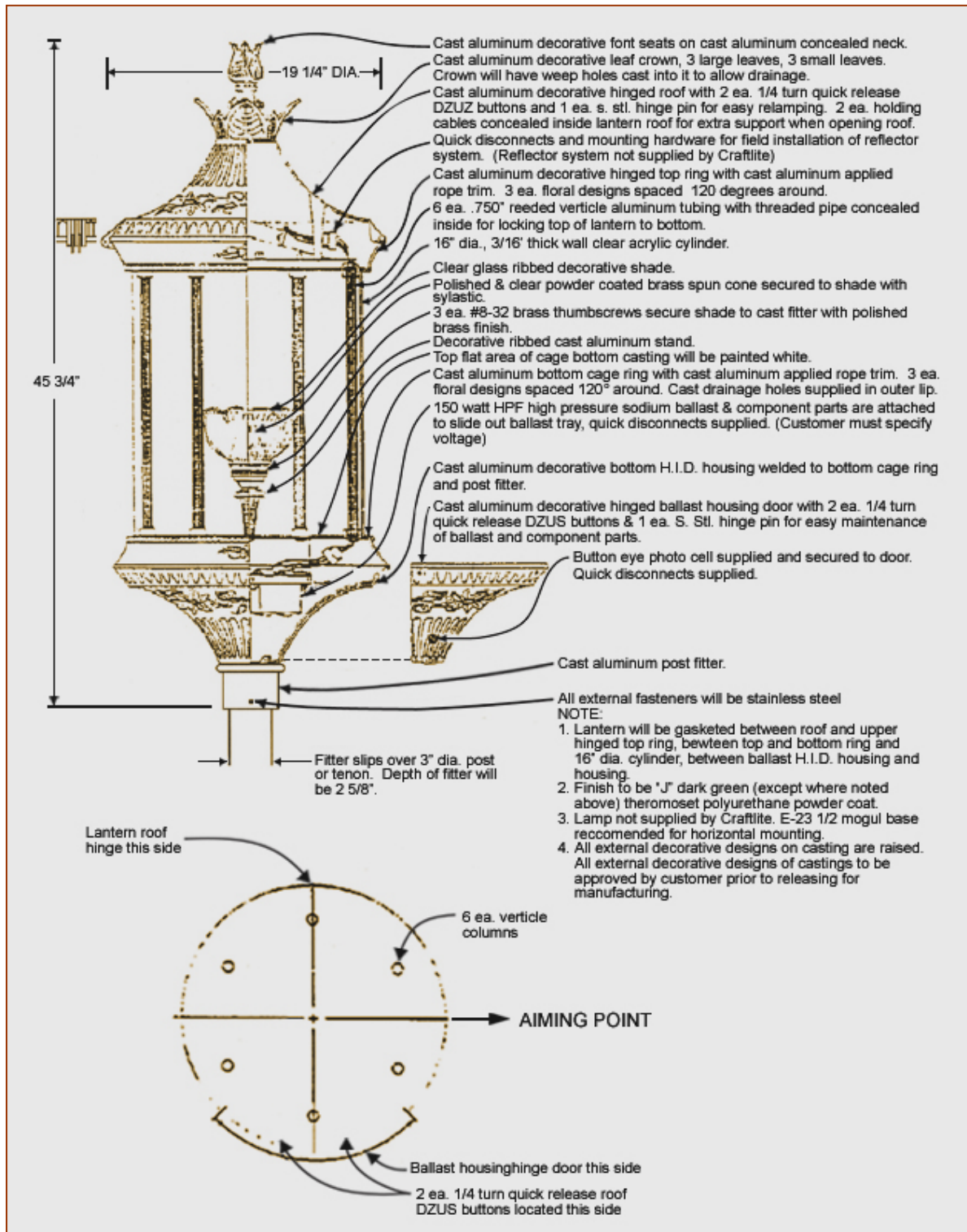
Washington Globe Luminaire





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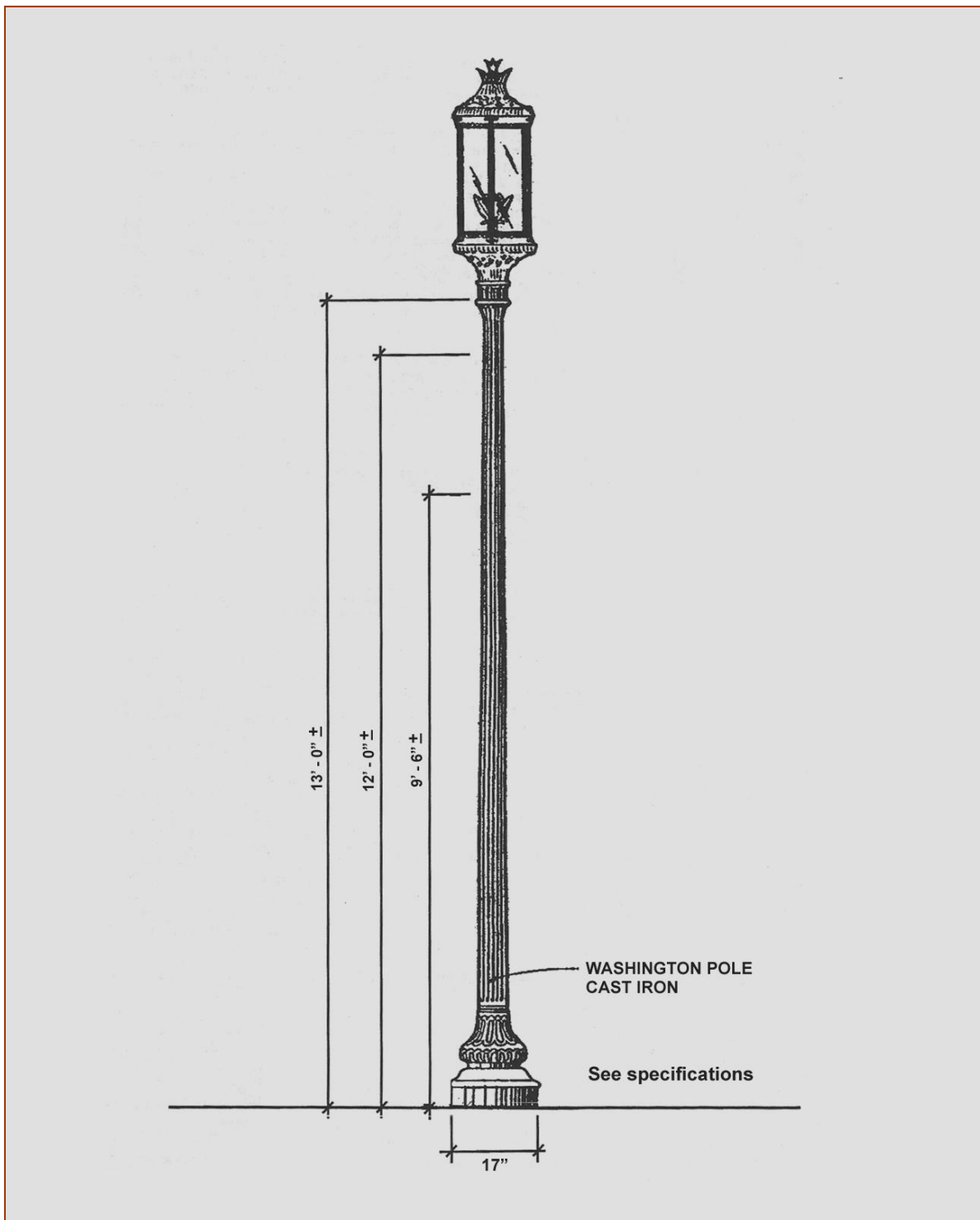
Street Lighting Poles & Fixtures





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Bethesda Street Light





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Bethesda Streetscape Contacts

Acknowledgements

Montgomery County Department of Planning

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Community Planning Staff	Marilyn Clemens, Darrell Godfrey
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Contacts

For general questions on streetscape design, materials and street trees:

The Montgomery County Department of Planning

John Marcolin	(301) 495-4572
Robert Kronenberg	(301) 495-2187

The Bethesda Urban Partnership	Jeff Burton	(301) 215-6660, Ext. 23
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The Department of Public Works and Transportation, Montgomery County

Fred Lees	(240) 777-2196
Tom Shoemaker	(240) 777-2161
Lighting Division	

Specifications other than lighting:	Construction Section	(240) 777-7210
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G:/Clemens/Friendship Heights Streetscape Plan

