INTRODUCTION

Urban design integrates the street corridors, public spaces and building masses of an urban center into coherent form. A successful streetscape binds the components of the center together into an attractive whole. When trees, clearly marked pedestrian routes and sidewalk amenities are absent, the lack is felt; when present, streetscape elements greatly contribute to the attractiveness, safety and legibility of a center.

Silver Spring is a major point of vehicular access between the District of Columbia and suburban Maryland. An active transit, business and service destination, it is surrounded by a dense variety of residential neighborhoods and supplied with abundant commuter parking. Safe and attractive pedestrian circulation within the central business district and to metro is critical to the center's viability and vitality.

The center of the Silver Spring CBD is intersected by two major State highways with heavy vehicular and, increasingly, pedestrian traffic. While street trees and pavers exist on both Colesville Road and Georgia Avenue, more emphasis can be placed on the pedestrian nature of these roads as they pass through the core of Silver Spring. The existing streetscape can be augmented and extended to clearly demarcate the pedestrian as well as vehicular nature of Colesville Road and Georgia Avenue within the CBD.

The Silver Spring streetscape is being implemented as development occurs: On Fenton Street, Ellsworth Drive, Second, Apple, Wayne and Dixon Avenues, as well as along Georgia Avenue and Colesville Road, street trees are beginning to mature and mitigate the glare off of roads and buildings.

The streetscape on parts of Georgia Avenue and Colesville Road (Plan A) has been implemented over the years by the Department of Housing and Community Development. The Urban Design Division of M-NCPPC designed the streetscape for the remaining streets in the CBD in 1988 (Plan B), and it has been implemented through either the optional method of development or the mandatory referral process.

The map on page 4 indicates the emphasis that has been given to implementing streetscape along the main axes of Georgia Avenue and Colesville Road and along the "ring road" defined by Wayne and Second Avenues and Cameron, Spring and Fenton Streets. East-West Highway is planned as an urban parkway with major public use spaces located between 16th Street and Georgia Avenue, and Georgia Avenue and Colesville Road are planned as urban boulevards, activated by pedestrians and lined with attractive store, restaurant, and office facades.

This draft technical report contains the materials and construction specifications currently in use in the Silver Spring CBD. Additional paving and landscape materials, signage and sidewalk amenities, such as kiosks, may be introduced in the future.

AMENDED SOIL PANEL

Trees are an essential streetscape element which provide shade, create "outdoor rooms," define edges, lend softness, and add color. However, street trees are often planted in confined areas in poor soils. In urban areas, one to two feet of good soil had traditionally been provided around the rootball, limiting how much the roots could grow. In addition, "urban soils" are often compacted, poorly drained, poorly aerated, and low in organic matter. Water does not readily penetrate the interface of different soil types until saturation of one medium is reached and surface tension forces are overcome. Consequently, moisture extremes often occur in the three adjacent soils of the planting area, i.e., root ball, backfill, and site. The extremes of saturation or drought often result in the acute stress and death of newly transplanted trees and shrubs.

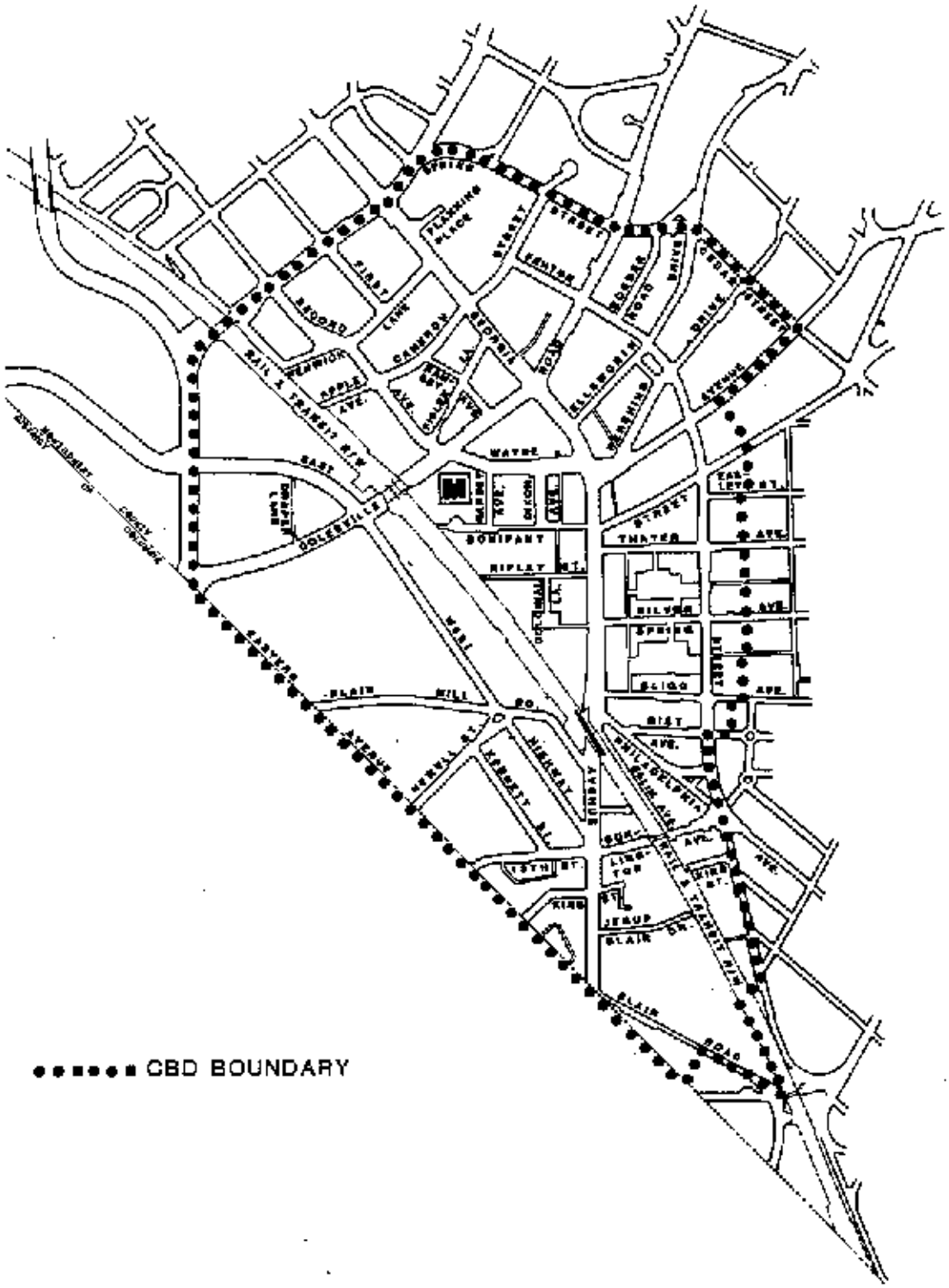
A tree planting technique has been developed in response to the urban soil and growth problems identified by the Center for Urban Ecology of the National Park Service. The Urban Design Division's tree planting detail calls for the construction of an amended soil panel that runs the length of the curb, providing the root system with a large area in which to grow along the curb and beneath the sidewalk. The cross section provides room for a prepared soil mixture, aeration, drainage and drip irrigation.

An earlier, widely-used detail called for a concrete retaining wall along the curb. The wall, however, was extremely costly and its construction required closing travel lanes over an extensive period of time. These problems resulted in a modification to the detail, replacing the wall with timber shoring and a compacted slope.

SOIL PANEL INSTALLATION

Construction begins with removal of all existing soil and pavement. The prepared soil mixture containing 1/3 native soil provides a suitable consistency for the tree in the urban environment. The soil panel increases the amount of amended soil to improve root development, providing a sub-surface drainage system to carry away excess water, avoiding root rot, and an irrigation pipe which will allow for manual watering of several trees at once during times of drought. In addition, the recommended paver detail over the amended soil panel will help minimize soil compaction.

Providing the root system with an amended soil panel and more space to grow promotes the long-term survival and healthy mature growth of urban street trees.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