Appendix C

DESIGN GUIDELINES

Good general land use planning alone does not ensure a safe and attractive community, since "planning by design," that is, attention to the detailed layout and design of any development, is also crucial. To help direct proposed development and redevelopment activities in the Village of Hartland and its Village Center, basic design guidelines should be established. The guidelines presented herein are intended to serve as a basis for determining desired physical development layouts and appearances, and not as inflexible, rigid, and narrow rules that may stifle innovative design alternatives. These guidelines should be used by Village officials to provide detailed guidance to applicants and to assist in the evaluation of development proposals including site, landscaping, and building plans.

BASIC URBAN AND SITE PLANNING DESIGN GUIDELINES

Neighborhoods

Neighborhood Units
Neighborhoods should be developed in a spatially organized manner around a central feature, or focal point, such as a neighborhood park or elementary school, to promote a sense of physical unity as a planned unit rather than a large, formless, and unidentifiable mass.

Neighborhood Identification
Delineated neighborhood units, insofar as is practicable, should be bounded by arterial streets; major parks, greenways, or institutional lands; bodies of water or waterways; or other natural or cultural features which serve to clearly define and physically distinguish each unit from the surrounding units. A name should be selected for each neighborhood based on a distinct land feature or land use character, including historic heritage, to provide a sense of identity. Main "entryways" into neighborhoods should be well-defined for identification, directional, and aesthetic purposes, as well as to further instill a sense of unity.

Neighborhood Facilities
The location and amount of land needed for neighborhood facilities should be based, in part, on the standards specified in Tables 26 and 27 of Chapter VI. Recreational lands at the neighborhood level should be centrally located to provide a focal point for neighborhood interaction and activities and should be developed, whenever possible, in conjunction with a neighborhood elementary school site. The elementary school and recreational facilities should be provided on a common site available to serve the recreation demands of both the school students and the resident neighborhood population. Individual recreational facility requirements should be based upon the values listed in Table 28 of Chapter VI.

Neighborhood Access to Facilities
Residents of neighborhoods should be afforded safe and convenient access to parks, schools, shopping centers, employment centers, and other community facilities. The walking and bicycling distances to these facilities should not exceed the maximum distance standards established in Table 27. Bicycle and pedestrian ways should be connected to or be a part of a trail system that provides access for both utilitarian and recreational purposes. Neighborhoods should also have ready access to an arterial street system, and, thereby, to urban activities and

services, through an internal network of minor and collector streets designed to facilitate vehicular circulation as well as bicycle and pedestrian circulation, while discouraging heavy volumes of arterial traffic through the neighborhood.

Streets, Bicycle, and Pedestrian Facilities[1]

Street Cross-Sections

The Village's desired cross-section designs for streets as well as bicycle and pedestrian ways are graphically shown in Figure C-1. On the shared roadways identified in this figure, bicyclists and motorists would share a travel lane. Collector and minor land-access streets can generally accommodate bicycle travel without widening the roadway due to the usually low traffic speeds and volumes. Sidewalks or pedestrian paths should be provided in areas of existing or planned urban development in accordance with the criteria established by the Village, as set forth in Table C-1. If curvilinear sidewalks or pedestrian paths are desired, additional right-of-way may be necessary to provide a minimum distance from the face of curb to right-of-way line of no less than 15 feet. It is recommended that the minor land-access street cross-section for industrial development be the same as the cross-section for a collector street.

Street Grades

Unless necessitated by exceptional topography, the maximum grade of any street should not exceed the following: arterial streets, 6 percent; collector streets, 8 percent; and minor land-access streets, alleys, and frontage streets, 10 percent. The grade of any street should in no case exceed 10 percent. The minimum grade of any street should preferably be 0.75 percent, and in no case be less than 0.50 percent. The minimum grade of road crowns should be 2 percent. The change in grade across a street intersection within 100 feet of the property line limits of said intersection should not exceed 3 percent, and preferably should be limited to 1.5 percent. In addition, the maximum grade of any street in an industrial area should not exceed 3 percent. All street grades should be established so as to avoid excessive grading, the promiscuous removal of groundcover and trees, and indiscriminate leveling of the terrain.

Street Intersections

Streets should intersect each other as nearly right angles as topography and other limiting factors of good design permit. Angles above approximately 60 degrees usually produce only a small reduction in visibility, which often does not warrant realignment closer to 90 degrees. In addition, the number of streets converging at one intersection should be held to a minimum, preferably to not more than two streets at one intersection; the location of street intersections immediately below the crest of hills should be avoided; the number of intersections along arterial streets and highways should be held to a minimum; and the distance between such intersections should generally not be less than 1,200 feet measured from the centerline of each street. Minor land-access street openings onto arterial streets should be minimized to improve traffic flow and reduce traffic hazards.

Property lines at street intersections should be rounded to an arc with a minimum radius of 15 feet, or, preferably, should be cut off by a straight line through the points of tangency of an arc having a radius of 15 feet or greater. This dimension may need to be increased or an easement should be provided if unique landscaping is proposed at

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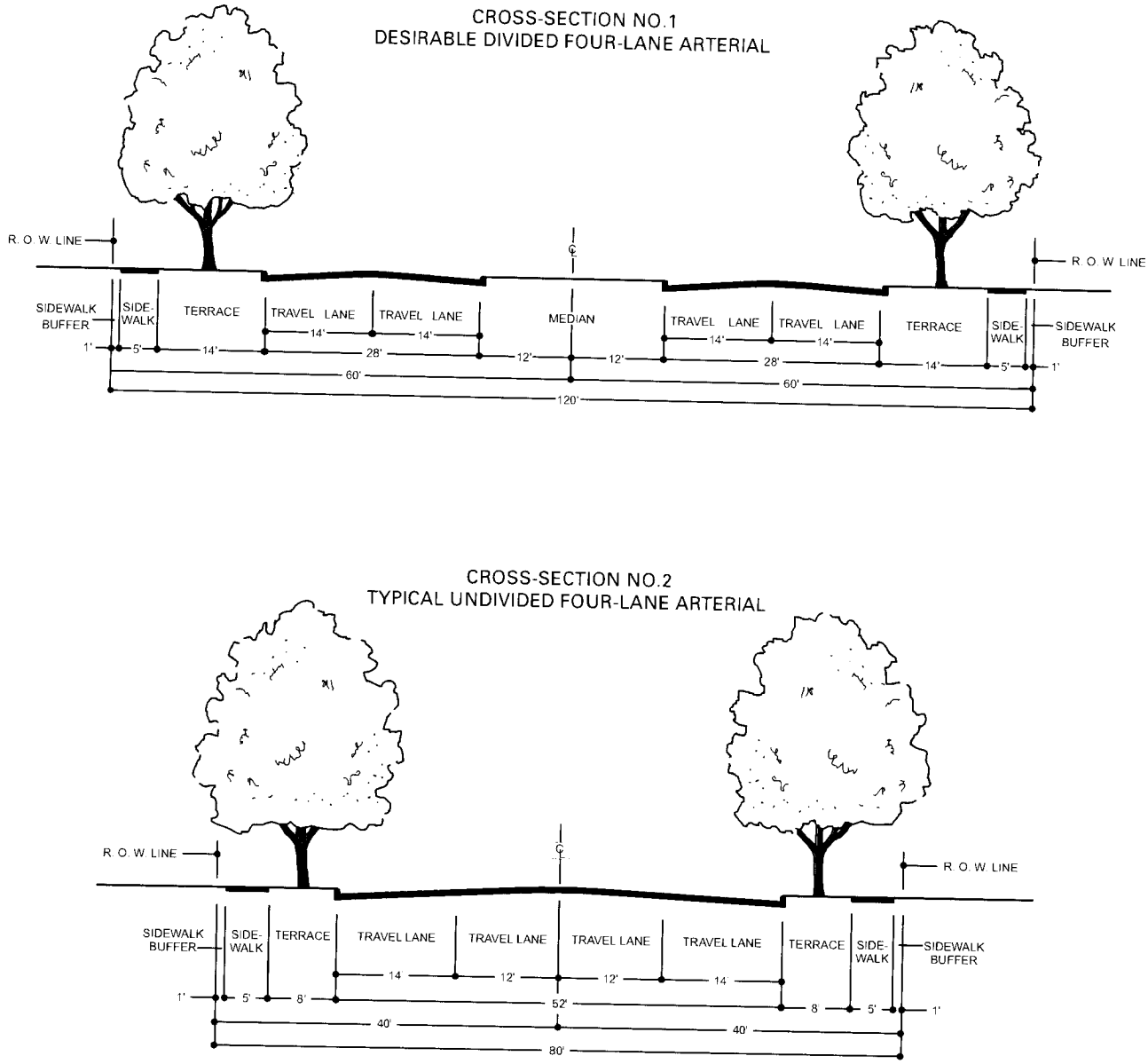
[1] *The design guidelines set forth in this section are not intended to serve as a comprehensive guide to the design of streets and highways, including those accommodating bicycle and pedestrian facilities, but are intended to suggest the general type of design treatments that may be appropriate in certain situations. Precise design specification should be determined during engineering studies for specific street, highway, and bicycle-way projects, and should be based, in part, on the recommendations contained in the most recent edition of,* A Policy on Geometric Design of Highways and Streets *and the* Guide for the Development of Bicycle Facilities, *both published by the American Association of State Highway and Transportation Officials, and the* Manual on Uniform Traffic Control Devices, *published by the U.S. Department of Transportation, Federal Highway Administration.*

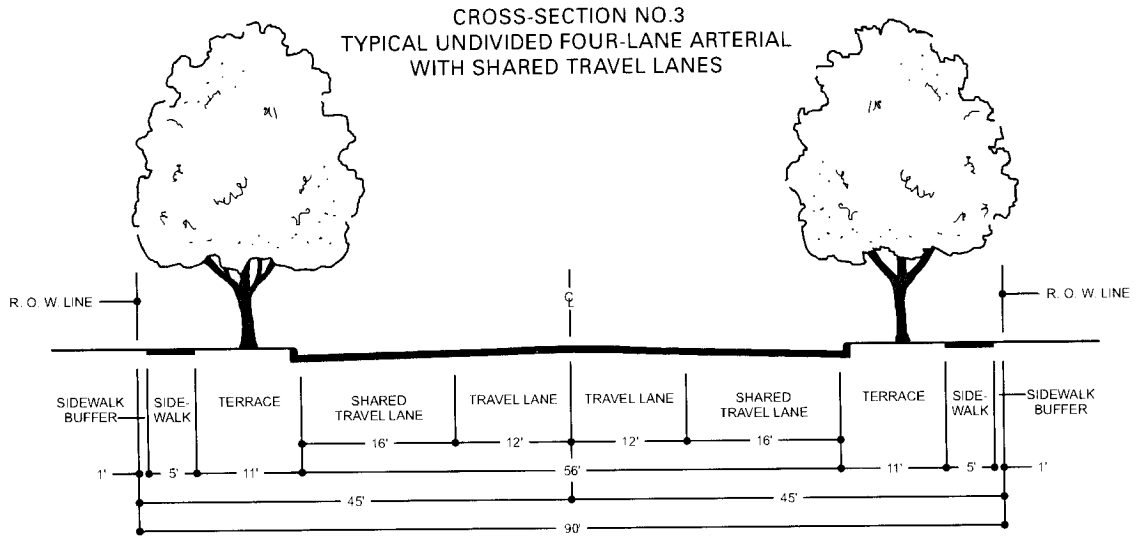
Figure C-1

TYPICAL CROSS-SECTIONS FOR STREETS, HIGHWAYS, BICYCLE WAYS, AND PEDESTRIAN WAYS IN THE VILLAGE OF HARTLAND[1]

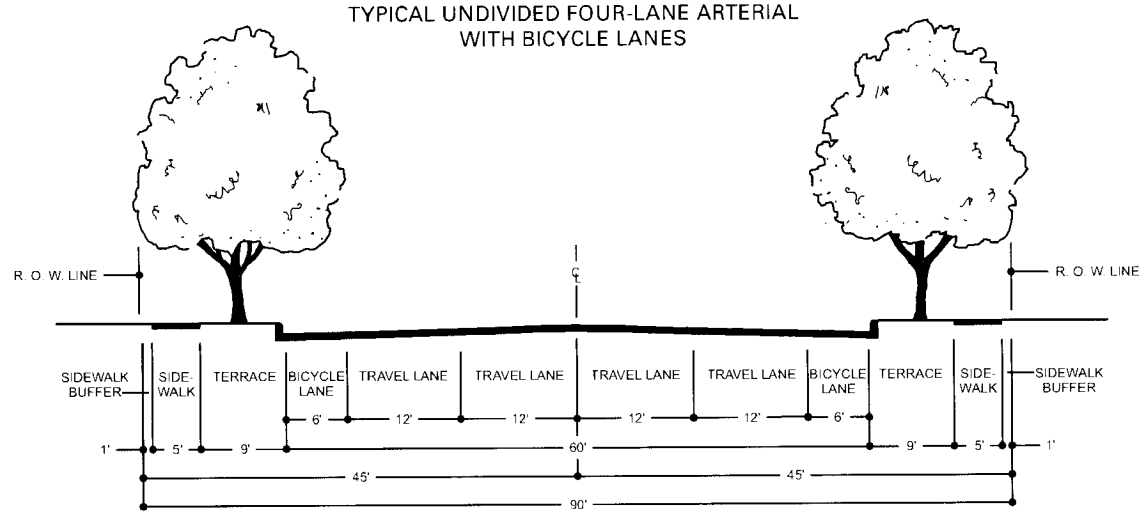


street corners such as those for defining a main entryway into a subdivision or a "gateway" into the community or Village Center while still recognizing traffic vision requirements. At street intersections, as a general guide, the minimum radius of curb return, where curbs are used, or of the outside edge of pavement, where curbs are not used, should be at least 15 feet or, preferably, 20 feet. This radius may need to be increased to meet the minimum turning radii of various motor vehicles, as illustrated in Figure C-2.

Figure C-1 (continued)



NOTE: IF THE RIGHT-OF-WAY WIDTH IS LIMITED TO 80 FEET, THEN EACH TERRACE CAN BE REDUCED TO 6 FEET WIDE.

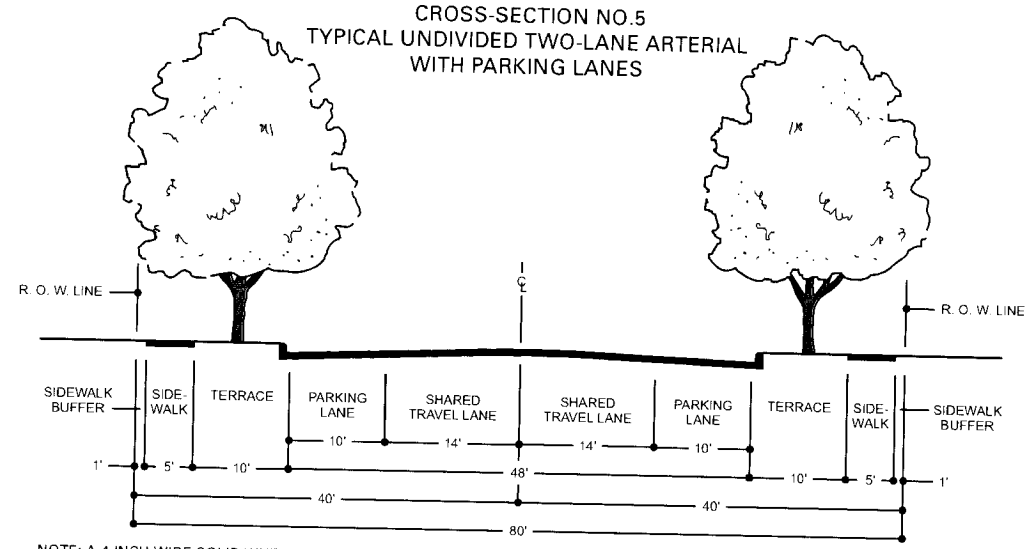


NOTE: A 6-INCH WIDE SOLID WHITE STRIPE SHOULD BE USED TO DISTINGUISH THE OUTSIDE TRAVEL LANE FROM THE BICYCLE LANE. IF THE RIGHT-OF-WAY WIDTH IS LIMITED TO 80 FEET, THEN EACH TRAVEL LANE CAN BE REDUCED TO 11 FEET WIDE AND EACH TERRACE TO 6 FEET WIDE.

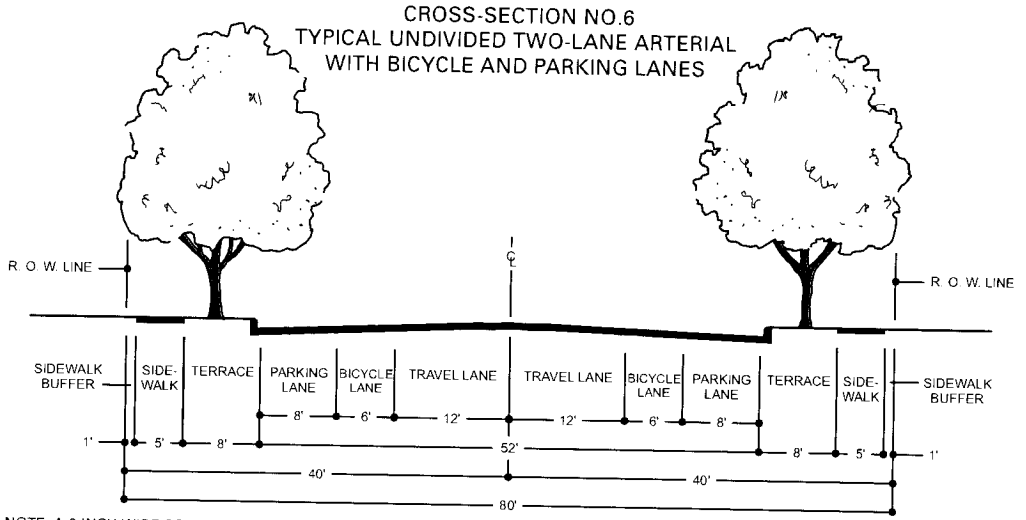
Street Jogs

If the distance between the centerline intersections of any street and any intersecting arterial street is less than 250 feet, measured from the centerline of the intersecting streets, or less than 125 feet, measured from the centerline of other intersecting streets, then the street location should be adjusted so that the distance is increased or the connection across the intersecting street is continuous in alignment, thus avoiding a jog in the flow of traffic. Minor and collector streets need not necessarily continue across arterial streets.

Figure C-1 (continued)



NOTE: A 4-INCH WIDE SOLID WHITE STRIPE OR MARKED PARKING STALLS SHOULD BE USED TO DISTINGUISH THE TRAVEL LANE FROM THE PARKING LANE.

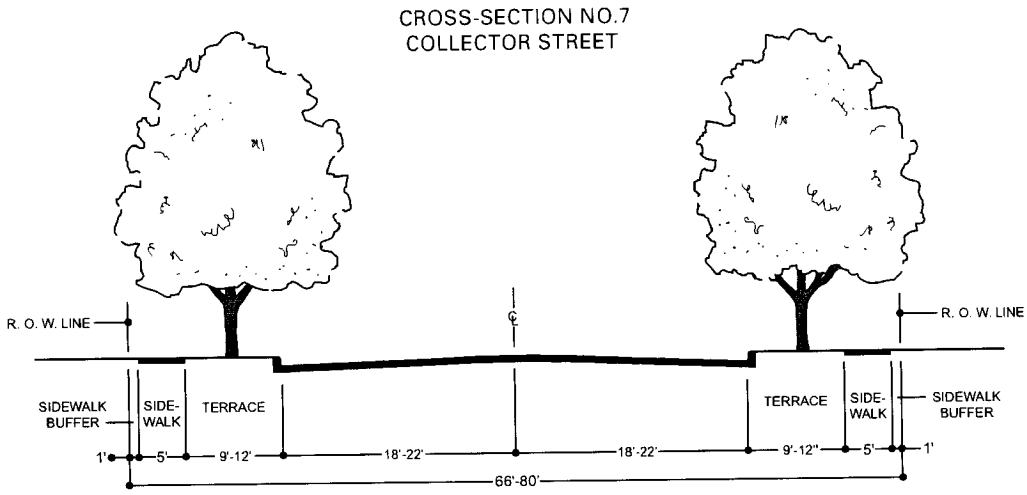


NOTE: A 6-INCH WIDE SOLID WHITE STRIPE SHOULD BE USED TO DISTINGUISH THE TRAVEL LANE FROM THE BICYCLE LANE. A 4-INCH WIDE SOLID WHITE STRIPE OR MARKED PARKING STALLS SHOULD BE USED TO DISTINGUISH THE BICYCLE LANE FROM THE PARKING LANE.

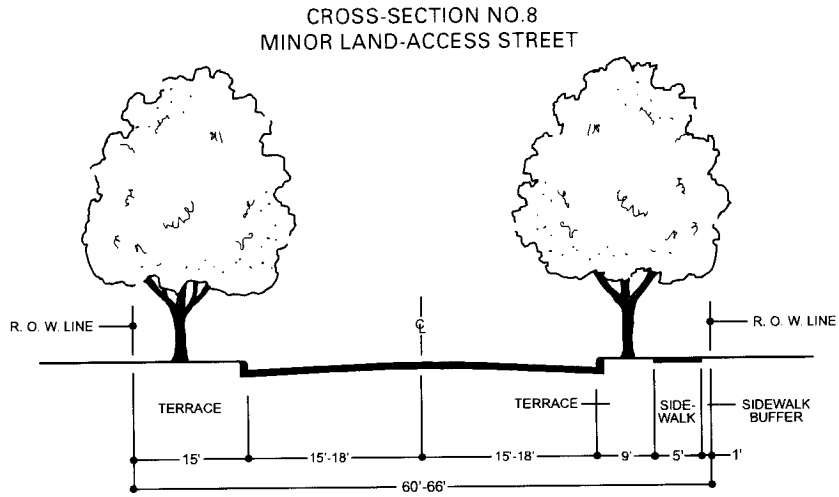
Street Curvatures

When a continuous street centerline deflects at any point by more than seven degrees, a circular curve should be introduced with a radius of curvature on the centerline of not less than the following: arterial streets, 500 feet; collector streets, 300 feet; and minor streets, 100 feet. A tangent at least 100 feet in length should be provided between reverse curves on arterial and collector streets. All changes in street grades that exceed one percent should be connected by vertical curves that meet the standards for stopping sight distance established in the American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*. Minimum curve radii should be further based on the function of traffic speed, sight distances, and other factors.

Figure C-1 (continued)



NOTE: THE PAVEMENT AND RIGHT-OF-WAY WIDTH FOR A COLLECTOR STREET MAY VARY FROM 36 FEET OF PAVEMENT WIDTH AND 66 FEET OF RIGHT-OF-WAY WIDTH TO 44 FEET OF PAVEMENT WIDTH AND 80 FEET OF RIGHT-OF-WAY WIDTH. THE NARROWER WIDTH WOULD APPLY TO COLLECTOR STREETS CARRYING AVERAGE WEEKDAY TRAFFIC VOLUMES OF UNDER 3,000 VEHICLES PER AVERAGE WEEKDAY AND MINIMAL TRUCK OR BUS TRAFFIC. THE WIDER WIDTH WOULD APPLY TO COLLECTOR STREETS CARRYING TRAFFIC VOLUMES EXCEEDING 3,000 VEHICLES PER AVERAGE WEEKDAY AND/OR CARRYING SIGNIFICANT BUS OR TRUCK TRAFFIC.

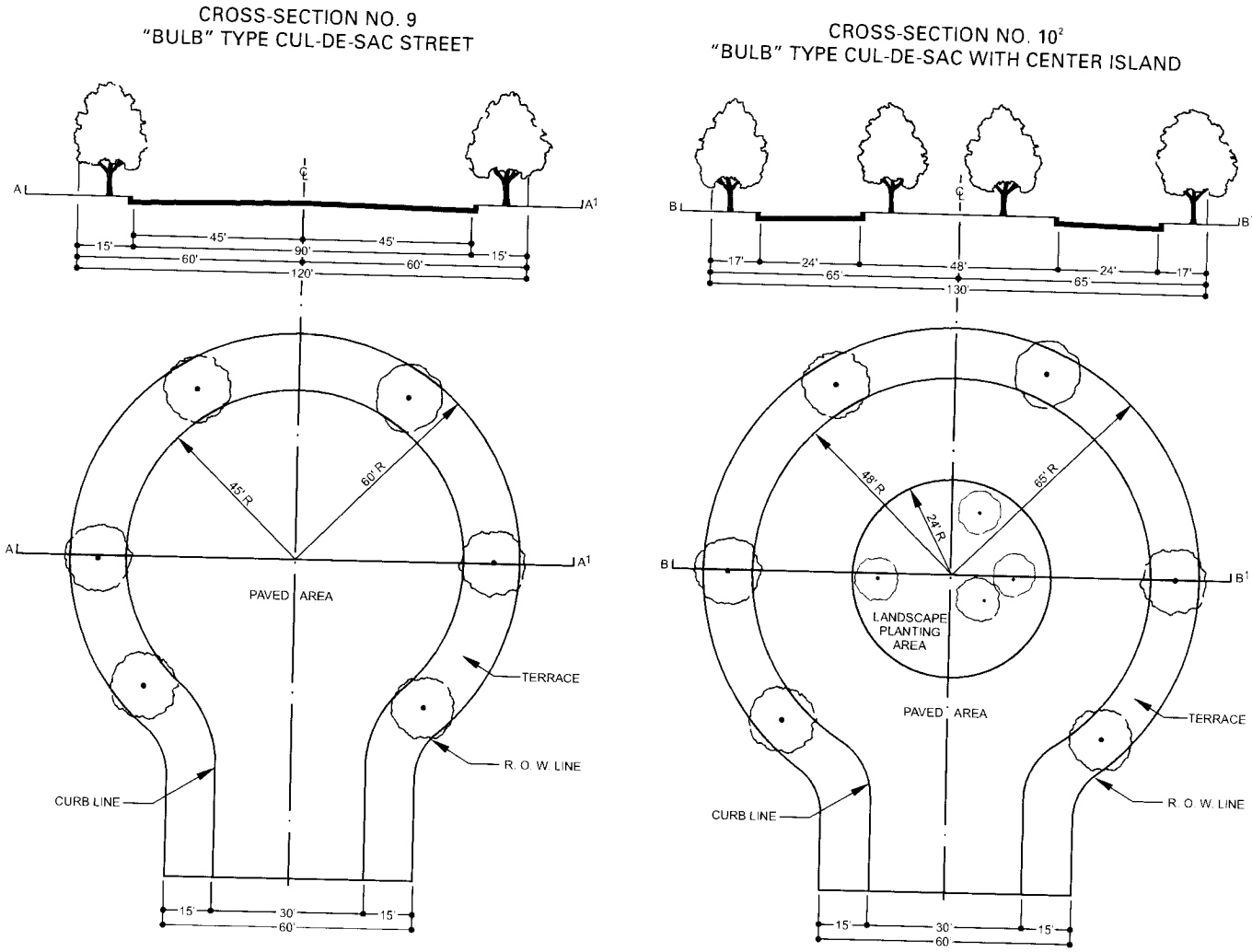


NOTE: THE PAVEMENT AND RIGHT-OF-WAY WIDTH FOR A MINOR LAND-ACCESS STREET MAY VARY FROM 30 FEET OF PAVEMENT WIDTH AND 60 FEET OF RIGHT-OF-WAY WIDTH TO 36 FEET OF PAVEMENT WIDTH AND 66 FEET OF RIGHT-OF-WAY WIDTH. THE NARROWER WIDTH WOULD APPLY TO LAND-ACCESS STREETS CARRYING AVERAGE WEEKDAY TRAFFIC VOLUMES OF UNDER 1,500 VEHICLES PER AVERAGE WEEKDAY, WITH LITTLE TRUCK AND NO BUS TRAFFIC AND LIMITED DEMAND FOR ON-STREET PARKING. THE WIDER WIDTH WOULD APPLY TO LAND-ACCESS STREETS WITH AVERAGE WEEKDAY TRAFFIC VOLUMES OF 1,500 OR MORE VEHICLES PER AVERAGE WEEKDAY, DEMAND FOR ON-STREET PARKING, AND SOME TRUCK AND BUS TRAFFIC.

Frontage Streets

Outer separations at any intersections between arterial streets and paralleling frontage roads should be 150 feet or more in width for traffic safety purposes, where practical and feasible. Narrow separations such as 20 feet wide between arterial streets and paralleling frontage roads, except at intersections, are acceptable.

Figure C-1 (continued)



Half-Streets

The platting of half-streets should be avoided. Half-streets put an unrealistic reliance on the chance that adjacent property owners will develop their adjacent properties at the same time. If half streets are allowed and then improved, their narrow width may result in street maintenance as well as traffic circulation problems.

Cul-de-Sac Streets

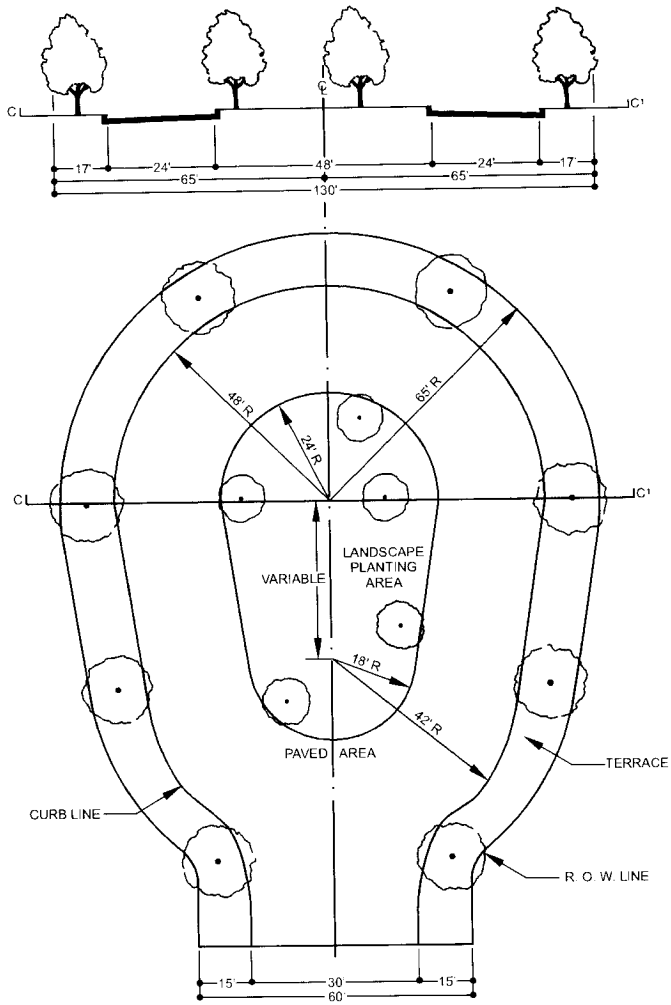
To minimize potential speeding and mid-street turn-arounds, the length of streets designed to have one end permanently closed with a turn-around should not exceed 750 feet. Cul-de-sac streets should terminate in a circular or tear-drop turn-around, as shown in Figure C-1, with preferably center landscaped islands maintained by private means such as a homeowners or condominium association. Such privately maintained landscaped islands should also be provided in the center of "eyebrow" turn-arounds (half circular cul-de-sacs).

Curb Ramps

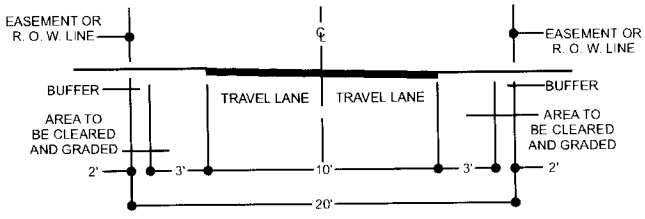
Curb ramps should be provided in accordance with the Americans with Disabilities Act and with Section 66.0909 of the *Wisconsin Statutes*.

Figure C-1 (continued)

CROSS-SECTION NO.11[2]
"TEAR-DROP" TYPE CUL-DE-SAC STREET
WITH CENTER ISLAND

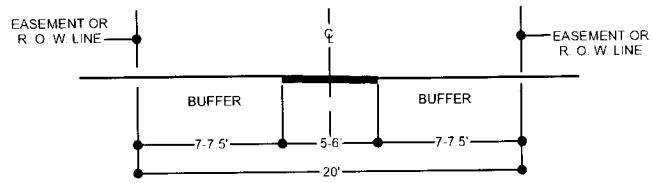


CROSS-SECTION NO.12
TWO-WAY BICYCLE AND PEDESTRIAN PATH
OUTSIDE STREET RIGHT-OF-WAY



NOTE: CENTERLINES ARE NOT NORMALLY REQUIRED ON BICYCLE PATHS. WHERE CONDITIONS SUCH AS LIMITED SIGHT DISTANCE MAKE IT DESIRABLE TO SEPARATE TWO DIRECTIONS OF TRAVEL, A SOLID YELLOW LINE SHOULD BE USED TO INDICATE NO TRAVELING TO THE LEFT OF THE CENTERLINE.

CROSS-SECTION NO.13
PEDESTRIAN WAY



NOTE: PEDESTRIAN WAYS INTENDED TO BE SHARED WITH BICYCLES SHOULD CONTAIN A MINIMUM PAVEMENT WIDTH OF 8 FEET WHERE FEWER THAN 50 USERS ARE ANTICIPATED DURING THE PEAK-USE HOUR. A MINIMUM 10-FOOT WIDE PATH SHOULD BE PROVIDED FOR SHARED-USE WHERE MORE THAN 50 USERS ARE ANTICIPATED.

[1]ALSO SEE TABLE C-1 PERTAINING TO THE PROVISION OF SIDEWALKS. THE VILLAGE OF HARTLAND'S PREFERRED CROSS-SECTIONS SHOWN IN THIS FIGURE ARE, IN ALL CASES, TYPICAL, AND ARE SUBJECT TO VARIATIONS WITH REGARD TO A NUMBER OF CONSIDERATIONS, INCLUDING TOPOGRAPHY, TRAFFIC PATTERNS AND VOLUMES, TRAFFIC AND PARKING LANE WIDTHS, RIGHT-OF WAY WIDTHS, AND ADJACENT LAND USES. NECESSARY VARIATIONS SHOULD BE DETERMINED DURING PRELIMINARY ENGINEERING STUDIES FOR SPECIFIC STREET AND HIGHWAY PROJECTS. THESE CROSS-SECTIONS ARE SHOWN IN ORDER TO PROVIDE THE APPROPRIATE JURISDICTIONAL AGENCIES AND LOCAL OFFICIALS WITH AN INDICATION BOTH OF THE AMOUNT OF RIGHT-OF-WAY WIDTH THAT SHOULD BE CONSIDERED FOR RESERVATION TO ACCOMMODATE THE REQUIRED NUMBER OF TRAFFIC LANES, AND OF WHAT PAVEMENT WIDTHS THAT MAY BE USED AS A STARTING POINT FOR ENGINEERING STUDIES.

[2]THE VILLAGE DETERMINED THAT ANY LANDSCAPED ISLANDS PROPOSED IN THE TURN-AROUNDS SHOULD BE PROPERLY MAINTAINED BY PRIVATE MEANS SUCH AS A HOMEOWNER OR CONDOMINIUM ASSOCIATION.

Source: SEWRPC.

Table C-1

RECOMMENDATIONS FOR THE PROVISION OF SIDEWALKS IN AREAS OF EXISTING OR PLANNED URBAN DEVELOPMENT IN THE VILLAGE OF HARTLAND

Roadway Functional Classification	Land Use	New Streets[a,b]	Existing Streets[a,b]
Arterial Streets[c]	Industrial	Both sides	Both sides
	Commercial	Both sides	Both sides
	Residential	Both sides	Both sides
Collector Streets and Minor Land-Access Streets[d]	Industrial	At least one side[e]	At least one side
	Commercial	At least one side[e]	At least one side
	Residential	At least one side[e]	At least one side

[a] *Sidewalks may be omitted along sides of streets where there are no existing or anticipated uses that would generate pedestrian trips on that side. Sidewalks proposed through environmentally sensitive areas should be reviewed on a case-by-case basis to determine if such a sidewalk is needed, or if there are alternative routes or options that may be less disruptive such as, for example, a boardwalk over wetlands.*

[b] *Asphalt pathways may be provided in place of concrete sidewalks along busy arterial and collector streets, except for those in the Village Center for aesthetic reasons, when the pathway would function as a shared recreation path for walking, bicycling, and in-line skating, and would connect to parks and schools.*

[c] *Where there are marginal access control or service and frontage roads, the sidewalk along the main road may be eliminated and replaced by a sidewalk along the service or frontage road on the side away from the main road.*

[d] *Sidewalks need not be provided along courts and cul-de-sac streets less than 600 feet in length, unless such streets serve multi-family development or connect to points of interest with pedestrian outlots or easements located between lots leading to, for example, schools, parks, or shopping areas. Also, sidewalks need not be provided along the side of streets that are served by adjacent parallel off-street walkways or recreation trails; however, sidewalks should be provided on the opposite side of said street.*

[e] *Sidewalks should be provided along both sides of busy collector streets where there are existing or anticipated uses that would generate pedestrian trips on each side.*

Source: Village of Hartland and SEWRPC.

Bicycle and Pedestrian Facilities

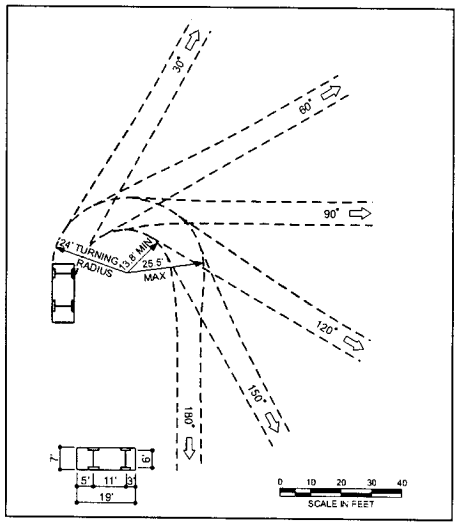
Bikeways[2] and pedestrian facilities should be provided for safe and convenient access to activity centers and places of employment. The provision of such facilities should be based, in part, on Figure C-1, Table C-1, and the

[2] *A "bikeway" is a general term that includes any road, path, or way that may legally be used for bicycle travel. Types of bikeways include "bike paths," which are physically separated from motorized vehicles; "bike lanes," which are portions of roadways that are designated by striping, signing, and pavement markings for the exclusive or preferential use by bicycles; and "shared roadways," which are roadways that do not have a designated bike lane, but may be legally used for bicycle travel. A "bike route" is a bikeway designated with directional and information markers, and may consist of a combination of bike paths, bike lanes, and shared roadways.*

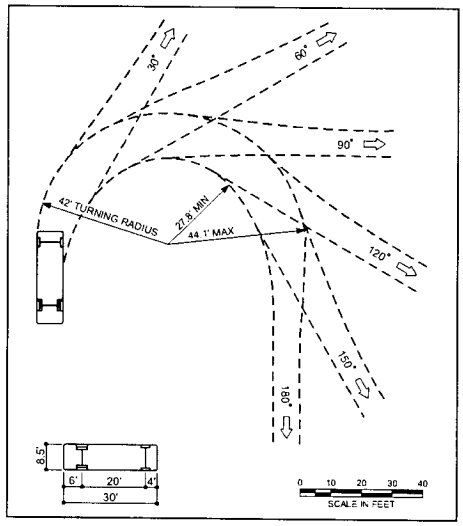
Figure C-2

TURNING RADII OF SELECTED MOTOR VEHICLES

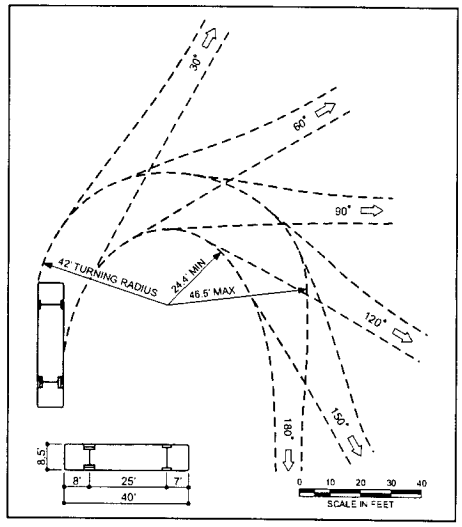
A. PASSENGER CAR



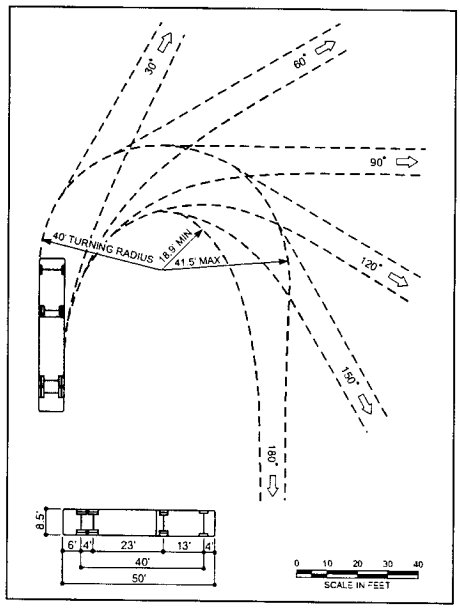
B. SINGLE-UNIT TRUCK



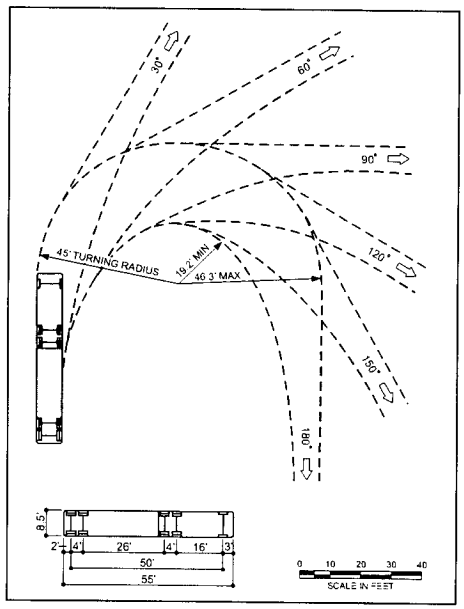
C. 40-FOOT-LONG BUS



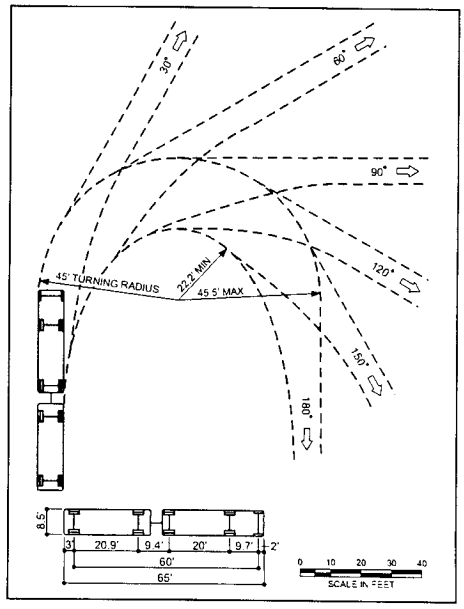
D. 50-FOOT-LONG INTERMEDIATE SIZE SEMITRAILER COMBINATION TRUCK



E. LONG LARGE-SIZE SEMITRAILER COMBINATION TRUCK



F. 65-FOOT-LONG SEMITRAILER-FULL TRAILER COMBINATION TRUCK



NOTE: THE TURNING TEMPLATES SHOW THE TURNING PATHS OF THE AASHTO DESIGN VEHICLES. THE PATHS SHOWN ARE FOR THE LEFT FRONT OVERHANG AND THE OUTSIDE REAR WHEEL. THE LEFT FRONT WHEEL FOLLOWS THE CIRCULAR CURVE; HOWEVER, ITS PATH IS NOT SHOWN.

Source: American Association of State Highway and Transportation Officials (AASHTO).

planning and design standards established in SEWRPC Planning Report No. 43, *A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010*, which includes specific design guidelines such as desirable grades, sight distances, pavement widths, crosswalks, and other standards. Off-street bike and pedestrian ways should be provided to connect cul-de-sac streets and adjacent streets across blocks of 900 feet or longer, and should be provided to connect adjacent subdivisions, subdivisions and activity centers, and activity centers and employment centers where alternative on-street routes are unduly circuitous. Examples of site designs that facilitate bicycle and pedestrian travel are illustrated in Figure C-3.

Whenever a street or highway that is designated as a bikeway is constructed, reconstructed, or resurfaced, such streets should accommodate bicyclists in accordance with Figure C-1. On streets with low traffic speed and volumes that contain a cross-section design with roadside swales and no curb and gutter, a paved shoulder with a width of at least four feet, and preferably five or six feet, should be provided to accommodate bicyclists if a separate path is not practical.

If a community desires a long gently curving sidewalk or path versus a straight linear alignment along streets, additional right-of-way may be necessary. In order to accommodate street trees and pedestrian ways, while minimizing obstruction of utilities in the tree terrace and yet contain sufficient space to curve the sidewalk or path, the distance from the face of curb to the right-of-way line should be at least 15 feet. In addition, such sidewalks or asphalt paths should also be at least four feet from the face of the curb to provide space for snow storage and utility location. This additional right-of-way should provide sufficient space for design flexibility to provide a more interesting free-flowing pedestrian pathway that gently winds around staggered street trees or even plant beds.

Vehicular Access

Access and Street Intersections

Driveways on corner lots should be set back sufficiently from intersecting streets so that they do not interfere with traffic movement. The corner clearance between new direct public or private access and an arterial street intersection should be a minimum of 115 to 230 feet or, preferably, 250 feet where land parcel size permits, as illustrated in Figure C-4. The clearance distance is defined as the distance between the nearest face of curb or edge of pavement of the intersecting street and the nearest face of curb or edge of pavement of the nearest access point upstream or downstream of the intersection.

Arterial Highway Access Barriers

No-access easements for motorized vehicles and physical barriers, such as ditching, curbing, fencing, plantings, berms, or other landscape barriers, should be provided to prevent undesirable vehicular access to arterial streets or highways and to properly and safely channelize traffic movements. When plantings are used as an access barrier, the width of the landscaped area should be at least 10 feet. If berms are used as barriers, the width of the landscaped area should be able to accommodate the size of the berms, based on their slope, crown, height, and form. When structural barriers are used, the minimum width could be five feet, preferably wider, with landscaping such as trees and shrubs provided between the structure and adjacent right-of-way. Where applicable, openings should be provided in the barriers for convenient bicycle and pedestrian access to adjacent streets. The vision clearance triangle standards discussed herein should also be observed. Figure C-5 illustrates alternative landscaping methods for barriers with parking lot screening.

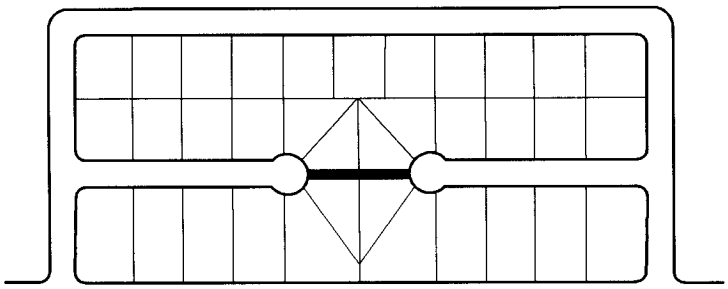
Reverse-Frontage Lots to Limit Arterial Highway Access

Reverse-frontage lots should be located adjacent to arterial streets or highways to limit vehicular access from abutting land uses. A landscaped buffer strip at least 30 feet wide should be provided with a nonaccess reservation along the rear property lines of residential reverse-frontage lots, as shown in Figure C-6. The landscaped buffer strip should be completed as part of a development to ensure proper installation and design continuity. Normal lot depths should be increased relative to the width of the buffer strip.

Figure C-3

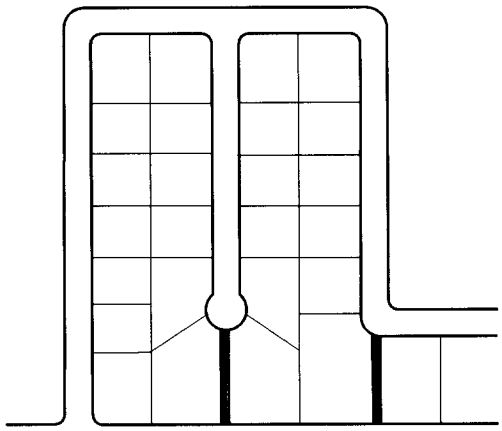
EXAMPLES OF SITE DESIGNS WHICH FACILITATE BICYCLE AND PEDESTRIAN TRAVEL

A. BICYCLE AND PEDESTRIAN CONNECTIONS BETWEEN CUL-DE-SAC STREETS



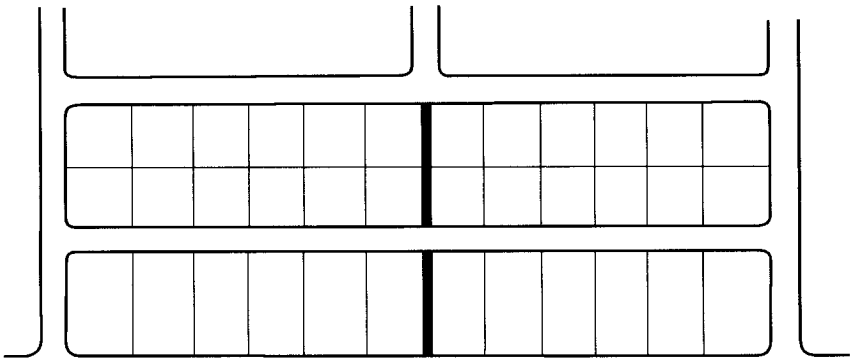
ARTERIAL STREET

B. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS BLOCKS



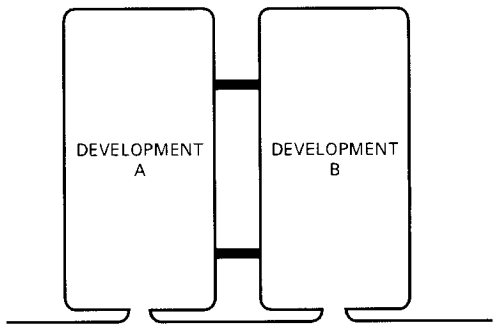
ARTERIAL STREET

C. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS LONG BLOCKS



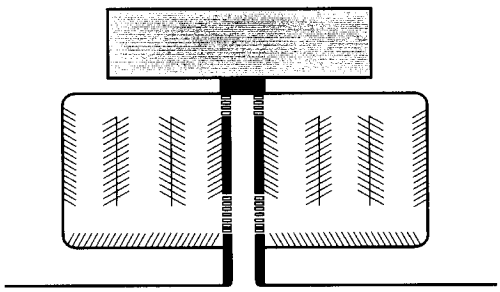
ARTERIAL STREET

D. BICYCLE AND PEDESTRIAN CONNECTIONS BETWEEN ADJACENT DEVELOPMENTS



ARTERIAL STREET

E. DESIGN OF PARKING LOT TO FACILITATE BICYCLE AND PEDESTRIAN ACCESS (WHERE PARKING CANNOT BE LOCATED TO REAR OF BUILDING)

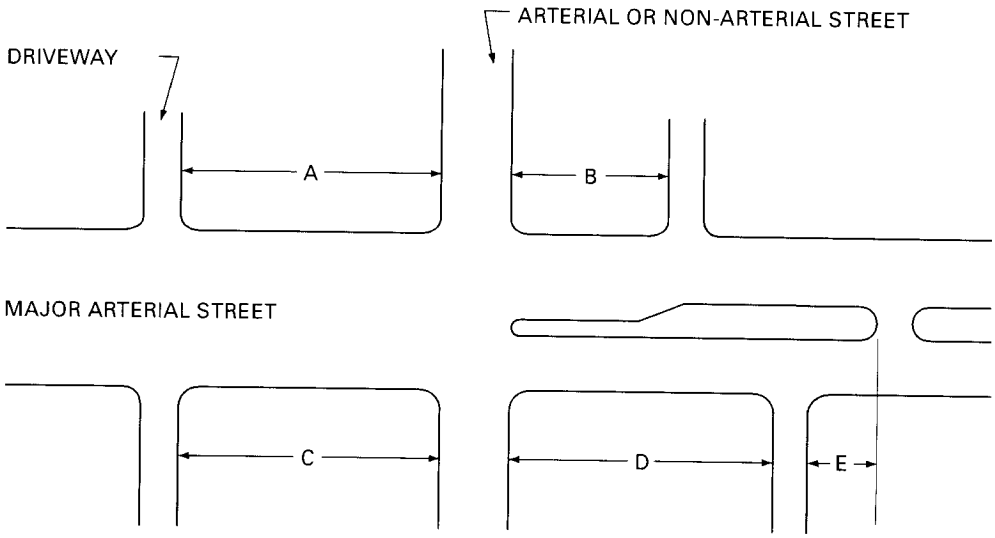


ARTERIAL STREET

Source: SEWRPC.

Figure C-4

DESIRABLE MINIMUM CORNER CLEARANCES AT SIGNALIZED AND UNSIGNALIZED STREET INTERSECTIONS



INTERSECTION OF MAJOR ARTERIAL AND ARTERIAL/NON-ARTERIAL STREET CONTROLLED BY TRAFFIC SIGNAL

Key	Corner Clearance (feet)
A	230
B	115
C	230
D	230
E	150

INTERSECTION OF MAJOR ARTERIAL AND ARTERIAL/NON-ARTERIAL STREET CONTROLLED BY STOP SIGNS ON ARTERIAL/NON-ARTERIAL STREET

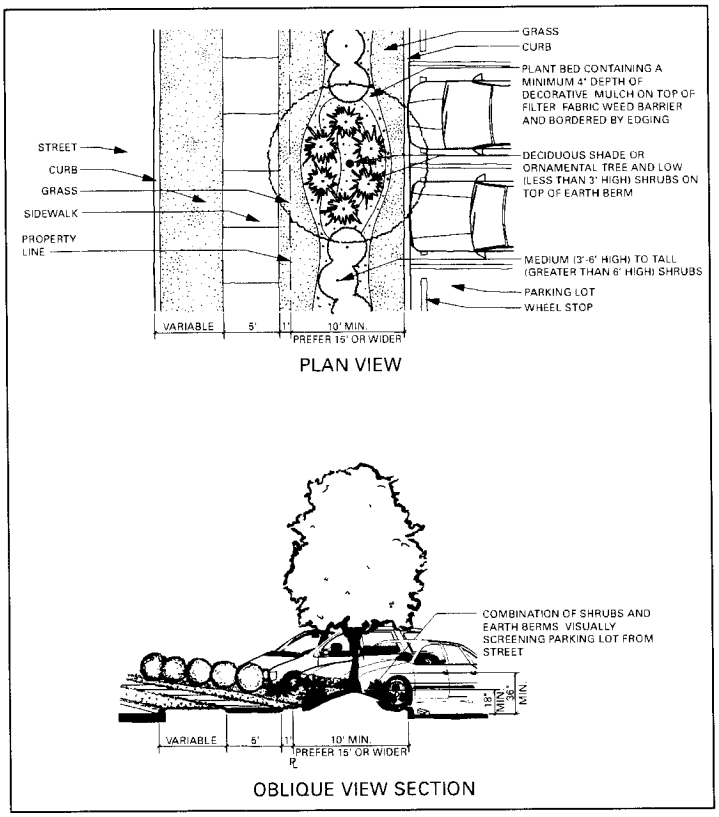
Key	Corner Clearance (feet)
A	115
B	85
C	115
D	115
E	150

Source: Institute of Transportation Engineers and SEWRPC.

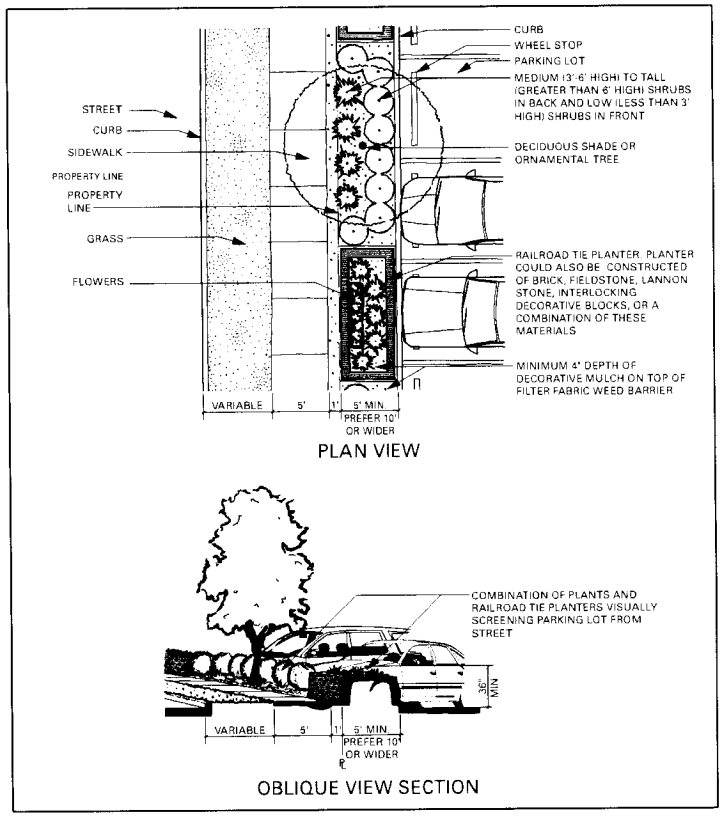
Figure C-5

ALTERNATIVE LANDSCAPING FOR HIGHWAY ACCESS BARRIERS AND PARKING LOT SCREENING

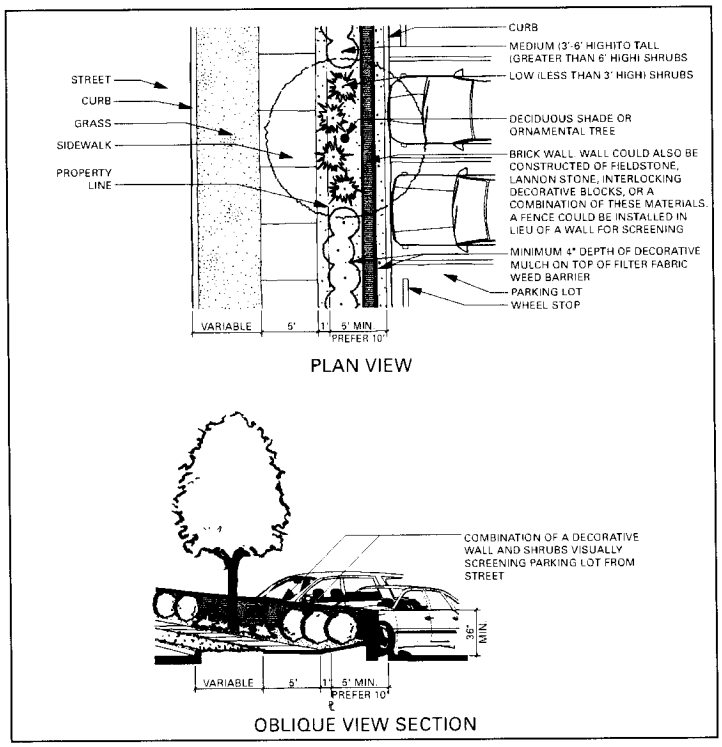
A. SCREENING WITH BERMS AND PLANTS



B. SCREENING WITH PLANTS AND PLANTERS



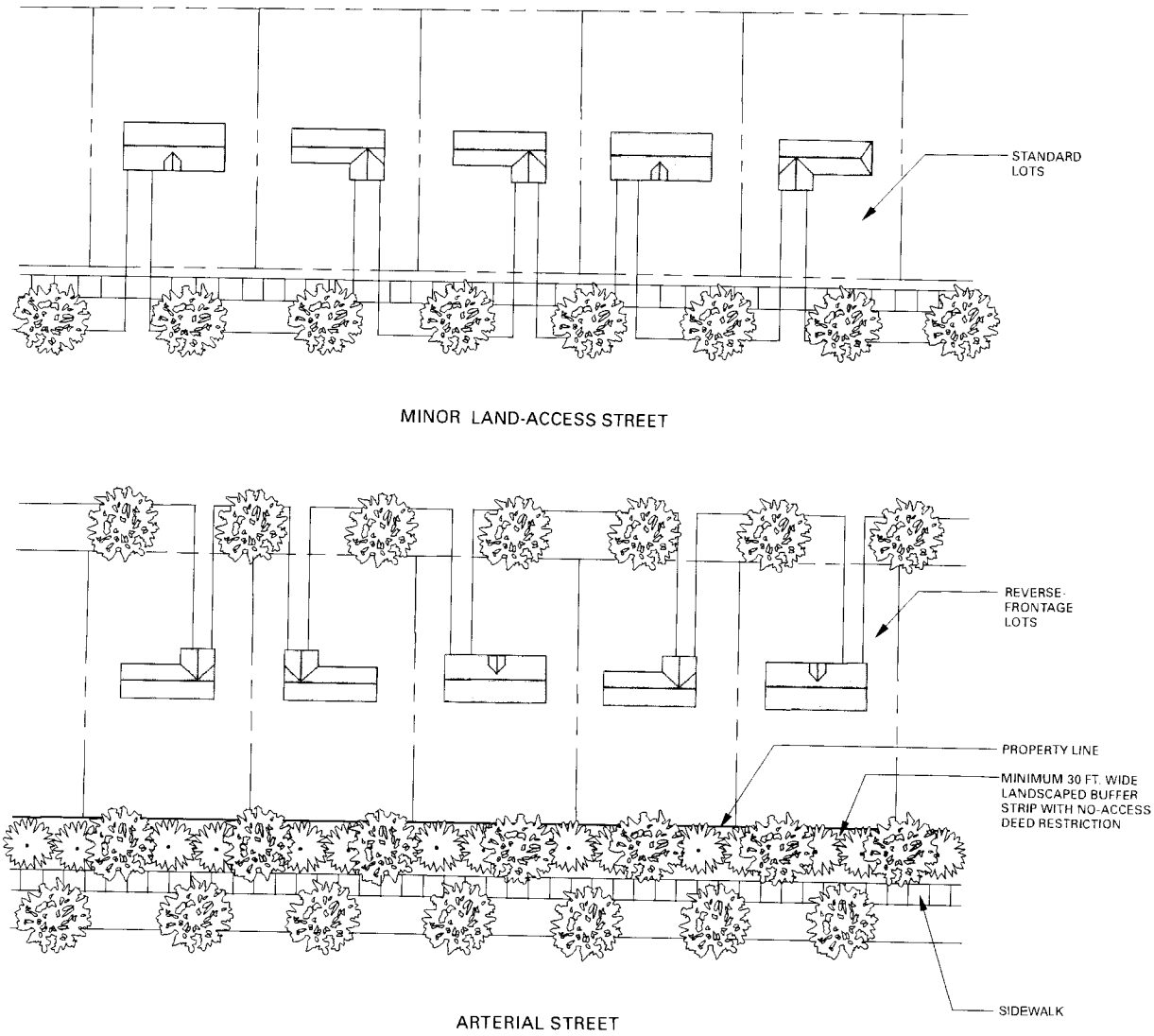
C. SCREENING WITH WALL AND PLANTS



Source: SEWRPC.

Figure C-6

REVERSE-FRONTAGE LOTS TO LIMIT VEHICULAR ACCESS TO ARTERIAL STREETS



Source: SEWRPC.

Looped Land-Access Streets and Shared Driveways/Traffic Aisles

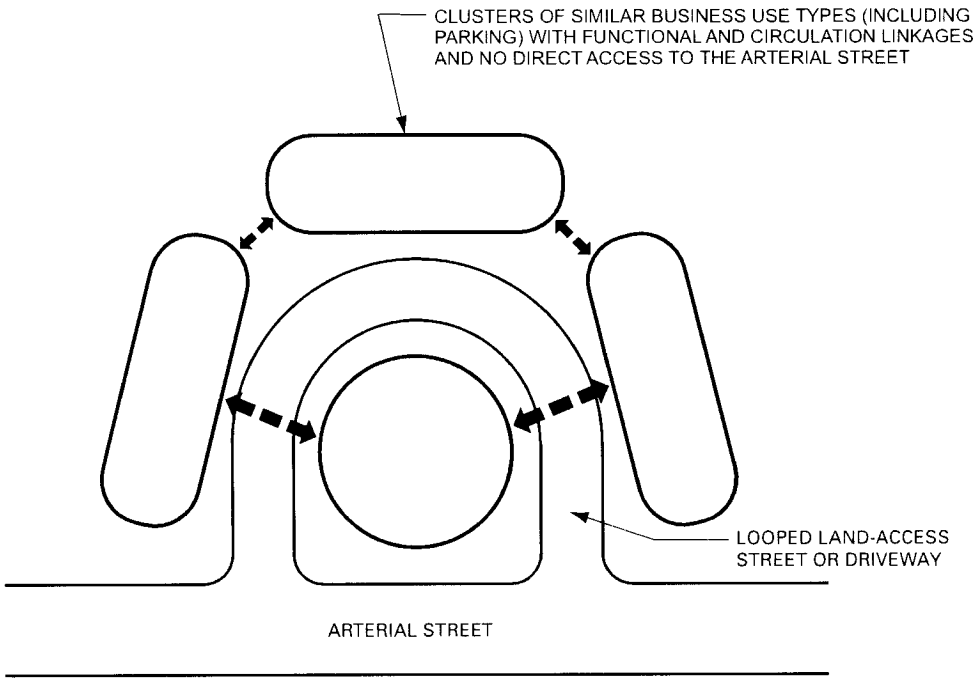
Looped land-access streets and shared drives should be used, when feasible, to help reduce the potential number of driveway intersections along an arterial for commercial areas, as illustrated in Figure C-7. In cases where parking lots are located in the front yard, shared traffic aisles should be used between adjoining compatible uses, such as abutting commercial uses, that are aligned parallel with arterial streets to help reduce the number of access points and vehicles entering onto and exiting off the arterials.

Alignments and Shared-Use of Driveways

Driveways should intersect each other and streets at as nearly right angles as topography and other limiting factors of good design permit. Driveway entrances along both sides of an arterial should be aligned as illustrated in Figure C-8 to help reduce the number of driveways needed and limit some of the confusion caused by unaligned driveways. Also, the use of shared driveways, except for single-family residential uses, and parking lots between

Figure C-7

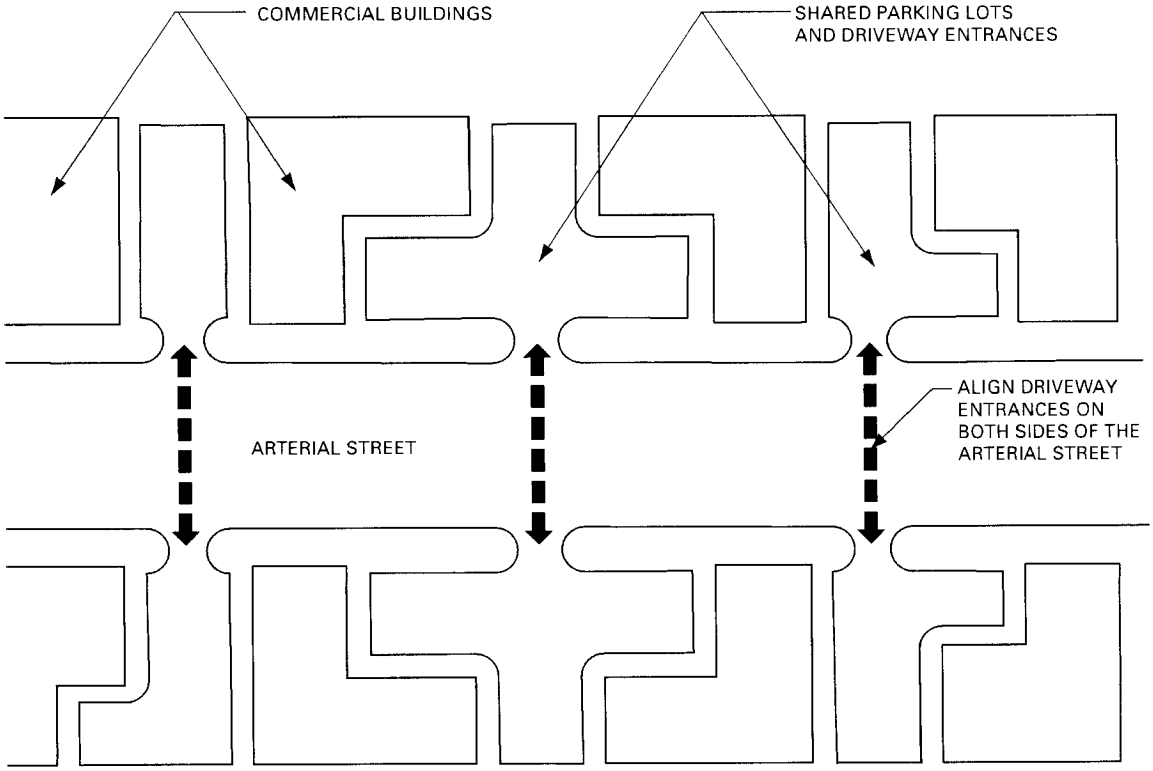
DESIRABLE LOOPING OF DRIVEWAYS AND LAND-ACCESS STREETS IN COMMERCIAL AREAS



Source: SEWRPC.

Figure C-8

DESIRABLE ALIGNMENT AND SHARED USE OF DRIVEWAYS AND PARKING LOTS IN COMMERCIAL AREAS



Source: SEWRPC.

compatible land uses should be promoted, as shown in Figure C-8. In such cases, the driveway centerline may be the property line between two parcels of land or may be a mutually agreed-upon access easement.

Driveway Design for Entering Vehicles
Driveway design along arterial streets should allow an entering vehicle a turning speed of 15 miles per hour to help reduce interference with through arterial street traffic. Driveway design and placement should be coordinated with internal site circulation and off-street parking design so that the driveway entrance to the site can absorb the maximum expected rate of inbound traffic during a normal peak-traffic period. Driveway widths should also be based on the minimum turning radii required for the types of vehicles entering and exiting the site, as illustrated in Figure C-2. In general, driveways should be at least 10 feet wide for one- and two-family dwellings, and 24 feet wide at the right-of-way line for all other uses. In addition, driveway widths should not exceed 24 feet at the right-of-way line and 30 feet at the roadway for residential land uses, and should not exceed 30 feet at the right-of-way line and 35 feet at the roadway for all other land uses. Local officials may determine that a wider opening may be necessary, after a recommendation by the Village Engineer, to prevent a traffic hazard.

Driveway Spacing
Driveway spacing should be determined as a function of street operating speeds. The minimum spacing between access driveways along an arterial street or highway should be determined according to Table C-2. These spacings are based on average vehicle acceleration and deceleration rates and are considered necessary to maintain safe traffic operation.

Maximum Number of Driveways per Parcel
Generally, where abutting street frontage is less than 400 feet along arterial streets and highways, a maximum of one driveway opening may be permitted to a particular site, except reverse-frontage lots, from each of any one or two abutting arterial streets and highways. One additional driveway entrance along a single continuous parcel of land with frontage in excess of 400 feet may be permitted. When a shared driveway is used, it should be considered as a single direct-access driveway.

Traffic Visibility

Sight Distance and Driveway Placement
Direct-access driveway placement on abutting arterial streets and highways should be such that an exiting vehicle will have the minimum unobstructed sight distance listed in Table C-3 for the operating design speed of the abutting arterial street or highway.

Vision Triangles
A vision clearance triangle should be provided in which obstructions, such as structures, vegetation, and parked automobiles, are minimized between the heights of 2.5 and 10 feet above the mean curb grade adjacent to the triangular space formed by intersecting nonarterial street (collector and minor land-access streets) right-of-way lines and a line joining points on such lines at a point 15 feet from their intersection, as shown in Figure C-9. In the case of streets intersecting arterial streets and railways, the corner cutoff distances establishing the vision clearance triangle should be increased to 50 feet, as illustrated in Figure C-9. Vision clearance triangles at intersections with State or County Trunk Highways should meet the vision corner requirements of the State or Waukesha County highway agency that has jurisdiction, but in no case should they be less than those specified in Figure C-9 except in the Village Center where many buildings are on or close to street right-of-way lines. The aforementioned standards may be modified on a case-by-case basis within the Village Center by the appropriate government agency having jurisdiction.

Single-trunk trees and pole signs may be permitted within the vision clearance triangle provided they are located as far away from the intersection as possible and that the bottom of the tree canopy or the sign face is at least 10 feet above the adjacent mean curb grade. Trees, when planted, should be pruned of branches lower than about five

Table C-2

HIGHWAY OPERATING SPEED AND MINIMUM SPACING BETWEEN DIRECT-ACCESS DRIVEWAYS

Highway Speed Limit (mph)	Minimum Spacing (feet)
25	105
30	125
35	150
40	185
45	230
50	275

Source: American Planning Association and the Wisconsin Department of Transportation.

Table C-3

HIGHWAY DESIGN SPEED AND MINIMUM REQUIRED SIGHT DISTANCE FOR DIRECT-ACCESS DRIVEWAY PLACEMENT

Highway Design Speed (mile per hour)	Minimum Sight Distance (feet)	Desirable Sight Distance (feet)
30	200	200
35	225	250
40	275	325
45	325	400
50	400	475

Source: American Association of State Highway and Transportation Officials and the Wisconsin Department of Transportation.

feet above grade; thereafter, all trees should be pruned of branches below 10 feet, when feasible, in relation to tree size as it grows. Open fences with less than 25 percent opaqueness and necessary utility poles and traffic, directional, and street name signs may also be allowed; however, any proposed objects within the clearance triangle should be coordinated with the government agency having jurisdiction.

Blocks

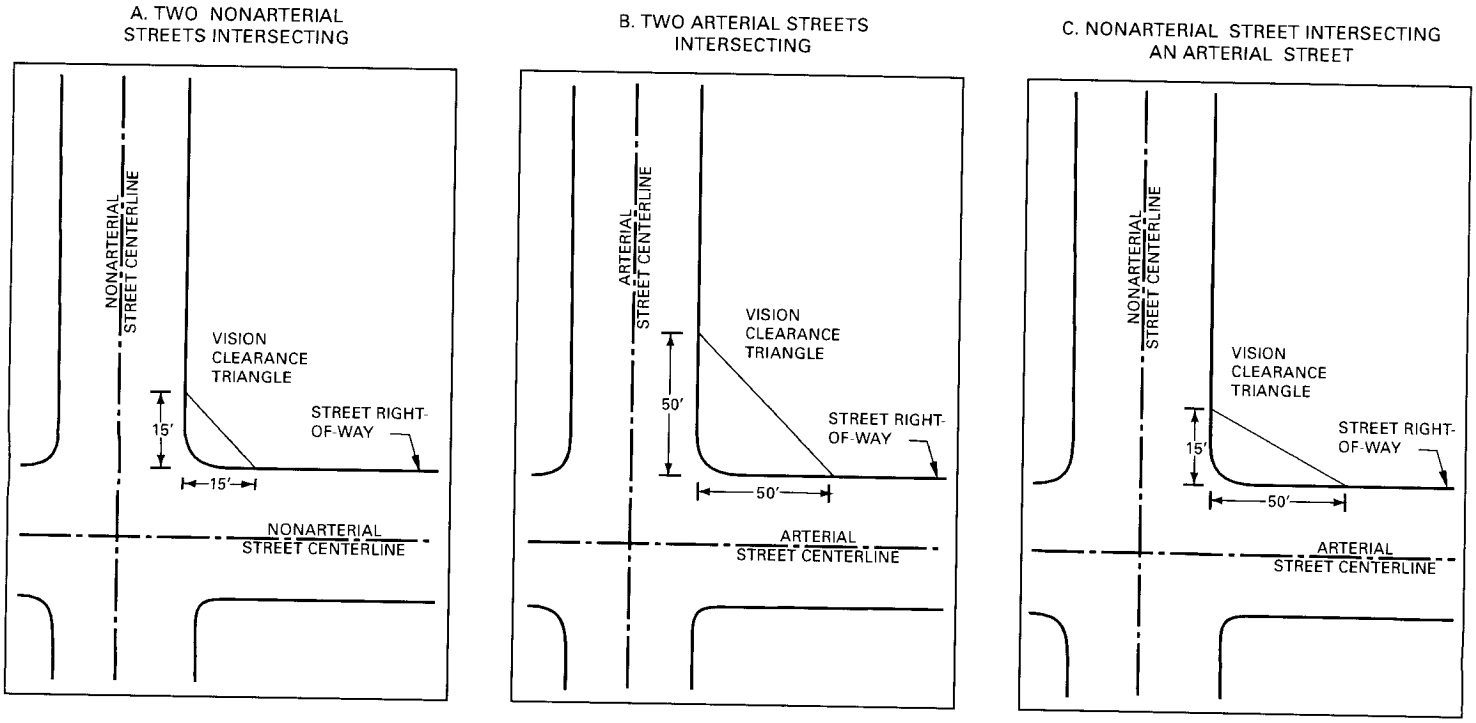
General

The widths, lengths, and shapes of blocks should be suited to the planned use of the land; subdivision ordinance requirements; the need for convenient access, control, and safety of street traffic; and the preservation of and minimal adverse impact upon natural resource features, including the limitations and opportunities provided by topography.

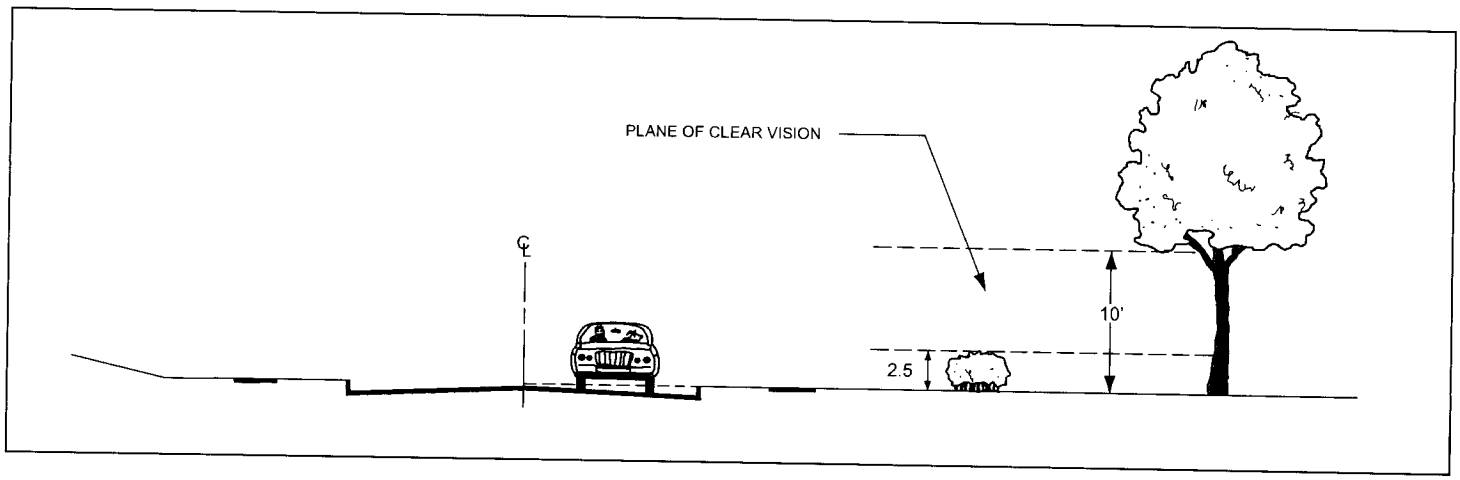
Figure C-9

VISION CLEARANCE TRIANGLES

PLAN VIEWS



CROSS-SECTION VIEW



Source: SEWRPC.

Length

Blocks in residential areas should not be less than 600 feet nor generally more than 1,500 feet in length unless otherwise dictated by the preservation of natural resource features, including exceptional topography or other limiting factors of good design.

Mid-Block Bicycle and Pedestrian Ways
Bicycle and/or pedestrian ways should be provided near the center and entirely across any block exceeding 900 feet in length to provide adequate pedestrian and bicycle circulation and access to schools, parks, shopping centers, churches, or transportation facilities. Bicycle and pedestrian ways should consist of easements or dedicated rights-of-way at least 20 feet in width. Pavement widths of at least five feet, or wider depending on the type and volume of users, should be provided, as indicated in Figure C-1.

Width
Blocks should be wide enough to provide for two tiers of lots of appropriate depth except where a single tier of lots may be necessary to separate developments from through traffic, such as with reverse frontage lots, or to protect and preserve natural resources.

Lots

General
The size, shape, and orientation of lots should be appropriate for the location of a proposed subdivision, for the preservation of natural resources, and for the type of development and use contemplated. The lots should be designed to provide an aesthetically pleasing building site and a proper architectural setting for the building contemplated.

Side Lot Lines
Unless justified by the configuration and preservation of natural resource features, side lot lines should be at right angles to straight street lines or radial to curved street lines on which the lots face. Lot lines should follow municipal boundary lines rather than cross them.

Double-Frontage Lots
Double-frontage, or "through," lots should be prohibited, except where necessary to provide separation of development from arterial traffic, as shown in Figure C-6, or to overcome specific disadvantages of topography and orientation.

Access
In general, every lot should front or abut a public street.

Lot Size
Lot sizes should contain sufficient area to adequately accommodate buildings, parking, landscaping, screening, and all required yards. Area and dimensions of all lots should conform to the requirements of the Village zoning ordinance.

Lot Depth and Proportion
It is recommended that the depth of new lots should generally be at least 120 feet. Normal lot depths should be increased relative to the width of any buffer strips provided along abutting arterial streets, highways, and railways. In certain cases, the depth should be increased to accommodate shared land-access road or traffic aisles between adjoining compatible uses and aligned parallel with arterial streets to help reduce the number of access points along arterials. Excessive depth of lots in relation to width should be avoided whenever possible unless justified for the preservation of natural resources; a proportion of two-and-one-half to one (2.5:1) is suggested as a maximum depth-to-width ratio. Flag lots, easements, and other lot stacking techniques should be avoided whenever possible, unless necessary to preserve natural resources or overcome specific disadvantages of topography and/or orientation.

Lot Width
Lots within the interior of a block should have a width at the building setback line that conforms to the Village zoning ordinance. In general, required minimum lot widths should be increased if a utility easement, bicycle way, pedestrian way, or a landscaped buffer strip is provided.

Corner Lots

Corner lots should have an additional width of at least 20 feet to permit adequate building setbacks from side streets.

Commercial Spatial Considerations

Commercial Business Clustering

Businesses with similar characteristics should form commercial clusters versus strips within proximity of one another in order to better define identifiable commercial areas for the user, provide functional linkages of similar business types, and provide circulation linkages for vehicular, bicycle, and pedestrian traffic. Businesses may be located so as to form the following three general types of clusters:

1. *Shopping center retail sales and services,* characterized by onsite parking for customer automobiles and a pedestrian-oriented shopping environment. Uses in this category would include general merchandise stores, food stores, apparel and accessory stores, drug stores, department stores, gift shops, cleaners, barbers and hairdressers, banks and savings and loan institutions, and restaurants (other than drive-in or drive-through).

2 *Automobile-oriented retail sales and services,* characterized by sales and services to commercial customers in the automobile. These types of commercial uses are not pedestrian oriented. Uses in this category include gasoline stations, automobile sales and service, car washes, drive-in banking, drive-in/drive-through restaurants, hotels, motels, and "big-box" retail stores.

3. *Offices,* including professional offices, medical offices, dental offices, clinics, and printing and photo reproduction services.

Traffic Circulation Between Adjacent Properties

Provision for traffic circulation between adjacent commercial uses should be provided through coordinated access drives, shared parking lots, and interconnecting bicycle and pedestrian ways, as shown in Figures C-3, C-7, and C-8.

Onsite Vehicular Circulation

The vehicular circulation system within and around individual commercial parcels should be developed so as to provide easy access to parking facilities from the larger community without lessening the safety or capacity of arterials. Conflicts between vehicles and pedestrians should be avoided where possible and, where conflicts cannot be totally avoided, conflicts should be minimized. Also, delivery and service circulation patterns on the site should not conflict with customer circulation.

Onsite Queued Vehicle Storage

Sufficient onsite space should be provided to accommodate at least three queued vehicles waiting to park or exit the parking lot without utilizing any portion of the arterial street right-of-way or interfering with arterial street traffic and safety. For drive-through services, queuing area to accommodate at least seven vehicles should be provided onsite.

Onsite Service and Loading Areas

Service and loading areas should be located for convenient service vehicle access. Service and loading areas should not conflict with pedestrian or general vehicular traffic in the area. Also, service and loading areas should be screened or located in the rear of buildings to shield them from view by the public and customers.

Parking Lots

Number of Parking Spaces

Parking spaces should be provided in sufficient number to meet the applicable zoning requirements. Reserved parking stalls should be provided for the physically disabled pursuant to the Americans with Disabilities Act and Section 346.503 of the *Wisconsin Statutes*. When warranted, adjustments to the minimum number of parking spaces required should be allowed to avoid constructing unneeded and excessive impervious surfaces in areas that could otherwise be preserved or converted to landscaped open space.

Parking Lot Location

Parking lots should be sited to minimize walking distances to the facility the parking lot is serving. Parking spaces for the disabled should be located as close as possible to a building entrance which allows such persons to enter and leave the parking area without assistance and, if possible, without crossing traffic lanes or passing behind other parked vehicles.

Parking Lot Dimensions

Minimum design dimensions for parking lots are shown in Figure C-10. Dimensions for handicapped parking spaces should comply with those established in the Americans with Disabilities Act.

Parking Lot Drive Width

Parking lot drives should have a minimum width as specified in Figure C-10 based on the parking space angle and whether the drive or traffic aisle will accommodate one- or two-way traffic.

Surfacing

All traffic aisles and off-street parking lots should be graded and hard-surfaced with concrete or asphalt so as to be dust-free and properly drained. Parking areas for five or more vehicles should have the aisles and parking spaces clearly marked in order to distinguish between parking stalls and vehicular circulation areas.

Parking Visibility from Arterial Streets

Parking lots should be partially visible from an adjoining arterial street or highway, have clearly marked entrances and exits, and be visually distinguishable from public rights-of-way. Parking lots with spaces perpendicular to arterial street rights-of-way and with direct access to the right-of-way without a service drive should be prohibited.

Curbs and Barriers Near Structures and Lot Lines

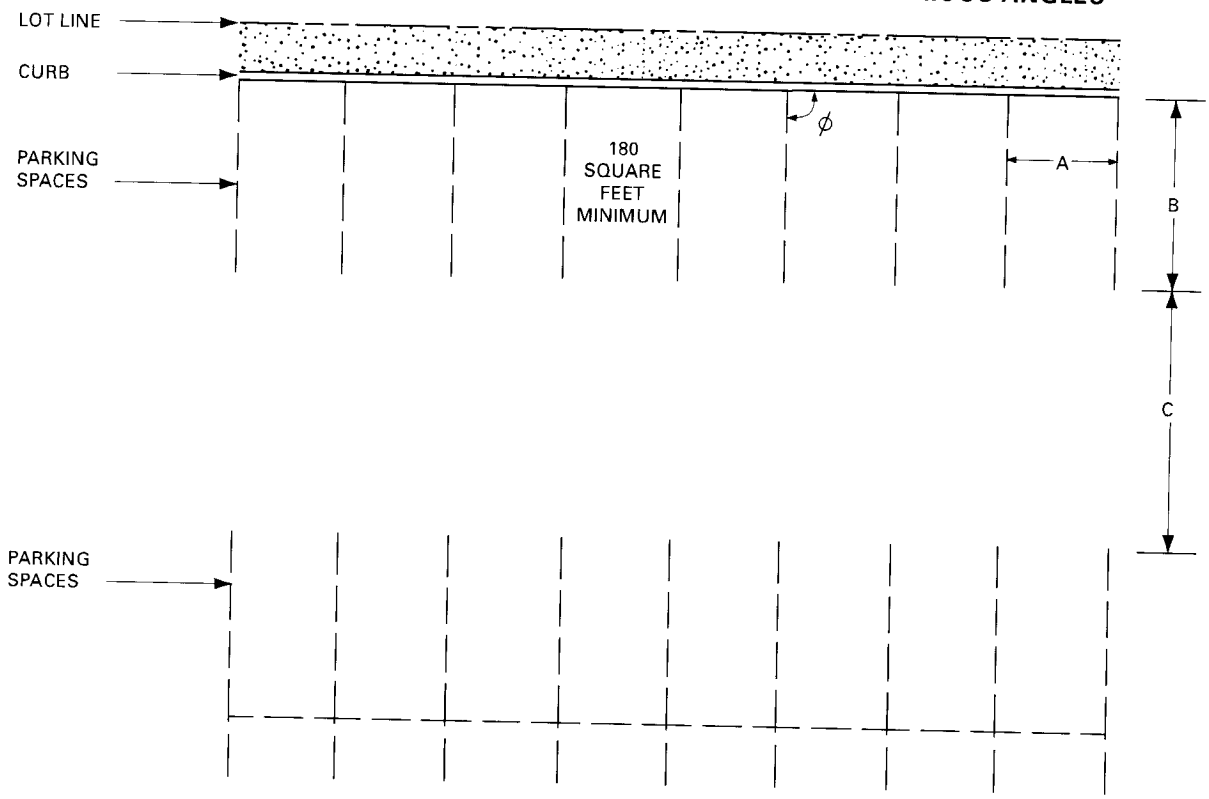
Curbs or barriers should be installed a minimum of five feet, and preferably 10 feet, from structures and property lines to prevent parked vehicles from damaging structures or from extending over lot lines and sidewalks. In addition, adequate space should be provided for landscaping and visual screening which would further help prevent vehicles in off-street park areas from directly backing onto public sidewalks and streets.

Parking Lot Lighting

Parking lot lighting should serve four purposes. First, the lighting should provide for the safe movement of pedestrian and vehicular traffic. Second, it should aid in the provision of an environment which promotes security and crime prevention. Third, the lighting should aid in creating an aesthetically pleasing environment at nighttime, as well as during the daylight hours. Fourth, the lighting for commercial parking lots should assist in promoting the use of commercial facilities both day and night.

Figure C-10

SUGGESTED DESIGN DIMENSIONS FOR PARKING LOTS AT VARIOUS ANGLES



Design Dimensions (feet)	Key	Degrees (ø)				
		0	30	45	60	90
Stall Width	A	9	10	10	10	10
Stall Length	B	22	18	18	18	18
Aisle Width	C	12	12	12	16	24[a]

[a] *Two-way aisle.*

Source: SEWRPC.

Parking lots should be lit to meet current standards issued by the Illuminating Engineering Society of North America (IESNA),[3] which ranges from 0.2 to 2.0 footcandles based on the type of use the parking lot is serving as well as the extent of desired security. All outside lighting should be arranged and shielded to prevent glare, reflection, nuisance, inconvenience, or hazardous interference of any kind on, to, or with adjoining streets or residential properties. The intensity of illumination should not exceed 0.5 footcandles at property lines. In general,

[3] *Lighting standards should be based on the most recent edition of IESNA Document RP-20,* Lighting for Parking Facilities. *The recommended illumination values provided are meaningful only when used in conjunction with other elements. The most critical elements are luminaire mounting height, spacing, transverse location of luminaries, luminaire selection, traffic conflict areas, border areas, transition lighting, alleys, and roadway lighting layouts.*

light poles for parking lots should not exceed 25 feet in height and should be placed at least four feet from tire-stops or paved areas, or protected by other approved means. All wiring should be placed underground.

Landscaping

General

A landscape design for a site should be integrated with the overall site plan and consistent with the desired community character, and not be considered merely as an afterthought. Landscaping enhances the overall attractiveness of a community and contributes to the general welfare of the public by providing shade, shelter, and screening. Plants selected for use in the urban environment, such as in parking lots and along streets, should be salt-tolerant. Decorative mulch, such as stone or shredded hardwood bark, with underlying filter fabric weed barrier should be used in lieu of turf grass where heavy pedestrian and vehicular traffic is present or where the availability of water is limited. If such grass is proposed in landscaped areas, it should be properly maintained and protected from pedestrian and vehicular traffic, otherwise an "all-weather" surface material should be used, such as decorative pavement surface or stone mulch with underlying weed barrier. Excessive pavement of open space areas with hard-surface materials such as asphalt or concrete should be discouraged. Flower beds should only be provided if provisions are made for proper maintenance. Berms are beneficial for plants especially if more suitable planting soil is placed above areas containing poor soil and drainage. Invasive plants identified in Appendix D should not be used in landscaping. The finished side of proposed fences should face the street or neighboring property with the supporting structural components of the fence facing away from adjacent streets or properties. In addition, any proposed landscaping should recognize traffic safety requirements including those for sight distances, vision triangles, and vehicular recovery areas.

Natural native plants, including prairie grass and wildflowers, should be used in areas of steep topography, along rural roadways, and in designated "natural" areas of parks and greenways to preserve or achieve a natural appearance while reducing maintenance cost. To preserve water supply, natural landscaping and xericscaping—a landscape arrangement with plants that require minimal water—should be encouraged.

Existing Vegetation

Every effort should be made to protect and retain existing native trees, shrubbery, vines, and grasses not actually lying in public streets, drainageways, paths, and trails. Removal of existing vegetation should be minimized and, when permitted, cutting and clearing should be conducted so as to prevent erosion and sedimentation and to preserve and improve scenic qualities. Existing invasive plants identified in Appendix D, however, should be removed provided that wholesale clearing in the absence of a detailed restoration plan does not result with attendant problems of bare ground and erosion. Trails constructed in environmentally sensitive areas should be designed so as to result in the least removal and disruption of vegetation with minimal impairment to the natural beauty of the area. Trees should be protected and preserved during construction as illustrated in Figure C-11 and in accordance with sound tree conservation practices, including the use of wells, islands, or retaining walls whenever abutting grades are altered. Special consideration should be given to preventing soil compaction and stockpiling of soil or construction materials in existing tree root zones, even if such placement is temporary.

Wind and Landscape Planting

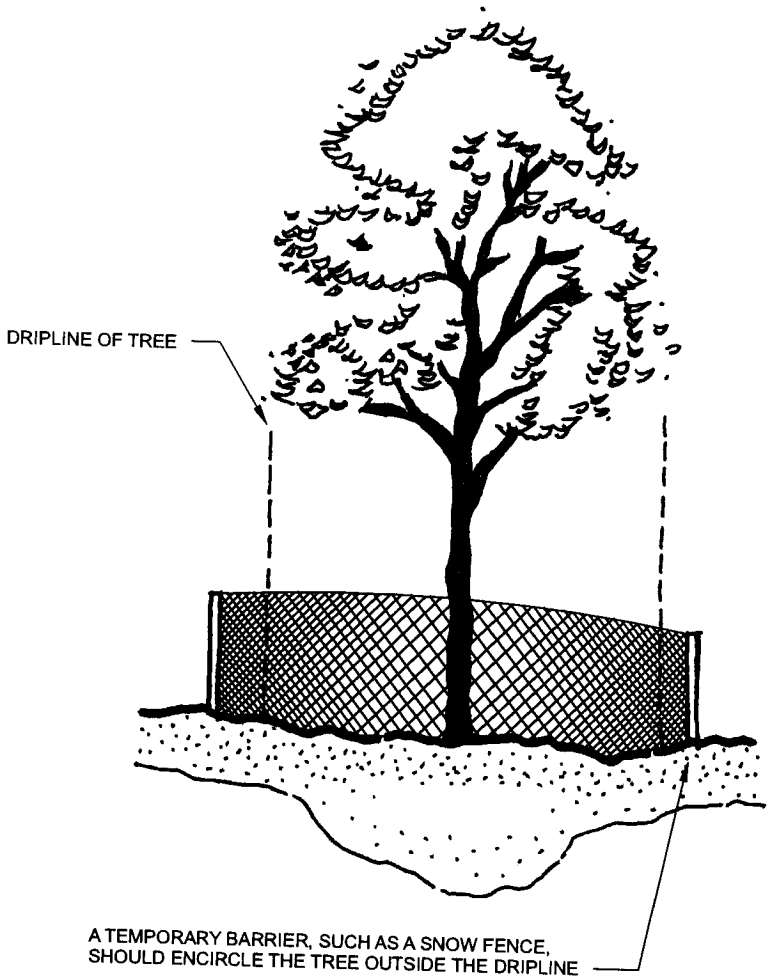
Landscaping should be provided to minimize winter wind and to promote summer wind effects on structures. Winter wind protection is afforded by providing landscaping of an adequate height on the west side of buildings. An optimum distance between a windbreak and a building is approximately twice the height of the windbreak. A windbreak consisting of two rows of coniferous trees is nearly optimal for efficiency, and additional rows would not significantly increase its effectiveness as a windbreak. Figure C-12 illustrates the concept.

Noise and Landscaping

Groups of trees, shrubs, and other landscape masses, such as earth berms or ornate solid fences and walls, can serve as noise barriers and should be utilized where noise could create problems for neighboring land uses. Such landscaped noise barriers are most effective when the barrier is near the noise source or receiver.

Figure C-11

PROTECTION OF EXISTING TREES



Source: SEWRPC.

Solar Access and Landscape Planting

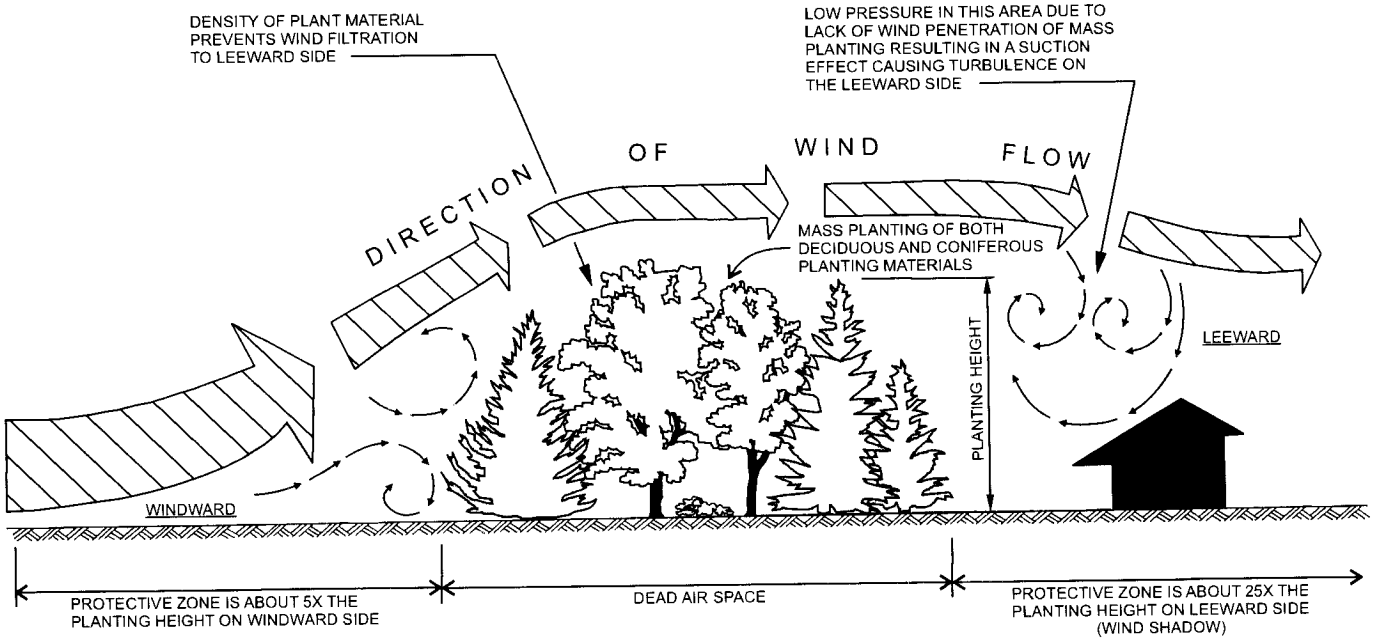
With respect to solar access, plants installed to the south of structures should be deciduous species with a broad branching habit and open twig patterns that would provide shading in the summer and permit sunlight through the branches in the winter. Figure C-13 illustrates these concepts.

Selection of Landscape Plants

Trees and shrubs, meeting the most recent edition of the American Standard for Nursery Stock, should be planted at appropriate intervals along public rights-of-way, adjacent to buildings, and in other designated onsite planting areas. The type of planting should be determined by the topographic features and microclimate of the site. The spacing of plants should be determined by soil conditions, land use, terrace width, utility locations, and design theme. Appendix E sets forth the species characteristics of various trees, shrubs, ornamental grasses, ground-covers, and vines to aid in the selection of landscape plantings based, in part, upon species hardiness to environmental conditions. For regulatory purposes, Appendix E also recommends desirable sizes and spacing of certain plant species to be used for buffering or screening. The installation of flowers are encouraged if properly maintained; otherwise, groundcover or ornamental grasses could be used, which require little maintenance.

Figure C-12

LANDSCAPING FOR PROTECTION FROM WIND

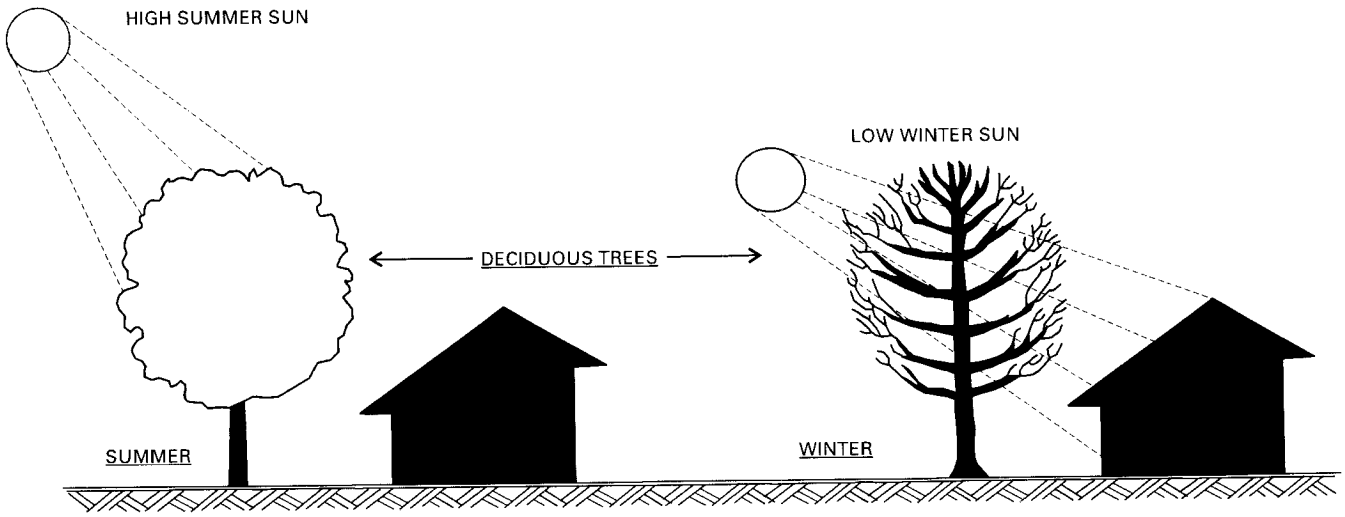


A MASS PLANTING OF LANDSCAPE MATERIALS, INCLUDING BOTH DECIDUOUS AND CONIFEROUS VARIETIES, CAN DECREASE THE WIND VELOCITY ABOUT FIVE TIMES THE PLANTING HEIGHT ON ITS WINDWARD SIDE AND ABOUT TWENTY-FIVE TIMES ITS HEIGHT ON THE LEEWARD (WIND SHADOW) SIDE OF THE MASS PLANTING.

Source: SEWRPC.

Figure C-13

DECIDUOUS LANDSCAPE PLANTING AND SEASONAL SOLAR ACCESS

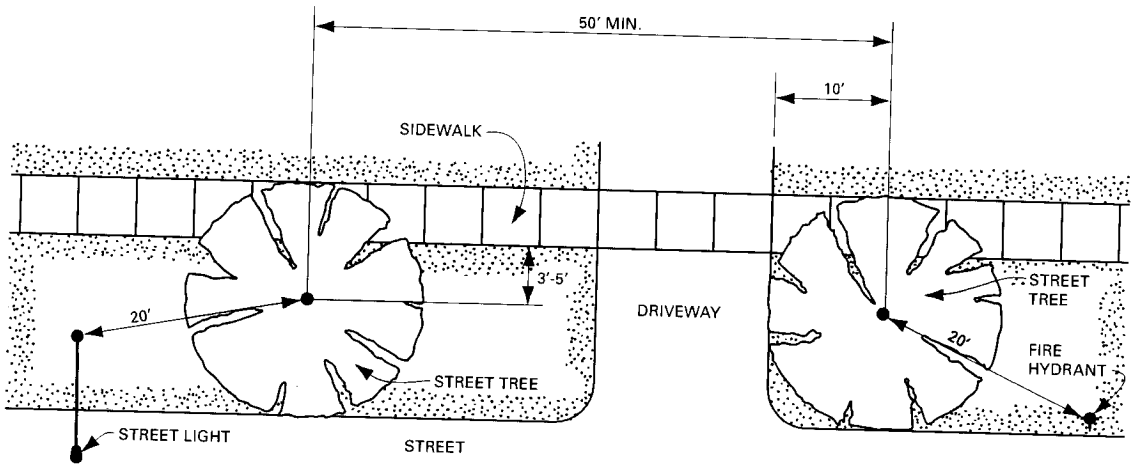


GENERALLY, LANDSCAPE PLANTINGS TO THE SOUTH OF STRUCTURES SHOULD BE BROAD, DECIDUOUS SPECIES WITH OPEN TWIG PATTERNS, AFFORDING THE PASSAGE OF LIGHT THROUGH THE BRANCH STRUCTURE IN THE WINTER. THE CHOICE OF DECIDUOUS PLANTINGS SHOULD BE MADE SINCE THEY DROP THEIR LEAVES IN THE FALL AND ALLOW LOW WINTER SUN TO PENETRATE THEIR BRANCHING STRUCTURE. IN THE SUMMER, THE DECIDUOUS PLANTINGS CAN ALSO PROVIDE SUN SHADING OF THE STRUCTURE, THUS LOWERING UNWANTED SUMMER HEAT GAIN.

Source: SEWRPC.

Figure C-14

MINIMUM STREET TREE PLANTING DISTANCES IN PUBLIC RIGHTS-OF-WAY



Source: SEWRPC.

Street Trees

Street trees should be provided along public rights-of-way to reduce air temperature by providing shade, and reduce air pollutants by converting carbon monoxide to carbon dioxide. Appendix F provides a list of trees that may be used as street trees. A minimum of one deciduous shade tree of at least two inches in diameter measured at 4.5 feet above ground level, about chest height, and meeting the American Association of Nurserymen's Standards for nursery stock should be planted for each 50 feet of street frontage. Trees may be planted closer together than suggested in Appendix F depending on the type of tree selected, the desired design effect to be achieved, and the amount and quality of growing space provided for the root system. Existing healthy trees that are noninvasive and properly preserved should be allowed to fulfill the Village's street tree requirement. Figure C-14 shows the minimum distances a street tree should be located from certain physical features within a street right-of-way.

Street Terraces

Sidewalks located immediately adjacent to motor vehicle travel lanes discourage pedestrian travel because of the perception of hazard. A landscaped or surfaced area (i.e. brick-paved street edge), referred to herein as a "terrace", should be provided between the curb or edge of pavement and the inside edge of sidewalks to provide separation between motor-vehicles and pedestrian traffic. Terraces provide a more pleasant pedestrian environment by permitting an area off the sidewalk for benches, street lights, sign posts, utility poles, refuse containers, and other street furniture; provide an area for street trees and other landscaping; allow driveway aprons to be located outside of the sidewalk area; provide additional area for snow storage; and reduce splashing of pedestrians by passing motor vehicles operating on wet pavements. Terraces that are to contain trees should be at least six feet wide, preferably 10 feet or wider, to allow sufficient space for the root system while minimizing damage to adjacent pavements, especially sidewalks. If the terrace is 15 feet or wider, trees may be staggered instead of arranged in a linear row. Generally, large street trees should not be planted in terraces less than four feet wide unless a tree grate or other methods are provided and/or a landscape device is used to control the lateral growth of the root system in certain locations, especially near sidewalks. Precaution should be taken when placing trees near utility lines.

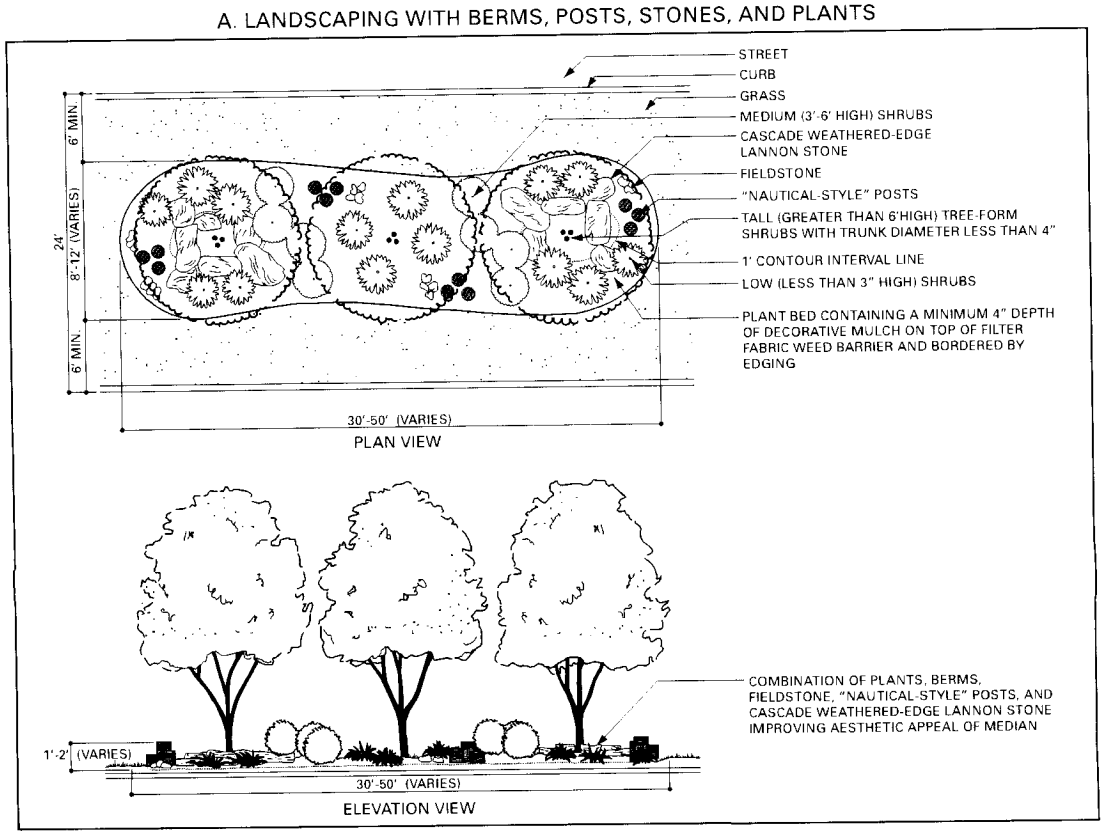
Median Landscaping

While recognizing traffic visibility requirements, large elevated plant beds, such as those shown in Figure C-15, should be provided in all raised street medians to dramatically improve the streetscape of the community. Landscaping in state trunk highway rights-of-way requires a permit from the Wisconsin Department of

Figure C-15

ALTERNATIVE LANDSCAPE BEDS FOR HIGHWAY MEDIANS

A. LANDSCAPING WITH BERMS, POSTS, STONES, AND PLANTS



B. LANDSCAPING WITH PLANTERS AND PLANTS

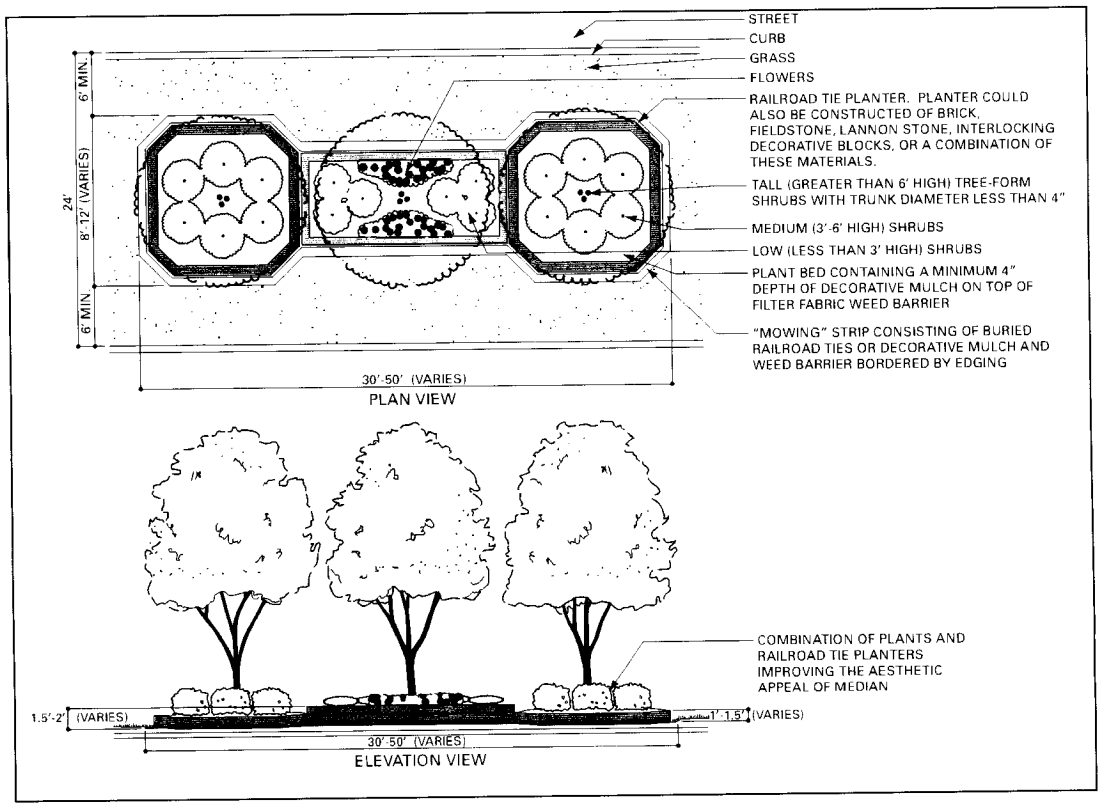
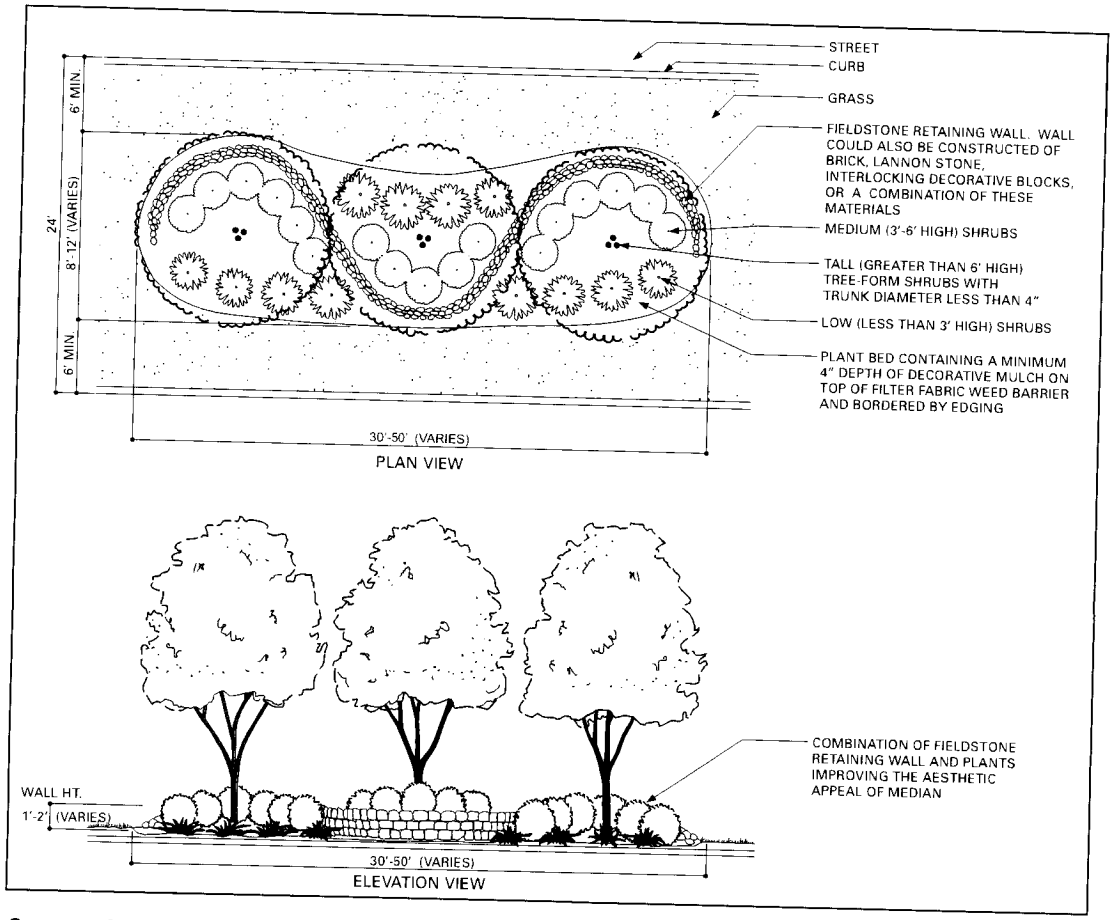


Figure C-15 (continued)

C. LANDSCAPING WITH FIELDSTONE WALL AND PLANTS



Source: SEWRPC.

Transportation (WisDOT). WisDOT permits plants with a trunk diameter of four inches or greater in the tree banks alongside highways with low speed limits, but prohibits such plant sizes in the medians. Tall shrubs shaped into a tree form, instead of large deciduous trees, could provide some vertical accent in the highway medians, as illustrated in Figure C-15. If WisDOT was to grant a special exception to its requirement and permit plants that would grow to a trunk diameter of four inches or greater in the medians, then deciduous shade or ornamental trees could be used in lieu of the tree-form shrubs.

Raised medians four feet or less in width should not be comprised of asphalt, but should contain either ornate concrete or, preferably, decorative masonry pavement, or even flowers and ornamental grasses if properly maintained. Raised channelizing islands should also consist of decorative brick and not unattractive plain asphalt, since they may serve as a safe haven for pedestrians waiting to cross busy streets. As an alternative, such medians may contain a mixed brick and concrete masonry pattern or a color-stamped concrete or asphalt pattern.

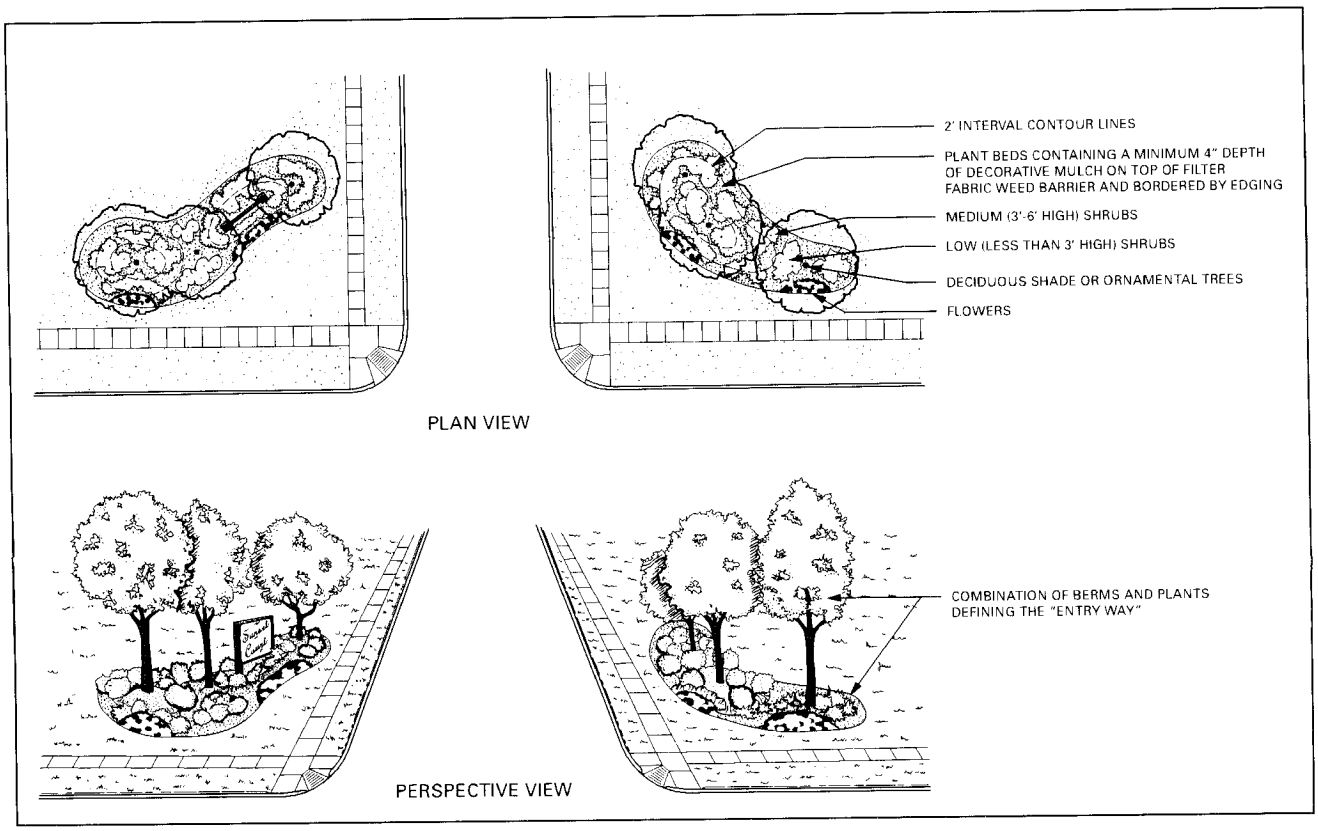
"Gateway" or Main "Entryway" Landscaping

Main "entryways"—sometimes referred to as "gateways"—into parks, residential neighborhoods, historic districts, village centers, and business or industrial centers should be well-defined with attractive landscaping and signs to provide a sense of identity as well as direction. Collector and minor land-access streets functioning as main entrances into residential neighborhoods and business or industrial parks should contain an attractive entryway that may consist of landscaped boulevard-type street entrance. Proper design and maintenance of

Figure C-16

ALTERNATIVE LANDSCAPING FOR MAIN "ENTRYWAYS"

A. LANDSCAPING WITH BERMS AND PLANTS



B. LANDSCAPING WITH RETAINING WALLS AND PLANTS

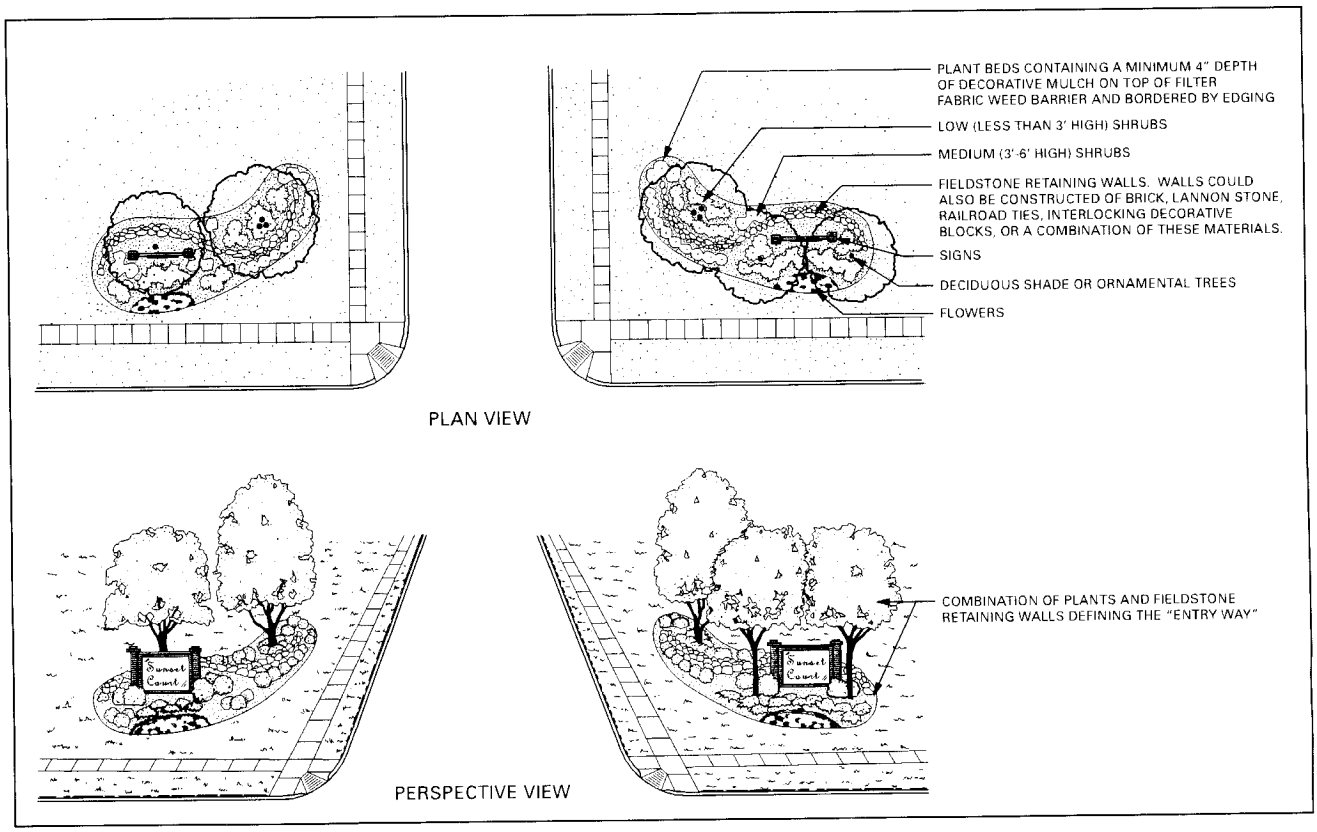
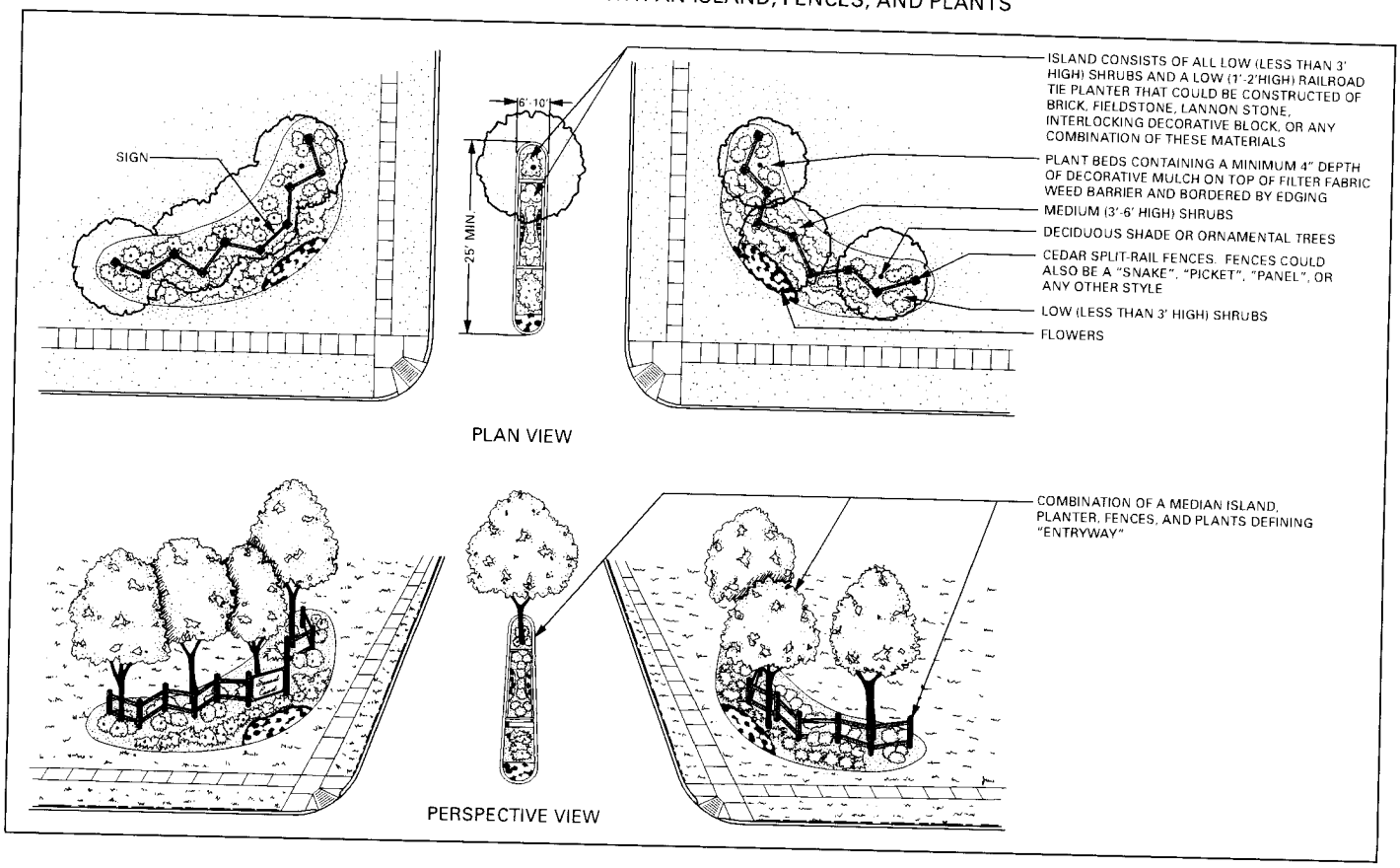
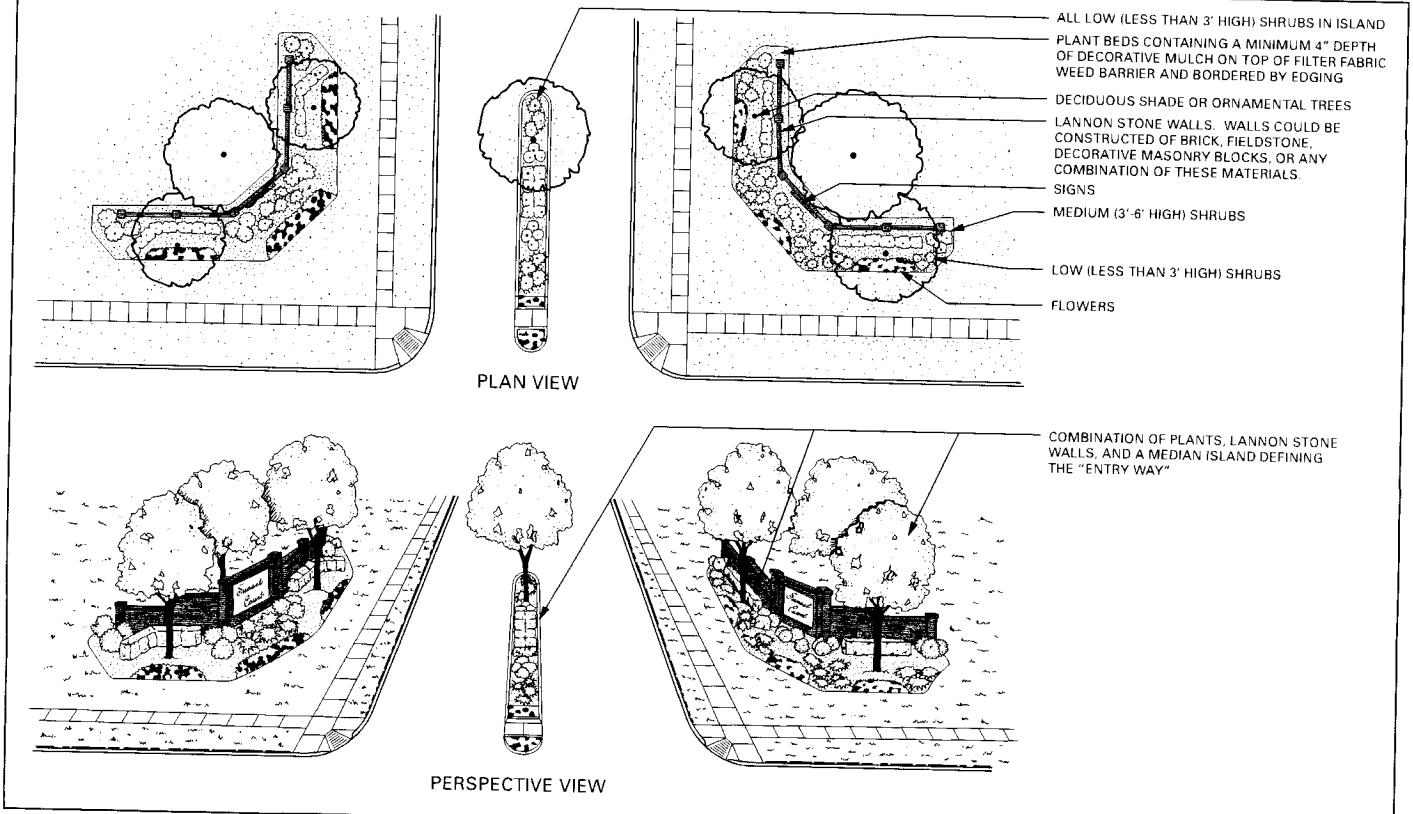


Figure C-16 (continued)

C. LANDSCAPING WITH AN ISLAND, FENCES, AND PLANTS



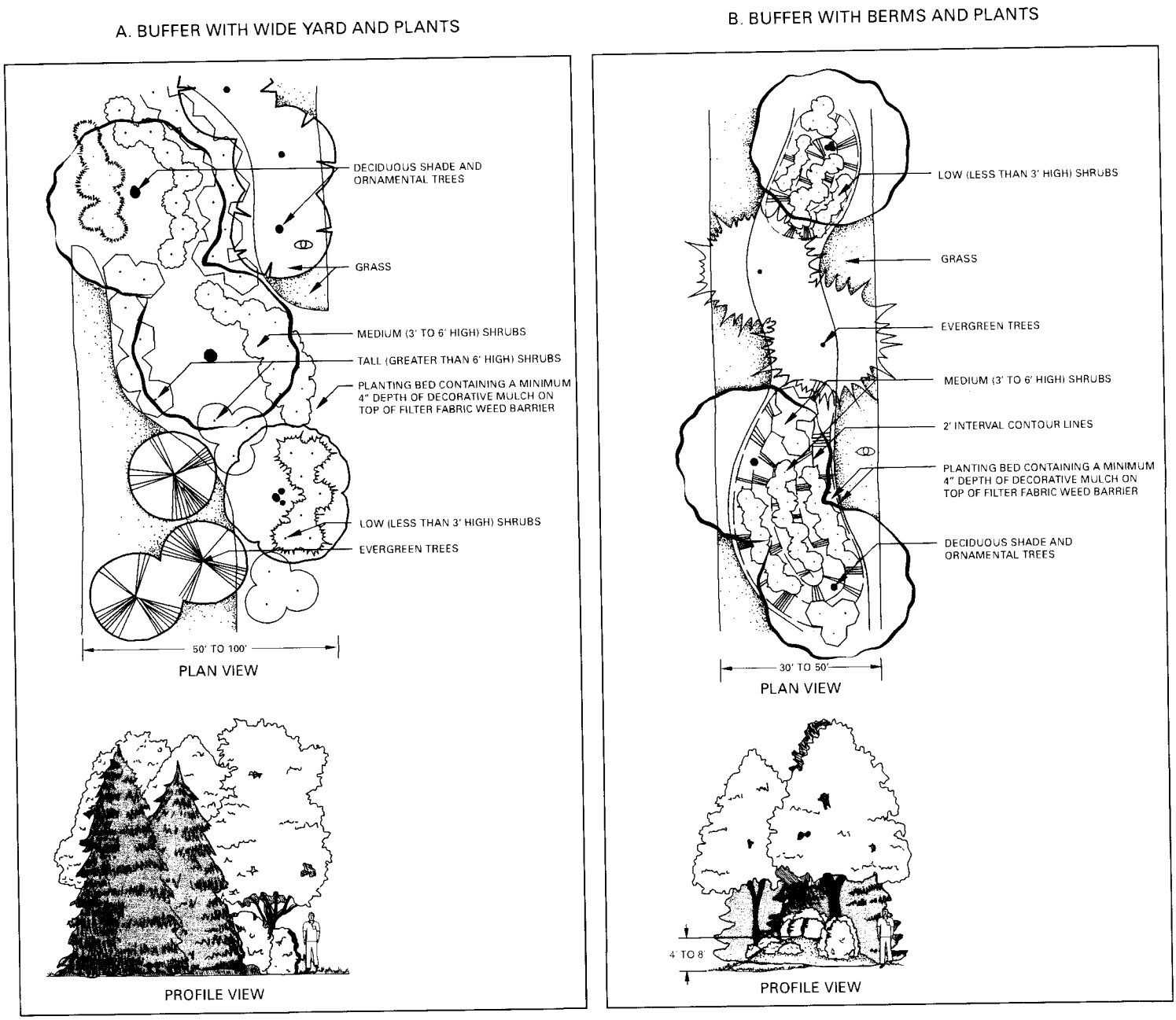
B. LANDSCAPING WITH AN ISLAND, FREESTANDING WALLS, AND PLANTS



Source: SEWRPC.

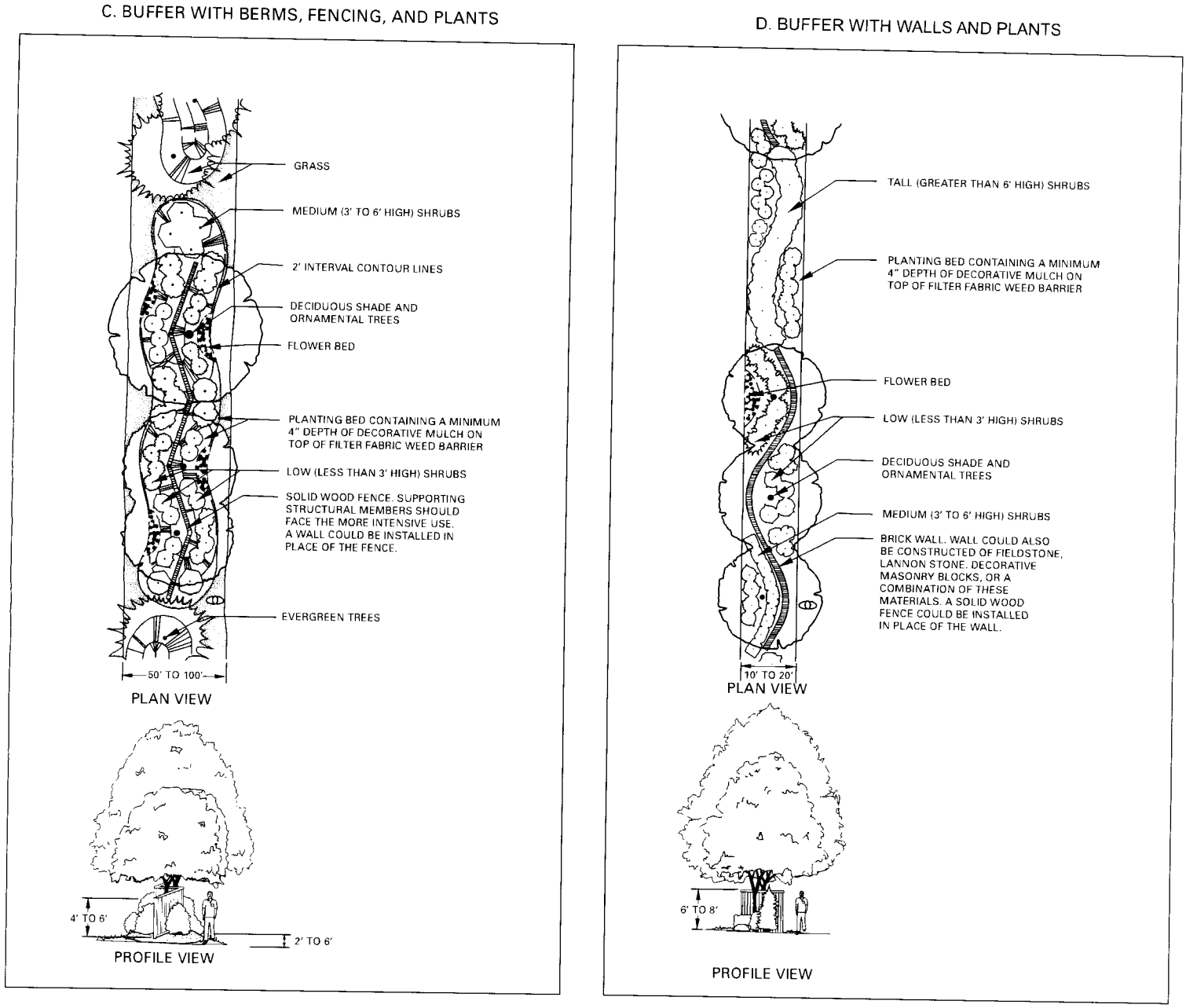
Figure C-17

ALTERNATIVE LANDSCAPING FOR BUFFERS BETWEEN INCOMPATIBLE USES



landscaped entryways, especially those containing center landscaped islands, are crucial for retaining aesthetic appeal and function without obstructing traffic visibility or turn movements. Figure C-16 illustrates alternative landscape designs for such entryways. Other alternative landscaping layouts are provided in Figure C-19. Low ground signs— "monument" signs—rather than high pole or pylon signs, are recommended. The Village has determined that the upkeep of most landscaped entryways, except those representing the Village as a whole such as defined gateways, should be primarily the responsibility of property owners or private organizations such as a subdivision homeowners association or neighborhood organization.

Figure C-17 (continued)



Source: SEWRPC.

Buffer and Perimeter Landscape Strips

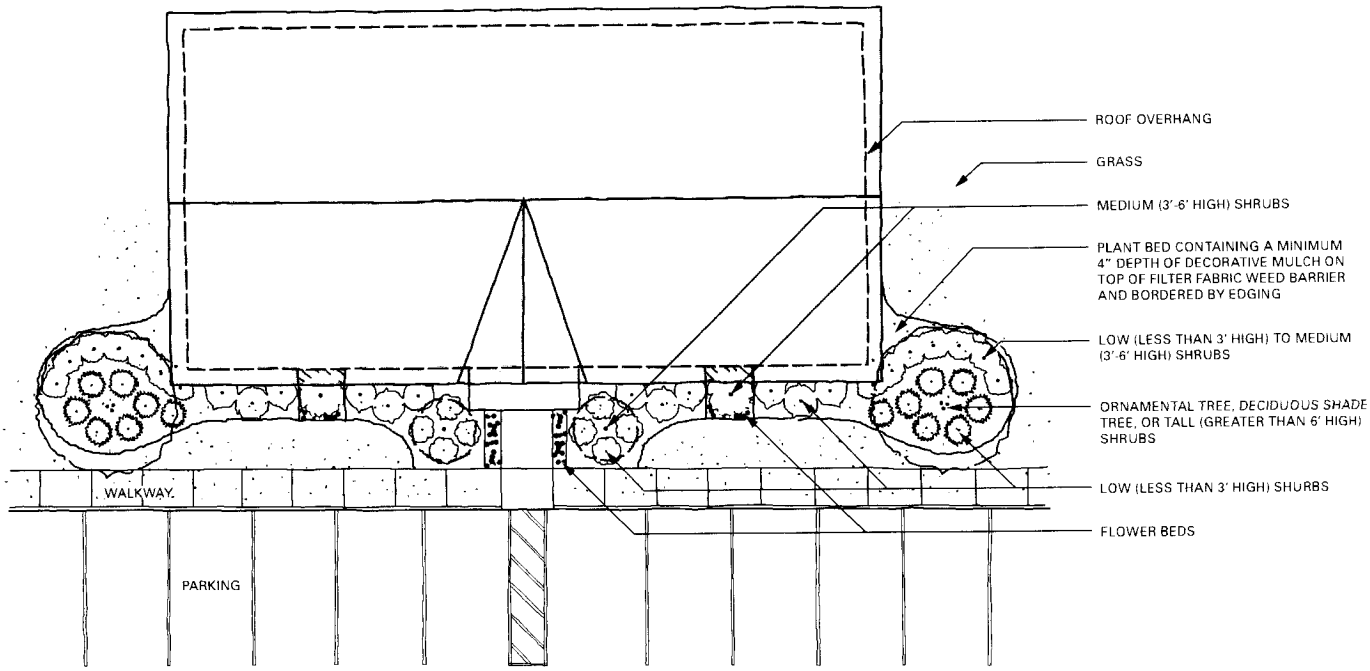
Perimeter landscape strips, which may also function as a landscaped buffer strip, should be located around parcels to provide open space for attractive landscaping, screening from incompatible lands uses, and filtration of stormwater runoff. These strips also help define the boundaries of properties and entrances and provide a separation between parking lots and public rights-of-way. Such strips, however, are not necessary for adjoining sites that share entrances, traffic aisles, or parking lots at the common lot line.

Landscaped buffer strips, sometimes referred to as transitional yards, should be provided between incompatible uses to screen or block visual nuisances, air and noise pollutants, or other negative impacts. Buffers could consist

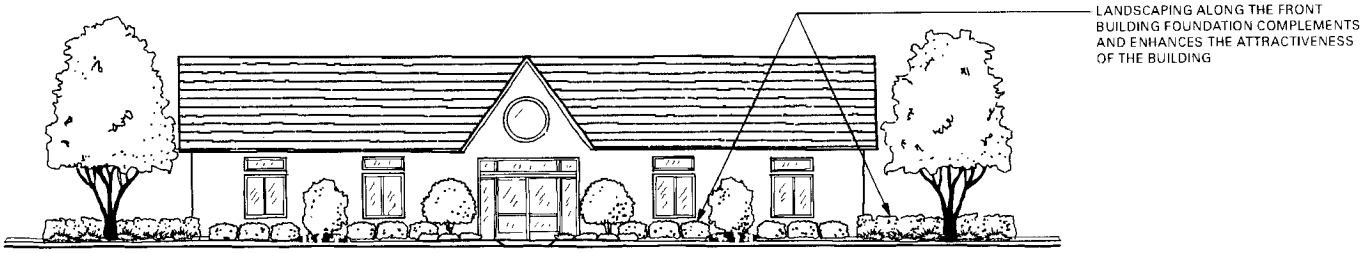
Figure C-18

ALTERNATIVE LANDSCAPING FOR FRONT ELEVATIONS OF BUILDINGS

A. LANDSCAPING ALONG BUILDING FOUNDATION WITH CONTINUOUS PLANTING BEDS



PLAN VIEW



ELEVATION VIEW

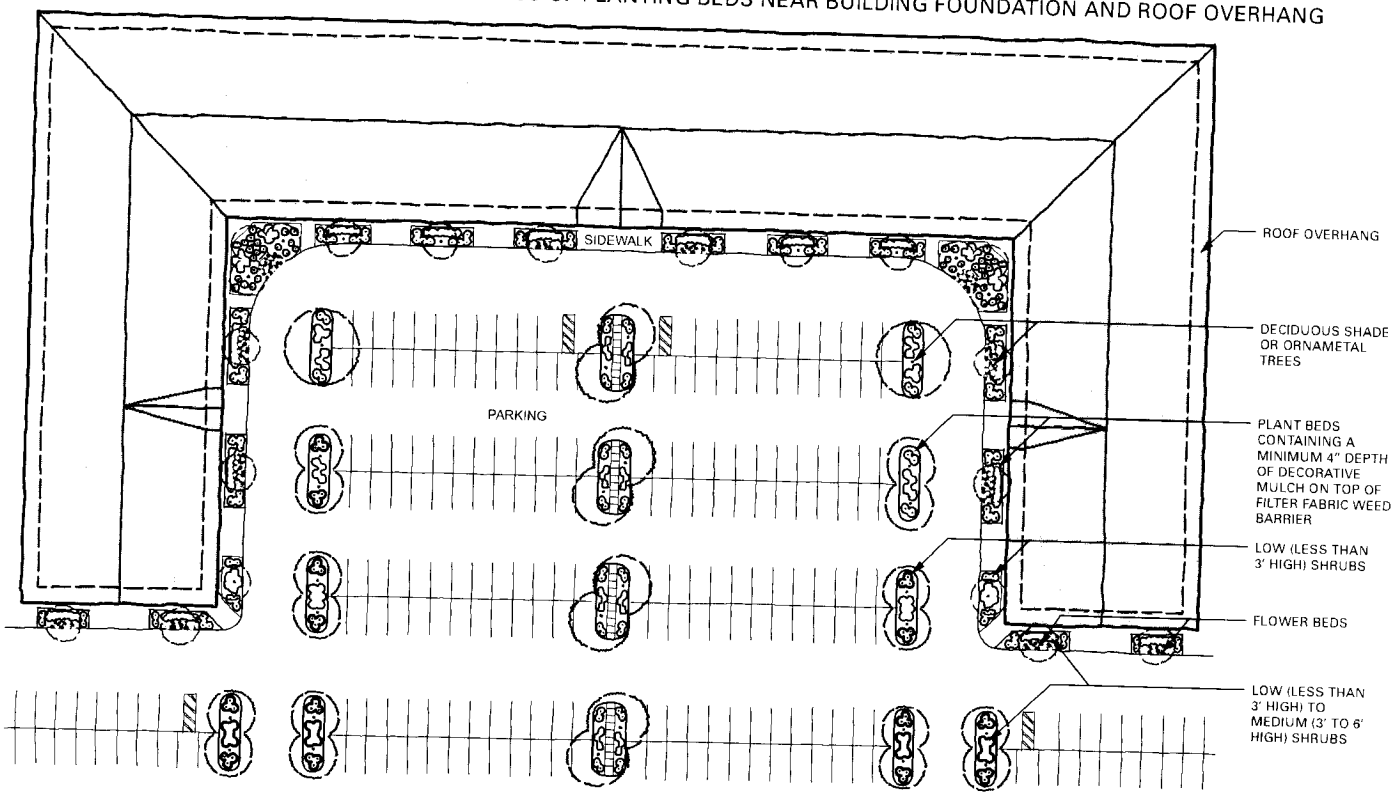
of various landscape features such as earth berms with landscape plantings; fencing and walls with plantings; wide open spaces; and grade separations in order to effectively buffer between dissimilar uses. Landscaped buffer strips provided along public streets should be designed to ensure a desired visual character of the community. Figure C-17 illustrates alternative landscaping that could be provided in such buffer strips, including those along the rear of reverse-frontage lots. Openings for pedestrian or bicycle access should be provided, and the standards for vision triangles mentioned earlier should be recognized. Also, buffers strips should not be located on any portion of existing or dedicated rights-of-way.

Building Foundation Landscaping

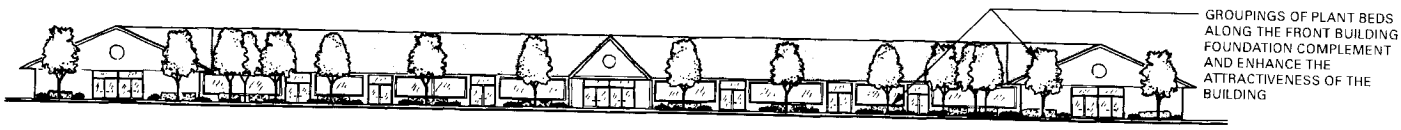
Landscaping adjacent to building foundations contributes to the overall aesthetics of the site as well as the architectural attractiveness of a building, as graphically illustrated in Figure C-18. Landscaped areas at least five

Figure C-18 (continued)

B. LANDSCAPING WITH GROUPINGS OF PLANTING BEDS NEAR BUILDING FOUNDATION AND ROOF OVERHANG



PLAN VIEW



ELEVATION VIEW

Source: SEWRPC.

feet wide, or preferably wider, and comprised of a combination of decorative mulch, flowers, ornamental grasses, groundcover, shrubs, or trees should be provided adjacent to building elevations, excluding entrances, visible from streets and parking areas. Foundation planting beds need not be continuous nor directly against the building. Planting areas could be consolidated into large groupings of beds instead of a continuous planting strip and located at or near the dripline of roof overhangs, as illustrated in Figure C-18. These planting areas could also reduce air-conditioning cost by absorbing potential refraction of warm solar radiation from adjacent pavement into buildings.

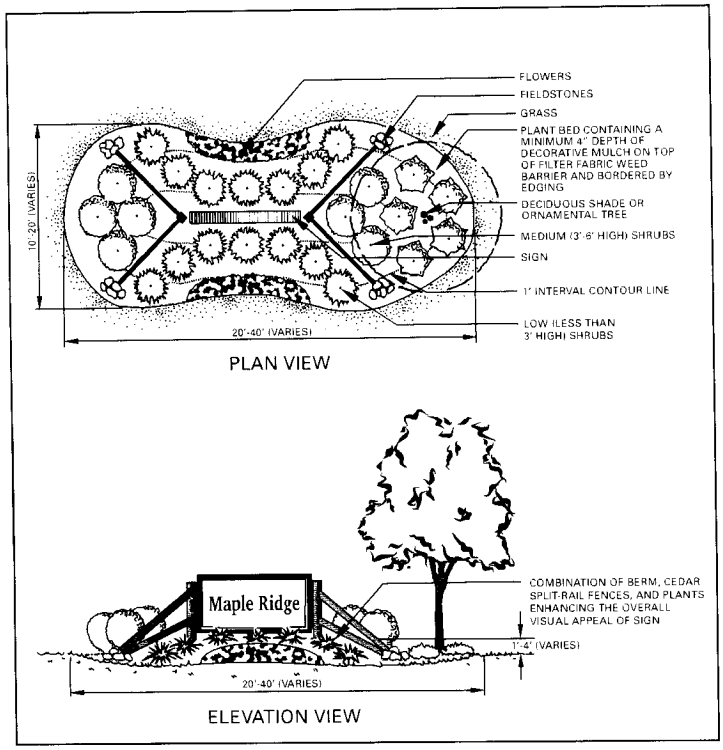
Sign Landscaping

A landscaped bed should be placed at the base of freestanding advertisement signs to improve the aesthetics as well as noticeability of the signs. A planting area of at least 150 square feet and consisting of a combination of decorative mulch, flowers, groundcover, or ornamental shrubs, should be provided around the sign without obstructing the sign face, as illustrated in Figure C-19.

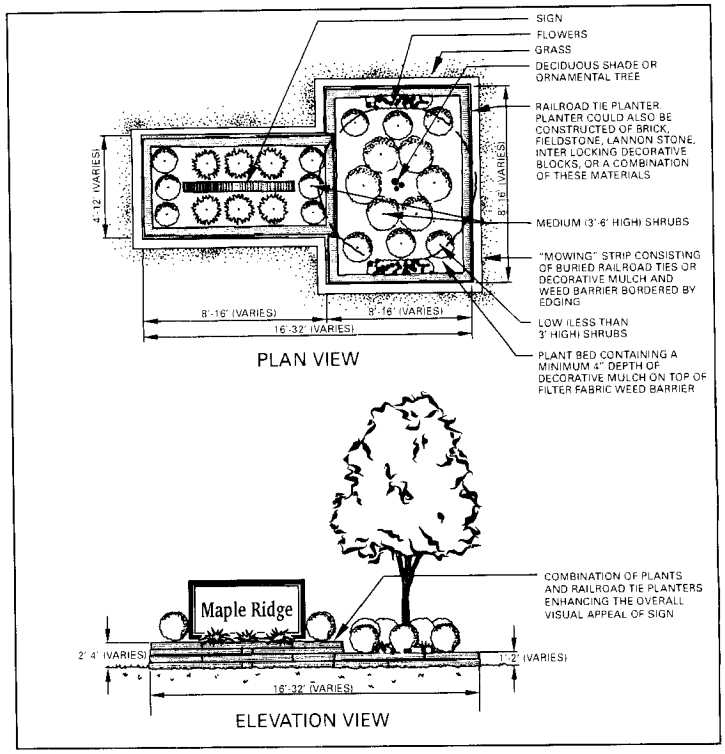
Figure C-19

ALTERNATIVE LANDSCAPING FOR FREESTANDING ADVERTISEMENT SIGNS

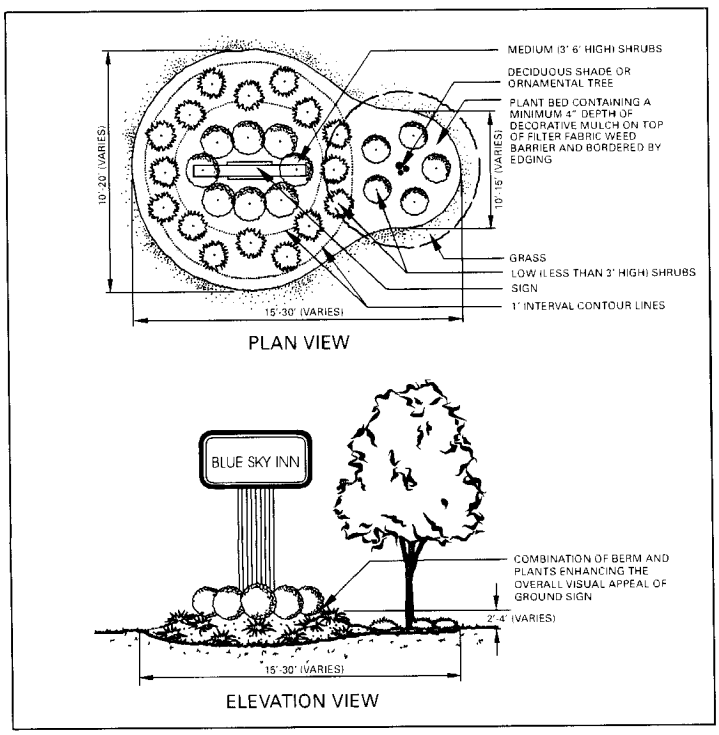
A. LANDSCAPING WITH BERM, DECORATIVE FENCES, AND PLANTS



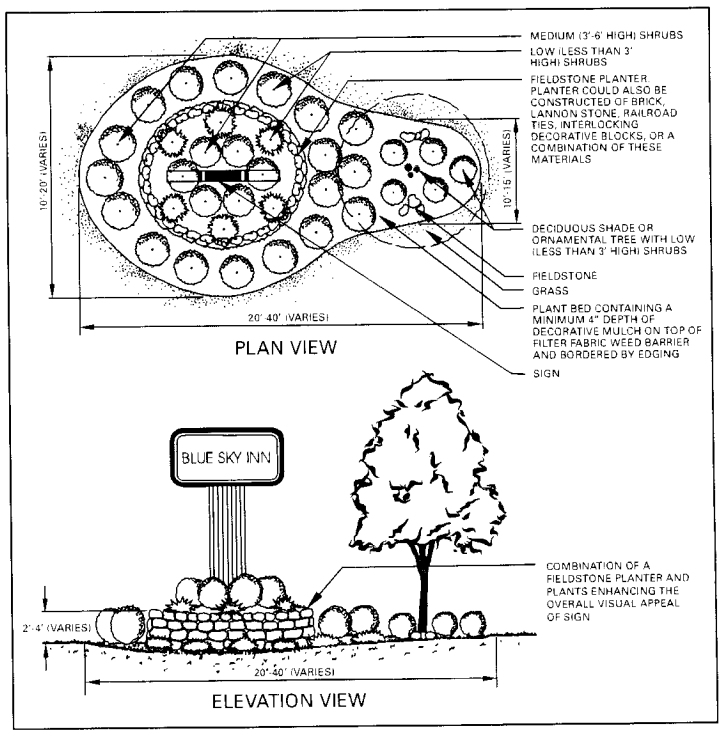
B. LANDSCAPING WITH PLANTS AND PLANTERS



C. LANDSCAPING WITH BERM AND PLANTS



D. LANDSCAPING WITH FIELDSTONE PLANTER AND PLANTS



Source: SEWRPC.

General Parking Lot Landscaping

The interior of off-street parking areas serving 10 or more vehicles should be provided with evenly dispersed landscaped areas totaling not less than 5 percent of the total surfaced parking area. In general, the size of each landscaped area should be at least 150 square feet and not less than six feet wide, preferably 10 feet wide if trees are provided. Trees should be provided at the rate of one deciduous tree at least two inches in caliper at chest height—approximately five feet above ground—for every 15 parking spaces and should be located in the landscaped areas provided within the parking lot. Location of landscaped areas, selection of plant materials, protection afforded the plantings, including curbing and/or wheel stops, and provision for maintenance should be considered. Landscaping should be provided in parking lots similar to that shown in Figure C-20.

Parking Lot Landscaped Islands

At the end of each parking bay, or row of spaces, a landscaped island of a similar dimension as a parking space should be provided to separate the bays from each other or from traffic lanes. Parking bays preferably should not be constructed more than 200 feet in length without providing a landscaped island contiguous to said parking bay, as illustrated in Figure C-20. The dimensions of a landscaped island may vary from the parking space dimension to provide desirable geometric design features, such as rounded corners and angles, to facilitate maneuvering of automobile traffic. However, the total area of any island should not be decreased to less than 150 square feet as a result of such design changes.

It is important to note that the provision of islands is recommended not only for aesthetic purposes, but also for functional and safety purposes. Islands separate parked vehicles from driveways; provide an indication of the parking orientation and layout, especially if parking stripes are absent; provide additional snow storage areas; and provide a visual clearance area, except for the minor obstruction of a tree trunk or light pole located in the island, for vehicles driving out of the general parking areas onto adjacent driveways. Islands that function as visual clearance areas should maintain a clear zone between the heights of 2.5 feet and 10 feet above the mean pavement grade adjacent to these islands. Turf grass should be avoided in islands unless properly maintained. As an alternative to grass, decorative mulch, such as stone or shredded hardwood bark, with underlying fiber-like weed barrier may be placed in islands.

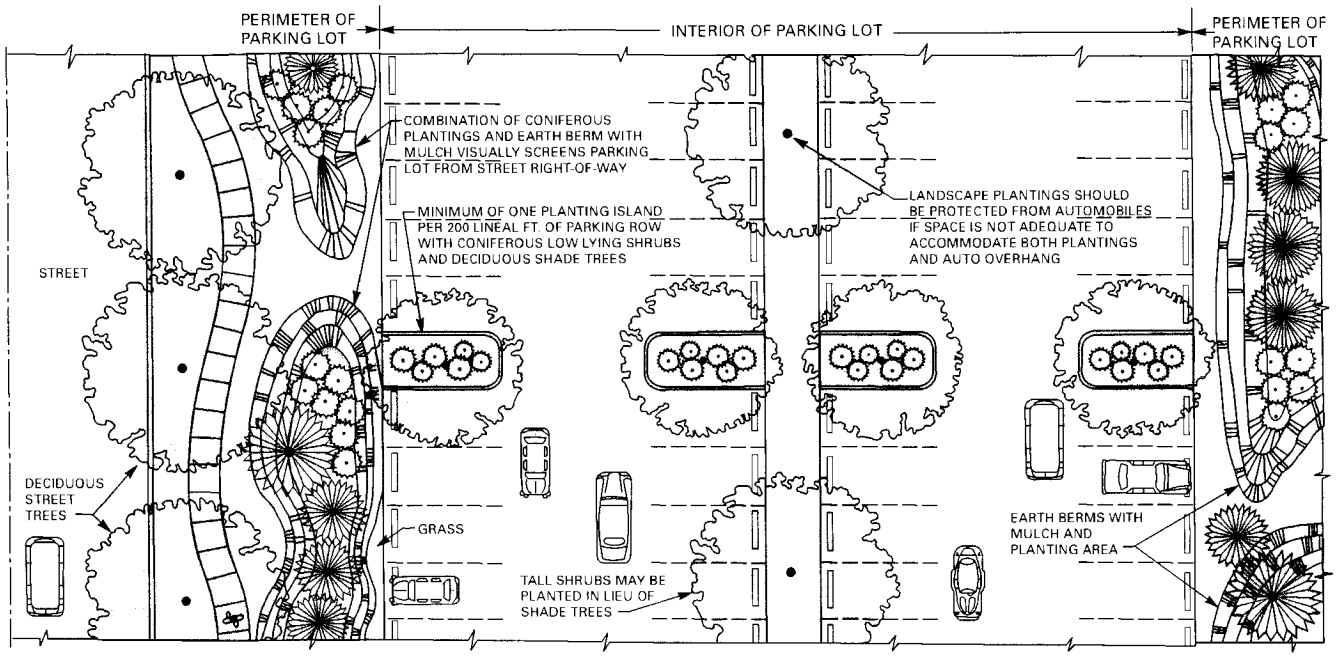
Parking and Service Area Screening

Parking areas and loading/unloading service areas, if adjoining a residential use, should be screened from such residential uses by a solid wall, fence, berm, dense evergreen planting, or other effective means, constructed and maintained at a height of at least six feet, or higher for loading/unloading areas. Loading docks should be located preferably to the rear of buildings or, alternatively, to the side of buildings especially if located on a reverse-frontage lot abutting two streets, facing away from public view, including from street rights-of-way. If such orientation is not practical due to site constraints, then the abovementioned screening should be provided. Parking lots visible from and within 100 feet of a street right-of-way should also be partially screened to "soften" the visual effect of such a use. The screen could consist of a combination of plantings on top of berms or in planters, provided the combined height is at least three feet above the parking surface after three years. Figure C-5 illustrates alternative landscape screening for parking lots visible to the public. The parking lot screen may be reduced in height or eliminated if a difference in grade will screen the parking lot. Also, openings for pedestrian and bicycle access should be provided, and the standards for vision clearance triangles should be recognized.

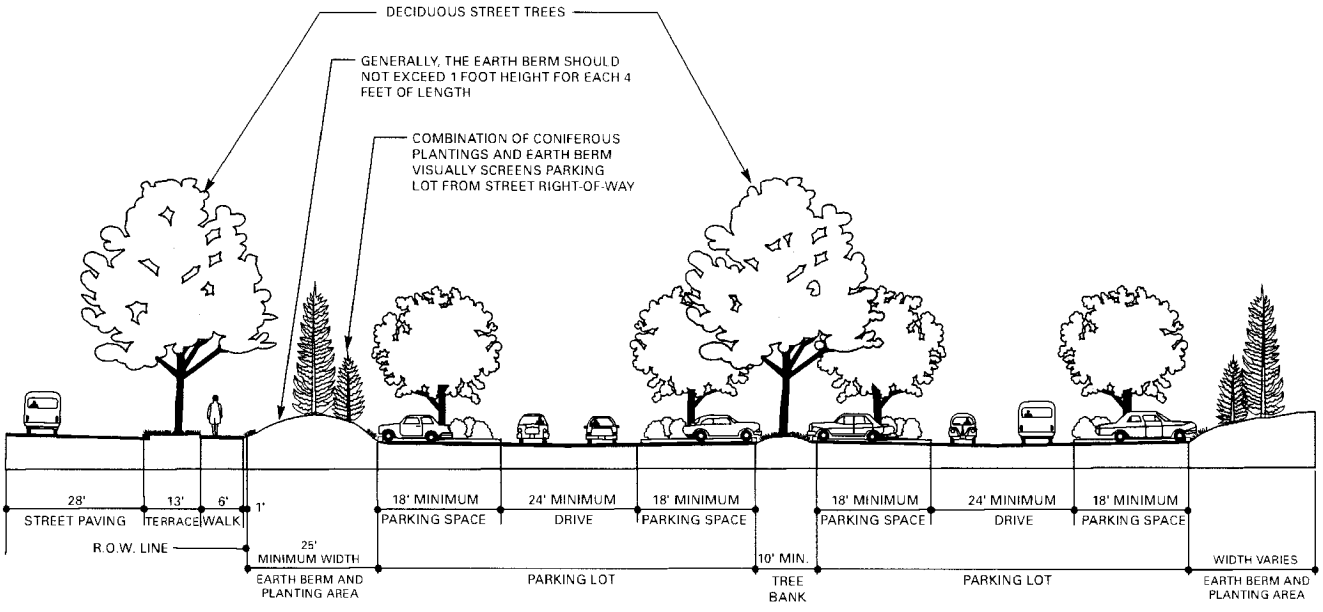
If a berm is used as a screen, it should have a minimum height of 1.5 feet and a crown of at least four feet wide, with side slopes no greater than one foot of vertical distance to four feet of horizontal distance. The berms should be curving or undulating. Fences and walls, excluding planters, should be constructed no less than three feet high and should be built of material compatible with the principal building of the site. Where applicable, gaps should be provided between the screen to allow for pedestrian and bicycle access.

Figure C-20

RECOMMENDED LANDSCAPING FOR PARKING LOTS



PLAN VIEW



SECTION VIEW

Source: SEWRPC.

When only plantings are used for screening, the width of the perimeter landscape area should be at least of 10 feet. If berms are provided as barriers, the width of the landscape area should be adequate to accommodate the size of the berm based on their slope, crown, height, and form. When structural barriers are used, the minimum width could be five feet. Plantings should be provided between the structure and the adjacent property line in order to reduce the visual impact and monotony of a continuous structure.

Outside Storage Area Screening and Surfacing

Outside storage areas for inventory, materials, equipment, supplies, and other materials utilized in the day-to-day operation of a principal business use should be hard-surfaced with concrete or asphalt, and screened from view from public streets with appropriate vegetation, fencing, or walls of a material compatible with the principal structure and the surrounding area. The outdoor display of certain products or merchandise may be allowed if the display is essential to a business, such as a landscape-nursery or car-sales business, and attractive periphery landscaping is provided.

Dumpster and Mechanical Equipment Screening

Dumpsters, utility boxes, and other mechanical equipment should be unobtrusive or shielded from view while still maintaining necessary access. Dumpsters should be screened, on all four sides by a solid fence or wall, from public view and adjacent properties. Dumpsters should be located preferably next to and in the rear of buildings or, alternatively, to the side and be screened with material that is identical to, or compatible with, the building. Dumpsters located near a building could utilize the building as one of the walls surrounding the dumpster. If security is a concern, the front portion or gate could consist of a partial screen with 50 percent or less opaqueness, such as a chain link gate with durable slats that are a color compatible with the rest of the screen. The height of the fence or wall should be at least one foot above the top of the dumpster to help prevent the wind from spreading debris over the structure. Plantings should also be provided adjacent to the structure in a surrounding landscape bed at least five feet wide, or preferably wider, as shown in Figure C-21. Rooftop and at-grade mechanical equipment should also be placed in an unobtrusive location or effectively screened from public view. The method used for screening should be compatible with the landscaping and building architecture of the site.

Site Furniture and Amenities

Site furniture and amenities should be provided to serve pedestrians and bicyclists and add visual variety to commercial centers. Site furniture and amenity items include lighting luminaires and posts, planters, benches, fences and gates, handrails, drinking fountains, water fountains, sculptures, clocks, bike stands, garbage receptacles, fire hydrants, phone booths, bollards, kiosks, newspaper boxes, sunshading devices, parking meters, mailboxes, and signage. The design and placement of such items should contribute to the overall design theme of a commercial area, serving an aesthetic as well as a utilitarian function, while adding a sense of design continuity and human scale.

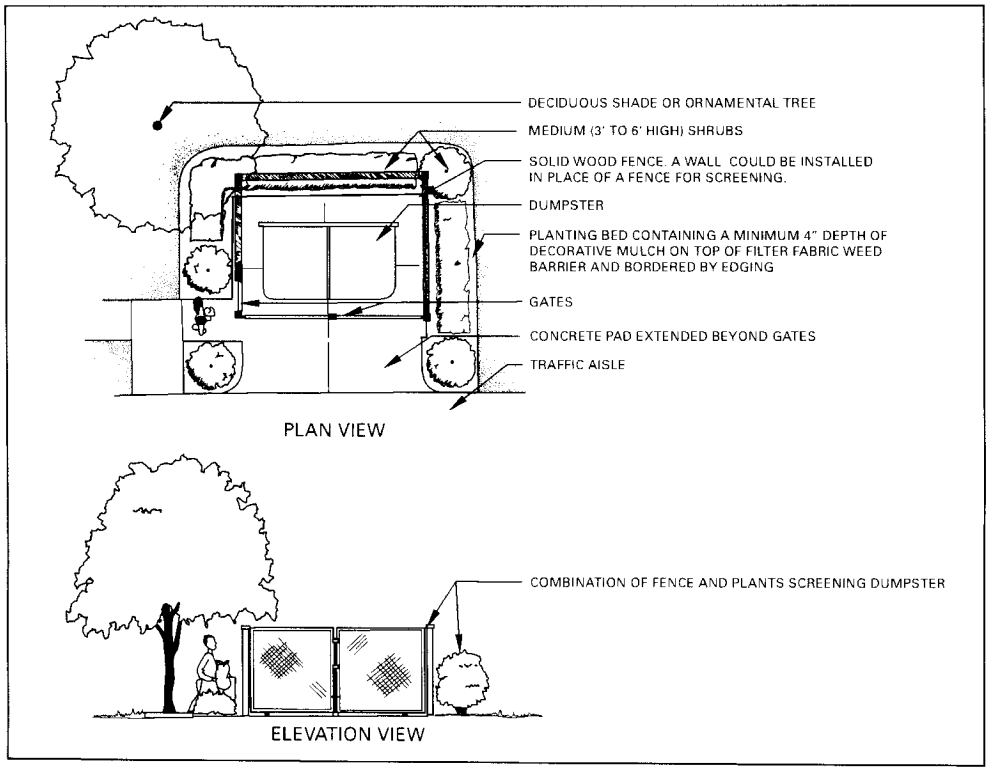
Building Facades

Buildings throughout the Village should contain attractive building facades, including business buildings facing public streets and parking lots. To retain or establish a unified architectural setting, building designs should be compatible with a unique style desired for a particular location or with the predominant architectural style of a defined area, such as an established residential neighborhood, a business park, a historic district, or a central business district. Nevertheless, variations of the same style should be obtained, without being radically different, to avoid monotony. Specifically, architectural style should not be overly restricted; however, proposed buildings should be reviewed on their individual merit based upon desired building design, building materials, longevity of the color choice(s) (fad/nonfad), statement in relation to overall design theme, compatibility with the character and color of adjacent structures, similarity between the overall size and mass of the proposed and adjacent structure(s), and unity with existing structures on the project site. Buildings in the village should preferably be one to two stories in height, but no more than three stories high in order to retain a "small Village character" with a human scale.

Figure C-21

ALTERNATIVE SCREENING FOR DUMPSTERS

A. SCREENING WITH FENCE AND PLANTS



B. SCREENING WITH WALL AND PLANTS

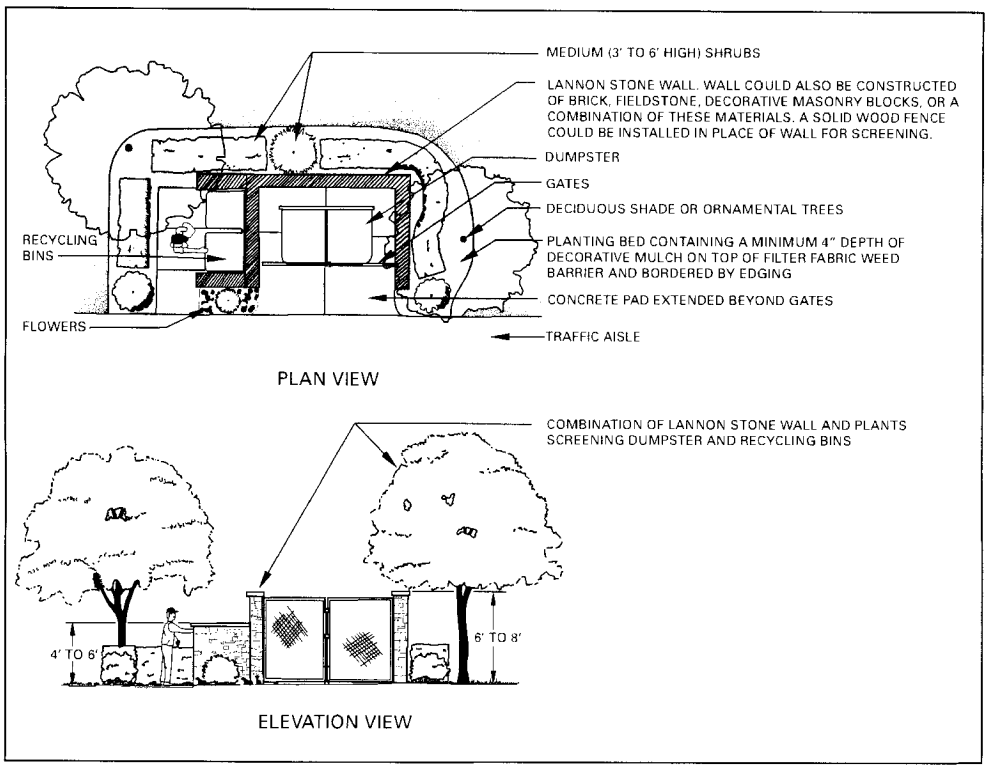
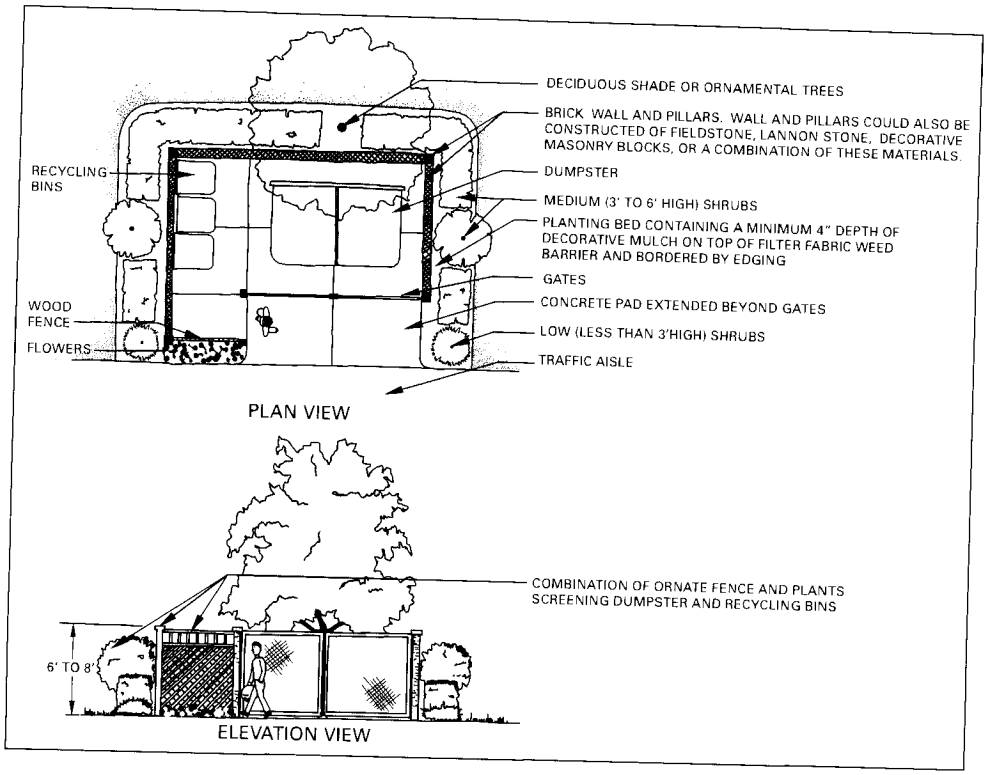


Figure C-21 (continued)

C. SCREENING WITH FENCE, WALL, AND PLANTS



Source: SEWRPC.

To create attractive facades and some variation in architectural styles to avoid excessive repetition and drabness, emphasis should be placed on: the creation of a varied roof line on a building by using, for example, a pitched roof with dormers or multiple pediments with gables to break the roofline; use of some variation in door and window style, size, and shape that are still proportionate to the building scale and mass; creation of well-defined main entryways, facade protrusions and recesses with porches and entryways, and wall offsets and recesses; use of columns, porticos, overhangs, projections, arcades, and arches; use of subtle colors harmonious to the surrounding area and the Village as a whole, with bright colors used only for accent; and use of attractive finished material, such as stone, brick, wood, or even decorative masonry blocks with accenting color banding. The facades of multi-family residential, commercial, industrial, governmental, and institutional buildings that face public streets and parking areas should consist of at least 30 percent of such finished material. Attractive aluminum or vinyl siding that has the appearance of wood siding or a "brushed" surface should be used instead of those with a smooth metal-faced finish, which should be discouraged.

In addition, large buildings, especially "big-box" retail stores, that are devoid of any architectural character should be avoided, since they typically consist of long continuous walls without a "break" —a protrusion or recession in the wall or a change in façade style. Public entryways should be clearly defined by the use of porticos, overhangs, or projections. For residential areas, garages should be de-emphasized without changing the building architecture. The front or main elevation of buildings facing public streets should not be overly dominated by more than 50 percent by the appearance of an individual garage, especially three-car garages, or a row of garages in multi-family residential areas with the large doors facing the front and the front yards, oftentimes occupied by mostly paved driveways with little landscaping. As alternatives, the doors of three-car garages could be oriented to face the side yard, and the row of garages for multi-family residential areas could be oriented to face the side or rear yards. Rows of doors for storage or mini-warehouse facilities should also be oriented to face side or rear yards, if possible. Otherwise, such doors should be buffered from public view.

Signs

General

In addition to conforming to the requirements of a community sign ordinance, signs should be designed to complement the overall character of the area and its buildings. Lettering on signs should be functional as well as visually pleasing. Truly functional lettering uses a typeface which is properly spaced and easy to read and makes its message clear from the distance at which it is intended to be read. Generally, the less cluttered and fewer the words on the sign face, the more likely people will be able to read the sign with ease.

Low ground signs—"monument" signs--of no more than four to six feet in height, supported by ornate columns or pillars on the sides and/or a structural base width of at least 75 percent of the width of the sign face, are usually considered more attractive and desirable than high pole or pylon signs. All freestanding signs should be surrounded by attractive landscaping at the base. Ideally, freestanding signs should also be panel signs with at least of 20 percent comprised of materials similar to the building materials of the principal structure. If pole signs are proposed, they should not exceed a height of 20 feet above the mean centerline street grade nor 35 square-feet per face to be in keeping with the pedestrian scale of a community. Wall signs attached to buildings should not extend above the roofline nor, except in the Village Center, the top of the second floor window, whichever is lower. Projecting signs should be avoided. Overall, the sign composition, structural material, color, logo, and location should be compatible with the building architecture.

Main "Entryway" and "Gateway" or Community "Welcome" Signs

Main "entryways" into parks, residential neighborhoods, historic village centers, and business or industrial centers should be well-defined with attractive signs to provide a sense of identity as well as direction. Community "Welcome" signs should also be provided at key locations along arterial streets functioning as main "gateways" into a community and/or a village center. The design should be representative of the character of the community and should reflect the design theme desired by the community residents.

Street and Wayfinding Signs

Street signs should be located at each street intersection and should be legible for all user groups. Simple "icon" or graphic symbol signs could also be used for aesthetic as well as wayfinding purposes such as, for example, identifying a public parking lot or providing symbolic directions to a public library. Unique street name signs should be provided that are different from the traditional rectangular street blades by consisting of a blue or red background with white letters and an icon at the end that reflects the community logo or neighborhood character. Even ornate street-sign poles and distinctively shaped street signs, such as elliptical or oval shapes, could be used for unique aesthetics.

Street Light and Traffic Pole Styles

The traditional style of tall streetlights could be made more attractive by using colors, such as black or green, instead of the bare silver metal color. As an alternative, the poles could be colored black or green while the extended arm with the illumination head could remain silver. Low uniquely-designed street lights should preferably be installed along the "Main Street(s)" of a community. The style or color selected for street lights should be emulated in the poles of street signs and traffic signs and signals.

Utilities and Easements

Above-Ground Utility Cables

The location or relocation of above-ground utilities underground should be considered. Overhead wires detract from the overall appearance of an area and typically add to visual clutter.

Utility and Drainage Easements

Utility easements of widths deemed adequate for the intended purpose, but no less than 10 feet, should be provided and centered on side and rear lot lines wherever possible or advisable for electric power and communication wires and conduits; storm and sanitary sewers; and gas, water, and other utility lines. Where a

land division is traversed by a watercourse, drainageway, or street, an easement should be provided for drainage purposes.

Cellular Towers

Antennas preferably should be co-located on existing structures such as water towers, public buildings, and utility transmission towers. If a new freestanding cell tower is warranted, such structures should be designed with an unguyed, monopole style and accommodate at least four antennas to reduce the need for, and the visual clutter of, additional structures in the vicinity. Guyed towers and lattice towers should be discouraged, unless the lattice appearance or an alternative design would better blend in with the surrounding environment.

Ornate Bridges and Retaining Walls

When new bridges and retaining walls need to be installed or existing faceless bridges and walls need to be replaced, they should be constructed with an unique design instead of the bland traditional, one-size-fits-all style. The facades of parapets and walls could consist of ornate materials such as fieldstone, lannon stone, decorative masonry, interlocking geometrically-shaped blocks, ornate precast concrete panels, or poured-concrete walls with unique "color-stamped" patterns or geometric patterns defined by scorelines and "brushed" surfaces with smooth edges as opposed to plain poured-concrete surfaces. Unless a community wishes to intentionally screen motor vehicles, the parapet—low wall or railing—of bridges should be partially "open," and yet function as a barrier for safety reasons, so that motorists can see through the parapet to enjoy the scenery from the bridge, including those over waterways.

Stormwater Management Facilities

Stormwater management facilities should be adequate to serve a proposed development, and may include curbs and gutters; catch basins and inlets; storm sewers; open channels; roadside swales; culverts; water detention or retention facilities; infiltration facilities; and existing natural depressions, wetlands, and streams. The facilities should be of adequate size and grade to accommodate peak rates and volumes of runoff through and from a proposed development, and should be so designed as to prevent and control nonpoint source pollution and to present no hazards to life or property. When natural features on the site are to be incorporated in the stormwater management system, appropriate measures should be implemented to avoid degrading the quality of those features. Stormwater facilities should, as a minimum, follow the design standards established by the Wisconsin Department of Natural Resources (DNR) in a document titled, *Wisconsin Storm Water Manual, Part Two: Technical Design Guidelines for Storm Water Best Management Practices.*

Stormwater detention or retention basins should have a 10- to 20-foot wide gently sloping "safety shelf" with a maximum depth of one foot around the perimeter and should be graded to a safe slope, no steeper than one vertical to four horizontal above the "safety shelf." Such basins should blend into the landscape with a natural form to avoid the "ice cube tray" appearance.

Erosion and Sedimentation Control

Earthmoving activities, such as grading, topsoil removal, mineral extraction, road cutting, waterway construction or enlargement, excavation, channel clearing, ditching, drain tile laying, dredging, and lagooning, should be so conducted as to prevent erosion and sedimentation and to minimize disturbance to natural fauna, flora, watercourses, water regimen, and topography. Construction activities should be planned so that the soil is disturbed a minimal amount of time. In general, cut and filled lands outside street rights-of-way should be graded to a slope not exceeding 25 percent or the angle of repose of the soil, whichever is less. All erosion control measures should meet the requirements for such measures in the Village of Hartland Zoning Code and the design standards identified by the DNR in a document titled, *Wisconsin Construction Site Best Management Practice Handbook.*

To help prevent erosion and sedimentation, a developer should plant grasses, shrubs, trees, and vines—the species and size of which are to be determined based on those identified in Appendix E. The Village may require a developer to provide or install protection and other rehabilitation measures such as fencing, slopes, riprap, wells,

revetments, berms, jetties, clearing, dredging, snagging, drop structures, brush mats, willow poles, and grade stabilization structures.

General Maintenance

A complete and thorough public maintenance program for public lands, as well as individual private maintenance programs, especially in commercial areas, should be established. Improvements to buildings and their continued positive appearance depend on proper maintenance procedures. Maintenance programs should include staking, watering, fertilizing, spraying, weeding, pruning, replacing and other general maintenance of landscape planting areas; picking up litter and emptying trash containers in a timely fashion; sweeping, cleaning, and repairing paved surfaces; and the care and maintenance of site furniture and the repair and/or replacement of non-functioning streetlights and fixtures and other amenities. Establishing a maintenance program will help to ensure the continued attractiveness and viability of the community.

VILLAGE CENTER DESIGN GUIDELINES

Design Concept

The Village Center should be designed with a human-scale focus supplemented with attractive streetscaping that complements unique buildings geared towards a pedestrian- and bicycle-friendly atmosphere. The Center should consist of mixed uses, with predominantly commercial establishments and limited residential and cultural/institutional uses, as outlined in Objective No. 3 of Chapter VI. Housing for the elderly should also be located in the Center due to convenient proximity to businesses meeting the needs of senior citizens. In addition, the Center should present opportunities for people-watching from inside and outside of buildings, while capitalizing on the beauty of the Bark River greenway and recreation corridor as an important natural contributing factor to drawing people to the Village Center.

More specifically, the individuality or uniqueness of the Village Center should be characterized mostly by certain areas of picturesque flat-roof, historic buildings and pitched-roof buildings, such as gable or prairie-style hip roofs, complemented with building facades consisting primarily of red or cream-city colored brick or light-colored natural materials, such as treated wood and native lannon stone, with large transparent window panels at the street level. Attractive streetscaping should serve to enhance these building facades and further project the community's desired design theme for the Center as described in detail below.

Entryway/Gateway Identification

A sense of definition and arrival to the Village Center should be established at "entryways" or arterial streets leading into the downtown area along with streetscape improvements, including decorative street lights, brick-paved street edges, articulated crosswalks, and entrance monuments. Entrance monuments should be placed at key entryways—sometimes referred to as gateways—consisting of low monument signs set in a decorative base, such as an ornate stone or brick wall, surrounded by attractive landscaping as illustrated earlier in Figure C-16, if sufficient space is available, and in Figure C-22 for those areas with spatial constraints.

Parking Layouts and Linkages

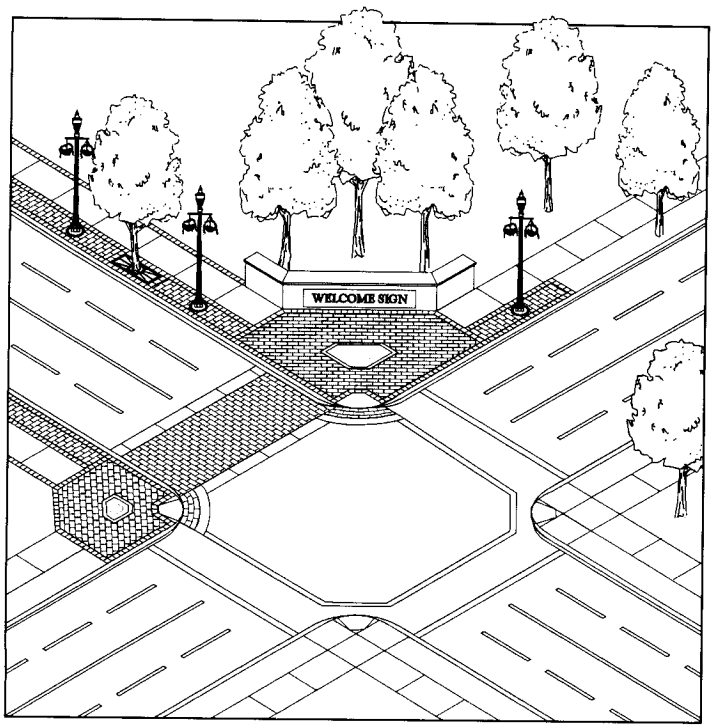
The use of shared driveways and parking lots linked by a common traffic aisle between compatible land uses should be encouraged to help reduce the number of access points for vehicles entering onto and exiting off the arterials. The drive or traffic aisle serving parking lots should extend to the property line in planned commercial areas so that, as development occurs over time, the drive would simply be extended to the adjoining property's parking lot.

To be consistent with a pedestrian-oriented setting for the Village Center, parking lots in front of buildings, as shown in Figure C-24, should be avoided and preferably located in the rear yard. As an alternative, parking lots could be located in the side yard while buildings would still be placed close to sidewalks. If parking is allowed in the front yard in certain areas of the Village Center, such as beyond the central area where some existing buildings

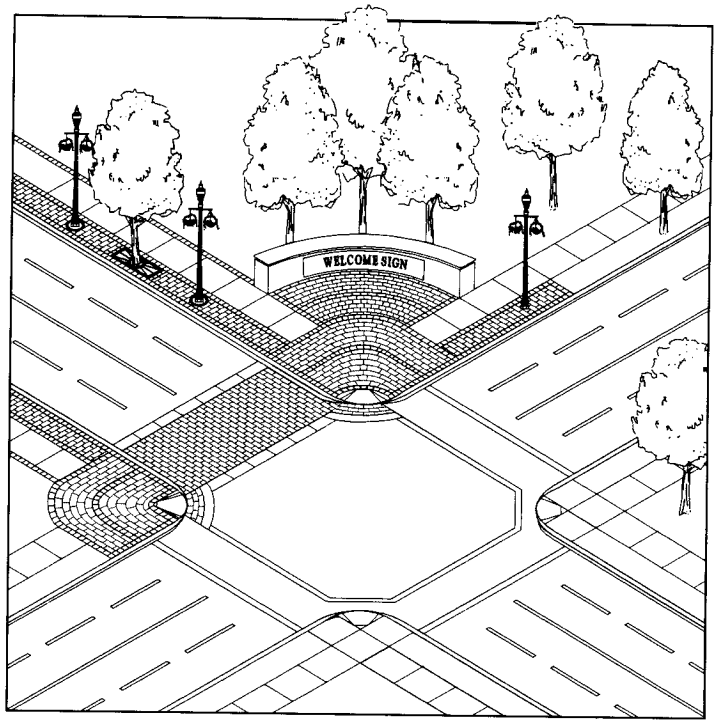
Figure C-22

ILLUSTRATIONS OF POTENTIAL VILLAGE CENTER GATEWAY DESIGNS

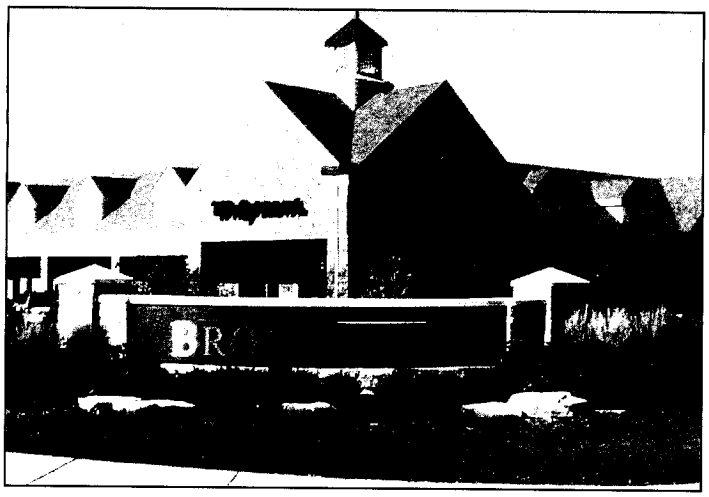
A.



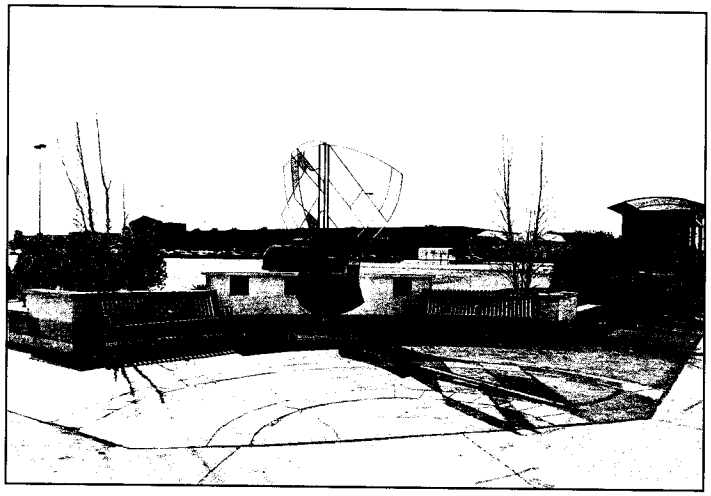
B.



C.



D.



Source: SEWRPC.

are not close to sidewalks, the number of parking rows in front of buildings should be minimized to no more than two rows with the remaining spaces located in the side and/or rear yards.

Walkways should be provided to connect the sidewalks along Cottonwood Avenue, North Avenue, and Capitol Drive to the Bark River Trail, large parking areas, and the rear of buildings, especially where parking lots in the back of neighboring buildings are connected.

Building Streetscape Facades

General

The guidelines herein are not intended to restrict individual architectural expression, but rather to direct the expression towards a standard of quality and compatibility with neighboring buildings and to complement and contribute to a desirable community identity for the Village Center. The structural shapes of buildings, their proportions, the placement of openings such as doors and windows, the placement of signs, and various other building details all contribute to the overall streetscape appearance. Although the facades of two adjacent buildings may be different, their overall appearance can be made compatible through the proper use of these visual elements. Treatment plans for individual building facades should take into account the design character of the surrounding area and the various urban design guidelines set forth herein to assure a degree of compatibility of architectural design with neighboring structures, without being very dramatically different.

In the Village Center, many of the storefronts, store entries, residential homes (including those in the nearby East Capitol Drive Historic District), and other building facades still retain to some degree their original architectural character. For buildings that have historic architectural significance, every effort should be made to enhance or recapture this original image pursuant to the standards for historic preservation promulgated by the U. S. Department of the Interior, and as outlined in Objective No. 10 in Chapter VI. The character projected by historic buildings in the Village Center should be maintained by continuing to encourage new structures to respect the form, materials, and detailing of surrounding existing historic buildings. These guidelines need not necessarily stifle creative architectural design, since new contemporary buildings could be designed to be in sync with the scale and rhythmic pattern of surrounding buildings. Two buildings could still be distinctly different yet seamlessly interrelated by retaining, for example, the cornice or soffit line of a building or group of buildings to ensure horizontal continuity while maintaining scale. The alignment or pattern of doors and windows, protrusions and recesses of entryways, and wall offsets and recesses can also help ensure both horizontal and/or vertical continuity between buildings, as illustrated in Figure C-23. Canopies and awnings, in addition to providing shade from direct sunlight and protection from rain and snow, can preserve and promote the overall horizontal visual continuity of the Village Center and can assist in the development of a uniform and visually compatible signage system.

Building Setbacks and Street Wall

New buildings in the Village Center should be set back the same distance as the majority of the existing buildings. To retain a pedestrian-oriented Village Center, compatibly scaled buildings following existing setback lines will reinforce the existing character of the Center. Out-of-scale buildings, set either too close or too far off the street edge, should be discouraged, as illustrated in Figure C-24.

Building setbacks from streets should be uniform wherever possible. Such uniformity in the streestscape facade or street wall adds to pedestrian comfort by enclosing and defining the space and provides a sense of continuity to the streetscape. Also, business buildings close to sidewalks allow pedestrians and potential customers to admire attractive window displays. New buildings should be constructed to a "build-to" line to provide such continuity. Preferably such buildings should be slightly set back at least five to 10 feet to accommodate building foundation plantings, if space permits. Planters could be used if the location of existing buildings would preclude the use of planting beds. The build-to line in the Village Center should be established based on the existing setback distance most prevalent in the area. As an alternative to a strict build-to line, new buildings may be set back based on a

Figure C-23

RHYTHM OF WINDOWS AND ENTRANCES

A. RHYTHM OF WINDOWS

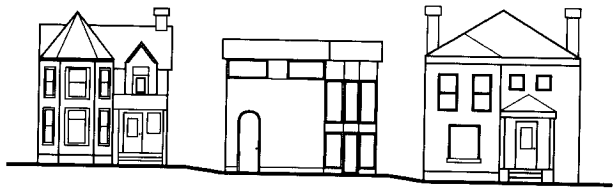
DESIRABLE

UNDESIRABLE

B. RHYTHM OF OPENINGS

DESIRABLE

UNDESIRABLE

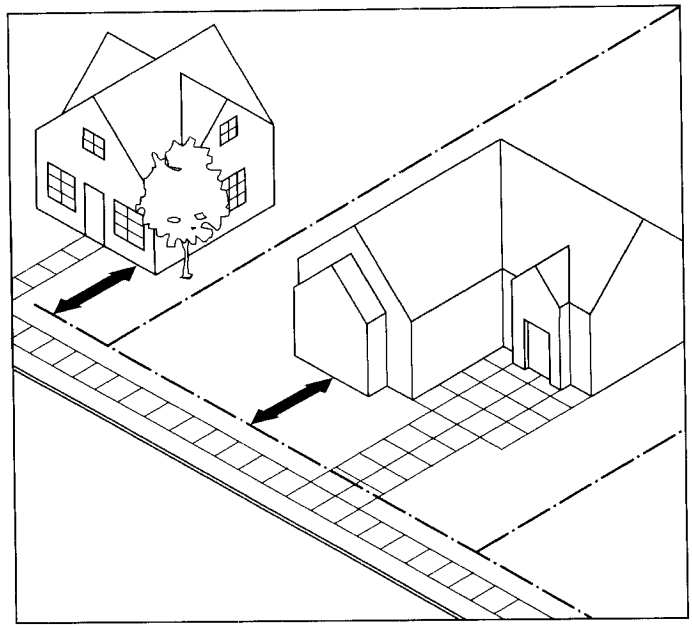


Source: American Planning Association and SEWRPC.

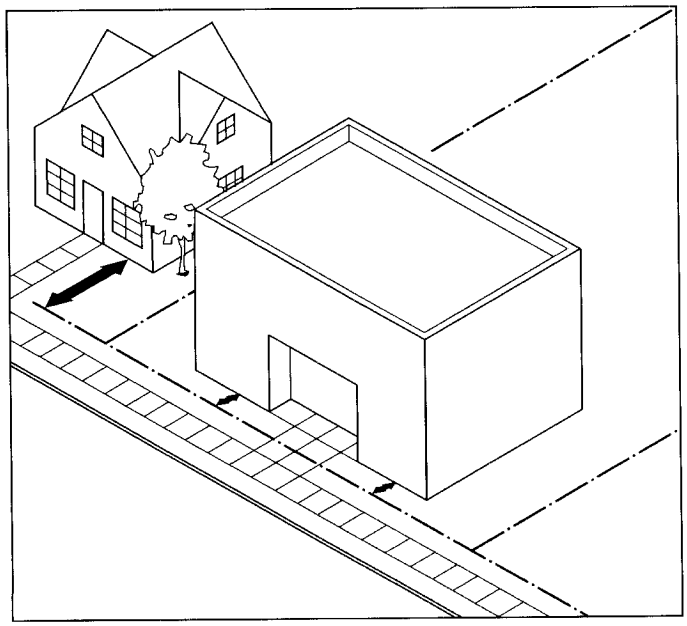
Figure C-24

BUILDING SETBACKS

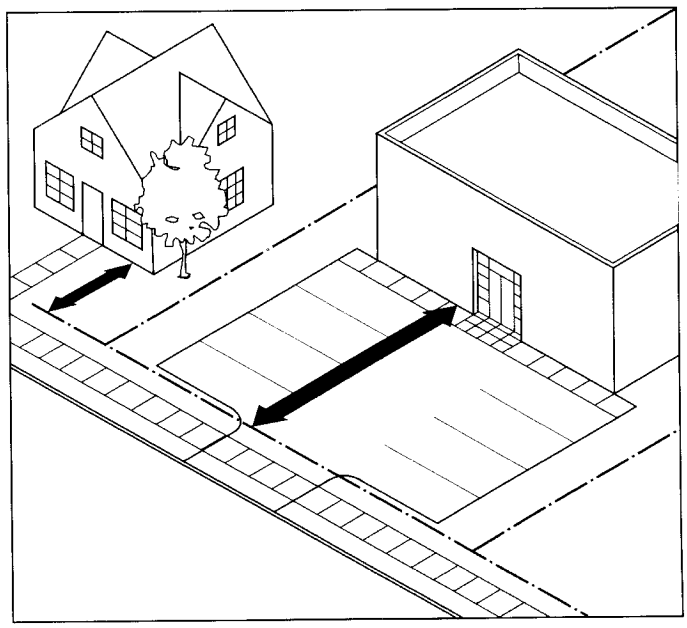
DESIRABLE



UNDESIRABLE - - SETBACK IS TOO CLOSE



UNDESIRABLE - - SETBACK IS TOO FAR



Source: Planning and Design Institute, Inc. and SEWRPC.

"build-within" range, or a distance that equals the average setback distance of the existing buildings adjacent on each side. Another alternative is to construct a strong architectural feature, such as an ornate fence or brick wall, at the build-to line, with the building itself set somewhat further back.

Large "blank" wall surfaces and long gaps in the street wall should be avoided. When parking lots are located in side yards or when side yards between buildings are too wide, elements of a street wall at the build-to line should be provided, either in the form of landscaping, such as hedges or tree lines, or in the form of structural elements, such as decorative fences or low walls, which would provide a "seam" to reinforce and continue the overall uniform setback.

Urban Scale and Mass[4]

The relative proportion, or scale and mass, of a building in relation to its neighboring buildings, to the pedestrian or observer, and to the surrounding area should be considered when new buildings are built or when existing buildings are remodeled or altered. Visual elements that contribute to this overall scale and mass in the Village Center include the visual rhythm and proportion of the elements of the building facades, the architectural detailing, the visual directional emphasis of the streetscape (which can either be horizontal or vertical), the symmetrical or asymmetrical character of the building facades, the mass of individual buildings, the size and configuration of open spaces, the type and color of building materials, the building height and width, and the presence or absence of landscaping materials and street furniture. These elements of urban scale and mass should be considered whenever possible to create an attractive environment. Figure C-25 illustrates the relationship of urban scale and mass to a streetscape. To retain the human-scale setting, most buildings in the Village Center should be two stories in height, but no higher than three stories.

Streetscape Rooflines and Roof Shapes

The upper edges of building roofs or rooflines visually define the upper edge or height of the building and streetscape. The visual continuity of these urban design elements should be maintained, if warranted, and building development or redevelopment with dramatically opposing rooflines should be discouraged. Figure C-26 illustrates the relationship of rooflines and roof shapes to an overall building streetscape.

Some groups of buildings in the central part of the Village Center, near the intersection of Capitol Drive with Cottonwood Avenue and North Avenue, contain flat roofs that are not easily viewed from the street level. However, the rooflines and parapet walls (a wall that extends beyond the roof) of some of these structures have pronounced and similar details which create both interest and visual unity among these structures. The visual continuity of the upper edges of these buildings, which visually defines the upper edge or height of the overall streetscape, should be maintained, if warranted. The edges of any flat rooflines on buildings should preferably be softened by "capping-off" the top with ornate cornices, pediments, finials, and/or parapets.

In this central location, other areas that are not within but are near the vicinity of existing flat-roof buildings should either replicate this roof style or provide a low pitched roof such as a low hip roof—sometimes referred to as a prairie-style building—to somewhat complement the low horizontal roofline image.

Further from this core, buildings consist primarily of peaked roofs versus flat-roof buildings. In general, buildings in these areas should continue to use the hip-style roofs, which may contain a low- or high-pitched roof, or provide a varied pitched roofline by using, for example, a gable roof with dormers or multiple pediments that also contain gables.

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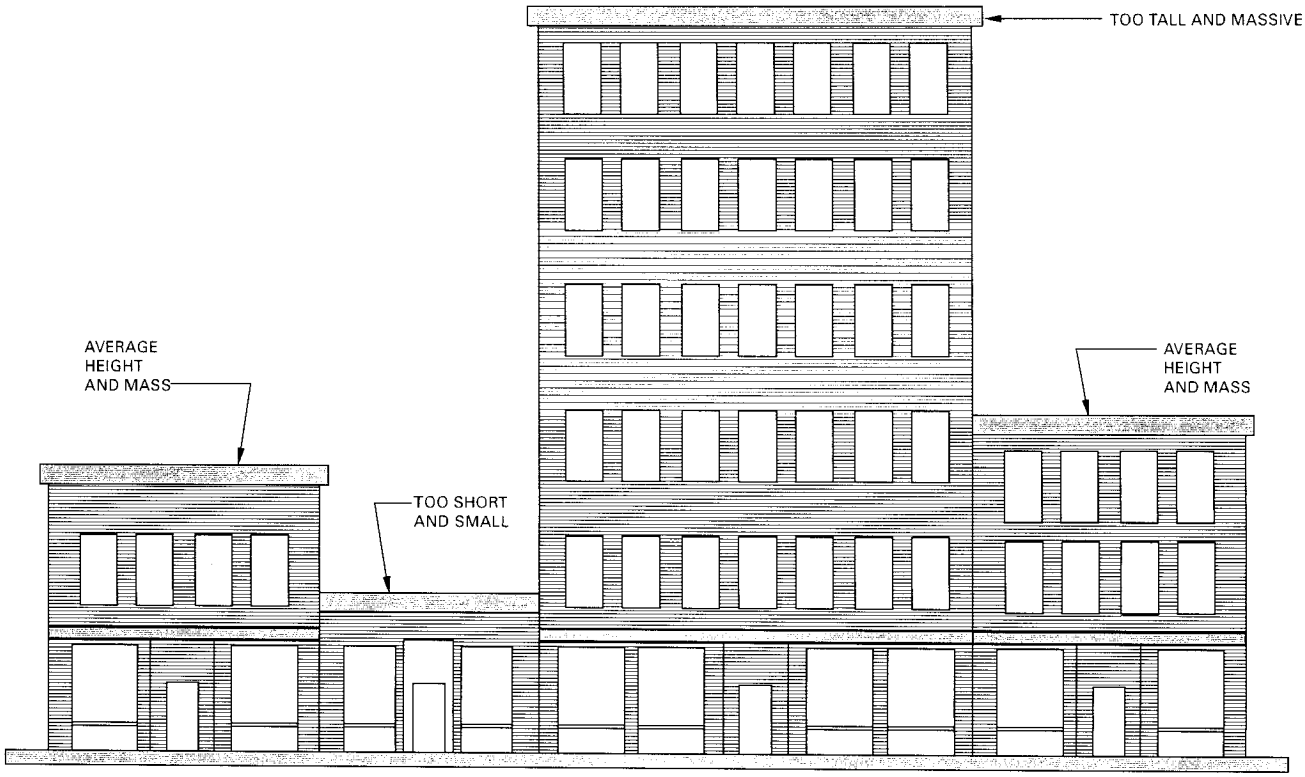
[4]*The mass of a building refers to the overall bulk or volume of space which a building encloses. Scale is conveyed by elements of the building façade where doorways, windows, and architectural details enable people to gauge its relative size and character in relation to the size of the human body.*

Figure C-25

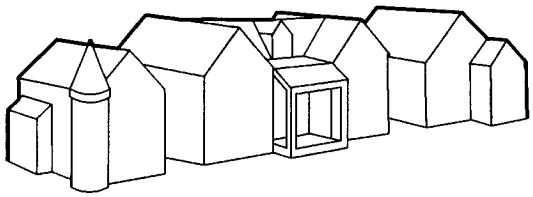
URBAN SCALE AND MASS OF BUILDINGS

A. ELEVATION VIEW OF BUILDING SCALE AND MASS

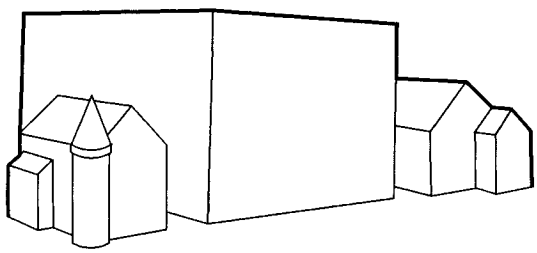


B. SCALE - - RHYTHM AND PROPORTION

DESIRABLE (ALTERNATIVE IS TWO SEPARATE SMALLER BUILDINGS)

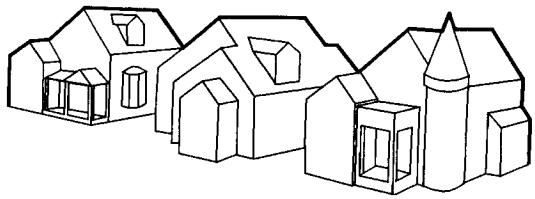


UNDESIRABLE

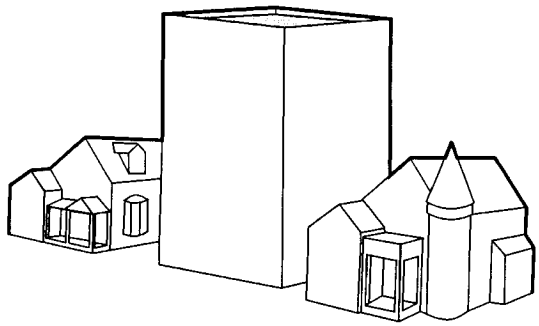


C. MASS

DESIRABLE



UNDESIRABLE



Source: American Planning Association and SEWRPC.

Figure C-26

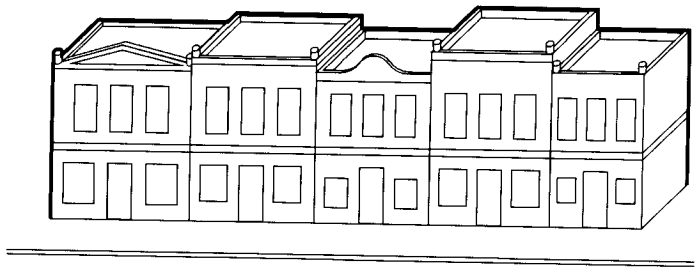
ROOFLINES AND SHAPES OF BUILDINGS

A. ROOF LINE

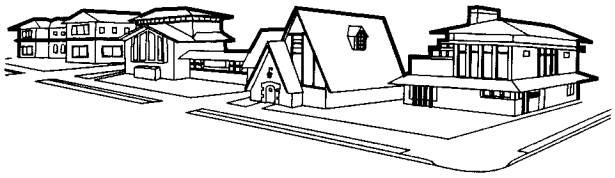
B. ROOF SHAPE

DESIRABLE GROUPING

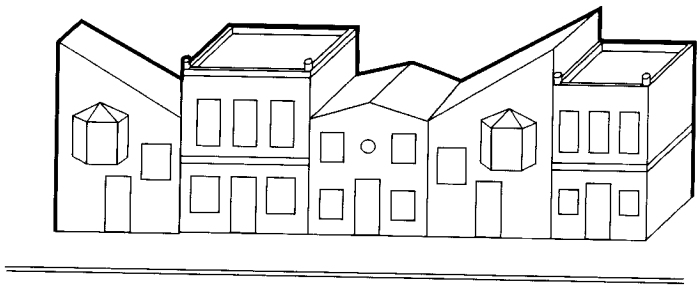
DESIRABLE GROUPING



UNDESIRABLE GROUPING



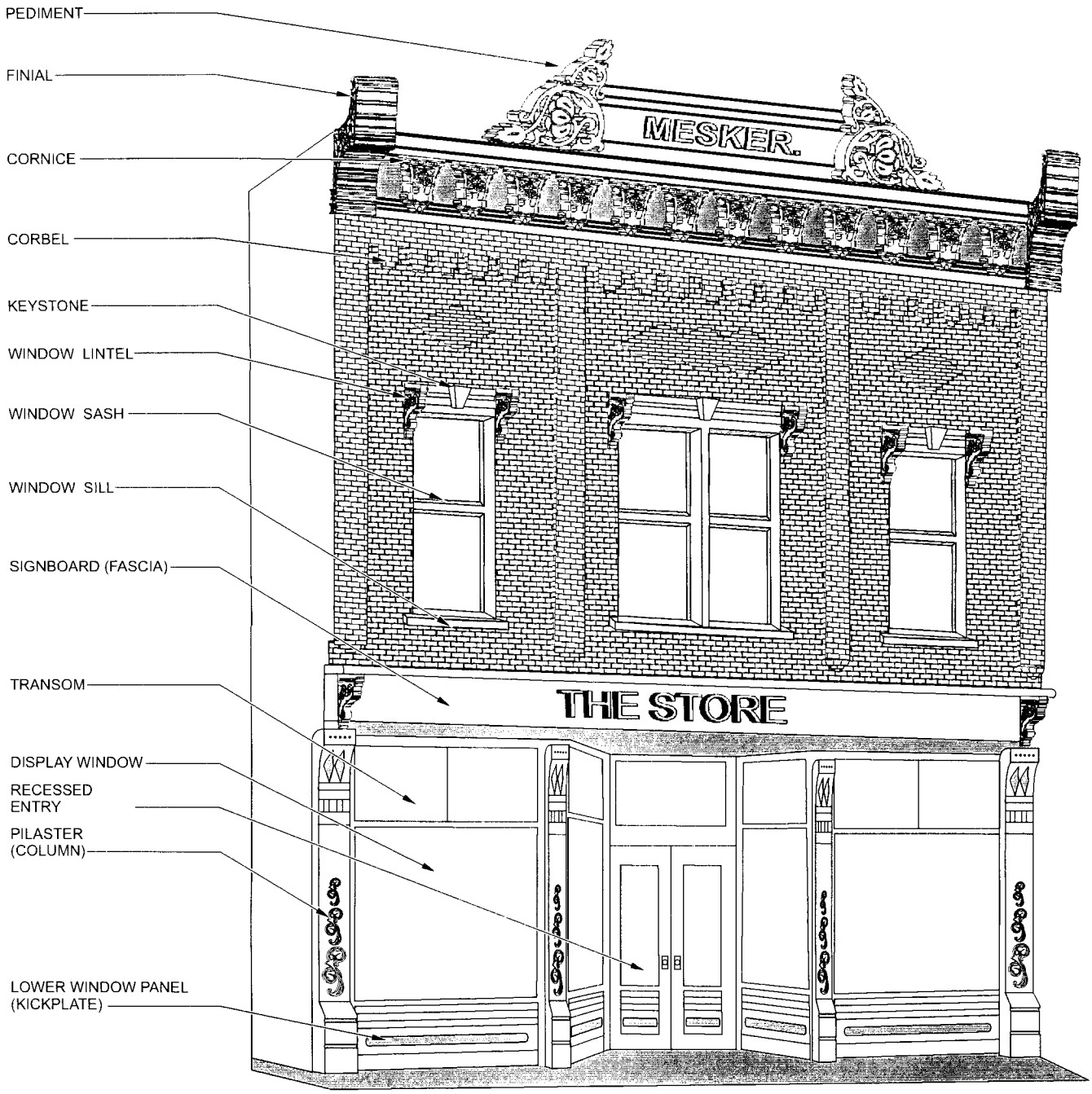
UNDESIRABLE GROUPING



Source: American Planning Association and SEWRPC.

Figure C-27

ARCHITECTURAL FEATURES OF A HISTORIC COMMERCIAL BUILDING



Source: SEWRPC.

Architectural Details

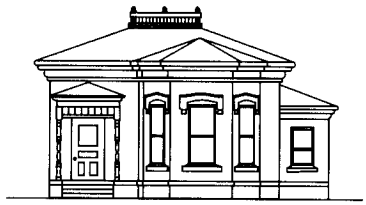
Architectural details and building ornamentation (if present) often represent historic elements of architecture and are important components of the overall character of the Village Center. The distinctiveness of older buildings is directly associated with their architectural details. Figure C-27 defines the various architectural features of a historic commercial buildings with offices or residential quarters in the upper level. Unsympathetic design changes to a building can destroy both the architectural character of the building and the overall streetscape, as

Figure C-28

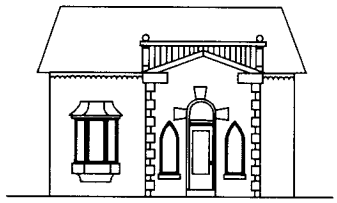
RESTORATION AND REPLICATION OF EXISTING HISTORIC BUILDINGS

A. HISTORIC RESIDENTIAL BUILDING

DESIRABLE



UNDESIRABLE



B. HISTORIC COMMERCIAL BUILDINGS

DESIRABLE

UNDESIRABLE

Source: American Planning Association and SEWRPC.

illustrated in Figure C-28. Significant architectural details, where they exist, should not be lost in rehabilitation or "modernization" of existing buildings. Remodeling efforts should attempt to retain any rich architectural details. However, efforts to transform an existing building into an earlier period through the use of details that were not originally used on the structure do not usually retain the original architectural integrity of the building.

Consequently, if there is an introduction of modern detail or a mixture of old and new parts on the building, the overall visual character of the building should not be spoiled.

Selection of Materials and Colors

Selection of materials and colors for both architectural and landscape design should be based upon material and color unity, the atmosphere and character desired, the prevailing material and color composition of surrounding buildings and landscape features, the harmoniousness of materials and colors used with other materials and colors, and climatic considerations. Since the primary exterior materials used in the Village Center are natural stone, wood, brick, and brick masonry and, to a limited extent, decorative concrete masonry, deviation from these materials should be minimized. By using these predominant materials, the overall building façade texture of the Village Center would be maintained. Overly conflicting material use and relationships, such as those shown in Figure C-29, should be avoided. Also, plain concrete block buildings, as shown in Figure C-24, and smooth metal-faced buildings that are characterless should be discouraged.

The selection of colors for privately-owned buildings is generally an individual decision. However, the use of colors does have a significant effect upon the overall appearance of the Village Center. Colors which overwhelmingly clash with the overall visual character of the Center should be avoided. Colors should be selected to complement the colors of surrounding buildings and such natural building materials as wood, stone, and masonry. Entire color schemes should consist of neutral subdued hues or earth tone colors such as reds, browns, or beiges. Trims, canopies, or wall signs may be highlighted with complementary accenting colors without overbearing the integrity of the facade, as shown in Figure C-31. Overall, buildings should consist of a predominantly neutral color tone to avoid overdoing the color scheme with an overwhelming mix of different colors in order to retain a coherent connecting color theme in the Village Center, but yet allow limited highlighting colors for some variation in the color scheme to help avoid a drab or monotonous appearance.

All proposed material and color schemes for individual buildings should be reviewed on their individual merit based upon desired building design, building materials, longevity of the color choices, statement in relation to overall theme, compatibility with the character and color of adjacent structures, and unity with existing structures in the immediate vicinity.

Windows

Windows are an important contributing factor in ensuring horizontal and vertical continuity between two buildings, as illustrated earlier, and in establishing a vibrant, "welcoming" atmosphere in the Village Center. Large window displays for businesses should be provided at the street level, as shown in Figure C-23, to not only attract the interest of the passing pedestrian, but also to draw potential customers inside. Window displays should be uncluttered and preferably free of signs or, if permitted, a window sign should occupy no more than 25 percent of the pane on which it is displayed.

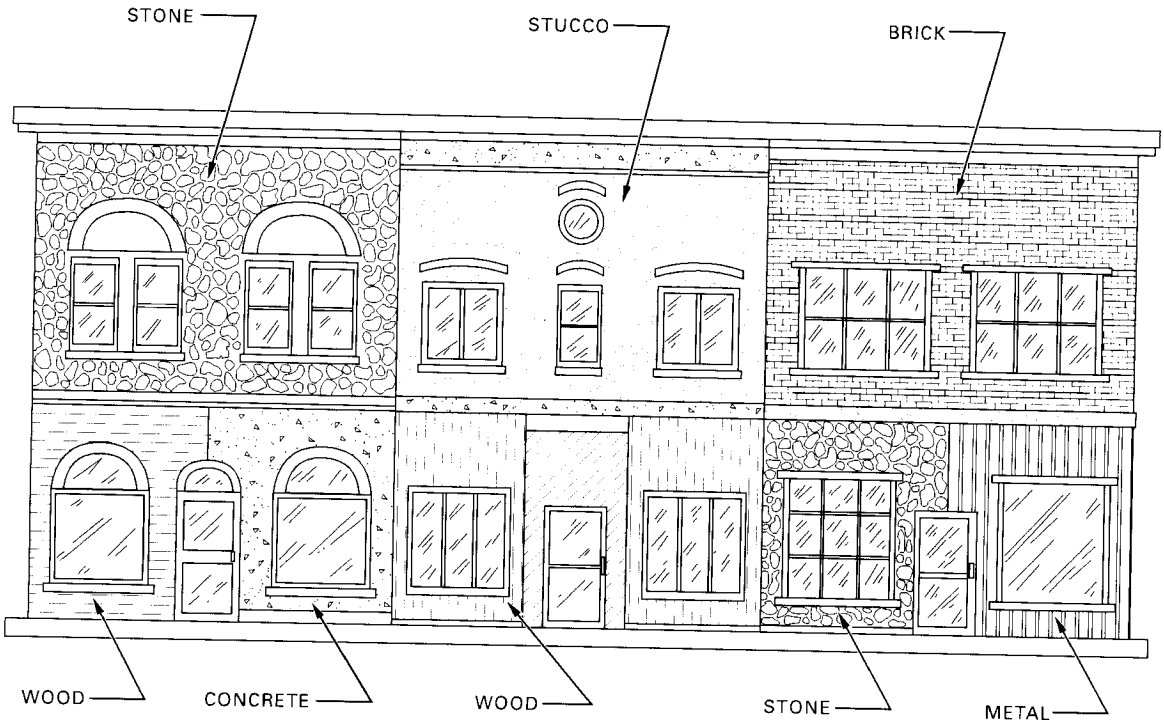
Boarded and dark-tinted windows also detract from the pedestrian atmosphere and should be avoided, at least at the street level, in order to retain an "inviting" facade at this level. To still achieve energy-efficiency and yet retain transparent windows, the following alternative materials could be used: glass with "low E" (emissivity) coatings, which reflects heat in the summer but keeps it in during the winter and still lets light through; glazing with ground-up glass—a ceramic "frit" or enamel—silk-screened onto the surface which is not completely transparent, but allows passers-by to somewhat see through it; double panes of glass with sunshades; lightly tinted windows with some transparency; and canopies and overhangs provided they do not interrupt architectural façade details. Importantly, windows also allow patrons from the inside to peer outside to enjoy people-watching, which, in turn, provides more "eyes" on the streets, thereby providing a greater sense of security.

Accessory Buildings and Structures

Accessory buildings and structures should be compatible with principal structures in terms of building facade character, roof shapes, materials, colors, and architectural details, particularly if these accessory structures are visible from public areas.

Figure C-29

USE OF MATERIALS ON BUILDING FACADES



NOTE: THE USE OF MANY CONFLICTING MATERIALS RESULTS IN VISUAL CHAOS.

Source: SEWRPC.

Landscaping

General

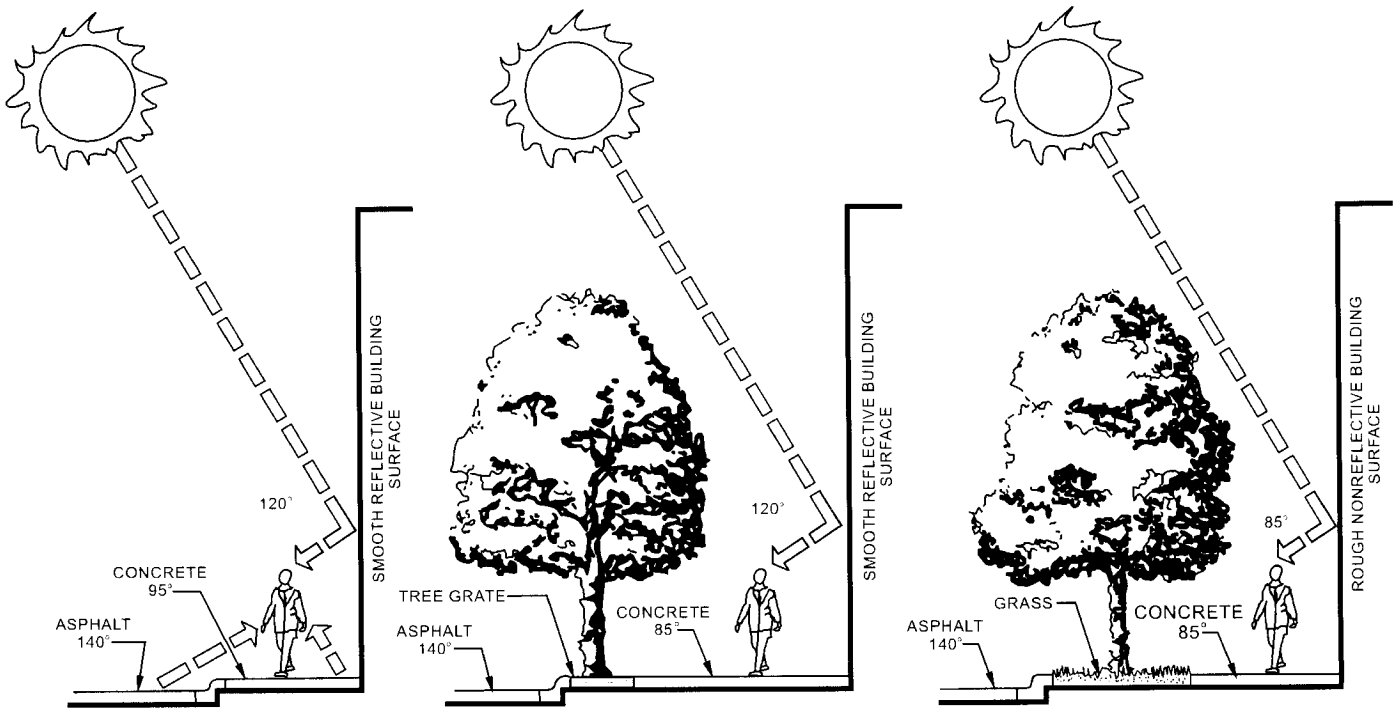
Landscape designs for sites in the Village Center should be integrated with overall site and building plans, not merely as an afterthought, and should be consistent with the desired design theme for the Center. Ultimately, landscaping provides functional and aesthetic characteristics that would improve the character of a Village Center as well as the community. Landscape plantings can provide shade and shelter, act as noise buffers and visual screens, assist in channeling pedestrian and vehicular traffic, reduce air pollutants, act as wind breaks, and decrease insolation (incoming solar radiation) before it reaches the ground, thus preventing re-radiation (long-wave radiation) from asphalt and concrete surfaces, as shown in Figure C-30. The design guidelines outlined earlier for landscaping should be used along with the recommendations below in addressing areas with site constraints such as limited space.

Street Trees

Deciduous canopy trees should be provided wherever possible, while encouraging the provision of ornate tree guards for protection. For those areas with limited space between the building and face of curb, columnar or small to medium scale street trees could be provided and spaced closer together than canopy-type trees, as shown in Figure C-31.

Figure C-30

EFFECT OF LANDSCAPE PLANTINGS ON AIR TEMPERATURE AND PEDESTRIAN COMFORT



NOTE: AN OVERALL BASE TEMPERATURE OF 90° WAS USED IN EACH CASE. ADAPTED FROM "PLANNING FOR ENERGY CONSERVATION", CITY OF DAVIS, CALIFORNIA.

Source: SEWRPC.

Sidewalks

Where space permits, wide sidewalks should be provided to further contribute to a pedestrian-friendly atmosphere; however, a terrace, such as a brick-paved or patterned — "color-stamped" — concrete street edge, as illustrated in Figure C-31, should be provided as a separation between roadways and pedestrian travel to reduce the perception of hazard while providing a more pleasant pedestrian environment.

Parking Lot Screening

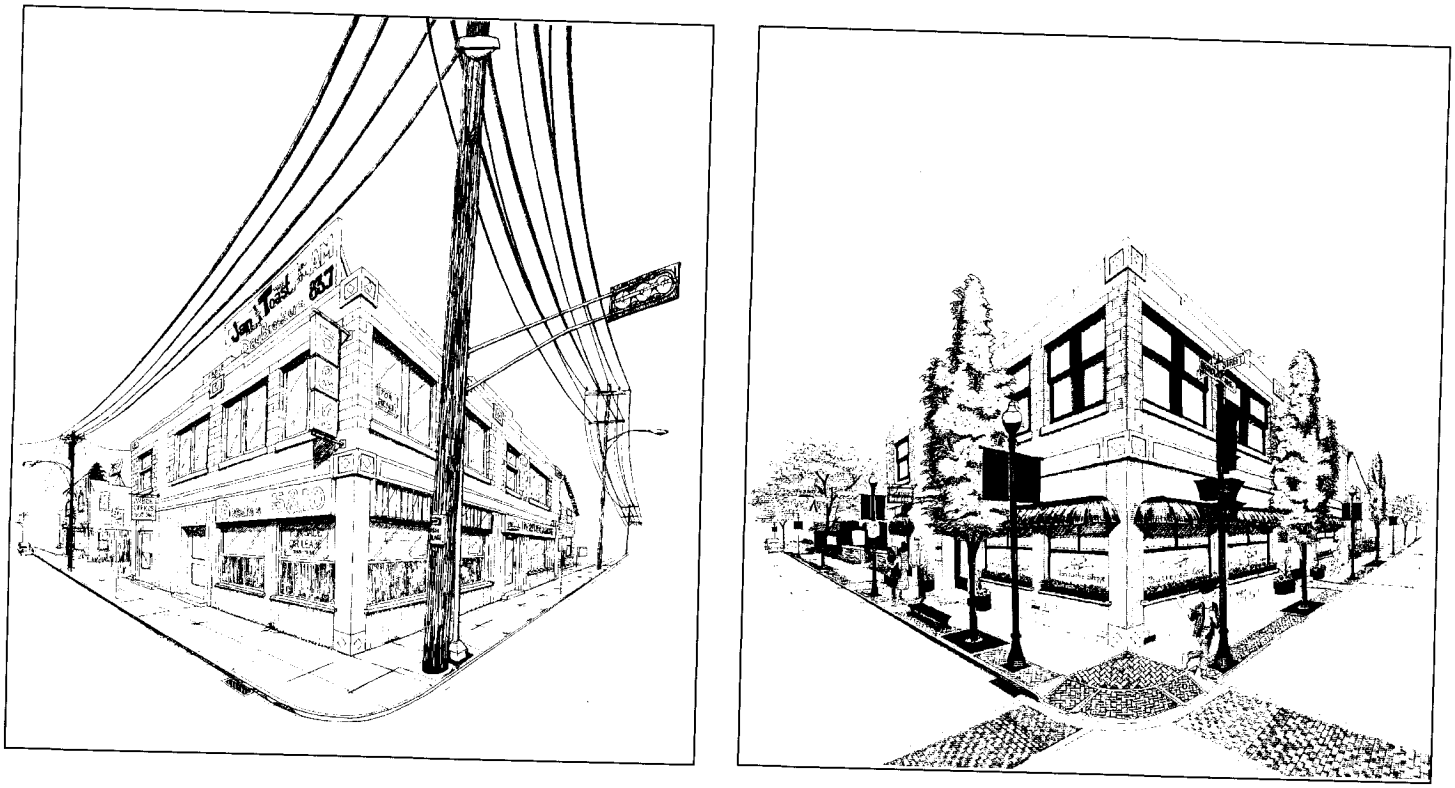
In so far as is possible, the visual effects of parking lots should be partially screened from public streets, as illustrated earlier in Figure C-5, and abutting residential areas to soften the visual impact in accordance with the guidelines established earlier; however, site area may be limited. In such cases, an attractive wrought-iron fence with brick masonry pillars or a solid ornate wall possibly constructed of materials similar to the principal building, may be provided with shrubs, flowers, or ornamental grass at the base that would complement the architectural theme of the building. Such screening from public streets may also function as a significant contributing element of a street wall as discussed earlier. Where parking lots face residential uses, a solid screen of at least six feet in height should be provided.

Buffers

Landscaped buffer yards should be provided between dissimilar uses, as illustrated earlier in Figure C-17. If space is limited, a solid ornate fence or wall should be provided, preferably with landscaping such as shrubs or ornamental grasses provided along at least the finished side of the screening structure; otherwise, the structure

Figure C-31

TYPICAL STREETSCAPE IMPROVEMENTS APPLICABLE TO VILLAGE CENTERS



PERSPECTIVE VIEW BEFORE IMPROVEMENTS

PERSPECTIVE VIEW AFTER POTENTIAL IMPROVEMENTS

Source: SEWRPC.

could be placed on the property line. Provision of some buffering between incompatible uses is preferable to none at all.

Building Foundation Landscaping

Ideally, building foundation landscaping should be provided along the front elevation of buildings facing public streets and parking lots, as shown earlier in Figure C-18. However, space may be limited in the central part of the Village Center. As alternatives, large plant containers, flower boxes under window sills, or low elevated planter beds, which may be constructed of the same materials as the principal building, should be provided along the building elevation to help define entrances and add variation to long continuous building facades, as illustrated with plant pots and containers in Figure C-31.

Site Furniture and Amenities

Site furniture and amenities should be provided to serve pedestrians and bicyclists while evoking a traditional "small Village" character. Such features include lighting standards, traffic standards, planters, benches, fences and gates, handrails, drinking fountains, water fountains, sculptures, clocks, bike stands, garbage receptacles, fire hydrants, phone booths, bollards, kiosks, newspaper boxes, sunshading devices, parking meters, mailboxes, and signage. Uniquely designed bike stands should be provided at designated bicycle parking areas, such as at the library, schools, parks, grocery stores, or in other areas along commercial corridors. The design and arrangement of these items should contribute to the overall design theme of the Village Center, serving aesthetic and utilitarian functions, while adding a sense of design continuity and human scale.

Above-Ground Utility Wires, Mechanical Equipment, and Dumpsters
In the Village Center, the relocation of above-ground utilities either underground or, if not practical, to alleys or the rear of properties, should be considered, since these wires detract from the overall appearance of the Village Center and typically add to visual clutter, as illustrated in Figure C-31. Dumpsters and mechanical equipment should be placed in an unobtrusive location and/or screened from view, as shown earlier in Figure C-21. If space is limited, dumpsters or mechanical equipment should be located in the rear, or, at a minimum, the structural screening shown in Figure C-21 should be provided. Rooftop and at-grade mechanical equipment should also be effectively shielded from public view.

Yards
Front, rear, and side yards should be kept clean and proper garbage receptacles used. Other unsightly features should be screened from view in a creative fashion. Entrances for the general public should provide a walkway which exhibits safe and attractive features, including landscape plantings when practicable. Where a building site or yard is exposed to public view, consideration should be give to its urban features and to its impact on the surrounding area.

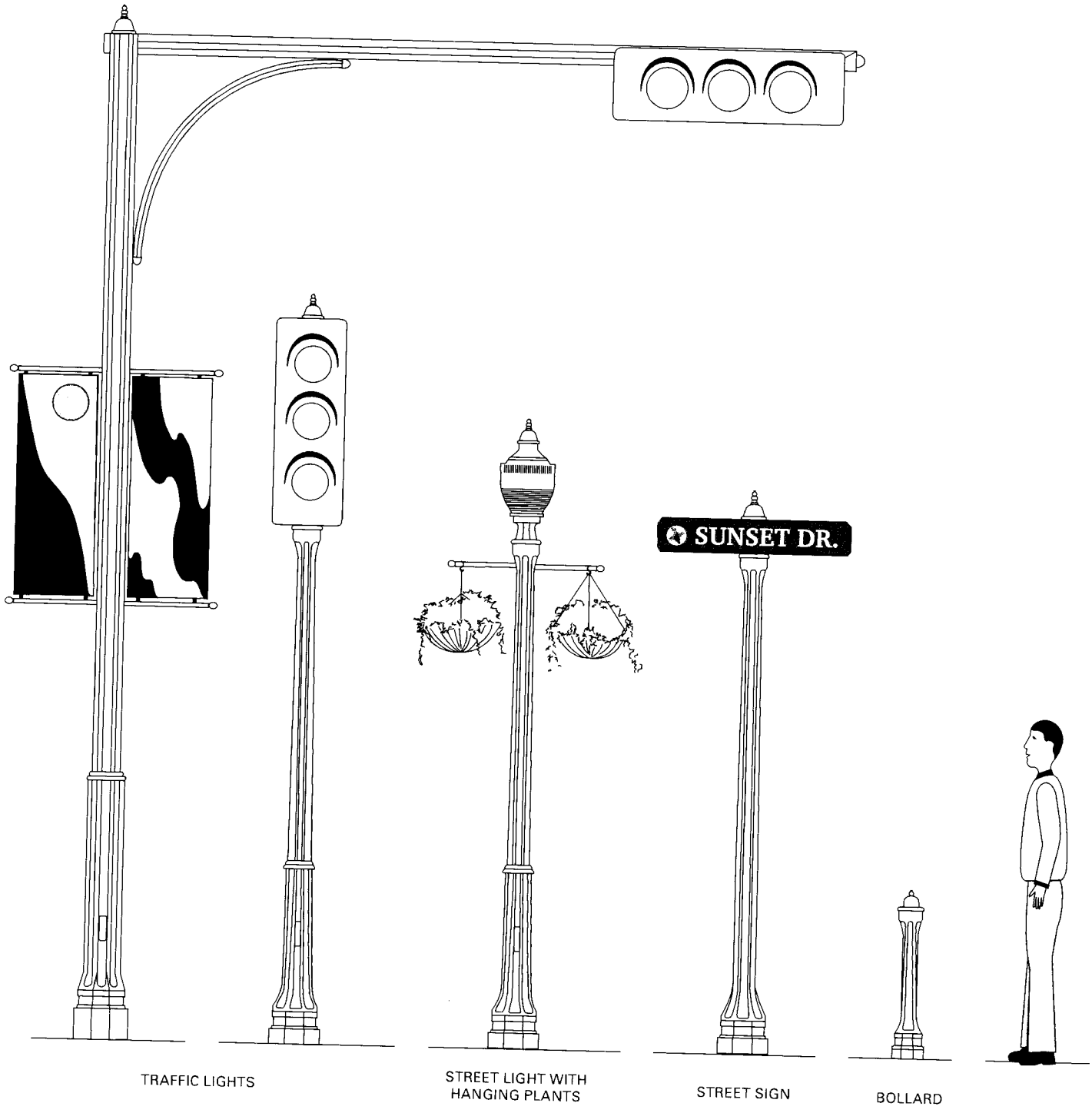
Street Lighting and Traffic Poles
Lighting in the Village Center should relate to both human and building scale. Primary lighting luminaires within the Center should be mounted on decorative posts that are in proportion with the setting, at a height of about 10 to 15 feet. As an alternative, slightly taller decorative posts at a height of about 20 feet could be used, but such posts should be supplemented with bright colorful banners to be in keeping with the human scale desired for the Center. Lighting fixtures or luminaires should be placed so that the light overlaps at a height of about seven feet. Posts and luminaires designed with colorful banners or hanging planters should reflect the desired theme for the Hartland Village Center. The overall illumination should be about 2.0 footcandles to help contribute to a secure and lively street life. If distinctive style streetlights are not practical, the traditional style of tall streetlights could be made more attractive by using colors, such as black or green, instead of the bare metal color. As another alternative, the pole could be colored black or green while the extended arm with the illumination head could remain silver. Due to interest in conserving energy and the night sky for star gazing, such lights should be shielded to efficiently project lighting downwards without reducing the sense of security and the desired degree of illumination. At the same time, such directed illumination would not shine into dwelling units that may be located on the second or third floor level of buildings. The distinct design style of the streetlights should also be emulated in bollards and poles for street signs and traffic signs and signals, as illustrated in Figures C-31 and C-32.

Signs
The sign design guidelines outlined earlier under the basic urban and site planning design guidelines should be used, including the provision of graphically unique street signs and color "icon" or symbolic directional signs for wayfinding purposes. Signs in the Village Center should be placed in visually pleasing and logical places of building facades that are void of openings, projections, and architectural details. The heights of signs should be consistent between stores in the same block streetscape. Standard "franchise" and "brand name" signs should be avoided. A master sign for businesses within a multi-tenant building or center should display the owner, business, or shopping center name only. Window signs should not dominate more than 25 percent of the total glass area of any individual display window.

Since the building facades in the central location of the Village Center have predominantly flat storefronts that are oriented parallel to streets and close to sidewalks, flush-mounted face signs (wall or canopy signs) are recommended. Most signs within the central location of the Village Center where space is limited should consist of wall signs not extending above the roofline nor the second floor window sill, as shown earlier in Figure C-27. Projecting signs should be avoided. Beyond this central location, where more space is available in existing front yards, most signs should also consist of flush-mounted face signs and/or low monument signs, about five to six feet in height, made of natural stone or wood-carved material and set in an attractive base. Monument signs should be surrounded by landscaping, as noted earlier in Figures C-16 and C-19.

Figure C-32

COMPATIBLE STREET ELEMENT STYLES



Source: SEWRPC.