

Coventry Design Guidelines for Commercial Development

Effective October 12, 2010



The above images are examples of the rich historic assets found in Coventry, these Design Guidelines encourage development that respects the uniqueness of Coventry's historic character and sense of place.

INTRODUCTION

These design guidelines strive to maintain and enhance Coventry's rural character, historic value and scenic charm. They encourage the use of forms and materials that are human in scale and allow expression of Coventry's sense of its small town way of life through commercial development..

Design Review

Design Review provides a framework for citizens and developers to work toward achieving a better built environment through attention given to fundamental design principles. Design Review is intended to affect how new development can contribute positively to Coventry's rural character. Design guidelines offer a flexible tool—an alternative to prescriptive zoning requirements—and will allow new development to respond better to the distinctive character of its surroundings.

Design Review has three principal objectives:

1. To encourage site planning and architectural design that will enhance the character of the town and ensure that new development sensitively fits into a village image; and
2. To provide flexibility in the application of development standards; and
3. To improve communication and participation among developers, neighbors and the town early in the design and siting of new development.

Design Review is a component of the permit application along with other components, such as environmental review, variances, etc., administered by the Land Use Department. Like these other components, Design Review applications involve public notice and opportunity for comment. Unlike other components, projects subject to Design Review are brought before the Planning and Zoning Commission for its recommendations or to staff through a Preliminary Administrative Design Review. The Planning Commission, together with the decisions on any other components, makes the final decision on Design Review.

Context and Design Issues

The overriding objective of the design guidelines is to ensure that new development and renovation/alterations and additions fit in well with its surroundings. The following design guidelines share this objective, and with an emphasis on siting and design conditions and priorities supported by the community, aim to guide the design of new development in a manner that strengthens the mixed-use commercial thoroughfares. The community has clearly stated its desire to maintain the small town atmosphere and qualities that have historically characterized the Town. However, it was also recognized that new development provides the opportunity for a broader mix of businesses and services, residential units and employment and an expanded tax base. Coventry's Plan of Conservation and Development recommends using tools such as design guidelines to ensure that new development enhances the rural qualities valued by the townspeople and creates a pattern of development that is pedestrian friendly and human-scale, character and function.

SITE PLANNING



GENERAL OBJECTIVES

Each property in Coventry's commercial and mixed use areas is unique and each needs to be developed with a careful understanding of the site to meet the needs of the proposed business while also improving the visual character, safety and function of the area.

GENERAL SITE PLANNING GOALS:

- Development that respects the uniqueness of each property and reinforces Coventry's historic character and sense of place, and is welcoming, and
- Creates an attractive, functional and safe environment that is beneficial to business, and
- Encourages walking and cycling to, and within, the area by providing safe, interconnected development, and
- Includes access management to increase public safety and
- Protects abutting residential properties through sensitive site planning, buffering, and architectural designs, and
- Preserves significant natural or cultural features such as wetlands, specimen trees and stone walls, and
- Is organized in such a way to create or enhance a village quality versus lineal strip development, and
- Focuses on the visual character of Coventry, including preservation of historic properties through adaptive reuse.

GENERAL SITE PLANNING DESIGN STANDARDS:

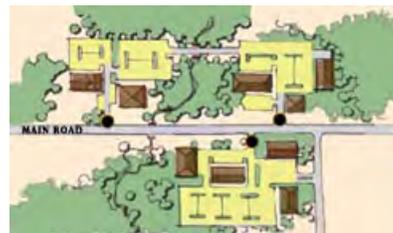
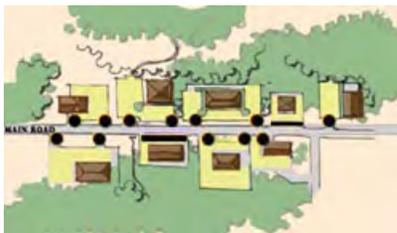
- **Licensed Professions.** All plans for development/redevelopment shall be designed by appropriate licensed professionals (architects, landscape architects, civil engineers, traffic engineers) with the training to address issues of public health, safety and welfare.
- **Relationships to Residential Properties.** The facades of buildings visible from a residential property shall use forms, materials, and details which are residential in nature and appearance. Service areas, parking lots, outdoor storage yards and other similar features shall not be visible from residential properties.
- **Access Management.** Site plans with curb cuts onto arterial road ways shall promote efficient traffic flow and maintain a high level of safety for pedestrians and motorists.
- **Landscaping.** Appropriate landscaping is important throughout the site. To enhance the appearance of the thoroughfare, special attention shall be give to the space between the roadway and the front of the building, this area shall be professionally landscaped with trees, flowering shrubs, fencing, stone walls and other elements. Existing healthy trees and shrubs shall be preserved or transplanted to another area on the site wherever possible.
- **Presentation.** Multiple site elevations, sketches and/or perspective drawings are encouraged to be included in the earliest stages of the review process to illustrate how the plan responds to these standards.

VEHICULAR CIRCULATION

All development will be characterized by safe, user-friendly and efficient traffic flow. Projects will be designed to reduce the number of curb cuts, provide for safe vehicular and pedestrian movement, encourage intra-parcel travel and minimize the number of roadway trips.

DESIGN STANDARD

- **Curb Cuts Minimized.** Site plans shall be designed to minimize the number of curb cuts onto town and state roads to increase vehicular and pedestrian safety.
- **Shared Access.** Entrances to abutting commercial properties shall be combined whenever possible.
- **Internal Traffic Pattern.** The site plan shall be designed to provide pedestrian safety by separating vehicles from pedestrian areas to the greatest extent possible.
- **Traffic Flow Delineation.** Parking spaces, directional arrows, crosswalks, and other ground markings shall be delineated with pavement paint or other suitable material to ensure safe circulation.
- **Traffic Calming.** The site plan will be designed to discourage speeding within the site and between abutting properties. Calming techniques that can be used include speed tables, raised crosswalks, curvilinear road alignment, on-street parking, street-side plantings, neck-downs and curbed islands.
- **Vehicular Intra-Connections.** Where feasible, connections between parking lots and driveways on abutting properties shall be provided. The site plan design will also anticipate possible future connections to abutting undeveloped properties. Intra-connections shall provide a safe, direct access between adjacent lots in a manner that prevents them from becoming a shortcut between roadways. Cross easements may be required to allow intra-connections.
- **Pedestrian and Bicycle Intra-Connections.** Safe pedestrian and bicycle connections between abutting land uses shall be provided where possible to encourage foot and bicycle traffic and minimize vehicular traffic. The site plan design will also anticipate possible future connections to abutting undeveloped properties.
- **Drive-Throughs.** Drives leading to or from drive-throughs shall minimize conflicts with pedestrian circulation. When there is a conflict with pedestrian circulation, techniques will be used to increase motorist awareness such as signage, lighting, raised crosswalks, changes in paving, or other devices. Drive-through queuing shall not be located in parking areas or other areas which would cause unsafe conditions or congestion.
- **Pedestrian Islands.** For all driveways greater than 32 ft wide, a 5 ft minimum width pedestrian island shall be installed at the crosswalk for pedestrian refuge.
- **Outdoor Storage and Sales Areas.** Areas for any future or potential outdoor storage and sales areas shall be included in the initial site plan design. These areas shall be designed to complement the overall development.
- **Service and Delivery Drives.** For safe pedestrian movement within the site, service and delivery drives shall be separated from internal walkways, parking areas or pedestrian use areas by landscaped islands, grade changes or other devices.



The illustration on the left shows a typical commercial development pattern, the black dots and wide black lines are the entry/exits from the parking areas. The illustration on the right has the same buildings, but through planning for access management and shared parking the road is much safer with far fewer exit/entry points.

PARKING AREAS

Parking lots shall be designed to complement the building, adjacent buildings, and physical characteristics of the site and the character of the Town, and not be a dominant visual element in relation to the site and surrounding properties. The scale of the parking lot shall be reduced by minimizing the amount of paved surface and parked vehicles visible from the road.

Site plans shall be designed so the parking lots are inviting, pedestrian friendly places by careful attention to internal walkways, landscaping and lighting. Proper planning can ensure that parking lots balance the needs of both the vehicle and the pedestrian.

DESIGN STANDARDS:

- **Siting.** The majority of the parking area shall be located at the rear or sides of the commercial buildings whenever possible. Where it is unavoidable that parking must be adjacent to a residential zone, the lot shall be sufficiently screened with evergreen trees, earth berms, fences or shrubs. The site plan will be designed with the parking coordinated with building entrances, proper lighting and landscaping.
- **Parking/Building Separation.** Paved surfaces of parking area shall be separated from all buildings by a minimum of an 8' wide landscaped area for every 10' in vertical wall surface.
- **Scale.** To reduce the visible scale of the parking lot, and to reduce the heat island affect, parking area with more than 19 spaces shall be broken up with landscaped islands and other appropriate features.
- **Landscaping.** Parking lots with more 20-39 spaces shall have 10% of the parking lot area as interior landscaped islands. Parking lots with 40 or more spaces, and those exposed to public view, shall have 15% of the lot area landscaped. For this calculation access roads are excluded. Planting islands shall be a minimum of 9' in width, and be planted with hearty and appropriate plant material for parking lot conditions. See the **Landscaping** section of these Design Guidelines.
- **Configuration.** The lots shall be designed to facilitate safe vehicular movement throughout. Single entry parking lots are strongly discouraged, but where unavoidable, space shall be provided to safely turn a vehicle around and to avoid backing out.
- **Shared Parking.** Shared parking is strongly encouraged where appropriate, particularly where abutting land uses have differing hours of peak usage. Cross easements may be required to allow shared parking.
- **Snow Storage.** In concert with overall site planning, provisions shall be made for snow storage in the design of all parking areas to avoid conflicts with landscaping, visibility, drainage or pedestrian safety. The area will be noted on the Site Plan.
- **Out-Parcels.** The development of smaller commercial buildings on out-parcels within a large existing parking area is encouraged as a means to break up the scale.



This parking area uses trees and planted islands to reduce the visual effect of the paved surfaces.



The parking area and buildings are separated by a landscaped area.



Out parcels are incorporated into the site layout to break up the scale of a large asphalt area and to utilize shared parking.

PEDESTRIAN CIRCULATION AND SPACES

Commercial properties shall provide attractive, safe and functional walkways to the main entrance. Entrances to buildings shall be designed to provide outdoor spaces for a variety of uses, seating/resting, displays and aesthetic enhancement, to create a pedestrian friendly environment.

DESIGN STANDARDS:

- **Internal Walkways.** Continuous internal walkways/sidewalks shall be provided to each customer entrance.
- **Location.** Walkways shall be located where motorists can anticipate pedestrians and react accordingly. Walkways shall be designed to give the pedestrian a full view of oncoming vehicles, with minimal interference from trees, shrubs and parked cars. Walkways shall avoid drive-through lanes, access and service drives and other high-traffic routes. Traffic control signs, light fixtures, trees or other potential obstacles shall be located far enough from walkways to prevent interference with pedestrian movement.
- **Orientation.** Walkways in parking lots shall be aligned with the main entry or focal point on the building, whenever possible, to assist in wayfinding.
- **Width.** Walkways shall be a minimum of five feet wide to allow two people to pass comfortably. Additional width may be necessary in certain areas such as those with heavy pedestrian traffic or where cars overhang the walkway.
- **Coordination with Landscaping.** Areas adjacent to walkways shall be landscaped with trees, shrubs, benches, flower beds, ground covers, or other such material.
- **Crosswalks.** Where walkways cross vehicular paths, the crosswalks shall be marked by a change in pavement material, texture, pattern or color to maximize pedestrian safety. The material selected for crosswalks shall be highly durable and low maintenance, and to allow safe bicycle movement across the surface. Raised crosswalks shall be considered at key locations as a traffic calming device and to make crosswalks more visible. Signs may be warranted as determined by the Institute for Traffic Engineers standards.
- **Drainage.** Sheet flow of stormwater across walkways shall be avoided. Stormwater system shall be sized to limit ponding and to provide uninterrupted use of the walkway.
- **Maintenance.** All internal walkways shall be designed to facilitate maintenance by the property owner. The site plan shall coordinate the location of walkways with utilities, plantings, drainage and other site elements that could affect long-term maintenance.
- **Snow Storage.** All walkways shall be designed for ease of snow removal; site plans shall locate snow storage in areas that will not interfere with pedestrian movement, block visibility or cause dangerous conditions from freezing meltwater.
- **Accessibility.** All walkways shall be located, designed and detailed in full compliance with the Americans with Disabilities Act (ADA), as revised.



Outdoor space for seating creates a pedestrian friendly atmosphere.



This walkway is separated from the drive to the right by a wide planted area, the scale of the trees and lighting enhance the site.



Internal walkways are an integral component of the site plan. This walk connects pedestrians from the parking to the entrance with a clearly defined crosswalk.

SERVICE AREAS

Service areas shall be integrated into the overall site plan. The location shall address the needs of the facility while minimizing traffic or visual conflicts, noise or odors.

DESIGN STANDARDS:

- **Locations.** All facilities for service, including waste collection and storage facilities, loading and unloading areas, loading docks, storage facilities, dumpsters, recycling areas, fueling areas and vehicle service and maintenance areas shall be at the side or rear of the principal building. Locations that face public roadways or abutting residential properties shall be avoided. Overhead doors or other vehicle entrances or exits shall not be located on any façade that faces a public street or residential neighborhood.
- **Design.** Service areas shall be sized to fit the specific needs of the building's intended use. The smallest size to meet the building's future needs is encouraged.
- **Screening.** Service areas shall be screened to minimize visibility from public and private streets, main entrances, abutting neighborhoods, public open spaces and walkways. Service areas shall be screened with architectural elements such as walls or fences. Screening a dumpster with a gate is discouraged; however, if required, they shall be designed to prevent sagging and for ease of use. Screening may be further enhanced with evergreen trees, shrubs and earth berms.

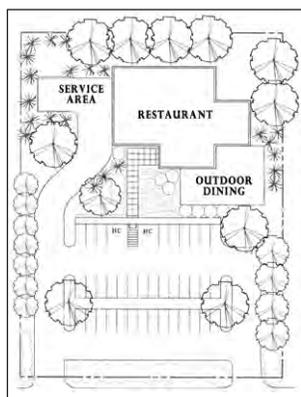
The overall material selected for screening shall complement the design of the main structure by repetition of materials, detailing, scale and color. Where chain link fencing is required for safety, it shall be painted or coated in black and landscaped to screen from view.

Architectural screening or fencing shall be protected with granite posts or concrete filled steel bollards that will prevent damage from service vehicles.

- **Service Access.** Service areas shall be sited to accommodate the turning movement of service vehicles.
- **Coordination.** Prior to site plan submission, the applicant shall contact anticipated companies that will be using the service areas for input into the design and siting of service areas and facilities.



The service area of this chain restaurant is screened with the same material and landscaping as the building's front.



The service area shown on this site plan is well integrated into the overall site plan. A fence and landscaping screen the area from abutting property, the street and entry. Service vehicles access is away from pedestrian walks.

BUFFERS AND SCREENING

Buffers and screening shall be required between residential and commercial properties, as a visual block between public roadways and parking areas, and in certain other situations of inharmonious land uses. Plantings, earth berms, stone walls, grade changes, fences, distance and other means can be used effectively to create the necessary visual separation.

DESIGN STANDARDS:

- **Suitability.** The selection of the proper type of buffer shall result from a thorough understanding of site conditions, distances to property lines, intensity of the proposed use and the degree of concern expressed by the Commission and abutting landowners. The requirement of a buffer or screen shall be incorporated into the initial site plan
- **Design.** Buffers and screening shall be an integral part of the site plan and be coordinated with other elements used on the site. Stone walls, plantings, fencing, walls, earth berms, and other screening elements shall be similar in form, scale and appearance to other similar elements on the site.
- **Maintenance.** Buffers shall be maintained in a condition that assures their continued effectiveness. Where plantings do not survive, or are no longer an effective buffer, they shall be replaced to meet the intent of the approved plan. Structural elements shall be maintained in good condition.



A planted earth berm screens a parking area from residential properties.



For now, these white pines screen the parking area from the neighboring property, however as they mature the loss of lower branches will reduce the effectiveness.



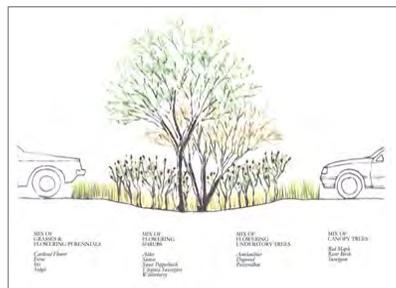
Preservation of the existing mature trees adds visual interest and forms one layer of the screening from a residential neighborhood.

STORMWATER SYSTEMS

Stormwater systems shall be an integral and attractive component of the landscape. An open stormwater system using Best Management Practices (BMP) is preferred, or if warranted by site conditions a combined open and closed system. A fully closed system is discouraged except in unusual situations. University of Connecticut's CLEAR and NEMO standards shall be used.



Detention basins can be designed to be an attractive part of the landscape.



One BMP technique is to use parking lot islands as mini-detention basins.



MULTIPLE-BUILDING DEVELOPMENTS

Developments with multiple buildings shall exhibit a high degree of coordination in site planning, architectural design, site design and site details. All components shall be designed to complement an overall plan.

DESIGN STANDARDS:

- **Master Plan.** A conceptual master plan shall be prepared to show the general location of future buildings, parking lots, vehicular and pedestrian circulation, common open spaces, utilities, service areas, stormwater systems and other components of site development. Multiple site elevations, sketches and/or perspective drawings are encouraged to be included in the earliest stages of the review process to illustrate how the plan responds to these standards

The master plan shall show how traffic, stormwater systems and utilities will be coordinated with adjacent properties.

The plan shall illustrate the measures that will be taken to preserve significant natural or cultural features such as wetlands, specimen trees or stone wall.

If to be constructed in phases, the master plan shall show the sequence of development and the steps to be taken to ensure compatibility between proposed and future activities.

- **Building Orientation.** All buildings shall be oriented to create usable, safe and attractive pedestrian spaces, preserve significant site features and minimize the appearance of parking areas.
- **Focal Points.** A limited number of buildings or other elements shall be designed as focal points. These structures shall be visually more prominent, enhanced by height, massing, distinctive architectural treatment, lighting, landscaping, or other distinguishing features.
- **Outdoor Spaces.** The development shall include outdoor use areas such as greens, plazas and courtyards. Buildings may be oriented toward open spaces provided they have a major entrance on the outdoors space as well as secondary entrance(s) oriented to the parking area. Outdoor spaces shall be coordinated with the master plan's pedestrian circulation plan to encourage pedestrian use, with provisions for seating and outdoor activities. Outdoor spaces shall be separated from vehicular traffic with landscaping, grade changes and other site features.
- **Drive-through Facilities.** The building and site plan shall emphasize pedestrian access; drive-through lanes should be placed on the periphery of the site.
- **Signage Plan.** The master plan shall include a master signage plan detailing how graphics will complement and unify the proposed development. See the Signage section of these Design Guidelines and Coventry's Zoning Regulations.
- **Lighting Plan.** Site lighting shall be coordinated with all other elements of the site and with the Lighting section of these Design Guidelines and Coventry's Zoning Regulations.
- **Landscape Plan.** All landscape elements shall be coordinated with all other elements of the site and with the Landscape section of these Design Guidelines and Coventry's Zoning Regulations. The landscape plan shall complement proposed buildings, reinforce circulation paths, help define pedestrian use area, highlight entrances, provide shade and add seasonal interest.
- **Architecture.** All buildings, even if constructed in phases, shall be coordinated with the other buildings to unify the entire development.
- **Shared Stormwater Systems.** Wherever appropriate, stormwater systems will be shared by multiple building sites.

MULTIPLE-BUILDING DEVELOPMENTS



Similar roof pitches, building materials and awnings, help to unify this multi-building development.



By siting the buildings to reinforce pedestrian circulation pattern along with pedestrian-scale lighting the overall scale of the development has been reduced.



The buildings in this large development have been sited to reinforce pedestrian spaces, effectively reducing the scale of the overall development.



This multiple building development has recreated the feel of a main street.



Olde Mystic Village encourages pedestrian use and enjoyment through well-connected walkways and mature landscaping.

ARCHITECTURE



GENERAL OBJECTIVES

Building design shall be influenced by traditional New England examples and shall reinforce a human scaled environment through careful consideration of architectural form, massing, detail, material and color. These design standards establish criteria, but are not intended to dictate building styles.

GENERAL ARCHITECTURE GOALS:

- Development that provides a positive experience for the motorist driving by and the pedestrian viewing the building up close, and
- Enhances Coventry's rural character, and
- Exhibits a thoughtful consideration of scale, form, orientation, height, setback, massing, materials and architectural features, and
- Provides a permanent, positive addition to the commercial district, constructed of high quality, long lasting materials, and
- Strives to restore and/or reuse older buildings to maintain the character of Coventry, replacement of historic buildings is strongly discouraged

GENERAL ARCHITECTURE DESIGN STANDARDS :

- **Design.** New buildings shall be designed to fit the individual characteristics of their particular site and be influenced by traditional New England village patterns while meeting the needs of the intended use and users.
- **Human Scale.** Buildings and site elements shall be designed to human scale. The forms, massing and openings of buildings shall be proportional to the size of a human figure.
- **Freestanding Accessory Structures.** The design of freestanding structures (such as ATMs, garages, canopies, storage units, recycling or trash enclosures, cart corrals, and the like) shall coordinate with the primary building through the repetition of form, materials, details and color.



These historic buildings, former residences, have been converted to commercial uses. The one on the left has leased office spaces, the one on the right is a McDonald's in Freeport, Maine.

FAÇADE DESIGN

All buildings shall have an aesthetically appropriate (as outlined by these standards) and human scaled façade to the street, internal drives, parking areas and surrounding neighborhoods. Entrances shall be easy to distinguish and reinforced through site and architectural features and wherever possible, clearly visible from the street.

DESIGN STANDARDS:

- **Main Entrance Façade.** As the primary and front façade, it shall be designed in a manner to clearly distinguish it from the other facades and to define the customer entry. This façade shall contain some of the following elements to add scale to the entry:
 - canopy
 - covered porch or arcade
 - gables and dormers
 - pilasters
 - display windows
 - outdoor seating area
 - recesses or projections in keeping with the scale of the building
 - peaked roof
 - unique architectural details in keeping with the overall building design
 - other features designed to add scale and visual interest to this façade

All façade elements must relate to each other and the scale of the building and form a harmonious overall design. Main entrance facade shall be designed to accommodate a facade mounted sign per the Signage section of these Design Guidelines.

- **Rear and Side Façades.** All façades facing public roads, residential neighborhoods or abutting properties shall be designed to match or complement the Main Entrance Façade. Blank façades are prohibited.
- **Offsets.** The maximum length of the plane of any façade is 40'; exterior walls of any building longer than 40' shall have recesses or projections at a minimum depth of 10% of the longer adjacent unbroken wall length and be proportional to the building's height and length. Projections used to break up the length of the building shall extend to the ground.
- **Site Design.** All exterior components, such as signs, lighting, landscaping and other elements shall be in scale with, and complementary to, the Main Entrance Façade.
- **Fenestrations.** All windows and door openings shall be in scale with the façade; windows should be vertical in orientation. All fenestrations shall be framed with a minimum of 3-1/2" trim. If shutters are used, they must be sized to fit the opening and used for all windows on a given wall.



These two buildings have clearly defined entries, windows in scale with the architecture and offsets to the facade, combined they visually break up the overall length of the buildings.



All four facades of this chain restaurant, including the back shown here, are attractive.

- **Mechanical and Functional Elements.** All vents, downspouts, flashing, electrical conduits, meters, HVAC equipment, service areas, loading docks, service connections and other functional elements shall be treated as an integral part of the architecture.

- downspouts and vents shall be incorporated into the façade design through detailing and color
- meters, utility connections, HVAC equipment and other exterior service elements shall be contained in service closets, behind walls or located out of view from the public

Building elevations presented for review shall show an accurate depiction of the location and treatment of all mechanical and functional elements.

- **Vending Machines.** Any vending machines located on the exterior of the building shall be located so they are not visible from any public street or abutting property.
- **Illustrations.** All elevations of proposed buildings shall be evaluated as part of the design review and shall be consistent with the architecture to be build and accurate in context with the environment.

BUILDING MATERIALS

Building materials shall be treated as a significant design element in defining the appearance of the building. The use of materials that give the appearance of New England colonial architecture, as found in Coventry, is strongly encouraged.

DESIGN STANDARDS:

- **Materials.** Traditional, high-quality building materials common to Coventry (for example, clapboards, brick and shingles) shall be used as the primary siding material. Modern materials that have the same visual characteristics are acceptable. In all cases attention must be paid to the detail at corners, trim at openings and whenever there are abutting materials. Long term maintenance requirements shall be a consideration in the selection of all building material.

The following materials are prohibited: highly reflective metal or plastic panels, brushed aluminum, bronzed glass, concrete block, bricks interspersed with random white bricks, T-111, untreated plywood, EIFS (i.e. Dryvit), and similar materials.

- **Colors.** Traditional New England colors are appropriate for all components of the building. All colors shall have low reflectivity. The use of high intensity, highly reflective, chrome, metallic or fluorescent colors or a black primary color, are prohibited. Trim color shall be a color that complements the building's primary color.
- **Details.** A limited number of material types should be used and all shall be in keeping with the design of the building as a whole.



Although new, this building's design and choice of material reflects traditional New England architecture.



Coventry's historic architecture has many examples on which to draw inspiration for design and material selection.

ROOFLINES

Roof lines shall be designed to provide diversity to the building form and add visual interest. Roof lines should reduce the mass of large buildings and emphasize entrances and they can provide shelter and shade for pedestrians.

DESIGN STANDARDS:

- **Pitched Roofs.** Buildings with an 8/12 to 12/12 pitch roof are strongly encouraged. Roof lines with projections shall be designed to create strong shade/shadow patterns.
- **Shapes to be Avoided.** Flat roofs, false mansard, A-frames and other non-traditional roof forms shall not be used as the primary roof line.
- **Materials for Pitched Roofs.** Visible roofing should be composite asphalt shingles or standing-seam non-glare metal. High gloss roofing materials are not permitted. The color of the roofing material shall complement the color and texture of the building's façade. Stripes and patterns on the roof are prohibited.
- **Roof-Mounted Equipment.** Mechanical and other roof-mounted equipment shall be screened from public view, or grouped in a location where visibility is limited. Where used, screening of the equipment shall be designed as an integral part of the architecture and complement the buildings mass and appearance.
- **Roof-Mounted Signs.** Are strongly discouraged.



The roof lines of these three buildings add diversity to the building form, increase visual interest, define the entrances and reduce the scale of the building mass.

AWNINGS & CANOPIES

Awnings and canopies can enhance the appearance and function of a building by providing shade, shelter, shadow patterns and visual interest

DESIGN STANDARDS:

- **Location.** If used, all awnings and canopies shall be an integral part of the design and located directly over doors or windows.
- **Materials.** Awnings and canopies shall not be made of reflective material such as metal or plastic. Their color and style shall complement the facade of the building.
- **Graphics.** Any graphics on awnings or canopies shall be considered signage, and must meet the sign requirements of these Design Guidelines and Coventry's Zoning Regulations. Backlighting is prohibited.



These awnings coordinate with the overall design of each building's entry facade.

RENOVATIONS, ALTERATIONS AND ADDITIONS

All renovations and additions to existing structures shall use the opportunity to add visual interest to the building and to enhance the original structure.

DESIGN STANDARDS

- **Design.** Where the existing building currently meets the design standards, proposed renovations must be designed to complement the existing building. Where the existing building does not meet design standards, the owner is strongly encouraged to upgrade the building. Plans submitted for approval must show the proposed improvements along with the existing building.
- **Materials.** Where the existing building meets the design standards, additions or renovations shall complement or match the materials, form color and detailing of the original structure. Where the original building does not meet these Design Guidelines, the owner shall demonstrate how the materials used in the renovation will complement the existing structure and bring it more into compliance with these Design Guidelines.
- **Features.** Distinctive architectural features or examples of skilled craftsmanship shall be retained in the renovations.



The repetition of architectural and landscape details help to integrate these additions with an historic building.

FRANCHISE ARCHITECTURE

National franchises are a welcome and permitted use in Coventry; however, the design of those buildings must reflect an awareness of New England architectural traditions in their form, detailing and material.

DESIGN STANDARDS:

- **Franchise Styles.** Architectural forms derived from a style outside of New England are prohibited. New England regional prototypes from national franchises are permitted provided they meet these Design Guidelines. Buildings that are stylized to the point of being a form of advertisement are prohibited.
- **Coordination of Site Features.** All site features and accessory structures must coordinate with the building and meet these Design Guidelines.



These three franchise buildings reflect New England architectural traditions in their form, detailing and material selections; landscaping and other site features are coordinated.

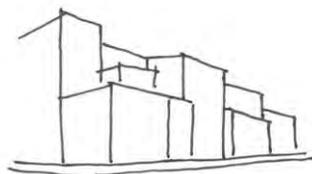
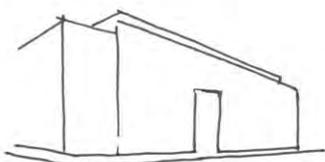
LARGE SCALE BUILDINGS

Buildings of 20,000 square feet or greater shall be designed according to these design standards and be consistent with the scale and form found in Coventry.

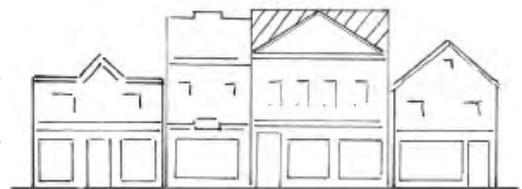
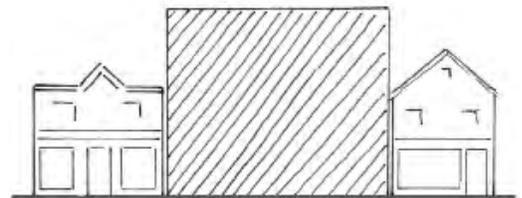
DESIGN STANDARDS:

- **Design and Massing.** Large buildings shall be designed to break up their mass into smaller visual components through the use of projections, recesses and varied facade treatment as described in these design guidelines.
- **Site Design.** The scale of site features, such as site furniture, trees and the entrances, shall be in keeping with the overall structure.
- **Architectural Details.** Elements shall be incorporated to add interest and human scale, such as colonnades, pilasters, gable ends, canopies, display windows, and light fixtures.
- **Façades and Exterior Walls.** The maximum length of the plane of any façade of a large-scale building is 60'; exterior walls of any building longer than 60' shall have recesses or projections at a minimum depth of 10% of the longer adjacent unbroken wall length and be proportional to the building's height and length. Projections used to break up the length of the building shall extend to the ground. Other techniques to reduce the scale of the structure shall be incorporated, such as strong shadow lines, changes in the roofline, patterns in the surface material and wall openings. All façade elements shall be coordinated with the landscape plan to ensure balance, proportion and continuity. All ground floor façade that face public areas, including streets, shall have display windows, entry areas or other such transparent features.
- **Multiple Tenants in Large Scale Buildings.** Each exterior customer entrance shall meet the design standards set out in Architecture-Façade Design: Main Entrance Façade of these Design Guidelines. The ground floor facade at each customer entrance shall have display windows adjacent to the entrance in a size complementary to the facade.
- **Amenities.** Large scale buildings shall enhance the pedestrian environment by providing some of the following:
 - patio/seating area
 - pedestrian area with benches
 - outdoor play area
 - water fountain
 - clock tower
 - other focal feature or amenities that enhance the pedestrian experience

Such features will be constructed of materials of the same quality as the building and will be consistent with the overall site plan.



The two drawings on the bottom show how changing the design and massing of a large building can dramatically alter the perceived scale of the building.



LINEAR COMMERCIAL BUILDINGS

All strip shopping centers, one-story multi-tenant offices and other linear commercial buildings shall be designed with façade and roof line elements that reduce their scale and add architectural interest.

DESIGN STANDARDS:

- **Design.** All linear commercial buildings shall use techniques to effectively scale down the visual appearance of the building, for example varied roof lines and offsets, open colonnades, and similar features.
- **Entrances.** Pedestrian entrances to each tenant shall be clearly delineated to convey a sense of individuality through the use of architectural detailing, roof line breaks, landscaping and lighting.
- **Roof lines.** Variations in roof lines, detailing and building height shall be included to break up the scale of the building.
- **Focal Points.** Raised roof lines at entry ways, clock towers or other architectural elements shall be included to add visual interest and to help reduce the scale of the building.



These three developments, although linear in nature, use variations of facades and changes in roof line and varying heights to add architectural interest.



These strip shopping centers are examples of development that would not meet the design standards for linear buildings.

SERVICE AND GAS STATIONS, CONVENIENCE STORES, CAR WASHES AND DRIVE-THROUGHS

All development of these vehicular focused buildings shall be designed with façade and roof line elements that reduce their scale and add architectural interest.

DESIGN STANDARDS:

- **Orientation.** To reduce the impact of the vehicular focus, the building structure shall be sited to face the street; all pump islands and canopies shall be located in the rear.
- **Architecture.** All four sides of the building's architecture shall meet these design guidelines; the façade facing the street shall have windows or other fenestration.
- **Canopies.** Service and Gas Station canopies shall be visually compatible with the main structure through consistency in roof pitch, architectural detailing, materials and color. Pitched roofs and fascia trim are preferred for canopies. Bands of bold color on the canopy and backlighting inside the canopy are prohibited. Any graphics on canopies shall be consider signage, and must meet the signage standards of these Design Guidelines and Coventry's Zoning Regulations.
- **Large Openings.** Openings for car washes or service bays must be integrated with the design of the building and sited so they are not directly visible from a public roadway or adjacent residential area.
- **Drive-through Design.** The drive-through shall be visually subordinate to the design of the main building. Windows and canopy shall be compatible with the design of the building; canopy roof line shall be compatible with the building roof line in pitch, fascia trim, material and other architectural detailing. Drive-throughs shall be located at the side or rear of the building and avoid facing any street or residential area.



These gas station canopies are designed to be visually integrated with the design of the building's roof line.



This canopy serves as advertising, many regulations would include the design in the maximum signage calculation.



These drive-throughs are located away from the front of the buildings to avoid pedestrian/vehicular conflicts; each canopy is incorporated into the overall design of the building with repeating roof lines, forms and materials.

LIGHTING



GENERAL OBJECTIVES

Lighting for commercial properties shall be designed to provide the minimum level of illumination necessary for security, safety and visual appeal for both pedestrians and motorists. Functional, aesthetic and safety goals shall be met with fixtures that are designed as integral site elements.

GENERAL LIGHTING GOALS:

- Provides lighting that offers safety to all users of the site, and
- Unifies the environment with the selection of attractive, appropriately scaled fixtures, and
- Does not cause distractions or hazards to motorists and pedestrians, minimizes skyglow, and
- Respects abutting property owners, especially residential uses, by avoiding off-site spillover or glare.

GENERAL LIGHTING DESIGN STANDARDS:

- **Site Plan.** A narrative shall accompany the lighting plan, defining the hierarchy of site lighting and how lighting will be used to provide safety and security and aesthetic effects.
- **Coordinated Design.** The location and design of the lighting system shall complement adjacent buildings, pedestrian amenities and site elements. Poles and fixtures shall be proportionate to the buildings and spaces.
- **Safety.** Dark spots shall be eliminated by the coordination of the lighting and site elements.
- **Feature Lighting.** Unique building or landscape features may be highlighted if the lighting does not create glare or distractions.
- **Light Pollution.** Lighting shall not cause spillover onto neighboring residential properties or glare on adjacent roadways. Bare bulbs are prohibited.
- **Replacement and Modification.** Any modifications, expansions or replacements to the light systems shall be consistent with the approved site plan and to these Design Guidelines.
- **Energy Saving Devices.** Wherever practicable, lighting devices shall include timers, photo sensors, and other energy saving devices.

DRIVEWAYS AND PARKING LOTS

Lighting shall be designed to provide the minimum lighting necessary for traffic and pedestrian safety. Lighting shall not cause glare or avoidable spillover onto adjacent property or an increase in skyglow.

DESIGN STANDARDS:

- **Illumination.** Driveway lighting shall illuminate the roadway, with a concentration on intersecting drives or access ways. Parking lot lighting shall provide the minimum necessary for visibility, comfort and safety. All light fixtures shall be selected and aimed to prevent glare, spillover onto adjacent properties and increased skyglow.
- **Illumination Levels.** All illumination shall meet within 5% levels defined by Illuminating Engineers Society of North America (IESNA) recommendations for road/driveaways and parking lots and be in compliance with Coventry's Zoning Regulations.
- **Luminaires.** Metal halide lamps is strongly recommended. In most instances, lamps shall be housed in a luminaire that is classified by IESNA as full cut-off. Decorative fixtures may be used provided they meet the cutoff criteria.
- **Design.** All fixtures shall complement the architecture, landscaping and other elements of the site in terms of form, color and style.
- **Layout.** The alignment and spacing of fixtures shall follow a regular pattern that is coordinated with the layout of the buildings and other site elements. Hierarchy of fixtures shall be used to define major and minor roadways. Light poles shall be located within raised planting areas wherever possible to avoid damage from vehicles and plows; elevated bases are strongly discouraged.
- **Coordination with Landscaping Plan.** The layout of fixtures shall compliment the spacing and rhythm of plantings, especially large shade trees. To avoid future dark areas and deep shadows, the lighting plan shall consider the growth pattern of trees and shrubs.
- **Mounting Height.** Light fixtures in driveways and parking lots shall be in scale with adjacent buildings and the human scale.
- **Adjacencies.** Full cut off fixtures shall be used to limit spillover onto adjacent residential properties to less than .5 footcandles at property lines or be in compliance with Coventry's Zoning Regulations.



These well placed lamps light both the drive and walkway.



The height of these fixtures are in proportion to the scale of the buildings, well-placed throughout the parking lot and located within planting beds to minimize damage.



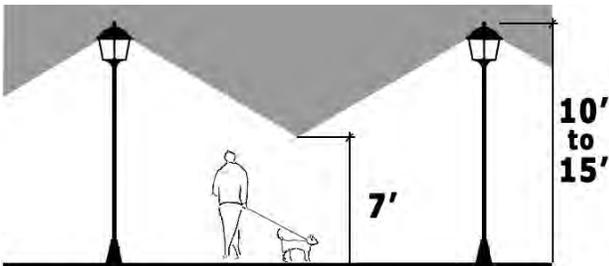
These pedestrian scale lamps are in proportion to the scale of the building and parking lot.

PEDESTRIAN SPACES

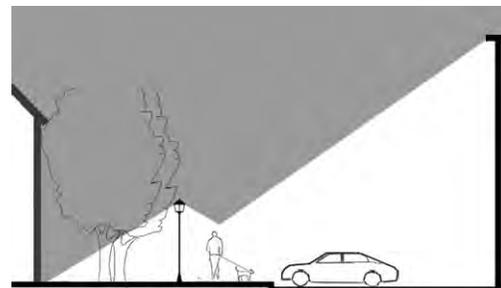
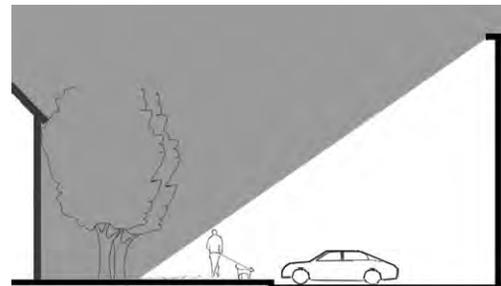
Lighting shall consider users' needs and safety. Light fixtures shall adequately, but not excessively, illuminate not only the space occupied by people, but also the elements within those spaces such as stairs, walls, benches, curbs and landscaping.

DESIGN STANDARDS:

- **Illumination.** Walkway lighting shall illuminate the walkway with enough peripheral distribution to illuminate the immediate surroundings.
- **Illumination Levels.** All illumination shall meet within 5% levels defined by IESNA recommendations for pedestrian spaces or be in compliance with Coventry's Zoning Regulations.
- **Luminaires.** Metal halide lamps are strongly recommended. Lamps shall be housed in a luminaires that is classified by IESNA as a full cutoff distribution. Decorative fixtures may be used provided they meet the cutoff criteria.
- **Design.** All fixtures shall complement the architecture, landscaping and other elements of the site in terms of form, color and style.
- **Layout.** The alignment and spacing of fixtures shall follow a regular pattern that is coordinated with the pedestrian ways and other site elements. Lighting shall be used to highlight significant design elements such as gateways, plazas, major building entrances, and the like.
- **Coordination with Landscaping Plan.** The layout of fixtures shall complement the spacing and rhythm of planting and to avoid any future dark areas and deep shadows, the lighting plan shall consider the growth pattern of trees and shrubs.
- **Mounting Height.** Light fixtures in pedestrian spaces shall be appropriate for the project and the setting and relate to the human scale. Bollard fixtures and ornamental light poles, up to 12' in height, are encouraged as pedestrian area lighting. Decorative and special lighting shall also relate to the human scale.



Lighting for pedestrian spaces and walkways needs to provide sufficient illumination for safety. Fixture location is established by the overlapping pool of illumination based on fixture height, style and lamp wattage.



In some situations, parking lot lights may be sufficient to illuminate a walkway, the illustration at the top shows insufficient lighting. To light the area behind the trees, lower mounting height is needed.

BUILDING FACADES AND OTHER FEATURES

Facade lighting is a way of highlighting special architectural features and attractively landscaped areas.

DESIGN STANDARDS:

- **Illumination Levels.** Maximum level of illumination on any vertical surface shall not exceed 5.0 footcandles and be in compliance with Coventry's Zoning Regulations.
- **Design.** Lighting of the building facade and other elements shall be part of an overall lighting plan to enhance certain key architectural elements or areas with attractive landscaping.
- **Location.** All fixtures shall be properly sited, aimed, and shielded so that illumination is directed only onto the feature. Lighting fixtures shall not be directed toward adjacent streets, sidewalks or properties. The lighting plan shall demonstrate that the installation will not generate excessive light levels, cause glare, or cause skyglow.
- **Facade Lighting.** Fixtures that are mounted on the facade and designed to wash the face with even light in a downward direction are preferred. Lighting shall avoid spillover onto adjacent areas.
- **Landscape Lighting.** Lighting shall be shielded to direct only onto a selected tree or shrub. Indirect landscape lighting fixtures, uplights and washes, are preferred.
- **Bands of Light.** Neon tubes as lighting fixtures are prohibited on building exteriors. The use of internally illuminated bands of color and/or light is prohibited.

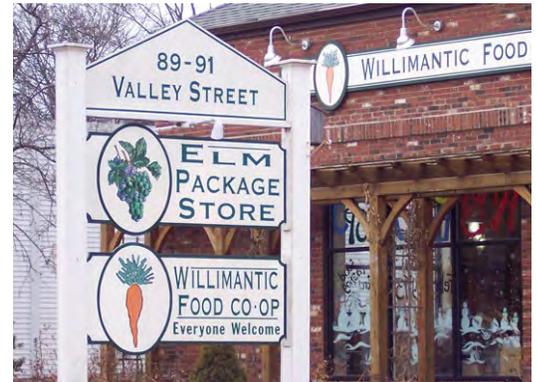
GAS STATIONS, CONVENIENCE STORES AND DRIVE-THROUGHS

All lighting for this type of development shall provide for user safety without creating glare onto adjacent properties or roadways.

DESIGN STANDARDS:

- **Illumination Levels for Gas Pumps.** The lighting around gasoline pumps shall provide a higher level of light for the safe and effective use of pumps. All illumination shall meet, but not exceed, levels defined by IESNA recommendations for gas pump areas and be in compliance with Coventry's Zoning Regulations.
- **Canopy Luminaires.** Recessed luminaires with flat or regressed lenses shall be used in canopies. The cut off angle shall not exceed 85 degrees above the vertical to make the light source invisible to passing motorists.
- **Parking Areas.** Areas beyond 20' from canopies or gas pumps shall follow the lighting design standards for parking lots
- **Fascia.** Light shall not be mounted on the fascia (sides) or top of the canopy; sides and tops of canopy shall not be illuminated.

SIGNAGE



GENERAL OBJECTIVES

Signage shall be an integral part of the overall plan and shall be attractive and legible to serve the needs of the business and complement the site and the architecture. All new and replacement signs shall be designed to meet these standards.

GENERAL SIGNAGE GOALS:

- Provides basic, clear information about commercial businesses with visually respectful, highly legible signage, and
- Demonstrates forethought in the design, size, placement, and graphic format of all signage, and
- Is compatible and complementary with the architecture, site design and Coventry's historic character, and
- Reduces visual clutter.

GENERAL SIGNAGE DESIGN STANDARDS:

- **Signage Plan.** A signage plan shall be developed by design professionals experienced in commercial signage or environmental graphics. The signage plan shall be submitted with the site plan for approval; signs for future tenants shall be submitted to town staff for approval.
- **Viewpoint.** Each sign shall be designed and located with the intended viewer in mind.
- **Compatibility.** Signs shall be designed to achieve a high level of visual compatibility with the building(s) and its surroundings through the use of similar detailing, form, color, font, lighting and material.
- **Design.** The shape of the sign shall complement the architectural features on the building. Simple geometric shapes are preferred for all signage. Signs shall be trimmed and detailed to complement the building.
- **Lettering Size.** As a general rule, the minimum lettering size for identification signs shall be six inches in height. Smaller letters are generally unreadable from a moving vehicle and may require motorists to slow down to read them which could potentially be a safety hazard.
- **Location. Faceted mounted signs** shall be placed in to complement the building's architecture, free standing signs shall not block motorists' line of sight or create a hazard for pedestrians or bicycles. Roof mounted signs are strongly discouraged.
- **Street Address.** To aid wayfinding and 911 emergency response, the street address shall be incorporated into the primary sign.
- **Directional Signs.** Signs indicating the entry, exit or wayfinding within a site shall complement the overall site design and be in an appropriate location and of the minimum size needed to provide direction.
- **Compliance.** All signs shall be in compliance with Coventry's Zoning Regulations

CONTENT

Signs used to identify a business shall be kept simple and direct in message and content. They shall convey only the most essential information about the business. Motorists should not be distracted by signs containing excessive information.

DESIGN STANDARDS:

- **Content.** The amount of information contained in a sign is dependent on the distance and travelling speed of the intended viewer.
Facade and ground signs shall be for identification only and shall contain either 30 letters or 7 bits of information. A bit can be a syllable or a symbol.
- **Advertising.** The use of 'sponsor' logos, slogans, or other messages on a sign, where the 'sponsor' is not the occupant or franchiser of the property, is strongly discouraged. If a sign is sponsored, the area of the 'sponsor' name and logo combined shall not exceed 25% of the total face of the sign.
- **Readerboards.** Electronic signs with movable images are strongly discouraged.

FACADE MOUNTED

Facade mounted signs shall clearly identify the business in a clear and direct manner.

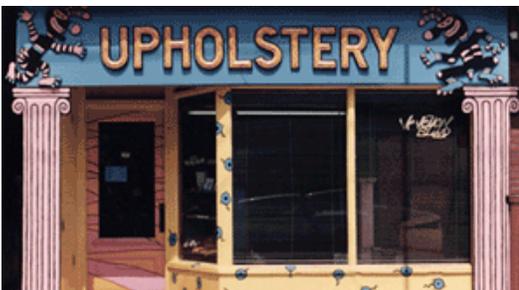
DESIGN STANDARDS:

- **Design.** Facade mounted signs shall be designed as an integral element of the architecture. The shape and materials of the sign shall complement the architectural features on the building.
- **Location.** Signs shall be located to enhance the architectural details on the building and shall not obscure any trim or other details. Signs shall be incorporated into the main entrance facade.
- **Hardware.** Signage shall be mounted with concealed hardware, the hardware shall be stainless steel or galvanized to prevent rust and corrosion that could stain or discolor the building.



These four facade mounted signs clearly display the name of the business at a glance.

Studies have shown that the human brain can register only up to 7 bits of information at a glance.



The sign on the bottom left contains 6 bits of information: the two graphic symbols and the syllables in the word upholstery (up · hol · ster · y).

While the Willard's sign is attractive, because it has 8 bits of information, the name isn't as easy to read at a glance as the other signs.

MULTI-TENANT

Multi-tenant properties shall provide legible, attractive signs that help people identify the property without contributing to the visual clutter. Signage shall stress the identity of the place (i.e. Coventry Crossings) and de-emphasize individual tenants.

DESIGN STANDARDS:

- **Hierarchy of Signs.** A hierarchy of signage shall be established to facilitate wayfinding and minimize visual clutter.
- **Identification Signs.** One identifying sign in a highly visible locations near the main driveway entrance shall be used to convey an overall identity for the property.
If individual tenants are also listed, the identification sign shall have a clear hierarchy in the display of information. Only the name of the individual tenants shall be displayed, in significantly smaller lettering. Other information such as phone numbers, hours of operation, and slogans are prohibited on the identification sign.
- **Street Address.** The main identification sign for multi-tenant property shall incorporate the street address into the sign to facilitate wayfinding and 911 emergency response.
- **Compatibility.** The design of multi-tenant signs shall be coordinated with the design of the principle building(s) in terms of color, materials, detailing, and style.
- **Color Consistency.** Multi-tenant signs shall conform to a simple color and graphic palette in order to minimize the confusion and clutter of the sign. In general, multi-tenant signs, colors including the individual tenant signage should have no more than 3 colors.
- **Landscaping.** Landscaping surrounding the identification signs shall be consistent with the site landscaping and be incorporated within the landscaping plan.



This development has a carefully integrated signage plan and a clear hierarchy of information: an identification sign is located at the entry, signs at each building lists the tenants, and each tenant has a sign at their door.



These signs stress the identity of the place and de-emphasize individual tenants. The design of each sign is compatible with the building design as well.



This multi-tenant sign contains more information than a passing motorist could read; the multiple colors and fonts increase the visual clutter.

SIGNAGE LIGHTING

Signage lighting shall be designed as an integral part of the sign design. Lighting shall not create glare that would distract motorists or pedestrians, nor shall the degree of illumination disturb any residential property or contribute to light pollution. Signs with external illumination are preferred. See the Lighting section of these Design Guidelines.

DESIGN STANDARDS:

- **Light Level.** The illumination level on the vertical surface of externally-lit signs shall be bright enough to provide a noticeable contrast with the surrounding building or landscape without causing undue glare or reflection.
- **Lighting.** The light fixtures of externally-lit signs shall be carefully located, aimed and shielded so that light is directed only onto the face of the sign. Ground-mounted fixtures shall be screened or partially buried to minimize the view of the light source.
- **Light Sources.** Top-mounted lighting fixtures shall be used if they are directed downward in a manner that hides the light source. Uplighting may be used if the fixture can be aimed to prevent spillage beyond the sign.
- **Design.** Light fixtures for externally-lit signs shall be selected to complement the color and design of the sign and the architecture. Concealed light sources are strongly encouraged.
- **Maintenance.** All lighting fixtures shall be selected for ease of maintenance.
- **Internally-lit Signs.** Internally-lit signs are strongly discouraged. If proposed, internally-lit signs shall consist of light lettering and/or symbols set against a dark background to minimize the amount of light emanating from the sign. Internally-lit letters and symbols are preferred over whole panels that are internally-lit. Letters and symbols on panels, combined, shall constitute no more than 40% of the sign's surface area.
Internally-lit signs shall not act as light fixtures or cause glare on nearby pathways or roadways. Lighting levels shall not exceed 1fc of illumination measured 10' from the base.
- **Compliance.** All signs shall be in compliance with Coventry's Zoning Regulations



These down lights complement the color and design of the architecture and are located, aimed and shielded to effectively light the sign.



This up-light fixture is carefully located and aimed to illuminate the sign without spilling beyond.



Internally-lit signs are discouraged; if proposed, the field area of the sign must be dark with a minimum of light lettering or symbols.

TEMPORARY

Temporary signs are used to convey specific information, alert the public to special events or announce a new business. The design and placement of temporary signs shall be closely related to existing sign systems, landscape improvements, and the building design to avoid visual clutter.

DESIGN STANDARDS:

- **Content and Design.** The same standards established for the content and design of permanent signs shall be applied to temporary signage.
- **Location.** Temporary signs shall be installed in locations that do not create a hazard for pedestrians or vehicles.

LANDSCAPING



GENERAL OBJECTIVES

Landscaping shall be an integral component of all site plan developments. The applicant shall carefully evaluate the physical characteristics of each site matching it to the appropriate plant material to ensure that all plants will survive and thrive in that location.

GENERAL LANDSCAPING GOALS:

- Enhances and complements commercial development through the use of properly selected and placed landscaping, and
- Reinforces wayfinding by emphasizing entrances and circulation patterns, and
- Accentuates buildings, create a sense of identity and provide a human scale, and
- Softens the appearance of parking lots by visually reducing their scale, providing shade and adding seasonal interest and textural variety, and
- Provides screening for less attractive parts of a site and from residential properties.

GENERAL DESIGN STANDARDS:

- **Site Plans.** All commercial development projects shall have a landscape plan as part of the site plan prepared by a landscape architect or qualified professional; a licensed landscape architect is required for all sites in excess of 5 acres. Multiple site elevations, sketches and/or perspective drawings are encouraged to be included in the earliest stages of the review process to illustrate how the plan responds to these standards.
- **Plant Material Selection.** The use of plant materials and landscape elements that require a low degree of maintenance is strongly encouraged. All plantings shall be resistant to insect infestations, drought, disease, roadside salt, urban conditions, and auto emissions and be suitable for Coventry's climate.

Plant material shall be selected with consideration to public health and safety. Plants to be avoided include those with poisonous fruits, large thorns, or invasive growth patterns, or trees and shrubs that could provide hiding places along walkways or block the view of moving vehicles.

Selection shall include consideration for multi seasonal interest, wildlife value, native origination and deer resistance.

A list of recommended plant material for various locations is on the last pages of this section.

- **Coordination with Utilities.** The landscape plan shall illustrate how planting shall be coordinated with the location of underground and above ground utilities and light fixtures. The plan shall include screening for transformers, propane tanks and similar mechanical elements.
- **Design.** Landscape design shall stress simplicity in form and limit the number of species. Shrubs, perennials, annuals, ornamental grasses, etc used along roadways or to define an edge should be planted in masses or 'drifts' that emphasize colors and textures. Plantings shall be massed to soften edges, corners and pavement areas and to integrate the building into the landscape. Plantings shall strike a balance between monoculture (the use of a single species) and too much variety.
- **Boulevard Effect.** Large spreading deciduous trees shall be planted in appropriate locations along town/state roads to define the edge of the travelway, lessen the visual impact of the development, clean the air and add scale to the corridor.
- **Existing Trees and Plants.** Wherever practical, existing or unique or other significant plantings shall be preserved. The landscape plan shall illustrate which vegetation will be preserved and what protection measures will be taken during construction; there shall be no ground disturbance within the drip edge. Transplanting and reusing trees and other plantings is strongly encouraged.
- **Stone walls.** Any stone walls existing on the site shall be either incorporated into the site plan, or rebuilt and enhanced as part of the landscape plan.
- **Rocks and Ledges.** Large rocks can be used as landscape elements as accents in mass plantings; where used they shall be buried for at least half their depth and incorporated into the overall design theme.
- **Ground Cover.** Live ground cover such as grass and plantings are encouraged for large areas. Extensive use of bark mulch as substitute for live ground cover is prohibited. Where mulch is used, it shall consist of dark, decomposed shredded bark, with pieces less than 1' in any one dimension.
- **Buffers and Screening.** Plant materials and other landscape elements shall be used to create suitable buffers between residential and commercial properties. The design of buffers shall consider the appearance from both commercial and residential viewpoints. Evergreen planting that are deer resistant are particularly effective for year-round buffering.
- **Root Zone.** Trees and other plant material will be provided a sufficient area for root growth.
- **Size at Time of Planting.** Unless otherwise required by site conditions, plant material shall meet the following sizes at the time of installation.

Canopy Trees	2.5" caliper
Flowering Trees	2" caliper
Evergreen Trees	5-7' height
Deciduous Shrubs	24" height
Evergreen Shrubs	18" height
Perennials	2 gallon container
Ornamental Grasses	3 gallon container
Ground Covers	3" container
- **Guarantee Period.** All lawns and plant materials shall be guaranteed for a period of not less than 2 years. The developer shall submit a copy of a guarantee and a contract with the landscape contractor indicating the terms of the guarantee period, or a letter of credit or performance bond.

LANDSCAPING PARKING LOTS AND DRIVES

Landscaping is necessary in parking lots and drives to improve the visual appearance, reduce the visual scale of parking areas, define edges, provide shade, add seasonal interest and textural variety.

DESIGN STANDARDS:

- **Amount of Landscaped Area.** 10-15% of the total area proposed for parking shall be landscaped depending on the size of the parking lot; lots with 40 or more spaces and any lot visible from a public road shall have the higher amount. In general, larger and more visible parking lots shall have more intensive landscaped areas. For this calculation, entry drives are not included.
- **Size of Planted Islands.** Paved areas shall be broken up with plant islands with a minimum width of 5' plus the width of total car overhang if the island abuts a parking stall. Islands can also be used as a vegetative swale for stormwater.
- **Screening.** Parking lots shall be separated from the street by plantings, earth berms, walls and/or other landscape elements to minimize the view of vehicles from streets, roads and drives, while still allowing the public to see the building.
- **Snow Storage.** Landscape material surrounding parking lots and in islands shall be able to tolerate large quantities of snow stored during winter months. The landscape plan shall integrate with the site plan that indicates the area for snow storage.
- **Plant Material Selection.** The branching habit of trees shall be considered in selecting plant material near pedestrian or vehicular areas; all branches below 7' shall be pruned at the time of installation. Trees that may damage automobiles (dripping sap, messy fruit, or hard seeds such as acorns) are discouraged in or around parking lots.
- **Layout.** The landscaping shall integrate with the overall design of the site. Generally trees and other plantings in a linear pattern enhance a drive and reinforce the grid inherent in a parking lot.



Both large and small parking lots can be greatly enhanced with a coordinated landscaping plan that includes shade trees.



Trees in a linear pattern clearly define this drive as an important entry.



By selecting landscape materials that are attractive in winter these entry drives have year-round visual interest.



LANDSCAPING NEAR BUILDINGS, ENTRIES AND OTHER LOCATIONS

Landscaping can be used to enhance features of the building and direct a visitor's eye to the entry.

DESIGN STANDARDS:

- **Coordination with Architecture.** Landscaping shall be carefully selected and located to complement the building elevations without blocking entryways, signs or lighting.
- **Roadside Planting.** Trees shall be predominately large shade trees and planted a minimum of 5' from the road right-of-way. Trees and other landscaping planted at intersections and driveway entries shall preserve an adequate sight triangle as determined by a traffic engineer.
- **Pedestrian Areas.** Trees whose future branching may interfere with pedestrian movement shall be avoided; all branches below 7' shall be pruned at the time of installation. Trees selection for areas with outdoor seating shall avoid messy fruit or excessive leaf litter.
- **Foundation and Wall Planting.** Planted beds are recommended along building edges, foundations and uninterrupted walls. Plantings shall provide either a formal pattern or a naturalistic blend of heights, colors and textures. Plants shall be generally planted in large masses or 'drifts' rather than individual specimens, to provide a pleasing effect for both the motorist and pedestrian.

LANDSCAPE MAINTENANCE

Landscaping plans shall anticipate a 3-8 year growing cycle to achieve maturity for shrubs, and a 15-20 year growing period for trees to achieve maturity. Proper maintenance shall be assured so the site continues to improve as the landscaping achieve maturity.

DESIGN STANDARDS:

- **Maintenance Plan.** A written maintenance plan shall be provided for all landscape elements installed on all commercial sites. The maintenance plan shall include details on initial installation, guarantee period, replacement policy, periodic and seasonal maintenance, special considerations, use of pesticides and fertilizers, irrigation and seasonal displays.
- **Natural Forms.** All plant material shall be allowed to achieve their natural forms without excessive pruning. Shaping evergreen shrubs into tight geometrical forms shall be avoided.
- **Low Maintenance Materials.** The use of plant material and landscape elements that require a low degree of maintenance is strongly encouraged. Planting characteristics to be considered include: draught resistance, salt tolerance, tolerant of urban conditions, and disease and insect resistant.
- **Replacement Planting.** Where plant materials specified on the planting plan do not survive or are damaged, they shall be replaced.

RECOMMENDED LANDSCAPE PLANT MATERIAL

The plants on this list have been derived from a number of sources and would be appropriate for sites with a hardiness zone of 5 or less. The final selection shall consider specific growing requirements (full sun, part shade, etc) and the conditions present at each specific location on the site.

Street Trees (for planting within 5' of pavement)

		Mature	
		Ht (ft)	W (ft)
<i>Acer buergerianum</i>	Trident Maple	20	30
<i>Acer campestre</i>	Hedge Maple	25	70
<i>Acer rubrum</i> 'Armstrong'	Armstrong Red Maple	60	15
<i>Acer rubrum</i> 'October Glory'	October Glory Maple	50	50
<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	45	35
<i>Acer x fremanii</i> 'Autumn Blaze'	Freeman Maple	55	50
<i>Aesculus flava</i>	Yellow Buckeye	50	40
<i>Aesculus x carnea</i>	Red Horsechestnut	30	30
<i>Carpinus caroliniana</i>	American Hophornbeam	25	20
<i>Cercidiphyllum japonicum</i>	Katsuratree	60	20
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	30	25
<i>Crataegus viridis</i> 'Winter King'	Winter King Hawthorn	20	25
<i>Fraxinus americana</i>	White Ash	50	30
<i>Fraxinus pennsylvanica</i> 'Summit'	Green Ash	50	30
<i>Ginkgo biloba</i>	Ginkgo	50	25
<i>Malus</i> 'Donald Wyman'	Donald Wyman crabapple	20	25
<i>Malus</i> 'Prairiefire'	Prairiefire crabapple	15	15
<i>Pyrus calleryana</i> 'Aristocrat'	Aristocrat Pear	30	12
<i>Quercus coccinea</i>	Scarlet Oak	75	45
<i>Quercus palustris</i>	Pin Oak	60	35
<i>Quercus rubra</i>	Red Oak	60	60
<i>Quercus shumardii</i>	Shumard Oak	60	60
<i>Sophora japonica</i>	Japanese Pagodatree	50	50
<i>Syringa reticulata</i>	Japanese Tree Lilac	30	15
<i>Ulmus americana</i> 'Princeton'	American Elm	60	30
<i>Zelkova serrata</i> 'Green Vase'	Japanese Zelkova	60	50

Ornamental Trees (for planting away from salt-prone areas, in addition to above)

		Mature	
		Ht (ft)	W (ft)
<i>Acer griseum</i>	Paperbark Maple	25	15
<i>Acer palmatum</i> 'Bloodgood'	Bloodgood Japanese Maple	15	15
<i>Acer saccharum</i>	Sugar Maple	70	60
<i>Acer saccharum</i> 'Green Mountain'	Green Mtn Sugar Maple	60	40
<i>Amelanchier canadensis</i>	Shadblow Serviceberry	20	12
<i>Amelanchier laevis</i>	Allegheny Serviceberry	15	12
<i>Amelanchier x grandiflora</i>	Apple Serviceberry	25	20
<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	Allegheny Shadblow	20	12
<i>Betula nigra</i> 'Heritage'	Heritage Birch	60	40
<i>Betula jacquemontii</i>	White-Barked Birch	35	15
<i>Betula nigra</i>	River Birch	40	40
<i>Betula papyrifera</i>	Paper Birch	50	30

<i>Cornus florida</i>	Flowering Dogwood	25	25
<i>Cornus kousa</i>	Kousa Dogwood	20	20
<i>Cornus kousa</i> 'Milky Way'	Milky Way Dogwood	20	20
<i>Fagus sylvatica</i>	European Beech	70	55
<i>Magnolia liliiflora</i>	Lily Magnolia	20	20
<i>Magnolia stellata</i>	Star Magnolia	12	12
<i>Nyssa sylvatica</i>	Black Tupelo	30	20
<i>Oxydendrum arboreum</i>	Sourwood	40	20
<i>Prunus cerasifera</i> 'Thundercloud'	Thundercloud	20	20
<i>Quercus alba</i>	White Oak	60	60
<i>Styrax japonicus</i>	Japanese Snowbell	20	20

Evergreens for Screening and as Ornamental Trees

		Mature	
		Ht (ft)	W (ft)
<i>Abies concolor</i>	White Fir	30	12
<i>Abies fraseri</i>	Fraser Fir	30	20
<i>Gleditsia triacanthos</i>	Common Honeylocust	45	45
<i>Juniperus virginiana</i>	Eastern Redcedar	25	8
<i>Picea abies</i>	Norway Spruce	50	25
<i>Picea glauca</i>	White Spruce	40	10
<i>Picea pungens</i> 'Fat Albert'	Fat Albert Spruce	15	8
<i>Picea pungens</i> 'Glauca'	Glauca Colorado Spruce	40	20
<i>Pinus densiflora</i>	Japanese Red Pine	50	50
<i>Pinus flexilis</i>	Limber Pine	30	15
<i>Pinus koraiensis</i>	Korean Pine	35	60
<i>Pinus nigra</i>	Austrian Pine	50	35
<i>Pinus parviflora</i>	Japanese White Pine	35	35
<i>Pinus rigida</i>	Pitch Pine	50	35
<i>Pinus strobus</i>	Eastern White Pine	60	30
<i>Thuja occidentalis</i>	Eastern Arborvitae	50	10

for full screening, place on center at 60% of mature width

Flowering and Ornamental Shrubs

		Mature	
		Ht (ft)	W (ft)
<i>Arctostaphylos uva-ursi</i>	Bearberry	0.5	4
<i>Buxus microphylla</i>	Littleleaf Box	3	4
<i>Buxus sempervirens</i>	Common Box	8	8
<i>Ceanothus americanus</i>	New Jersey Tea	3	4
<i>Clethra alnifolia</i>	Summersweet	6	7
<i>Cornus sericea</i>	Redosier Dogwood	6	8
<i>Cotinus coggygria</i>	Common Smoketree	10	10
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster	2	5
<i>Enkianthus campanulatus</i>	Redvein Enkianthus	6	5
<i>Hamamelis virginiana</i>	Common Witchhazel	15	15
<i>Hydrangea arborescens</i> 'Annabelle'	Annabelle Hydrangea	4	4
<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea	4	4
<i>Hydrangea paniculata</i>	Panicle Hydrangea	10	10
<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	6	6
<i>Hypericum frondosum</i> 'Sunburst'	Yellow St. John's wort	3	2.5
<i>Ilex glabra</i> 'Densa'	Inkberry	3	3-4

<i>Ilex verticillata</i>	Common Winterberry	8	8
<i>Juniperus chinensis</i> 'Robusta Green'	Robusta Green Juniper	14	6
<i>Juniperus chinensis</i> 'Sargentii Viridis'	Green Sargent Juniper	1	8
<i>Juniperus communis</i> 'Blueberry Delight'	Blueberry Delight Juniper	1.5	6
<i>Juniperus conferta</i>	Shore Juniper	1	8
<i>Juniperus horizontalis</i> 'Bar Harbor'	Creeping Juniper	0.5	8
<i>Juniperus procumbens</i> 'Nana'	Dwarf Japanese Garden Juniper	0.5	6
<i>Kalmia latifolia</i>	Mountain-laurel	5	6
<i>Kalmia latifolia</i> ' Sarah'	Mountain Laurel	6	6
<i>Microbiota decessata</i>	Russian Carpet Juniper	1	10
<i>Myrica pensylvanica</i>	Northern Bayberry	5	8
<i>Physocarpus opulifolius</i> 'Summer Wine'	Summer Wine Ninebark	4	4
<i>Pieris floribunda</i>	Mountain Pieris	3	3
<i>Pieris japonica</i>	Japanese Pieris	5	5
<i>Pieris japonica</i> 'MountainFire'	Mountain Fire Andromeda	6	5
<i>Pinus mugo</i>	Swiss Mountain Pine	3	3
<i>Potentilla fruticosa</i>	Bush Cinquefoil	3	3
<i>Prunus maritima</i>	Beach Plum	6	6
<i>Prunus x cistena</i>	Purpleleaf Sand Cherry	7	5
<i>Rhododendron species</i>	Rhododendron	var	var
<i>Rhus aromatica</i>	Fragrant Sumac	1.5	5
<i>Rhus glabra</i>	Smooth Sumac	5	5
<i>Rosa virginiana</i>	Virginia Rose	5	6
<i>Sambucus nigra</i> 'Black Beauty'	Black Beauty Elderberry	8	8
<i>Sambucus canadensis</i>	American Elder	8	8
<i>Sambucus racemosa</i>	European Red Elder	10	10
<i>Syringa vulgaris</i>	Common Lilac	12	8
<i>Taxus cuspidata</i>	Japanese Yew	4	5
<i>Taxus x media</i>	Anglojap Yew	4	4
<i>Vaccinium angustifolium</i>	Lowbush Blueberry	0.75	2
<i>Vaccinium corymbosum</i>	Highbush Blueberry	6	6
<i>Viburnum trilobum</i>	American Cranberry	8	8
<i>Viburnum dentatum</i>	Arrowwood Viburnum	6	8
<i>Viburnum lantana</i>	Wayfaring Tree	7	7
<i>Viburnum plicatum tomentosum</i>	Doublefile Viburnum	8	9
<i>Viburnum prunifolium</i>	Blackhaw	10	6
<i>Viburnum sargentii</i>	Sargent Viburnum	12	12

Perennials and Grasses

		Mature	
		Ht (ft)	W (ft)
<i>Artemisia schmidtiana</i> 'Silvermound'	Silvermound Wormwood	1	1
<i>Aster</i> 'Woods's Blue'	Aster	1	1.5
<i>Athyrium felix femina</i> 'Crestata'	Crested Lady Fern	3	2
<i>Coreopsis verticillata</i> 'Moonbeam'	Moonbeam coreopsis	1.5	2.5
<i>Epimedium grandiflorum</i> 'Lilafee'	Lilafee Barrenwort	1	1
<i>Epimedium x rubrum</i>	Reb Barrenwort	1	1.2
<i>Eupatorium dubium</i> 'Little Joe'	Dwarf Joe Pye	3	3
<i>Hemerocallis</i> 'Black Eyed Stella'	Black Eyed Stella daylily	1.5	2
<i>Hemerocallis</i> 'Stella d'Oro'	Stella d'Oro daylily	1	1.5
<i>Lamium maculatum</i> 'Orchard Frost'	Orchard Frost Deadnettle	0.5	1
<i>Lamium maculatum</i> 'Red Nancy'	Red Nancy Deadnettle	0.5	1

<i>Lavendula augustifolia</i> 'Munstead Strain'	Munstead Lavender	1	2
<i>Leucanthemum</i> 'Broadway Lights'	Broadway Lights Shasta Daisy	1.2	1.5
<i>Leucanthemum x superbum</i> 'Snow Lady'	Snow Lady Shasta Daisy	1.2	2
<i>Liatris spicata</i> "Kobold"	Kobold Gay Feather	2	2.5
<i>Miscanthus sinensis</i> 'Adagio'	Dwarf Maiden Grass	4	4
<i>Pachysandra terminalis</i>	Japanese Pachysandra	0.5	1
<i>Pennisetum alopecuroides</i>	Fountain Grass	3	3
<i>Rudbeckia fulgida</i> var. <i>sullivantii</i> 'Goldsturm'	Black-eye Susan 'Goldstrum'	2	2
<i>Rudbeckia speciosa</i> 'Viette Little Suzy'	Little Suzy Dwarf Bk Eye Susan	1	1.5
<i>Sedum spectabilis</i> 'Autumn Joy'	Autumn Joy Sedum	2	2
<i>Thyme praecox</i> 'Albus'	White Thyme	0.1	1
<i>Thymus praecox</i>	Thyme	0.2	1
<i>Vinca minor</i>	Myrtle	0.5	1

Wetland Plants for Detention/Retention Basins

		Mature	
Trees:		Ht (ft)	W (ft)
<i>Acer rubrum</i>	Red maple	45	40
<i>Amelanchier canadensis</i>	Shadbush	20	12
<i>Betula nigra</i>	River birch	40	40
<i>Celtis occidentalis</i>	Hackberry	35	20
<i>Chionanthus virginicus</i>	Fringetree	15	15
<i>Magnolia virginiana</i>	Sweetbay	30	20
<i>Nyssa sylvatica</i>	Blackgum	30	20
<i>Quercus bicolor</i>	Swamp white oak	50	50
<i>Quercus palustris</i>	Pin oak	60	35
Shrubs (plant in groups of 3-7 of one species):			
<i>Andromeda glaucophylla</i>	Bog rosemary	2	2
<i>Aronia arbutifolia</i>	Red chokeberry	8	4
<i>Aronia melanocarpa</i>	Black chokeberry	4	3
<i>Cephalanthus occidentalis</i>	Buttonbush	8	6
<i>Clethra alnifolia</i>	Summersweet	6	7
<i>Cornus racemosa</i>	Grey dogwood	7	11
<i>Cornus sericea</i>	Redosier dogwood	6	8
<i>Ilex glabra</i>	Inkberry	5	5
<i>Ilex verticillata</i>	Winterberry holly	8	8
<i>Lindera benzoin</i>	Spicebush	8	8
<i>Myrica pensylvanica</i>	Bayberry	5	8
<i>Physocarpus opulifolius</i>	Ninebark	6	6
<i>Rhododendron maximum</i>	Rosebay	12	12
<i>Rhododendron viscosum</i>	Swamp azalea	6	6
<i>Salix discolor</i>	Pussy willow	20	18
<i>Sambucus canadensis</i>	Elderberry	8	8
<i>Spiraea tomentosa</i>	Meadowsweet	5	5
<i>Vaccinium angustifolium</i>	Lowbush blueberry	0.75	2
<i>Vaccinium corymbosum</i>	Highbush blueberry	6	6
<i>Viburnum dentatum</i>	Arrowwood	6	8
<i>Viburnum prunifolium</i>	Blackhaw	10	8
<i>Viburnum trilobum</i>	Cranberrybush	8	8

Perennials (plant in massings for naturalized effect):

<i>Asclepias incarnata</i>	Swamp milkweed	3	1.5
<i>Boltonia asteroides</i>	White doll daisy	1.5	1.5
<i>Caltha palustris</i>	Marsh marigold	1.5	1.5
<i>Chelone glabra</i>	Turtlehead	2	1.5
<i>Eupatorium maculatum</i>	Joe pye weed	5	5
<i>Geranium maculatum</i>	Wild geranium	1	1.5
<i>Iris versicolor</i>	Blue flag iris	3	2
<i>Lobelia cardinalis</i>	Cardinal flower	2	2
<i>Osmunda cinnamomea</i>	Cinnamon fern	2	2
<i>Osmunda regalis</i>	Royal fern	2	2
<i>Physostegia virginiana</i>	Obedient plant	2	2
<i>Tiarella cordifolia</i>	Foamflower	1	1
<i>Verbena hastata</i>	Blue vervain	0.5	2
<i>Veronicastrum virginicum</i>	Culver's root	4	3

- **Resources.** The following sources are recommended for additional information on the selection and planting of landscape plants.

Urban Tree Selection Manual. John Alexopoulos, ASLA Paula Stahl, ASLA Robert Ricard, PhD. University of Connecticut Extension. 2007.

Plant Selection Database of UConn's College of Agriculture and Natural Resources.
www.hort.uconn.edu/plants/

Green Valley Institute's Community Planning Fact Sheets:

#17 *Selecting Trees Along Our Streets and Roads*

#18 *Plant Recommendations for Constructed Wetland Sites*

available at: <http://www.greenvalleyinstitute.org/publications.htm>

Dirr, M.A. 1998. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign, Illinois: Stripes Publishing LLC.