

Groton Center Design Guidelines

Groton Town Center Overlay District Groton, Massachusetts

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Acknowledgements

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The Vision



The purpose of the guidelines is to promote development of a socially and economically vibrant town center.

In the decades since World War II, the daily activities of Groton residents' lives have become increasingly tied to the Greater Boston Metropolitan Area. Routes 119 and 225 have become major regional corridors, connecting the relatively inexpensive land to our North and West to the jobs and relative prosperity to our South and East. Major centers for business, shopping and even entertainment have shifted from town centers to locations where these regional corridors intersect with major routes like 495 and 128. This process has narrowed the role that Groton's Town Center plays within the culture of Groton's residents. Every day, thousands of people who live in Groton leave town to make a living, to shop for the needs and wants of their households, and to participate in the cultural events that bring meaning and value to their lives. As the era of cheap gas and moderate traffic comes to an end, there is a growing need to bring services, shopping, entertainment and business closer to where people live.

The Town envisions a place where more of the townspeople's needs and wants can be satisfied in the town center. We see a place where we can do errands, do business, and participate in cultural activities enriched by a strong sense of community. Adjacency to civic and social institutions will create additional activity and synergy between uses, weaving together a rich fabric of community and civic life.

In order to facilitate this social and economic activity in a durable and lasting way, the district must manifest a coherent and cohesive physical framework — a comprehensive composition of spaces and buildings that achieves a distinct and compelling sense of place. Much of the town center has these characteristics already, benefiting from centuries of gradual growth and refinement. In these areas, especially within the historic district, the guidelines are designed to reinforce what is already working – allowing for modest redevelopment that enhances what is already here. In other areas, such as along Station Avenue, there is an opportunity for more extensive redevelopment – but this too must be shaped carefully to support the visual and historic character of the entire town center. In all cases, the guidelines are designed to support a system of streets, parking areas and sidewalks that meet the needs of all users. While providing safe and efficient vehicular access and ample public parking, the district shall be marked by its pedestrian-friendly character, with a continuous network of sidewalks and paths making it easy and enjoyable to visit by foot.

Purpose of the Design Guidelines

The Town Center Overlay District (TCOD) is designed to promote a socially and economically vibrant town center by enabling civic, commercial and residential development that is consistent with these Design Guidelines and with the Town's Comprehensive Master Plan. It provides landowners with the opportunity to elect an alternative form of development which provides greater flexibility and density in exchange for advancing the town's design and land use goals.

These guidelines are intended to support the redevelopment process with specific recommendations that illustrate the principles by which applicants will be judged, without specifying every detail. The design shall respect the historic context of the district, responding to local architectural traditions, but may also explore creative approaches to design that express Groton's unique character for a new century.

The Town has minimized strict zoning requirements in favor of a cooperative design process overseen by the Design Review Committee, which is charged with determining whether the proposed development plans serve the Town's best interest as defined by these Guidelines and the Comprehensive Master Plan. As required by the TCOD bylaw, the findings of the Design Review Committee shall include:

1. An evaluation and opinion as to whether the proposed building and site design and proposed development layout constitute a suitable development for the TCOD;

2. A Statement as to whether the proposed development plans are consistent with the purposes of the TCOD and the published Design Guidelines;

3. Recommendations for modifications, restrictions or requirements to be imposed as a condition of the Special Permit

4. Recommendations with respect to waivers of the Design Guidelines or other requirements of the bylaw.

Planning and Design Process

In order to allow some flexibility and creativity in design while promoting the realization of Groton's vision for the Town Center Overlay District, the Design Review Committee will work closely with the applicant, through an iterative process, to develop plans that are consistent with that vision. This process will start very early in the development of concepts for each site and proceed through design development, with the goal of simplifying the review process. This process includes the following elements:

Site walk and review of preliminary conceptual alternatives: The Design Review Committee will meet with the applicant to walk the project site and consider the context.

Site analysis: The applicant shall prepare a detailed map of existing site features, including property lines, topography, existing buildings, roads, sidewalks, specimen trees and other vegetation. The project site shall be studied in relation to the whole district, and the proposal shall be designed as a valuable contribution to the vision for the district. Environmental factors, including wetlands, floodplains, soil conditions, wildlife habitat, and potential contamination shall also be shown. Urban design and visual factors shall be evaluated, including key visual relationships, existing and potential views, and the spatial structure defined by buildings, vegetation and road corridors.

Review of schematic alternatives: The Design Review Committee will meet with the applicant to review the site analysis and alternative design concepts, including a public space plan of the



district, and schematic parking and landscape plans, as well as preliminary building floor plans, elevations, and sections. Sections shall show the building in the context of the surrounding site and/or streetscape, including buildings across the street and existing/proposed trees. A physical or digital, three dimensional site model shall also be submitted.

Design Development: The Design Review Committee will meet with the applicant to review a revised schematic master plan for the site and supporting floor plans, elevations, and details of parking, pedestrian circulation, landscape design and stormwater management.

Design Review Checklist: As design progresses, the Design Review Committee will prepare a preliminary review describing approval or additional recommendations for each element on the design guidelines checklist.

Groton Center has served as a center of commerce, culture, education and community life for centuries. These varied uses are reflected in the design of buildings, yards and street frontages. In addition to its original use, each structure also reflects the architectural style of the period when it was built. The result is a dynamic and beautiful composition of buildings, yards and streetscapes, graced by mature trees and marked by a pleasing irregularity -- all of which contributes to a unique identity and sense of place. **Coordination with Historic Districts Commission:** Since parcels with the Town Center Overlay District may also fall within the historic district, the town has established a collaborative framework for design review. Where a property falls within both the historic district and the TCOD, design review will be carried out by a team made up of the members of the Historic Districts Commission (HDC), joined by a landscape architect appointed by the planning board and an elected member of the planning board. The review team will be chaired by HDC chairperson, and design review will be guided by these TCOD Design Guidelines. Where the property lies within the TCOD but not within a historic district, the review will be conducted by the TCOD Design Review Committee, joined by one non-voting member of the Historic Districts Commission.

Core Values

Cultural

- A dynamic civic and cultural environment where people gather for multiple activities for daily living.
- First floor retail uses that foster and enrich desired civic and cultural activity.
- Design that reinforces the **unique identity and sense of place** of Groton Center.
- Development which respects the historic, environmental and residential character of nearby neighborhoods.
- Authentic, high-quality design and construction.
- Circulation system that promotes pedestrian circulation while accommodating vehicular travel.
- **A human-scaled composition** with a rich pedestrian experience.
- Universal accessibility that accommodates all people at all stages of life.

Environmental

- Celebrate and embrace Broadmeadow, the Rail Trail, James Brook, Gibbet Hill and other surrounding open space resources.
- **Sustainable development** consistent with the Leadership in Energy and Environmental Design (LEED) rating system and the principles of Low Impact Development (LID).
- Development which protects the environment and sensitive natural resources.

Economic

- A vibrant economic center to promote a rich variety of small-scale business activities.
- Long-term, sustainable economic viability benefits the town, businesses and property owners.

Town Center Overlay District Design Guidelines

I. Consistency with the Groton Center Vision

A. Sustainability

The town will favor design and planning approaches that adhere to the principles of sustainability and offer measurable long term benefits. The town will highly favor projects that intend to seek certification under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System[™].

B. Reinforcing the Streetscape of Main Street and Station Avenue

The streetscape shall be the visual and functional focus of Groton Center. The importance of Main Street and Station Avenue shall be reinforced with a consistent streetscape lined with 2-3 story buildings fronting on tree-shaded sidewalks.



A conceptual approach to redevelopment grew out of visioning sessions in 2012. The vision promotes infill development of new buildings along the street (orange blocks), with shared parking lots in the rear of structures (purple areas). By sharing driveway entrances and providing connections across lot lines behind buildings (dashed lines), circulation can be safer and more efficient.

Placing parking behind buildings, simplifying circulation and reducing the number of curb cuts allows the streetscape to be more pedestrian friendly. Additonal space is opened up along the frontage for active retail uses, gardens and gathering spaces.



The District will best serve the town if ground floor spaces house retail functions, with office spaces and residential uses above. Creative use of space above the ground plane, including roof gardens and terraces, is highly encouraged.

C. Circulation

Where possible, vehicular circulation between lots along the Main Street Corridor shall be enhanced by providing alleys or driveways that connect across lot lines. Protection of the existing residential neighborhoods shall include implementation of mitigating measures to enhance pedestrian safety and to discourage undesired vehicle movements. Such measures may include, but not be limited to: signage, streetscape material changes, raised sidewalks and crossings, and access restrictions.

D. Providing a Broad Mix of Uses and Flexible Building Space

A broad mix of uses and densities shall be provided, as described in the Town Center Overlay District bylaw. The vitality of the streetscape shall be supported by providing a variety of ground-floor retail businesses and restaurants, each generally not exceeding 2,000 square feet in floor area. Buildings shall be designed to be flexible in floor plan, adaptable to different uses over time as market demand changes.

Where appropriate, the District will best serve the town if ground floor spaces house retail functions; with office spaces and residential uses above. Ground floor residential and office uses are least compatible with the creation of effective public space, and are specifically discouraged along Station Avenue.

E. Shaping Public and Civic Space

Each project shall contribute to the success of public spaces within the district, and use these shared public spaces as the backbone of the development plan, providing a clear structure to the district and fostering participation in shared activities.

To the extent possible, projects should reinforce natural centers of activity at intersections, at the junction of roads and pedestrian paths, and at the end of a long vista down a street. This includes

A Conceptual Vision for Redevelopment of Groton Center

These images represent an imaginary section of Main Street, but they are based on the typical uses, lot sizes, setbacks and building types found in the area. They also show the correct existing dimensions of the Main Street right-of-way, sidewalks and planting strips.



Existing Conditions: This image shows the current design of lots fronting on Main Street. Each has it's own curb cut and driveway. Most of the older structures have parking in the rear, while several have parking lots in front of the building. (Trees are not shown for purposes of clarity.)



Preferred Future Conditions: Under these design guidlines, new buildings (shown in brown) are located along the historic setback line close to the street, with parking "flipped" to the rear of the structures. Connections across lot lines allow cars to circulate in the rear and access side streets. This allows for fewer curb cuts along Main Street, reducing conflicts between cars and pedestrians.



A closer view of the proposed future alternative shows how new buildings (in brown) help to enclose the space along the street. Setbacks from the right-of-way are generally consistent, but can vary to fit the immediate context or specific site conditions.



A low-level view shows how enclosing the street with new buildings and trees can support a comfortable pedestrian space. This image also demonstrates the feasibility of streetscape enhancements that include pedestrian "bumpouts" at cross walks and bike lanes in each direction.



the existing parks and commons along main street, the site of the former depot at the end of Station Avenue, and possibly other areas, such as adjacent to Town Hall andat the base of Court Street. These key locations shall be considered for public parks and squares, public uses such as restaurants, as well as civic buildings, Visual access and convenient pedestrian connections will reinforce their place in the overall design of the district.

F. Integrating the District with the Surrounding Neighborhoods

It is important to provide convenient pedestrian and vehicular connections to the surrounding neighborhoods by completing the network of streets, providing continuous sidewalks, and building trails and boardwalks through natural areas. At the same time residential areas shall be protected from unwanted traffic and visual intrusion, and negative impact to the pace and scale of their environments.

Redevelopment of Groton Center should be organized around the public spaces along the street. This shared space, sometimes called the civic realm, includes sidewalks, parks, squares, courtyards and plazas, and is shaped by structures, trees and other vegetation, and reinforced by the location of benches, fountains and other design elements.

In Groton Center, part of the charm of the streetscape is the variation from areas with views of lawns and distant hills to sections where shops and historic homes front directly on the sidewalk. Applicants and landowners are encouraged to work cooperatively to pursue "creative reparcelization" where it would benefit the overall success of the vision. This could include assembly of multiple parcels into a single ownership, forming a partnership between multiple landowners, and land swaps between landowners, including the town.

G. Preserving Important Architectural and Site Features

Every reasonable effort shall be made to preserve the distinguishing original qualities of existing buildings and surrounding site features. The removal or alteration of historic buildings, stone walls and other elements shall be avoided to the greatest extent possible. Character-defining features shall be respected and treated with sensitivity. Specimen trees and significant existing features shall be preserved. Scenic views from publicly accessible locations shall be preserved.

H. Adaptive Reuse of Historic Structures and Cultural Context

Outside of the Historic District, contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural or cultural material. Such design must not have a negative impact on views or visual character to and/or from the historic district itself.

I. Services, Utilities and Stormwater Management

Services and utilities shall be buried. Switch boxes, transformers and other above-ground elements shall be located away from the primary façade of buildings and shall be concealed.

Low Impact Development (LID) techniques shall be used to reduce the concentration of stormwater runoff and maintain existing stormwater flows. Where feasible, bioswales, rain gardens and other bioretention techniques shall be employed Green roofs and rain storage systems are encouraged in order to reduce and reuse roof drainage. Pervious paving materials shall be used where feasible to reduce runoff from hardscaped areas and integrated into the design of the project. Notwithstanding these functional goals, LID techniques shall be modified if necessary to fit the character of buildings and grounds within the historic district.



Low Impact Development techniques open up rich possibilities for design. They can include naturalized stormwater ponds surrounded by vegetation (left) as well as courtyards and formal garden spaces. Unlike standard stormwater solutions, which concentrate runoff in large detention ponds, LID is intentionally spread around the site, where it can easily be integrated with other landscape elements.

II. Design of the Streetscape

Every new project shall be designed as an integrated system of building facades, pedestrian and vehicular circulation, streetscape elements, signage, lighting, planting, and drainage structures. The focus shall be on pedestrian comfort, livability for residents, and encouragement of community life. The design of the public realm shall come first, with private uses subordinated to a larger system organized around public spaces. Applicants shall submit plan and cross-sections that illustrate the setback, shape and scale of proposed buildings in relation to the street, pedestrian areas, parking, lighting, landscaping, and neighboring buildings.

A. Overall proportions of the cross section and degree of enclosure

The width of the paved roadway, right-of-way, pedestrian walkways, and building setbacks shall be coordinated with the size of proposed buildings to produce a comfortable sense of enclosure along the street. Wherever public access between buildings is appropriate, it shall be designed as public space and accommodate pedestrian connections.



Pedestrian-friendly streets are often enclosed by buildings or vegetation to form an "outdoor room." Comfortable proportions tend to fall between a 1:1 and 1:2 ratio of height to width of the spatial volume.

B. Building Design, Orientation and Setbacks

While the design of buildings shall respect the character of the surrounding neighborhood, architectural treatments shall be varied from one building to the next to avoid visual monotony. While a consistent theme is desirable, variations on that theme provide an opportunity to enhance the overall character and interest of the area. Visual richness shall be achieved by adding human-scale details, such as decorative bays or entrances, storefront windows, window boxes, porches, awnings and other elements.

New buildings should have relatively short setbacks that provide direct and convenient access to front entries. Occasional modest building setbacks that articulate the succession of contiguous facades, as well as niches for public seating, landscaping, and recessed entry ways can add interest to the pedestrian experience, and are therefore encouraged. Buildings shall be oriented with their principal façade and entrance doors facing the public way.

Proportions of the Cross Section



Section through Main Street Commercial Area

This cross-section Main Street depicts the most common set of dimensions. This includes a shallow front yard, a sidewalk and planting strip, and 50 feet of pavement. In several areas buildings come right up to the front property line, with doors that open directly onto the sidewalk.



Section Through Estate Area

In some of the older residential sections of Main Street the homes are set back from the sidewalk behind a landscaped front yard. Preservation of these landscaped areas is encouraged. In no case should these front yards be converted to parking as buildings are redeveloped.



The principal facade and entrance doors should face the street, be easy to locate, and have convenient pedestrian access from the sidewalk.





Groton's historic Main Street buildings share a strong frontal relationship to the street. Setbacks are minimal, with a small front yard fairly common, but many buildings are very close to the front property line. A few of the grander residences have large landscaped front yards.





Within a consistent theme, variety in massing, architectural details, and materials is encouraged as a way to add visual richness to the streetscape. Porches, arcades and other projections, as well as recessed entry ways and niches for public seating, can add interest and functionality to the pedestrian experience.





C. On-Street Parking

On street parking shall be encouraged in order to slow traffic, provide for convenient access to shops and businesses, and add vitality to the streetscape. Location and design of parking spaces shall be coordinated with the overall design of the streetscape, especially by providing appropriate setbacks at cross walks and street corners to ensure visibility for cars and pedestrians.



Designing a "Complete Street": a comfortable pedestrian system starts with the design of the overall street cross section. Streets should be no wider than necessary, which calms traffic and helps signal that pedestrians are just as important as vehicles. The street can widen to allow parking on one or both sides, but should narrow again at corners to reduce the width of pedestrian cross-walks. These can be accented with a change in materials, and are ideal for planting of street trees.





On-street parking provides ready access to shops, restaurants and other businesses and is an efficient use of Main Street's broad pavement. Parked cars have the added benefit of slowing traffic and sheltering pedestrians - making the sidewalk more comfortable.

D. Pedestrian Walkways

Walkways shall be designed and located to encourage use by pedestrians. They shall function as a continuous pedestrian system that encourages people to park once and walk throughout Groton Center. Walkways along roadways shall be no less than five feet wide, and as appropriate, shall widen to allow enough space for cafes, public seating, landscaping, and spontaneous events such as sidewalk sales and street performances.

Materials: The use of small sidewalk stone pavers or bricks is encouraged. Clay brick and natural stone are preferred to imitation materials. Asphalt paving is not acceptable. All curbs shall be vertical granite. Permeable pavement, iron gratings, and other devices that reduce stormwater runoff and support healthy tree growth are encouraged.







Interior paths and courtyards can take advantage of space between buildings that might other wise be wasted to create special sitting areas. These give people another reason to use the path system while adding value to adjacent businesses.

Materials should be coordinated with the design of the surrounding streetscape and buildings. Traditional small stone or brick pavers are preferred. Changes in material can help communicate a change in use or warn of possible use by cars, as in an alley or crosswalk.



Crosswalks: In order to facilitate pedestrian circulation and slow traffic, the use of texture changes or raised crosswalks is encouraged wherever pedestrian ways intersect roads or high-traffic corridors within parking lots. Bulb-outs or similar devices shall be used at intersections and crosswalks to narrow the width of pedestrian crossings.

E. Accessibility

All design standards and materials shall follow the requirements of the Americans with Disabilities Act (ADA) and Massachusetts Architectural Access Board (MAAB) in providing universal access. These elements shall be reinforced where possible with benches, covered sitting areas, and shading of walkways to provide for pedestrian comfort.



A change in materials and texture makes a crosswalk easier to see, and helps to "teach" drivers where crosswalks are located. Durable stone, brick or concrete help to tie crosswalks into the larger pedestrian system, and hold up better than paint.







Trees, shrubs and other landscaping play a critical role in making pedestrian spaces comfortable, especially in summer when paved areas can become unbearably hot.

Site elements such as benches, trash barrels, bike racks, etc., should be consistent with the character of the entire district, but can vary to play off the design of individual buildings or outdoor spaces. Just having a consistent color and materials (far right) can tie together street furnishings that otherwise can seem like an accidental collection of mis-matched elements.



F. Site Elements and Street Furnishings

Site elements such as water features, clock tower, light posts and signage, and street furnishings such as benches, trash barrels, planters and bike racks shall reflect traditional design and materials found along Main Street, though variations tied to the architecture of specific buildings are acceptable. Location of these elements shall be coordinated with pedestrian circulation and building entrances to enhance the functioning of the entire district.

G. Screening Elements: Walls, Fences and Hedges

Designs for fences, walls, and hedges shall create a finished edge to the street. Fences located at the front property line shall be designed so that pedestrians can look through or over them. Taller screens shall be kept behind the front wall of the structures. Traditional materials like wood, stone, wrought iron, and plants are preferred. Chain link, plastic and vinyl are not acceptable.

Like benches and trash barrels, the design of fences and hedges is often an afterthought. With care, such elements can help to tie the design of buildings to the landscape and enliven the edge of the street, while helping to control physical and visual access to private spaces.

III. Architecture

The architecture of the Town Center Overlay District need not be an historic reproduction, but it must be authentic. Authenticity is not about how old something is. It is about how well it is made and whether it is created with a genuine understanding of its form and function. Authentic new buildings employ building elements and materials creatively, but also in controlled and rational manner. The end result is a new form, which respects historical architecture, rather than merely copying it.

The design and construction of buildings in the district should be of the highest quality, inspired by what is already here, and expressing a sense of permanence and belonging. Each building should be designed as part of the overall composition, and contribute to the overall good. Design approaches and decisions should be intentional, and the use of materials should be honest and logical in its application.



Groton's town center represents a living museum of architectural styles from the last three centuries. The intent of these guidelines is to encourage new buildings that respect these design traditions and are well-made and honest in their use of materials. Creativity in design is encouraged, with a recognition that each building must blend harmoniously with the larger composition made up of the surrounding buildings and streetscape.

A. Siting of Structures

Structures shall be sited and positioned to define and dignify public spaces, such as streets, squares or parks. New and renovated buildings shall consider the use and privacy needs of existing neighbors and provide screening to minimize detrimental impacts. Key areas of concern include:

Relationship to lot lines.

Density and lot coverage.

places.

Relationship to view corridors.

Relationship to other existing or planned buildings.

Placement of uses to foster an active streetscape.

Relationship to circulation pathways and gathering



Important community buildings should be sited to take advantage of key views points at intersections, parks or other public spaces. Such buildings benefit from the location, but also make that location itself more important as a center of activity and community life.

B. Authenticity

Especially outside of the historic district, proposals shall strive for authenticity in form, function and materials, but need not be based on historic precedents. Forms should flow logically from the function of a building, and the motivation of design decisions should be clear from its appearance. Buildings should be well-made, and express a sense of permanence and belonging. Within or immediately adjacent to the historic district, proposed buildings should harmonize closely with their neighbors, and should not seem visually obtrusive or out of place.

Authentic buildings may draw on historic precedents, but they may also explore approaches that meet the needs of the building program with creative use of materials, and forms inspired by vernacular buildings or the patterns of nature. Visual interest can be provided by working with the rhythm of windows and doors, and the design of functional elements providing shade or ventilation. The image on the right shows a portion of a design model prepared by Tim Hess to explore creative design approaches for the redevelopment of Station Avenue.





C. Overall Building Shape, Massing and Proportions

Building shape, massing and proportions should be compatible with Groton's architectural traditions. Structures should be limited to an overall footprint and width in any dimension that is compatible with the architectural fabric of the district and its broader context. Large masses might benefit from articulation as assemblies of smaller ones with traditional proportions. Larger buildings will be allowed where the composition of the district and/or the town center are distinctly and emphatically enriched and the new building manifests a civic-scaled grandeur. Important ideas include:

- Simple forms that are clearly discernable are favored over unnecessary complexity.
- Massing should relate to the context, not just programmatic goals, and work with neighboring buildings and public spaces to create a "whole".
- Blind building facades should be avoided.
- "Traditional" architecture should be used with an understanding of historic design principles and use of materials.
- Decorative elements should be used sparingly to lend scale, visual interest, and detail; too many "add-ons" can be awkward and diminish the overall sense of order.
- Building forms should be used to define usable outdoor spaces for daily activities, and unusable residual spaces should be avoided.

The Town Center Bylaw limits the height of buildings to 35 feet, though the Planning Board may allow greater heights. It is expected that most will be between 2 and 3 stories, in line with typical buildings along Main Street (above). Regardless of their height, the scale of buildings should be based on human scale, where elements relate to the size and proportions of the human body. This is especially important along street-level facades and building entrances.



D. Building Height and Scale

The height of any new structure or proposed alteration should be compatible the surrounding buildings. Human scale should be the basis for determining the overall scale of new structures as well as their component features. In general:

- Overall building scale should relate to individual elements.
- The scale of the entire façade must relate to the human-scaled streetscape.
- Floor to floor heights should be governed by exterior proportions rather than building systems, and not be elongated or exaggerated to cover up functional elements.
- Avoid uniformity of height along the streetscape. Consider how the part relates to the whole.

E. Roofs

Roof design is critical to the overall character of a building. Building facades should not just terminate, but should be integrated into the design of the roof as part of the overall expression and character of the structure. Creativity in design of roofs is encouraged, supported by authenticity in the expression of form and use of materials.

- Pitched roofs are not mandatory.
- The design of strong eaves, cornices, parapets where appropriate is encouraged.
- Any necessary components such as mechanical equipment, gutters, leaders, etc. should be an intentional part of roof and façade, not an after-thought.
- "Green roofs," photovoltaics, terraces, etc must be carefully integrated into the overall design of the building.
- Rooftop mechanical equipment must be integrated into the overall design.

Whether simple or elaborate, most the buildings in Groton Center have a steeply pitched roof, with a peak that faces the street in the Greek Revival tradition, or the Federal-style roofline parallel to the street. There are a few examples of mansard, gambrel or hipped roofs. Traditional pitched roofs are not mandatory, but they have persisted for good reason in the rain and snow of Massachusetts. Pitches of at least 8 in 12 are preferred; where building widths make this impractical, consider breaking roofs into multiple intersecting gables. Low shed roofs are not recommended.





Unusual rooflines, towers and projections should be used sparingly, and should have a logical relationship to the underlying functions of the building. Any such explorations must harmonize with the character of surrounding buildings and the district as a whole.



Traditional "Main Street" buildings hide the roof behind a parapet, and follow time-tested approaches to articulating the building's base, body and cap. Horizontal elements typically separate each element; the body should constitute at least 50% of the buildings total height.

F. Design and Orientation of Facades and Entrances

Every building should have a clearly identifiable front, a formal side facing the street or other public space. The principal entrance should be clearly visible, set apart by its location and detailing to mark it as the front door. Pedestrian entrances should be logically and conveniently located. The overall proportions of the façade and the relationships between doors and windows should be compatible with the architectural style and character neighboring buildings, the district, and the town center.

- Buildings should have a hierarchy of entrances which is expressed in the design of the facade
- Buidings with multiple storefronts should be designed to enhance the richness and texture of the pedestrian experience.
- Entrances shall be physically and visually accessible, welcoming, and inviting.

public space, and be clearly identifiable. Celebration of the front door with extra design attention is a tradition that goes back to colonial times.

Entrances should face the principal

Porches and arcades can also signal the location of an entrance (far right), and provide a comfortable transition zone between exterior and interior spaces.

A building entrance that is coordinated withthe design of the building facade will be easier to find and helps create a focus for the composition.

G. Design of Windows

The composition of windows across a building's façade (and other elevations) shall be deliberate and pleasing. The proportions, detailing and distribution of windows are especially prominent elements of the building's character and vocabulary. Windows should generally be vertically proportioned. Windows should be designed to reduce energy costs through good seals and insulation, low- emissivity glass, etc. Design for solar gain in winter, opening windows in summer, and natural lighting are encouraged.

- Windows should express a sense of order and belonging.
- Repetition should be designed within an overall ordering scheme not random.
- Storefront windows should not be backlit or covered with signage.
- Reflective coatings are not acceptable.
- Interior window coverings should complement the architecture of the building.
- Windows should be operable, if appropriate to the use and location.

The size, proportions and location of windows should be governed by an overall ordering scheme appropriate to the style of the building. Where large openings are desired, pairs or clusters of windows are preferred to large, unarticulated expanses of glass. Repetition of forms should be designed to create a pleasing and consistent rhythm across the facade.

Vertical orientation is preferred for all fenestration, whether or not traditional forms and materials are used. Where larger openings are to be filled with glass, the area should be subdivided to provide some articulation of the opening (bottom left).

H. Surface Appearance

Traditional forms, materials and colors are required within the historic district and encouraged elsewhere in the TCOD, especially where a site is surrounded by older structures with a consistent surface treatment. Exterior materials shall express their inherent material qualities, and not seek to express qualities of other materials.

- Materials should be chosen that enhance the overall appearance of the building.
- Changes in plane, texture, shadowing, etc. are encouraged, if integrated into the overall design of the building.
- Trim and detailed should fit the architectural style of the building and be integrated with other elements.

Storefront windows should offer unobstructed views of window displays and/or the interior of the building. Dark, tinted glass is not recommended. Transparency should be reinforced with lighting that illuminates the interior and highlights displays while avoiding glare in the eyes of window shoppers.

Traditional materials like wood, brick, stone, iron and glass convey a sense of permanence, relate naturally to human scale, and can easily be carried out into the landscape with paving, lighting, fencing, etc. Color, texture and pattern can be used to call attention to key features, while simple forms and subdued hues make a striking contrast to seasonal flowers or other displays.

I. Porches, Arcades, Canopies and Awnings

The use of porches and arcades to shelter building entrances and connect buildings is encouraged as a way to provide for pedestrian use and comfort and add interest to the streetscape. They should be designed along with the façade of the building, with authentic materials and study construction. Stormwater management should be carefully planned.

Awnings and Canopies should be designed with simple shapes, integrated with the façade of the building, and consistent in character across multiple storefronts. Round or bullnose shapes are not acceptable. Fixed or retractable awnings should be no lower than 8 feet above the sidewalk. Backlit awnings are not allowed.

Porches are already common in Groton Center. They provide shelter for building entrances and create a useful transitional space between the street and the interior of the building.

Awnings provide shelter from the sun and rain that, unlike permanent porches and canopies, can be retracted to allow more light into front windows. Another advantage is that they provide some protection for pedestrians on the sidewalk, without requiring another vertical support on the street side.

Because awnings and canopies are somewhat temporary, they can be used to add color and life to a building facade, or advertise a particular shop or restaurant, and easily be changed later.

J. Secondary Elements: towers, cupolas and chimneys

Decorative elements should be appropriate to the architecture of the building and the neighborhood. They should be used sparingly, in order to highlight important buildings and provide for landmarks and focal points within the TCOD. They should have a clear purpose that is evident in their design and location, rather than just decorative appliqué. Historically-based elements should be scaled and detailed appropriately to the building.

Towers and other decorative elements should be used sparingly, and with a clear purpose, such as creating a focal point at the end of a street. These elements should be integrated in the design of the building, rather than appearing like a random appendage.

The Trustees of Reservations' Doyle Conservation Center was built as a

a clerestory above the roof enhance daylighting using traditional architectural forms. Photovoltaic panels, geothermal heat, high-performance walls and windows, and sustainable

into the design of the building. It was designed by HKT Architects of

Somerville.

K. Service Areas, Mechanical Systems, HVAC Equipment

Building service areas, dumpsters, generators, transformers, etc. should be carefully placed and screened with fences, walls or landscaping that complement the architecture of the building. Mechanical systems and HVAC equipment should be located to reduce noise pollution and screened from view. All service areas, equipment and utilities should be shown on building representations during design development.

If dumpsters must be placed in a visible location, the design of enclosures whould be coordinated with that of the surrounding structures.

Ventilators, chimneys and other functional elements have long been used as an opportunity to add life and visual interest to the roofline of a building. These and other, more modern mechanical equipment, should be coordinated with the design of the whole structure, or screened from view.

Modern rooftop mechanical equipment should be placed in an area that is not visible from the surrounding area or surrounded by architectural elements that fit the design of the building.

IV. Landscape

A. Purpose & Approach:

Groton values its natural landscape. All plan proposals are strongly encouraged to reflect the character and history of the region. The following are important overall goals:

- Spatial definition: Trees and other landscape plantings shall be used to reinforce the pattern of private and public spaces -- not just for decoration. The landscape shall enhance the sense of place, creating a human-scale and pedestrian-oriented environment.
- Screening and framing: Plantings and site features shall promote and increase design compatibility between different land uses, while ensuring attractive views from streets and adjacent properties. These site features should shield adjacent properties from potentially adverse impacts of development.
- High quality materials are encouraged, providing an expression of concern for the quality of the pedestrian experience and the perception of timelessness.
- Sustainability: The reliance on one species is discouraged to reduce the risks and prevent spread of blights and pests -- although massed plantings of the same variety may be allowed for design purposes. Reflecting the Town's dedication to its natural landscape, all plan proposals shall include native and/or drought tolerant plants, and minimize the clearing and grading of existing vegetation. No invasive species will be permitted. See Appendix for suggested plant species. Where appropriate, plant food-producing vegetation to support natural diversity and wildlife habitat. Where appropriate, allow dead trees to remain for dead trees and leave as nesting sites. Protect vernal pools and streams.

Trees can have an enormous positive impact on the design of parking lots, while taking up relatively little space on the ground. The key is to provide enough room for healthy root growth, so that the tree can grow to its full potential.

B. Parking lots and driveways

Intent: Shade and visual relief: Parking lots should be planted with large shade trees and landscaped to provide visual relief, minimize the amount of glare, noise, and heat, block wind, and support safe patterns of circulation. This requires canopy trees growing in enough permeable soil to thrive.

- Minimum placement: At least 5% of the interior of any parking lot shall be maintained with landscaping (trees and shrubs) in islands and/or medians at least ten feet wide. All parking spaces shall be located within 60 feet of the trunk of a canopy tree, and 30 ft. of an ornamental tree.
- Minimum size: Canopy trees shall be at least 3 inches in caliper when installed, measured at 12-18" from the ground. Evergreen shrubs shall be at least 24" in height and minimum three-gallon container size at the time of installation.
- Screening: Parking lots visible from streets or public pedestrian ways should be screened with attractive fences and plantings. Opaque screening is required between the parking area and adjacent streets or public pedestrian ways. Shrubs, plantings, hedges or walls shall provide an opaque screen or barrier for the first three feet of height within three years of planting.
- Preserve existing vegetation and specimen trees, unless specifically approved otherwise.

Parking lot islands should be wide enough to keep overhanging cars from damaging trees. Whether paved for pedestrians, grassed or mulched, soil throughout the island should be of consistent quality, encouraging tree roots to extend beyond the planting pit and allowing them to thrive over the long term.

Thick plantings of trees and shrubs can reduce the visual impact of parked cars and screen parking lots from pedestrian areas. Street trees make a huge difference to the quality and character of the streetscape. Relatively inexpensive in themselves, the key to long-term success lies in careful design of the planting area to ensure the right amount of water and nutrients. Long term maintenance, with regular pruning and feeding and protection from damage, is well worth the extra time and expense.

C. Streetscape

Intent: The planting of trees along public streets or the retention of existing natural vegetation shall enhance the appearance of the TCOD, shall enclose and define the streetscape, and will reinforce the pattern of spaces. Special plantings may highlight significant sites, gateways and entrances. The streetscape shall be designed to minimize conflict between trees, roadways, sidewalks, sight distance, and streetlights.

Street trees should be planted in sufficient numbers and close enough together to form a continuous canopy at maturity. Trees should be spaced as follows:

Large Deciduous street trees: 30'-0" O.C. Small Deciduous trees: 20'-0" O.C.

- More significant plantings in public areas
- Trees will aid in reducing heat and glare in the summer months. They shall be large deciduous trees, unless the use of smaller trees is required due to other considerations.

Small gathering spaces and building entrances can enliven the streetscape and enhance business opportunities. Special attention to shrub and perennial plantings is well-rewarded wherever people are going to sit for a while.

D. Nonresidential & Multifamily Residential Planting Standards

Intent: Landscape plantings can be used to bring a human-scale to buildings while enhancing the character of each site. Whether placed against the building wall in a traditional manner, or between the building wall and the vehicular use area, the town supports the use of vegetation to soften and make more human scaled spaces.

Building perimeter plantings

Plantings shall visually break up the mass of buildings and pavement, between sidewalks and buildings or between parking areas and sidewalks.

- Minimum planting strip width: 4'-0".
- Maintain clear area for bumper overhang at parking spaces. Expand minimum width of planting strip to 6'-0".
- The sum length of the planting must equal at least 50% of the length of that side of the building.

Planter Boxes

Along Station Avenue and Main Street, planter boxes may be used in lieu of foundation plantings.

Visibility of Storefronts and Signs

It is not the intent of the above-mentioned planting standards to obscure storefronts from view.

Plantings shouldn't be limited to the obvious locations. Vines (left) can be trained up simple structures, which provide shade and visual interest yearround. Even narrow areas between buildings (right) can hold a surprising amount of vegetation, turning a forgotten area into a unique experience. Pocket parks (left center) can include sculptural elements surrounded by plantings: perhaps, as here, reflecting the history of the place.

Creative juxtaposition of the natural form of vegetation with different hardscape materials can enliven pedestrian areas. Here, the trunks and branches of a few large trees changes what otherwise could be a stark area. Changes in materials can create a charming contrast of form and texture (far right).

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E. Buffer Planting

Intent: Semi opaque Buffers can serve a purpose in establishing and retaining the character of the TCOD. Plantings and site features may be used, as appropriate, to shield adjacent properties and public ways.

Screening is required at dumpsters, service areas and necessary utility components.

- Existing trees are preferred over new planting if they achieve the same purpose.
- Fences are not considered to be a screen unless combined with plantings.
- Aesthetic buffers create the impression of spatial separation, without eliminating visual contact between uses.

Buffer plantings should serve multiple purposes; in addition to creating a visual screen to hide cars, service areas or mechanical equipment, they should also enhance the visual quality of the streetscape. Combinations of trees, shrubs and seasonal flowers are preferred over shrubs alone.

Plantings should be designed to enhance the human scale of the district. Flowering trees and shrubs, perennials and groundcovers should be used to help blend the district into the character of surrounding residential streets.

V. Vehicular Access and Off-Street Parking

A. Access Driveways

Shared driveways serving multiple uses shall be used whenever possible to simplify vehicular circulation patterns and reduce conflicts between cars and pedestrians. Driveways shall be located to provide easy access to rear parking areas from the street while minimizing disruption of pedestrian flow, and shall connect where possible to existing parking lots along.

B. Vehicular Connections Across Lot Lines

Short interior roadways shall be provided to allow continuous access from one parking area to the next, crossing property boundaries as necessary. This will limit the number of curb cuts needed along the street, while providing convenient rear access to each building.

C. Parking Location

All parking areas shall be located at the rear of the TCOD Development tract, and no closer to any street line of the tract than 50 feet, unless the Special Permit Granting Authority allows a reduction of the 50 feet based on the recommendations of the Design Review Committee. On-street parking can provide for convenience shopping, while reducing the required size of parking lots.

In a design concept developed as part of the Station Avenue visioning process, most of the parking is placed to the rear of structures, with the exception of some parallel parking along the street. By reducing the number of curb cuts, and allowing access across rear lot lines, the rear parking areas are easy to find and navigate through, and more of the street frontage can be used for buildings and landscaping.

D. Amount of Parking Required

The amount of parking shall follow established standards for mixed-use development, taking into account the projected demand of each proposed use and the potential for pedestrian access from the surrounding neighborhoods. The amount of parking provided shall be sufficient to prevent parking from spilling over into existing downtown and residential areas. Where additional overflow parking is provided, it shall be surfaced with gravel or other permeable materials.

E. Shared Parking

Shared parking for mixed use areas, such as lots which are used by office and retail employees and shoppers during the day and by residents at night, is encouraged as a way of reducing the overall area of pavement. Parking lots shall be built in phases, as needed to meet demand, rather than to meet the maximum possible need from the outset.

On-street parking is the ultimate form of shared parking, for it is clearly part of the public realm and accessible to all without entering private parcels. Parking in the rear of buildings (right and left, below) need not be ugly, and creates opportunities for businesses to open up a second entrance. It can make it easier for building owners to lease out under-utilized floor area in the rear of buildings.

F. Pedestrian Connections

To encourage pedestrian activity along the street, pathways shall be provided to encourage people who park in the rear of structures to walk to the street frontage and enter buildings from the street side. Wherever possible, enhance the streetscape by separating the pedestrian circulation from motor vehicle circulation.

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Rear parking lots work well if they are connected to the street frontage and important gathering spaces with a robust network of pedestrian paths. These often require little more than a paved surface and a little creative landcaping in the left-over spaces between buildings.

VI. Lighting

Lighting shall be provided at minimal levels that will allow for reasonable comfort and security, with an average illumination of 1-2 footcandles and a maximum of 5 footcandles to reduce "hot spots." All lighting shall employ full cut-off fixtures with color-corrected lamps to minimize glare, reduce light trespass and avoid polluting the night sky. The reflectivity of building surfaces and pavement shall be considered when designing lighting in order to reduce reflection of light into the night sky. All lighting shall wherever possible incorporate timers or other devices to turn off lights when not needed. Flood or area lighting is not acceptable.

A. Street Lights

Except in the case of decorative fixtures designed to complement the streetscape, all lighting shall employ cut off elements to project light downward. A larger number of medium-wattage streetlights is preferable to generalized illumination by bright lamps located high above street level. Area floodlights that use high-glare lamps are not permitted. Metal halide or similar color-corrected lighting shall be used whenever possible. Indirect lighting of facades, vegetation and signage is encouraged.

Lighting and light fixtures should be designed as an integral part of the pedestrian realm. Poles and fixtures for street, parking and pedestrian lighting should be consistent within each area, but need not be identical throughout the district. Lighting for signs, building facades, and window displays (lower left and center) should be considered as part of the overall plan for illuminating the streetscape.

There is no required design for light fixtures along the street and pedestrian areas, but it is expected that the lighting harmonizes with the architecture of the buildings and streetscape.

Low bollard lighting is encouraged, especially for pedestrian areas. It can also serve to mark the edge of such areas, signalling drivers that vehicles are not allowed.

B. Height of Fixtures

Fixtures should be mounted at a height appropriate to the scale of the buildings and to support a pedestrian-scale streetscape. Wall Mounted fixtures shall be mounted no higher than 12-15 feet above grade, depending on the size of the building. Pole mounted fixtures shall be no higher than 15 feet above grade.

C. Parking Lot Lighting:

Lighting shall be provided at minimal levels that will allow for reasonable comfort and security, and shall wherever possible incorporate timers or other devices to turn off lights when not needed. All lighting shall employ full cut-off fixtures with color-corrected lamps. Flood or area lighting is not acceptable.

D. Building Lighting

Indirect lighting of facades and decorative elements is encouraged. Lighting of entrances, sidewalks, and parking areas shall be accomplished with recessed fixtures under eaves and porches to minimize glare. Window displays shall be illuminated with shielded accent lights. Interior lights shall not create glare that shines out windows and doors.

E. Hours of Operation

Except as needed for site safety or security, all external lighting, including lighting accessory to authorized signs, shall be extinguished one half hour after the facility is closed for the business day. Such lighting may be timed to resume one half hour prior to the arrival of the first employee on the premises.

F. Light Source

No outdoor light fixtures using high pressure sodium vapor or mercury vapor lamps shall be allowed. The use of LED and fluorescent lighting is encouraged as long as the intensity, coverage and color of the light matches traditional light sources.

Poles and fixtures should be designed as complementary units, with both elements consistent with the design of the streetscape and surrounding buildings. Short, pedestrian-scale light poles are preferred to tall, high-wattage fixtures.

VII. Signage

Signs should make a positive contribution to the general appearance of the district, and should be compatible with the building and its neighbors. They should not compete with each other for attention, but focus attention on each business or other use in turn, allowing for visitors to easily find their desired destination. In most cases light letters on a dark background are preferred.

A. Size

Signs should only be big enough to serve the needed purpose and scaled appropriate to the building façade and/or use they describe – generally lettering from 8'' - 14'' is large enough to be seen from across the street.

Many different kinds of signs are appropriate in the TCOD, but all must meet the standard of communicating clearly while harmonizing with each other, complementing the design of buildings, and blending with the overall character of the District.

Wall signs should be scaled to fit the overall facade of the building. Most should be confined to a continuous horizontal sign band between the first and second floors of the buildings, though creative alternatives (below) are worth exploring.

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B. Materials

All signs shall be made of durable, high quality architectural materials, with forms and colors that are compatible with the associated structure. Traditional wood, metal, or glass signs are preferred, while composites which look like wood and can be carved are also acceptable. Color should be compatible with the color of the building and its neighbors.

C. Lighting

Signs shall not be internally illuminated, backlit, or use channel lettering. Illumination shall be projected onto signs, preferably from above, and directed away from pedestrians or vehicles. There shall be no neon signs unless specifically recommended by the Design Review Committee (DRC) and approved by the Planning Board. There shall be no flashing or moving lights, including search lights. Electrical services to signs shall be concealed – no conduits, wires or boxes should be visible.

Incandescent light: Spot or flood lighting attached to the building façade should be spaced appropriately to illuminate the full area of the sign. Fixtures that contribute the design of the façade, such as gooseneck lamps or other decorative elements, are preferred.

Fluorescent light: fluorescent light shall be shielded to hide the light source, and shall be color balanced to retain the color of the sign and building façade if necessary.

LED light: use of light-emitting diode fixtures is encouraged as as long as the intensity, coverage and color of the light matches traditional light sources. The light source should be shielded unless specifically recommended by the DRC and approved by the Planning Board.

D. Wall Signs

Signs which dominate the façade of any building or compromise architectural details such as arches, moldings, cornices or windows are discouraged. Where appropriate, signs should be organized within a signboard or frieze integrated into the overall façade of the building.

E. Window Signs

Window signs, meant to be seen by pedestrians from a few feet away, should complement and not obscure window displays. Signs painted on the glass are acceptable if carefully planned and executed. Signs that look temporary and cover large areas of storefront windows are not allowed.

F. Projecting Signs

Projecting signs should convey information in creative ways, using images that visually represent the goods or services provided at the premises. They should be centered on a vertical pier or column, not centered on a wall opening such as a door, window or storefront.

Projecting signs provide an opportunity for creating a work of art that conveys both the identity and spirit of the business within. Coordinated with other elements of the facade, they have a comfortable human scale and enrich the character of the streetscape.

Awnings are a convenient place to advertise the name of a business, but need to be handled carefully so they don't overwhelm the design of the building facade. Small, subtle lettering and harmonious colors can enhance the overall composition.

Signage above the first story should be limited to painted letters on window glass.

G. Awnings, Canopies and Marquees

Lettering, logos, and marquee lettering will only be allowed with specific reccomendation from the DRC and approval of the Planning Board. Signs should not be used under awnings or canopies unless there is at least 8 feet of clearance for the sign from the sidewalk.

H. Number and Hierarchy

The number of signs on a façade should be kept to the minimum necessary to effectively communicate the messages being conveyed. "Less is More": too many signs not only compete with each other, they also detract from the appearance of the district and can cause customers to block out the messages entirely. Where multiple signs are needed in order to list tenants or uses in a building, they should be consolidated within a single area with a clear, understandable hierarchy. Signage above the sills of second story windows should be confined to painted letters on window glass, provided that these signs advertise the organizations therein and are compatible with the architecture of the building.

I. Content

Signage should focus on advertising local businesses, not national product brand names or logo. Text should be kept as short as possible and organized hierarchically.

Appendix: Definitions

Civic Space

A shared public space, such as a square, park, sidewalk or street, or some combination of elements, positioned and sited in context so as to encourage and accommodate the social, political, artistic, and economic life of the community. In order to be effective, these spaces must be sited / composed to provide common relation to and from, common access for a mix of uses (retail, office, residential, civic, recreational) in order to gather and collect people.

Critical Root Zone

A circular area centered on the trunk of a tree which must be protected from any disturbance if the tree is to survive. The Critical Root Zone (CRZ) of a tree is established on the basis of the trunk diameter, and shall have a radius of 12 inches to every inch diameter of trunk taken at 4.5 feet above grade. Disturbance includes any excavation or filling activities, storage of materials or supplies, soil compaction from vehicles or equipment, and changes to free flow of precipitation.

Landmark

A building, statue, sculpture, tree or other natural or man-made object that creates a visual focus for an area: providing for orientation and way-finding, identifying an important community space, and celebrating the life of the community.

Light-Emitting Diode (LED)

A light-emitting diode is an electronic device that emits light when electricity passes through it. Recent advancements in LED lighting allow for lamps with a color and brightness that matches conventional incandescent or florescent lighting while using dramatically less power.

LEED

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System[™] is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

LEED ND

LEED for Neighborhood Development, a pilot program led by the US Green Building Council to extend the principles of the Green Building Rating System to whole neighborhoods. It emphasizes the creation of compact, walkable, vibrant, mixed use neighborhoods with good connections to nearby communities.

Low-Impact Development (LID)

The practice of stormwater management based on the principles of nature, with a focus on diffusing stormwater close to the source. It includes numerous techniques such as pervious pavement, rainfall storage and recycling, rain gardens, biofiltration and constructed wetlands.

Pedestrian Scale

Design for streets, sidewalks, buildings and parking areas that bases its scale, meaning the relative size of different elements, on the scale of the human body, resulting in an environment which is physically and psychologically comfortable for people on foot.

Specimen Tree

A native, introduced or naturalized tree which is important because of its impact on community character, its significance in the historic or cultural landscape or its value in enhancing wildlife habitat. Any tree with a DBH of six inches or larger is eligible to be considered a specimen tree. Trees that have a small height at maturity or are slow growing with a DBH of four inches or larger are eligible to be considered specimen trees.

Spine

A generally linear visual axis or physical connection that can serve to organize uses and activities and unify a composition containing many different elements.

Sustainable Design

Design that provides for the needs of the current users without compromising the ability of future generations to meet their own needs.

Urban Design

The manipulation of buildings, roads, landscaping, parking, sidewalks, lighting, signage and other elements to create harmonious compositions that are both useful and beautiful.

A design philosophy for making effective and compelling public places; a philosophy in which the composed whole of the built environment is revered and served by each individual component.