

DESIGN GUIDELINES
FOR THE
MIXED USE TOWN
CENTER (MTC)
DISTRICT

TOWN OF GROTON, CT

OCTOBER 1, 2019

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This document contains design guidelines for development in the Town of Groton, Connecticut. The purpose of these guidelines is to describe design principles that, when applied, help contribute to the quality of the public realm, creating the “sense of place” that is the difference between communities that thrive and those that do not.

These guidelines are supplementary to design standards provided in the Town’s Zoning Regulations, which apply to the Mixed Use Town Center (MTC). Where the design standards included in the body of the Zoning Regulations are firm and require compliance, the guidelines herein are meant to be more instructive. The guidelines communicate the intent of what the Town calls for in its Plan of Conservation and Development (POCD) and other more targeted plans that examined individual village areas. Images are used to help clarify the design language and overall vision for each village and, in some cases, clarify how different choices are appropriate for different village areas. These guidelines will help developers and the Town discuss the character of each village and how existing conditions do or do not inform applications for development. Overarching principles related to village development in Groton include:

1. A Vibrant Public Realm – “Public realm” is a term of art in urban/village planning that is used to discuss any area where people have the opportunity to mingle, gather, and visually experience their surroundings. The term often refers to the street right-of-way, park areas, sidewalks, bike paths, plazas, and similar features. Any of these areas may be publicly or privately owned. In Groton’s mixed use areas, great care will be taken to provide a public realm that works as a connected system of accessible and attractive spaces that will foster positive interaction between residents, visitors, and businesses. All projects will contain a vibrant public realm or create ways to connect and be a part of a larger public realm.
2. Environmental Best Practices – The days when urban development was incompatible with achieving environmental objectives are in the past. The Town of Groton envisions town center mixed use at various scales that incorporates state-of-the-art “best practices” in the areas of construction management, stormwater management, waste management, and landscaping.
3. A Mix of Uses and Densities – The Town recognizes that market demand will play an important role in determining the types of uses and densities that are built in mixed use districts. The Town also acknowledges that the most economically resilient mixed use centers are those that foster a diverse mix of commercial uses that can respond to market trends and innovations over time. Similarly, housing shall be provided within mixed use districts and should provide options for individuals and households at all levels of abilities, incomes, and preferences.
4. Pedestrians First – The Town understands that accommodations for automobiles within mixed use areas are essential to their success. However, the Town also recognizes that the most successful and memorable mixed use centers are those where pedestrians feel safe and welcome. Circulation along Route 1 as well as within newly developed or redeveloped mixed use areas in Groton shall be designed with the highest priority placed on developing a safe, attractive, accessible, and intuitive pedestrian network. The use of bicycles as an alternative form of transportation shall be incorporated into all development proposals.
5. Quality Architecture – Buildings and signs will be designed in a manner that conveys high quality design and a thoughtful approach to developing a sense of place within mixed use areas. Traditional building forms, high quality building materials, and attention to detail will be apparent and integral to the design process.

DESIGN GUIDELINES FORMAT

The majority of the design guidelines follow the general format illustrated below:



SITE DESIGN

This section of the Design Guidelines looks at different elements of site design within the Mixed-Use Town Center, ranging from pedestrian connectivity within the public right of way (ROW) to more specific issues related to individual sites, like building placement and parking location.

BUILDING LOCATION

ON A TRADITIONAL MIXED-USE STREET, BUILDINGS ENGAGE THE SIDEWALK

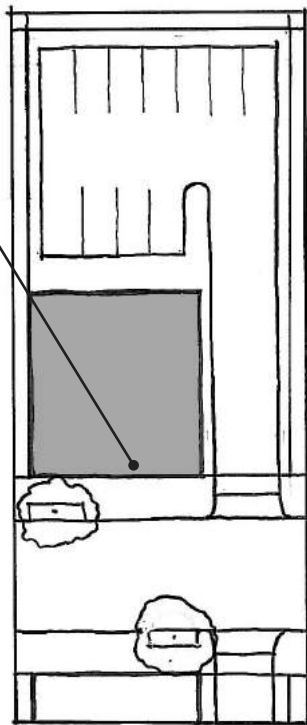
Mixed-use buildings should engage the sidewalk and form a street wall that contributes to the character of the street.



A traditional retail building meets the sidewalk to engage pedestrians in window-shopping.

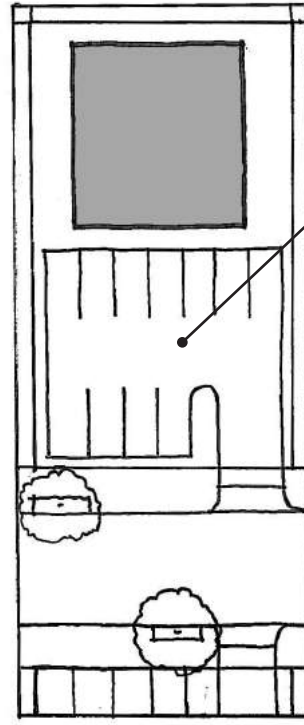
DO

Buildings help define the edge of the sidewalk. In conditions where sidewalks are tight, buildings should consider setting back a few feet to create ample pedestrian space.



AVOID

Front setback area typically used for parking is hostile to pedestrians.



The front of the shops form a street wall that define the street as a "public room".



Retail buildings set back from the street discourage shoppers since even adjacent shops or those across the street are separated by expanses of cars and asphalt.



Commercial entries connect directly to a public sidewalk

BUILDINGS SHOULD BE ENTERED DIRECTLY FROM THE SIDEWALK

Building entries should engage and activate the street edge. In mixed-use conditions, there should also be a clear separation and hierarchy between retail storefronts and secondary entries for upper floor uses.

DO

Secondary entrance / exits may be located facing the rear parking area, but retail entrances should never solely be located at the rear.

Provide a clear walking path from the rear parking area to the front entrance.

A corner entrance can provide both main thoroughfare entry as well as access from rear parking.

Retail entrances should always be located fronting the main thoroughfare.

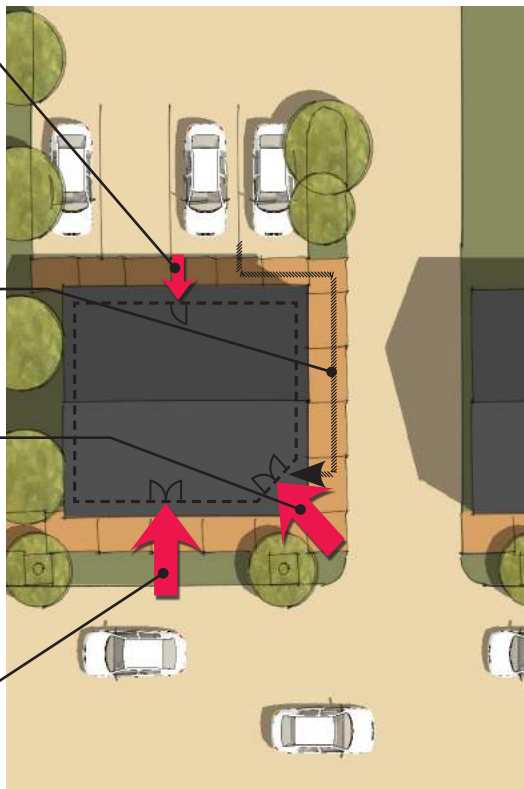


Diagram of entry location(s).

Key Points

- Entries to retail and commercial uses should be prominent and large in scale to be clearly identifiable to the public.
- Retail entries should be located directly off the sidewalk. Galleries and indoor malls are prohibited.
- Residential entries should be separate from public entries. The location may be less prominent and the scale smaller than for retail.
- Residential entries should have their own address separate from the retail.



An inset entry allows more display area and a protected place to view merchandise.



A corner entry serves customers arriving from two different directions.

AVOID



Avoid locating the primary entry at the rear of a building, regardless of its proximity to a rear parking area.

PARKING LOCATION

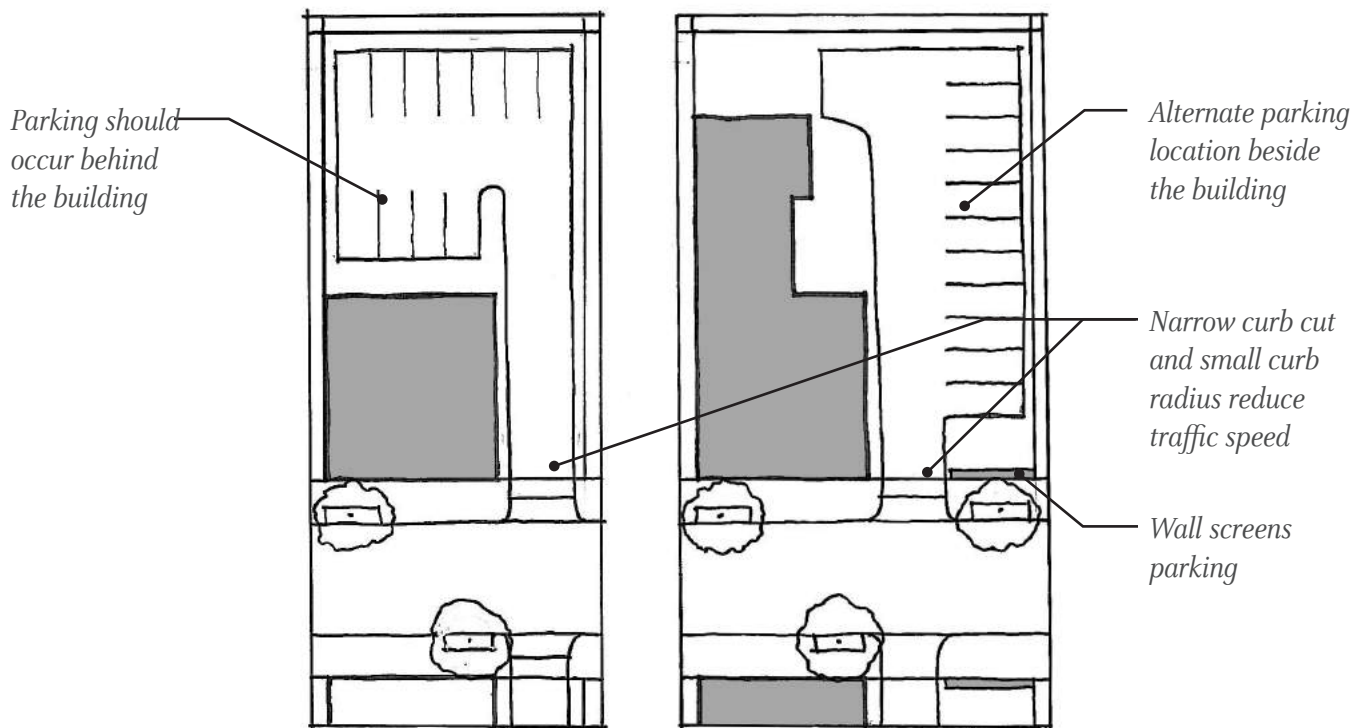
VISIBLE OFF-STREET PARKING HARMS TRADITIONAL MIXED-USE STREETS.

Gaps between storefronts for parking or driveways disrupt the experience of mixed-use streets. Off-Street parking should be hidden to the greatest extent possible by buildings, fences, walls or landscaping. See Site Components section for more details on screening and landscape.



Successful mixed-use streets offer a continuous line of buildings and entries.

DO



Off-street parking is least disruptive behind or beside the building.

AVOID



Avoid parking lots in front of the building.



Wide entry and exit lanes, yield conditions and large curb radii allow traffic to enter or exit parking lots at dangerous speeds.

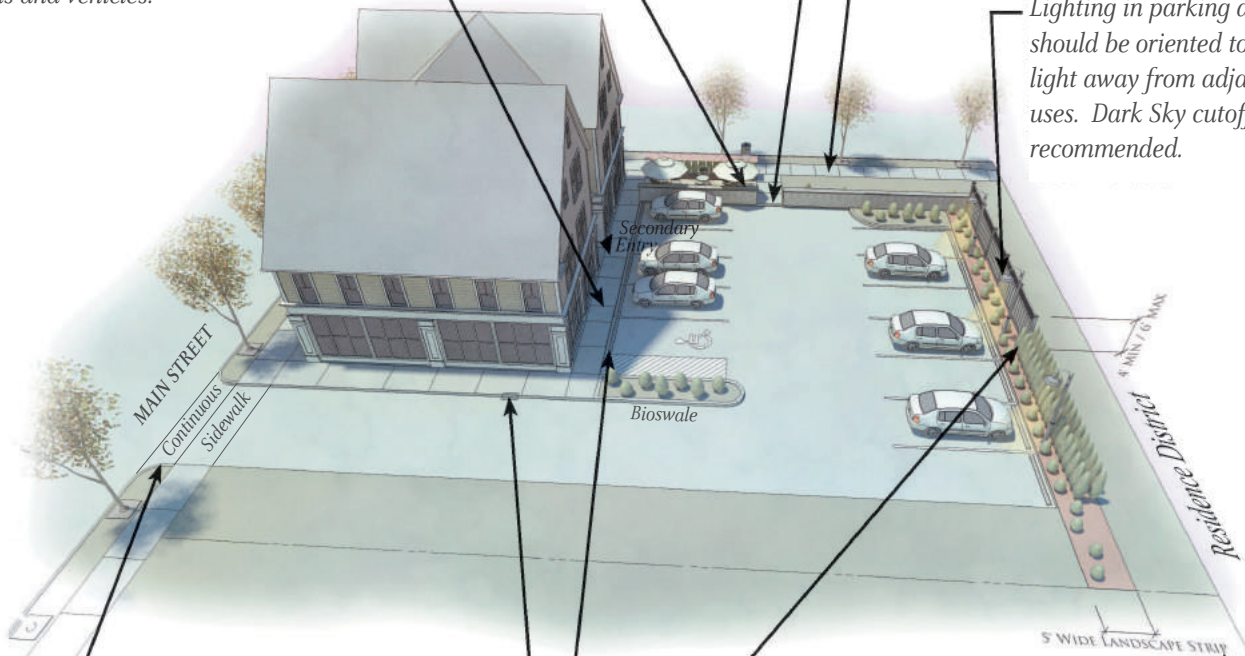
Screen parking areas from outdoor seating and sidewalks by the use of masonry walls and plantings at a minimum of three feet in height.

The layout and design of all means of circulation, including interior drives, parking areas, and walkways, should provide for safe, delineated circulation for pedestrians and vehicles.

Where parking abuts a sidewalk, a curb at least six inches high should be included to delineate the two uses.

Sidewalks or walkways should be included in commercial areas to provide a safe route from parking areas and retail establishments.

Lighting in parking areas should be oriented to reflect light away from adjacent uses. Dark Sky cutoff fixtures recommended.



Site entrances should be minimized, including sharing access drives with adjacent properties and creating contiguous parking areas wherever possible.

Opaque fencing and/or dense landscaping should be included to screen parking areas from adjacent residential areas.

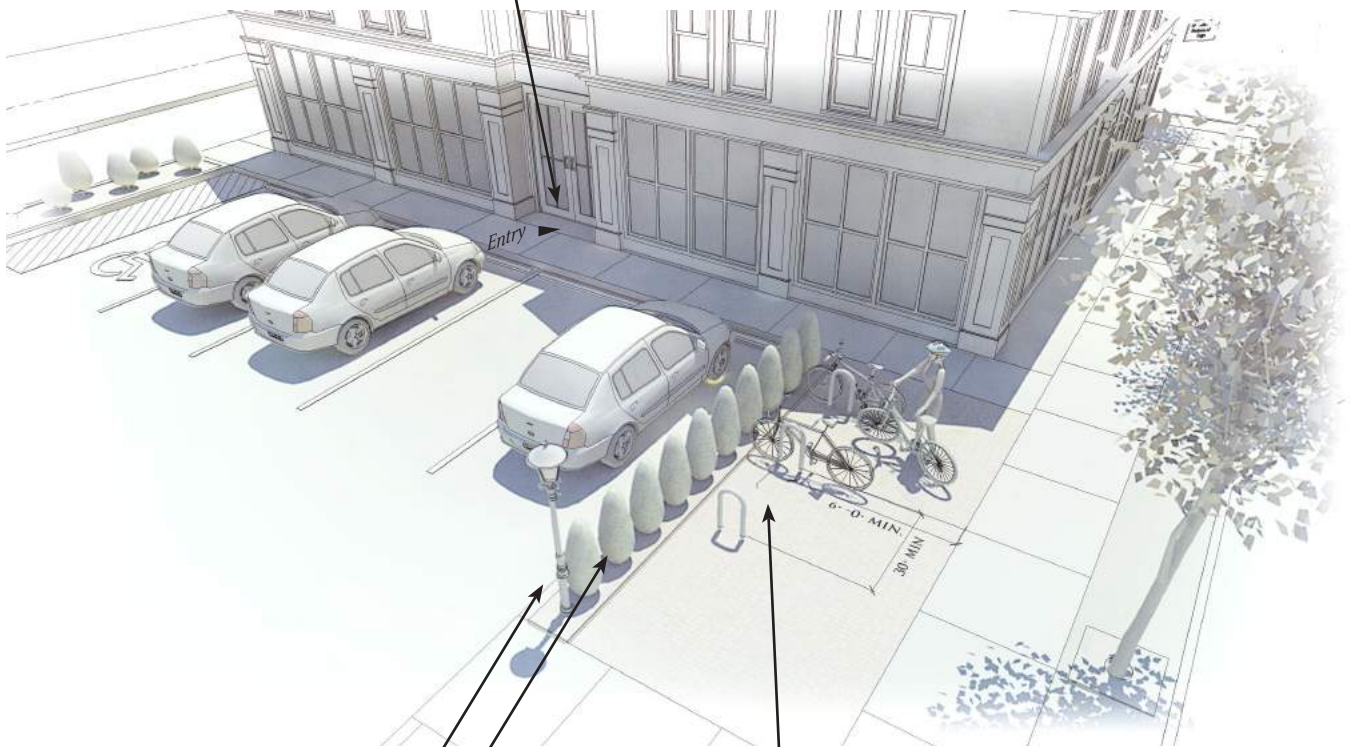
Sidewalks should be a hard surface with provisions for managing stormwater runoff included as necessary. Where sidewalks intersect with automobile lanes, raised surfaces and/or durable, decorative alternatives to conventional pavement shall be used to connect sidewalks or bike lanes across the automobile lanes.

BIKE PARKING

SAFE AND CONVENIENT
PARKING CAN ENCOURAGE
BICYCLE USE.

SITE DESIGN

Bike parking should be convenient to building entrances and street access but away from normal pedestrian and auto traffic.



Bike parking should be well lit and separated from parking and roadways for safety and security.

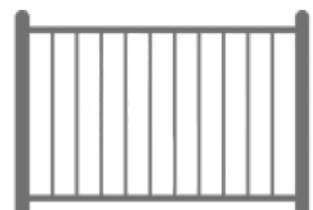
Bike parking should be provided wherever possible. A highly visible location promotes use and discourages theft and vandalism.

DO

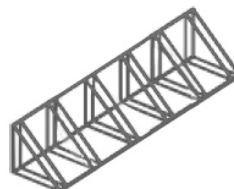


Inverted 'U'

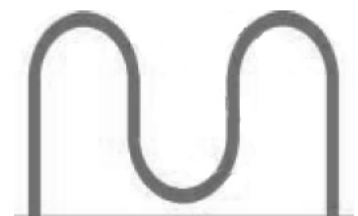
AVOID



Comb



Toast



Wave



WELL DESIGNED
SIDEWALKS ARE CRUCIAL
TO A PEDESTRIAN FRIENDLY
ENVIRONMENT.

Sidewalks support pedestrian flow and mixed-use activity while also accommodating elements such as street trees, lighting and other street furniture.

Well designed sidewalks promote pedestrian use by a range of people, supporting local business, reducing vehicular use, and improving wellness.

DO

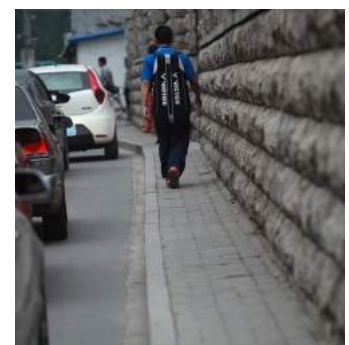


Key Features

- Sidewalks are composed of three zones: a furnishing zone (for trees, lighting, etc.), a pedestrian zone (for movement), and a frontage zone (for activities adjacent to building)
- Ideally each of these has a dedicated area: a minimum of four feet for furnishing, five feet for pedestrian, and two feet for frontage.
- In highly constrained locations, these activities may overlap but doing so will constrain use and may eliminate the ability to include certain elements, such as street trees.

In addition to pedestrian movement, sidewalks can host a number of other amenities if given enough space and distributed appropriately.

AVOID



Narrow sidewalks end up compromised by other needs and create conditions that don't promote pedestrian use.



Furnishing Zone

The 4' to 5' of sidewalk closest to the roadway, used for street trees, light fixtures, and garbage cans. This zone helps define the edge of the sidewalk area and protects pedestrians from vehicular traffic.

Pedestrian Zone

The middle of the sidewalk dedicated solely to pedestrian circulation. The pedestrian zone should be at least 5' for comfort and accessibility and should be free of obstructions.

Frontage Zone

The area of the sidewalk closest to the building face, used for objects and activities associated with the building. The frontage zone may include potted plants, outdoor seating, and temporary signage.



Furnishing zone used to define the edge of the sidewalk



Frontage zone used for plants and outdoor seating.



SAFE, BROAD, AND CLEARLY IDENTIFIABLE PEDESTRIAN AND NON-MOTORIZED VEHICLE CONNECTIONS ENCOURAGE ALTERNATIVE MODES OF TRAVEL

The networks of circulation in mixed use areas should be designed to balance the needs of motorists, cyclists, and pedestrians.

Continuous sidewalks promote pedestrian use by a range of people, supporting local business, reducing vehicular speed, and improving wellness.

DO



Key Features

- Where sidewalks or other pedestrian or bicycle ways intersect with automobile driveways or lanes, raised surfaces and/or durable, decorative alternatives to conventional pavement should be used to connect sidewalks or bike lanes across the automobile lane.
- Striping across the asphalt used for an automobile lane to connect the pedestrian or bicycle way is not adequate.

Raised and painted crosswalks serve as traffic calming measures by extending the sidewalk across the road and bringing vehicles to the pedestrian level.





Provide linked shared streets (woonerfs) or alleyways as pedestrian connections between buildings where applicable. The design should provide safe, broad and easily identifiable ways for pedestrians to travel through areas that may also be shared by vehicles. These shared streets shall be designed to clearly show the space is primarily dedicated to pedestrian traffic through the use of signage, raised or alternative surfaces, and other traffic calming devices.

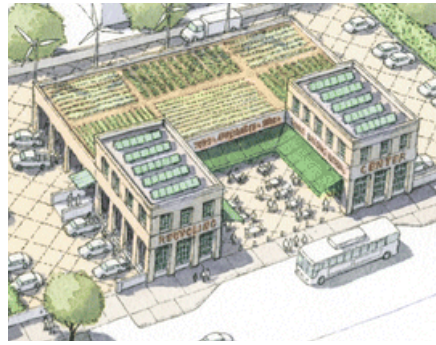
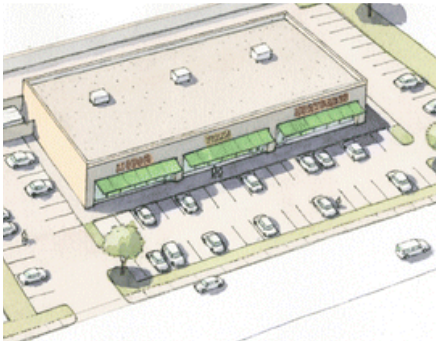


Covered pedestrian only walkways shall be integrated into the site between buildings to connect both on and off-site buildings and parking areas and provide pedestrian access during inclement weather.

AVOID



Crosswalks that are designed or located to prioritize automobile traffic create hazardous conditions for pedestrians.

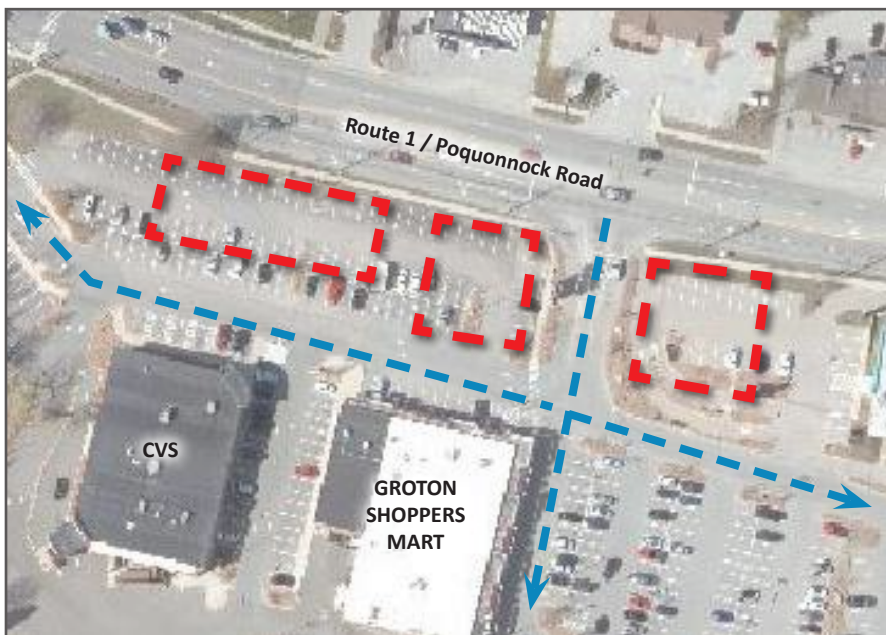


RESTRUCTURE THE SINGLE-USE, AUTO-ORIENTED STRIP MALLS INTO BALANCED, MIXED-USE, WALKABLE PLACES

Through redevelopment, the MTC district will become a destination and ultimately serve as a true Town Center and gathering spot.

*This diagram from **Sprawl Repair Manual** by Galina Tachieva shows how a strip mall site can be re-developed through additions that help define the street edge and create a new public space and opportunity for public art.*

DO

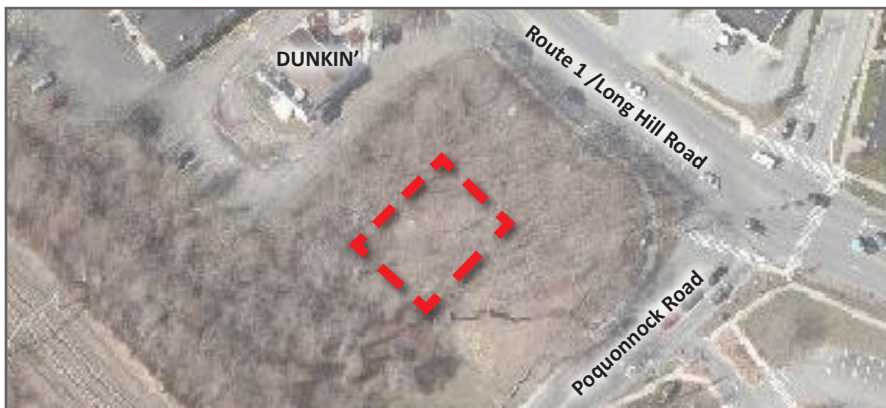


Place new buildings along the street edge to hide parking lots and create a well-defined public realm. Utilize curb cuts that already exist and convert primary parking aisles into internal streets for pedestrians, cyclists, and motorists

Key Features

- Place new mixed-use buildings on corners and along the street edge to hide parking lots and create a well-defined public realm
- Convert primary parking aisles into internal streets that balance the needs of pedestrians, cyclists, and motorists.
- Maintain a manageable/walkable block size
- Connect adjacent parking lots to avoid unnecessary curb cuts along Route 1

AVOID



New buildings should not be placed in a way that reinforces the current auto-oriented development pattern



Deep setbacks, endless parking lots, and frequent curb cuts make walking along Route 1 unpleasant and dangerous

WELL-SHAPED PUBLIC SPACES CAN CREATE MEANINGFUL PLACES FOR PEOPLE TO GATHER

Concentrate public and green space into meaningful squares, parks, and greens and avoid scattered bioswales and green “features” that do not relate to each other or the public realm.

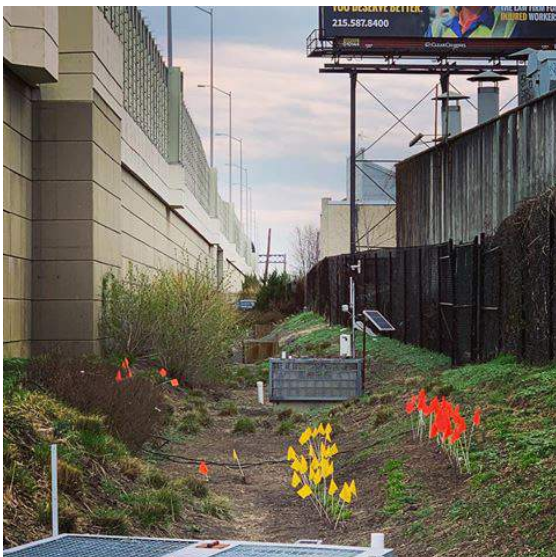


DO



Creating well-defined public and green space between buildings creates opportunities for creative place-making and public art while also helping with water retention and passive stormwater strategies

AVOID



Small and scattered green spaces that are not well-defined or well-located will not add to the quality of the public realm

BUILDING DESIGN

This section of the Design Guidelines addresses a number of issues related to new construction within the Mixed-Use Town Center. The design principles described will help create a vibrant mixed-use, pedestrian-friendly neighborhood.

BUILDING FORM

MIXED USE BUILDINGS SHOULD CREATE A PEDESTRIAN-FRIENDLY GROUND FLOOR AND DEFINE THE EDGES OF THE PUBLIC REALM

Multi-story buildings should clearly articulate base, middle, and top of the building using cornices, distinct materials, or other articulating features.



DO

Key Points

- New buildings should clearly articulate base, middle, and top
- Ground floors should be at least 11' in height and should enhance the pedestrian streetscape
- Middle floors should be articulated differently than the ground floor with smaller window openings and ceiling heights of at least 9'
- The top of the building should gracefully meet the sky and complete the overall composition



Traditional, modern, and transitional mixed use buildings utilize the same principles to create a pedestrian-friendly environment

AVOID



Facades that are largely monolithic, homogeneous, or blank provide little interest and detract from a sense of place.



GROUND-LEVEL RETAIL
DRAWS SHOPPERS AND
ENLIVEN THE SIDEWALK.

Large displays on a storefront can entice passers-by and invite them into a store. Visibility is important to make potential customers aware of a store's offering and create a sense of welcome.

DO



Transparency of a storefront invites customers by letting them know what is offered and if the shop is welcoming business.



Key Points

- Storefronts should contain approximately 70% clear glazed area for the display of goods and services.
- Displays should allow a view through to the sales floor for customers to easily see whether the shop is open.

AVOID



Opaque façades do not invite commercial activity.



The blank walls and windows are uninteresting and shoppers may pass on by.

SITE COMPONENTS

The objects and elements that occupy the space between buildings have a big impact on the “sense of place” in the neighborhood. This section addresses how items like site lighting, landscaping, and walls all contribute to the quality of the public realm.



A mix of lighting types, including appropriate street lights, helps to establish the character of a place.

STREET LIGHTING IS A KEY COMPONENT TO THE MAKING OF A PLACE

Street lighting has a strong effect on the character of a place. This includes both the distribution of the light, and the character of the light fixture/pole itself.

DO



Street lights should reflect the character of the district, with articulated treatments for the base, post, and fixture.



Key Features

- A variety of lighting types should be used to address the different needs of civic spaces, pedestrian oriented streets, and parking areas.
- Lighting should be designed to provide a uniform distribution of light while also addressing safety needs.
- Lighting should be in keeping with the character of the spaces and buildings around them. Industrial poles and fixtures concerned purely with functional requirements should be avoided.

AVOID



Designing site lighting purely to meet functional requirements denies its ability to support character of place.



Landscape used as buffer between sidewalk and parked cars

LANDSCAPING CONTRIBUTES TO A BEAUTIFUL PEDESTRIAN ENVIRONMENT AND HELPS ABSORB WATER.

Landscaping is critical to softening the urban environment. Arrangements should be both beautiful and resilient.

DO



Use plants that complement the scale of the architecture and street.

Key Features

- Select plants that are tolerant of drought, salt, and heat
- Species should be native where possible. No invasive species allowed.
- Use landscaping as part of stormwater management wherever possible.
- Use a variety of plants that will provide some color year-round.



Integrate stormwater management into overall design.



Landscaping can help define the pedestrian realm.

STREET TREES PROVIDE SEVERAL PEDESTRIAN-FRIENDLY BENEFITS.

For pedestrians, street trees can serve as a buffer to vehicular flow and as protection from the elements, while also adding an element of natural beauty and softening an otherwise hard landscape.



Street trees can help delineate zones of a street and add character.

DO



Regularly spaced street trees create a continuous canopy that covers sidewalks while physically and visually separating pedestrians and cars.



Where space is limited, trees can be incorporated in curb extensions.

Key Features

- Continuous, regularly spaced street trees are best for creating a consistent canopy, but even periodic trees (where feasible) are worthwhile.
- Proper installation and maintenance are required to promote health and avoid hazardous situations.

AVOID



Improper maintenance or tree selection creates hazards.



Pedestrian-friendliness is hard to achieve without trees.

FENCES AND WALLS



Fences and walls can have a big impact on the character of a place.

FENCES AND WALLS HELP
HOLD AN EDGE WHERE
BUILDINGS CAN NOT

Low stone walls and fences can mark the boundaries of a property to identify the edge of public and private space. They can also serve to help screen parking lots or define open spaces.

DO



Key Points

- Fences and walls can be used in combination with landscaping to help create separation between the public realm and private property.
- Construct fences of durable, paint-able materials such as wood, fiberglass, or wrought iron. Walls may be brick or stone masonry.
- The design of fences should be appropriate in scale and style to the building, site, and surrounding properties.



Dressed masonry walls, wrought iron, and decorative wood fences are appropriate in more urban and/or formal settings and can help define boundaries like parking edges or deep setbacks.

AVOID



PVC, plastic and other synthetic fences have been shown to lower property values in historic neighborhoods.



Chain-link fencing should be confined to the least visible locations.



Tall stockade type fences are typically not found in a mixed-use setting.

PROPER SCREENING OF
PARKING AREAS CAN
MINIMIZE THEIR VISUAL
IMPACT.

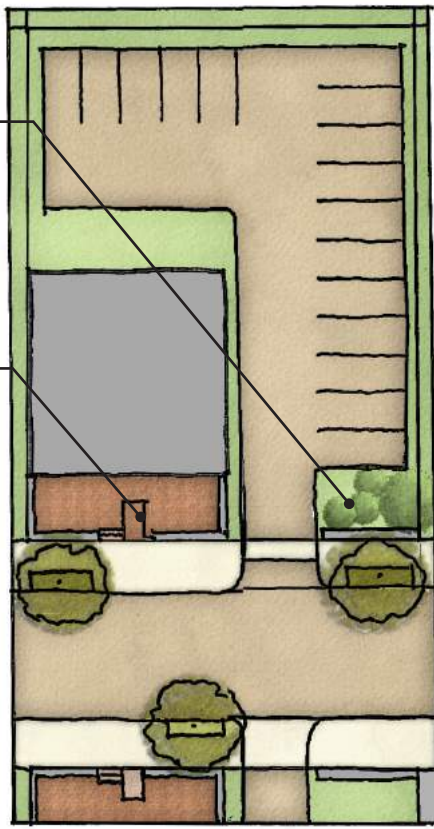
At exposed edges of surface parking lots, a combination of landscaping and fencing can help screen and define the public realm.



DO

A wall, fence or landscaping can shield views to the parking area from the public way.

A similar approach can be used to define the space in front of existing buildings set back from the road to create usable space for seating or programming.



Key Points

- When parking is exposed to the public realm, a wall or fence can shield the parking area from view from the public way.
- Including a layer of landscape can also serve to soften the edge of an otherwise broad expanse of hardscape.
- Without such screening, pedestrians will feel uneasy being surrounded by motor vehicles.
- This approach also works well to screen utilities and/or to help define underutilized spaces in building setbacks.

AVOID



Undefined parking zones in retail building front setbacks are unwelcoming to pedestrians.



Large expanses of parking exposed to the public realm also detract from the character of the community.

APPENDIX

For further reading and guidance, see the following resources:

The Architectural Pattern Book: A Tool for Building Great Neighborhoods
Urban Design Associates, 2004

Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
Institute of Transportation Engineers, 2010

Model Design Manual for Living Streets
Los Angeles County, 2011

Retrofitting Suburbia: Urban Design Solutions for Redesigning Suburbs
Dunham-Jones, Ellen, and June Williamson, Hoboken, John Wiley & Sons, 2009

SmartCode (version 9.2) & SmartCode: Bicycling Module
The Town Paper, 2009

Street Design Manual
New York City Department of Transportation, 2009

Sprawl Repair Manual
Tachieva, Galena, Washington, DC, Island Press, 2010

Urban Street Design Guide
National Association of City Transportation Officials, 2013