



ROUTE 110 MASTER PLAN

Westford, MA

FINAL - NOVEMBER 15, 1999

TRANSPORTATION ENGINEER & PLANNER

Bruce Campbell & Associates, Inc.

38 Chauncy Street, Suite 701
Boston, Massachusetts 02111
617-542-1199

LANDSCAPE ARCHITECT

Geller Associates, Inc.

2310 Washington Street
Newton, Massachusetts 02462
617-244-8521

MEMBERS OF THE ROUTE 110 MASTER PLAN COMMITTEE

Robert Herrmann (Chair)
Angela Harkness (Vice-Chair)
Peter S. Fletcher
Nicholas S. Reed
Robert L. Shaffer
Leslie A. Thomas
Samuel Zouzas

Jeffrey Chelgren - Director of Land Use Management

CONSULTING TEAM

Bruce Campbell and Associates, Inc. - Transportation Engineers & Planners
Geller Associates Inc.- Site Planning, Landscape Architecture

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I. EXECUTIVE SUMMARY

“Whether we are discussing housing, or economic issues, transportation or environmental protection, we are trying to answer two fundamental questions: What do we want the character of Westford to be? and How can growth and change be accommodated in a manner that is compatible with Westford’s character?” [Westford Master Plan Policies and Directions - Adopted 1995]

The intent of the Route 110 Master Plan is to institute measures in which a sense of community can thrive and in which the Route 110 retail and commercial district can retain and rebuild the rural and scenic character of a country road while allowing the overall transportation network to function efficiently.

Much like the town-wide Master Plan which was adopted in 1995 for the express purpose of affecting positive change in the eventual build out of our community, the Route 110 Master Plan strives to provide similar guidance for development occurring along Littleton Road, Boston Road and Carlisle Road. The town-wide Master Plan seeks to accommodate acceptable levels of growth while using various controls to assist the Town in maintaining desirable rural, historical and agricultural character. Likewise the Route 110 Master Plan provides a method by which this important retail and commercial district can thrive, the pedestrian network can function more efficiently, and the entire corridor can simultaneously retain or rebuild its desired rural and scenic character.

For example, rather than designing roadways or sites primarily for the convenience of vehicular traffic, the plan envisions a design in which the pedestrian comes first. Much of the transportation plan focuses on roadway improvements that would create a more aesthetically pleasing, pedestrian friendly environment, would provide more usable links between commercial projects, would promote the remaining rural characteristics of the roadway and would encourage replication of lost rural character where appropriate. To accomplish these goals, the Plan includes, among other things, a safe and convenient walkway network, bicycle ways, well-marked crosswalks,

benches, boardwalks through wetland areas, interpretive signage and suggestions for landscaping design and preservation areas. In addition, the Plan recognizes and provides special, detailed treatment for eight specific nodes along the corridor deemed to be important either because of their history or their present use.

The Route 110 Master Plan is intended to serve as a tool for review of both Town and private development projects. In recognition of the fact that traffic impacts are projected, the Town may request that the development community contribute its fair share toward mitigation of those impacts and improvements to the general transportation network. The Plan can provide a suggested structure and framework for such mitigation contributions.

The overall intent of the Route 110 Master Plan is to create a sustainable balance between traffic, inevitable land use development and the environment.

ORGANIZATION OF THE ROUTE 110 MASTER PLAN

The Route 110 Master Plan document is comprised of the following six, interrelated sections of text, graphics and plans. Any one section loses relevance when taken out of context of the entire report.

- Executive Summary
- Goals and Objectives - The scope of the Route 110 Master Plan, and what it sets out to accomplish.
- Roadway Character Analysis - A graphic representation which delineates the four Character Districts in the study area, a description of each Character District with representative photo examples. This serves as an analysis of visual character and how it changes as you move through the study area. A description of the unique development pressures on each Character District is also included.

- Policies and Directives/Design Prototypes - The nuts and bolts of the Route 110 Master Plan document, these are a set of design guidelines to be implemented along with any proposed development in the study area. This will apply to built elements within the study area; not just along the roadway, but to areas interior to sites visible from the road. Design guidelines will be for sidewalks, walls, fences, planting, etc.

A Conclusions and Recommendations section will be included which emphasizes broader planning strategies, approaches to changes in zoning, funding strategies, and other regulatory approaches to implementation of the Route 110 Master Plan. The Policies and Directives section applies to *all* Character Districts.

The Design Prototypes portion contains pictures which convey images of the design aesthetic the Town is striving for within the study area.

- Travel Demand Management - Recommendations provided to reduce traffic congestion and promote environmentally friendly transportation systems.
- Schematic Node Plans - Eight locations within the study area were chosen that have importance either from a traffic standpoint, are high visibility, or simply provide opportunities to develop unique landscape which further the development of a rural design aesthetic. These areas have been designated to receive special treatment in the form of landscaping, pavements, lighting, fencing, walls, wildflower meadows, boardwalks etc.
- General Plan and Details - Plans containing surveyed existing and proposed conditions for entire study area. Sidewalk routing and construction is detailed. Specific design and planning recommendations for landscape treatment, screening, curb cut widths, viewshed maintenance, etc. are provided. Proposed easements which allow for construction and maintenance of proposed facilities are shown.

II. GOALS AND OBJECTIVES

The scope of the Route 110 Master Plan, and what it sets out to accomplish.

A. Develop a design language that defines the visual character of the roadway corridor, and promotes the roadway corridor's sense of place, rather than just as a conduit for travel.

B. Promote preservation and enhancement of the project area's existing visual rural character, and rebuilding of lost character. Each district identified and analyzed in the following section is defined by a particular character, District 1 being the most pristine, District 3 the most developed. The goal for all districts is to evolve toward a District 1 level of visual rural character.

C. Support and build upon the recommendations of the existing Westford Master Plan by:

1. protecting community character
2. protecting open space
3. encouraging alternatives to strip mall development
4. fostering environmental protection
5. implementing travel demand management strategies

D. Provide recommendations to enhance visually degraded areas and to resist pressures which contribute to further visual degradation of areas, such as spot zoning, "creep zoning" or "connect the dot" zoning.

E. Identify and describe roadway corridor development features, existing and disappearing, that will enhance the roadway appearance and can be implemented regardless of future roadway widths, addition of lanes and/or signalization of intersections. Improvements will include:

1. new sidewalks to accommodate pedestrians and bicyclists
2. stone walls, fences, signage and lighting
3. creation of landforms
4. landscaping
5. traffic calming measures to reduce speeding
6. protection of mature tree canopy
7. promotion of the burial of overhead utility lines

F. Identify sites and develop site plans for public access “nodes”. Nodes will be sited at locations recognized as special or unique, and points of confluence such as transportation nodes and local landmarks.

G. Promote the burial of overhead utility lines.

H. Implement Travel Demand Management (TDM) strategies.

I. Provide options for passive and alternative transportation by incorporating pedestrian and bicycle amenities (ie. sidewalks, wide shoulders for bicycles). To encourage passive and alternative transportation, provide for connections to the following:

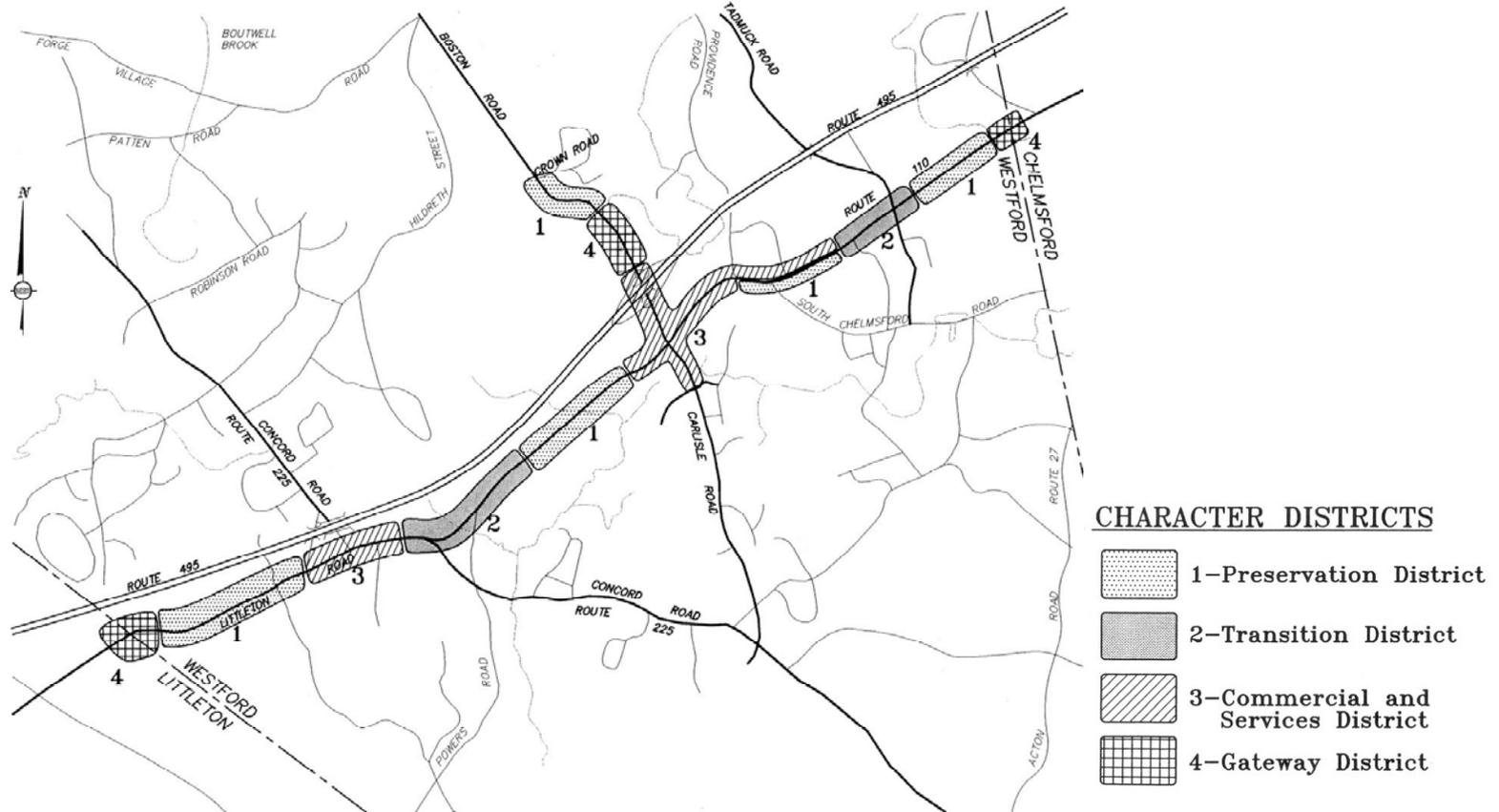
1. the Town Center
2. community centers and schools
3. recreation facilities
4. the proposed regional recreational trail system
5. neighborhoods
6. office parks
7. restaurants
8. shopping centers
9. other businesses

J. Develop a plan that can ultimately be implemented through a combination of public and private funds. The Route 110 Master Plan design will seek to qualify for state funding in a manner most appropriate for the community.

K. Blend the desires of the community with the requirements for improvements on State Highways, in a manner most appropriate for the community.

III. ROADWAY CHARACTER ANALYSIS

A graphic representation which delineates the four Character Districts in the study area, a description of each Character District with representative photo examples. This serves as an analysis of visual character and how it changes as you move through the study area. A description of the unique development pressures on each Character District is also included.



CHARACTER DISTRICT 1: PRESERVATION DISTRICT

Defined by areas of distinct rural character that exemplify the desired rural landscape aesthetic.

Characteristics of this district include:

- mature tree canopy
- narrow roads
- open fields
- limited street lights
- vistas
- absence of traffic signals
- stone walls
- limited curbing
- country fences
- resource areas (ie. Wetlands and Wildlife Habitat)
- period architecture that exemplifies and contributes to the desired rural aesthetic (massing, scale, detail, character)
- low density development

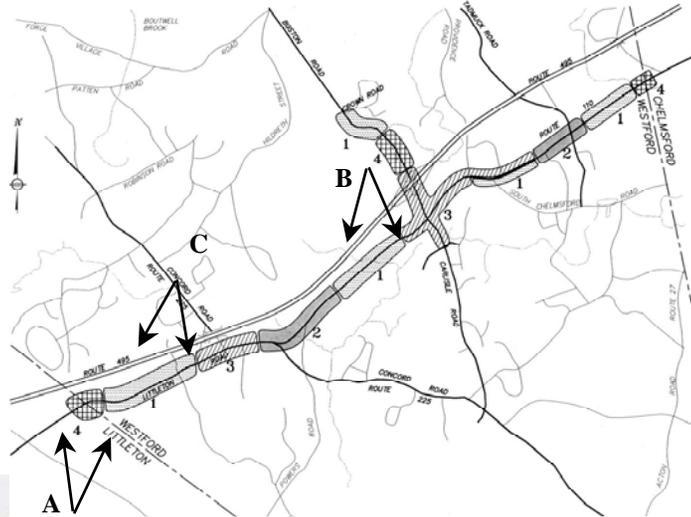
Development Pressures and Implications:

- high potential for character erosion due to:
 - large, undeveloped land
 - parcels that allow for traditional development patterns
 - highway access
- preservation degree of difficulty: high
- “Resource Areas” which contribute to unique landscape character are provided local, state and federal regulatory protection

CHARACTER DISTRICT 1: PRESERVATION DISTRICT



A-Open Fields



B-Narrow Roads, Limited Curbing



C-Rural Architecture and Stone Walls

CHARACTER DISTRICTS

-  1-Preservation District
-  2-Transition District
-  3-Commercial and Services District
-  4-Gateway District

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CHARACTER DISTRICT 2: TRANSITION DISTRICT

Defined by areas of predominant rural character that provide a bridge between a Preservation District and a Commercial and Services District.

Characteristics of this district include:

- open space interspersed with limited development
- highly maintained landscapes
- architecture of mixed compatibility with the desired rural aesthetic (massing, scale, detail, character)
- wetlands, pocket forests and small open fields

Development Pressures and Implications:

- high potential for character erosion due to:
 - existence of areas whose character is defined in Commercial and Services District
 - existing large, undeveloped lots
 - assemblage of small lots into larger developable lots
- this district is subject to the maximum threat of development of all the districts

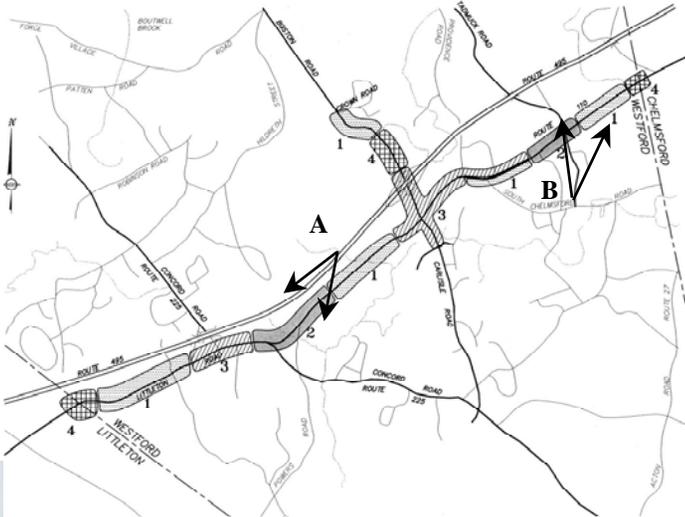
CHARACTER DISTRICT 2: TRANSITION DISTRICT



A-Open Space Interspersed with Limited Development



B-Highly Maintained Landscapes



CHARACTER DISTRICTS

-  1-Preservation District
-  2-Transition District
-  3-Commercial and Services District
-  4-Gateway District

CHARACTER DISTRICT 3: COMMERCIAL AND SERVICES DISTRICT

Defined by areas of concentrated development that do not contribute to the desired rural landscape aesthetic.

Characteristics of this district include extensive and/or excessive:

- parking fields
- street lights
- commercial sites
- roadway pavement
- traffic signals
- curbing
- architecture incompatible with the desired rural aesthetic (massing, scale, detail, character)

Development Pressures and Implications:

- high potential for development due to:
 - existence of areas whose character is defined in Commercial and Services District
 - highway access
 - high land value
 - reuse of existing sites
- most challenging district in terms of restoring rural character
- greatest inconsistency with desired goals

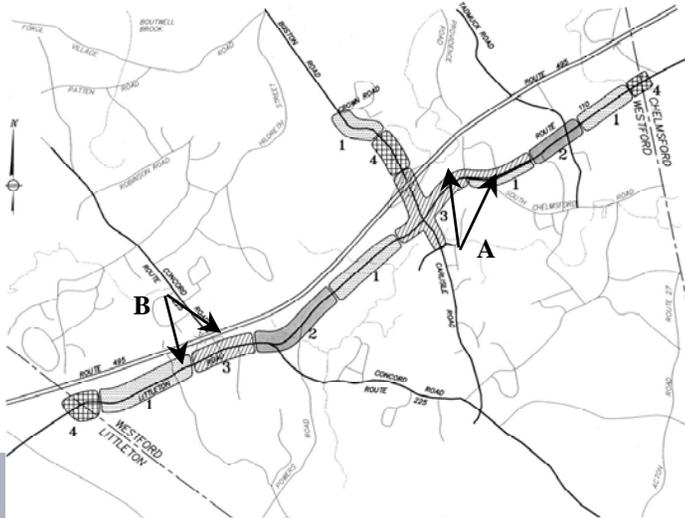
CHARACTER DISTRICT 3: COMMERCIAL AND SERVICES DISTRICT



A-Roadway Pavement, Traffic Signals and Curbing



B-Commercial Sites



CHARACTER DISTRICTS

-  1-Preservation District
-  2-Transition District
-  3-Commercial and Services District
-  4-Gateway District

CHARACTER DISTRICT 4: GATEWAY DISTRICT

Defined exclusively by their location at entry points to the Town.



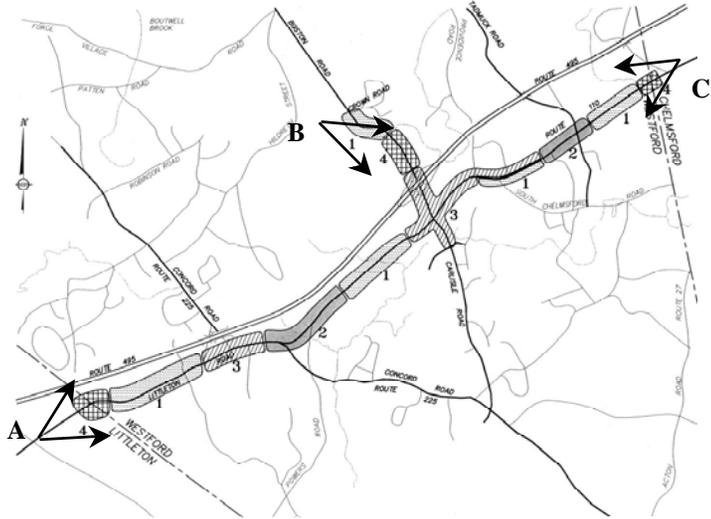
A



B



C



CHARACTER DISTRICTS

-  1-Preservation District
-  2-Transition District
-  3-Commercial and Services District
-  4-Gateway District

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IV. POLICIES & DIRECTIVES / DESIGN PROTOTYPES

The nuts and bolts of the Route 110 Master Plan document, these are a set of design guidelines to be implemented along with any proposed development in the study area. This will apply to built elements within the study area; not just along the roadway, but to areas interior to sites visible from the road. Design guidelines will be for sidewalks, walls, fences, planting, etc.

The Conclusions and Recommendations section emphasizes broader planning strategies, approaches to changes in zoning, funding strategies, and other regulatory approaches to implementation of the Route 110 Master Plan. The Policies and Directives section applies to *all* Character Districts.

The Design Prototypes portion contains pictures which convey images of the design aesthetic the Town is striving for within the study area.



SIDEWALKS



GOAL- Encourage passive and alternative transportation by providing sidewalks for pedestrian and bicycle use.

GUIDELINES-

1. To encourage passive and alternative transportation, sidewalks should be linked to public and private points of interest or destinations which include the following:

- A. the proposed regional recreational trail system
- B. recreational facilities
- C. schools
- D. neighborhoods
- E. office parks
- F. restaurants
- G. shopping centers
- H. Town Center
- I. other business



- 2. Provide significant separation between the edge of the roadway and sidewalk to maximize safety and provide a sense of security for pedestrians and bicyclists.
- 3. Layout sidewalks to meander through wooded areas and around existing trees, stonewalls and other natural physical features. Provide selective clearing as opposed to clear cutting in order to limit vegetation removal.
- 4. Allow the sidewalks to follow the existing topography to minimize grading within and outside the existing right-of-way.
- 5. Construct sidewalks to approximately a 6 foot width (1.83 meters) in all locations. Sidewalks shall be constructed of bituminous concrete.

SIDEWALKS

6. Where sidewalks meet driveways or roadways, provide wheelchair ramps in accordance with the rules and regulations of the Commonwealth of Massachusetts Architectural Access Board (521 CMR).

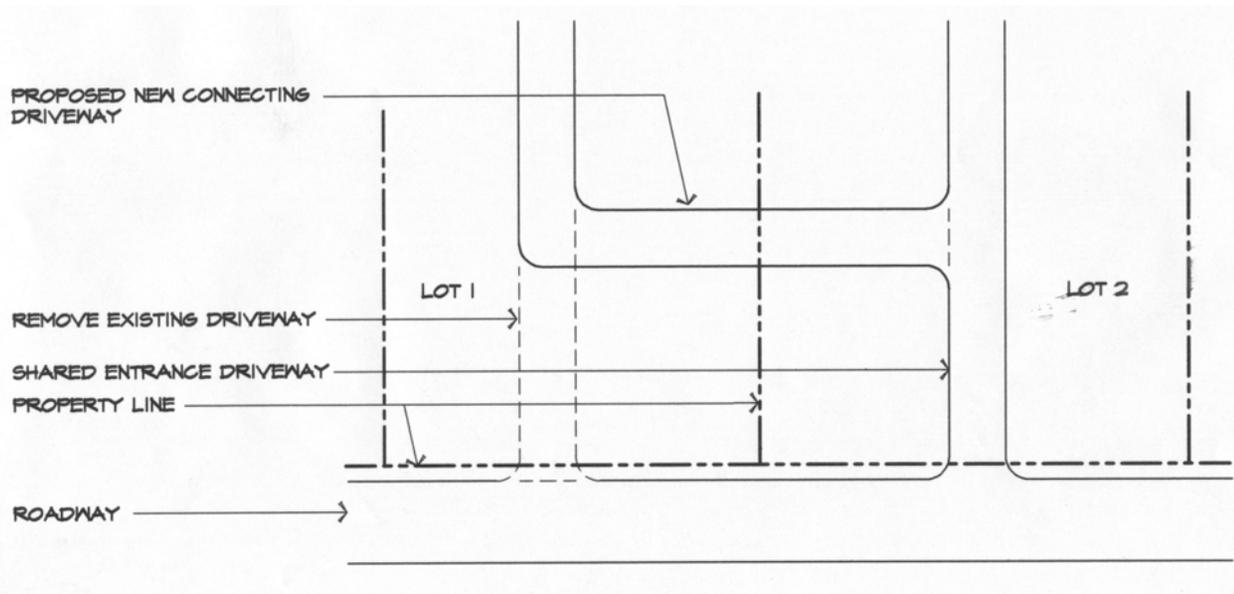


DRIVEWAY OPENINGS

GOAL - To minimize conflict between motorists, pedestrians and bicyclists through the consolidation of existing and future driveway openings to improve public safety.

GUIDELINES -

1. Consolidate the number of existing and future driveways to reduce vehicular conflict between driveway traffic and the following:
 - A. Motorists on public roadways
 - B. Pedestrians
 - C. Bicyclists
2. Provide shared driveways for single and multiple adjacent properties under the same or separate ownership particularly where property frontage on a public roadway is less than 150 feet.
3. Provide access easements to allow legal use of shared driveways over property under different ownership.
4. Provide access drives between adjacent properties under the same or different ownership to minimize travel and congestion on public roadways.



BOARDWALKS



Handicapped Accessibility



GOAL- provide access through the wetlands while educating the public about this important ecological system.

GUIDELINES-

1. Minimize disturbance by using proven construction means and methods.
2. Maintain existing vegetation to the greatest extent possible.
3. Minimize re-grading within existing wetlands.
4. Provide interpretive signage.
5. Provide sitting areas and passing lanes at required ADA intervals.



Sitting area

BOARDWALKS



Post and Beam Construction



Interpretive signage



Lookout

CURBING



Cape cod asphalt berm

GOAL - Limit the use of curbing to necessary applications such as: directing drainage, where pedestrian areas abut roads or driveways, to protect landscape areas.

GUIDELINES - Acceptable curb types include bituminous “Cape Cod” berm, vertical and sloped granite curbing. See plans for acceptable locations and preferred type to be used.



Sloped granite curb



Vertical granite curb

STONE WALLS AND FENCES



GOAL - Utilize stone walls and wood fences along the street frontage of developments as a linear design element, to evoke rural character, and to enhance pedestrian security and safety.

GUIDELINES -

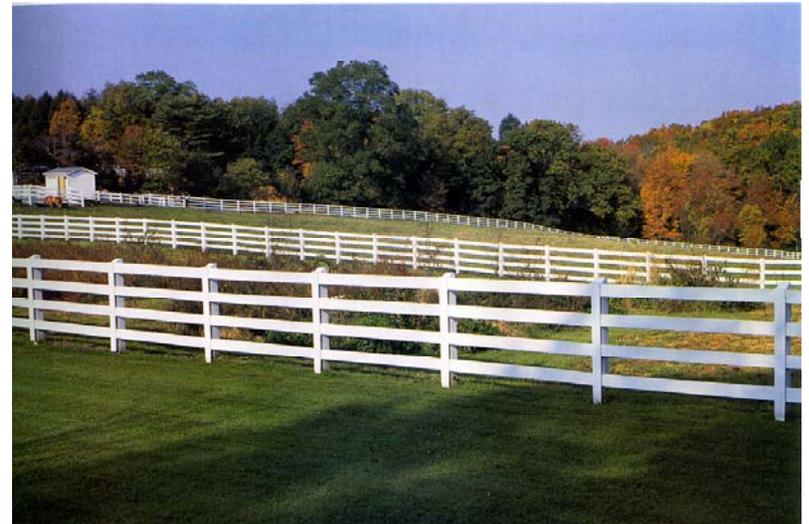
1. Stone walls shall be 36" height, dry laid fields stone, sited as accent features at driveway entrances or to highlight other landscape features, existing or proposed, along roadways or in sites. Although not a preference, if mortared walls are used construct with deep-raked joints (see detail).

STONE WALLS AND FENCES



2. 4' high post and rail fencing shall be located along roadways and driveways and in between the roadway edge and sidewalk(s).

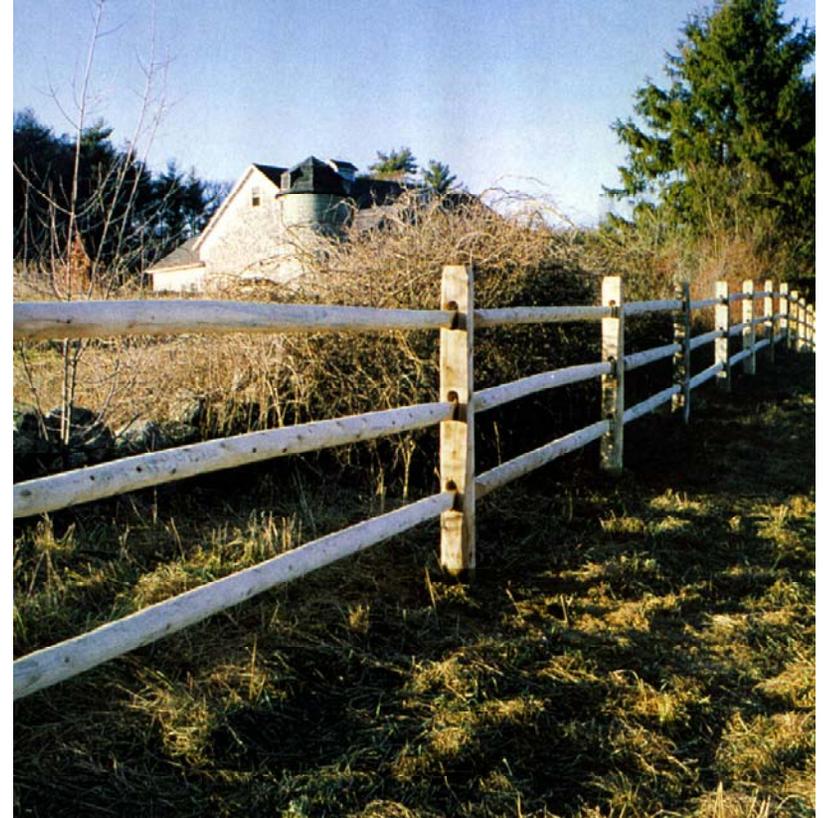
Paddock type fence



STONE WALLS AND FENCES



Post and Rail type fence



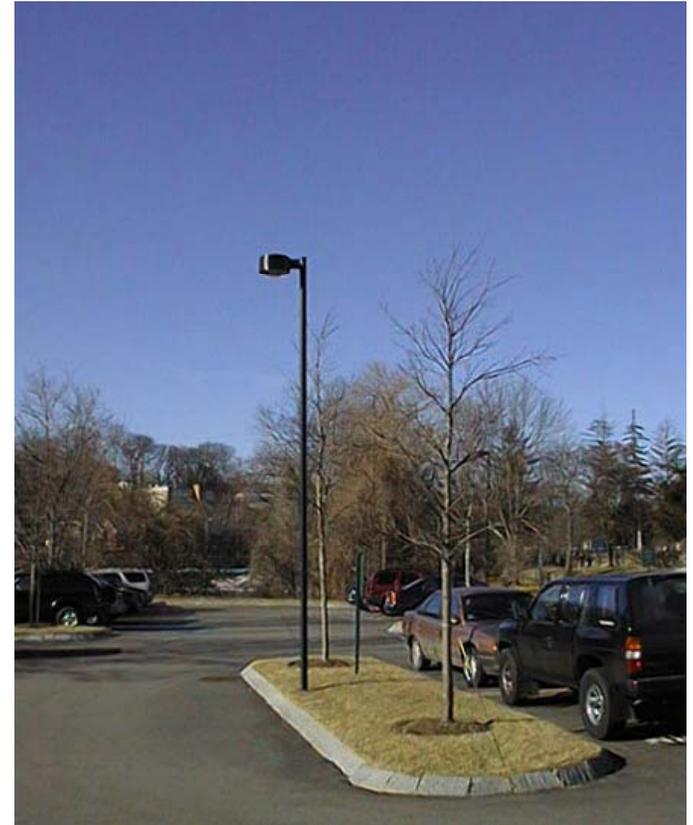
PARKING LOT AND SITE LIGHTING



GOAL - Provide unobtrusive site lighting for parking lots and site entry drives.

GUIDELINES -

1. Site lighting fixtures for parking lots and site entry drives shall be 18' height or less.
2. Maximum average ground level footcandle levels at any point in the study area shall be 1.5 fc for parking lots.
3. Fixtures shall be similar in design to examples shown on this page or approved equal.
4. Black coated finish to be used on all bases, posts and fixtures.



PEDESTRIAN SCALE LIGHTING



GOAL - Provide attractive lighting for pedestrians.

GUIDELINES -

1. Site lighting for pedestrians to be 12'-14' in height.
2. Maximum average ground level footcandle levels at any point in the study area shall be 1 fc in pedestrian areas.
3. Fixtures shall be similar in design to examples shown on this and the following page.
4. Black coated finish to be used on all bases, posts and fixtures.



SIGNAGE LIGHTING



GOAL - Provide unobtrusive lighting for signage.

GUIDELINES -

1. All lighting for signage shall be screened with planting where possible.
2. Utilize small, black coated fixtures with a maximum mounting height of 18”.

TRAFFIC SIGNALS

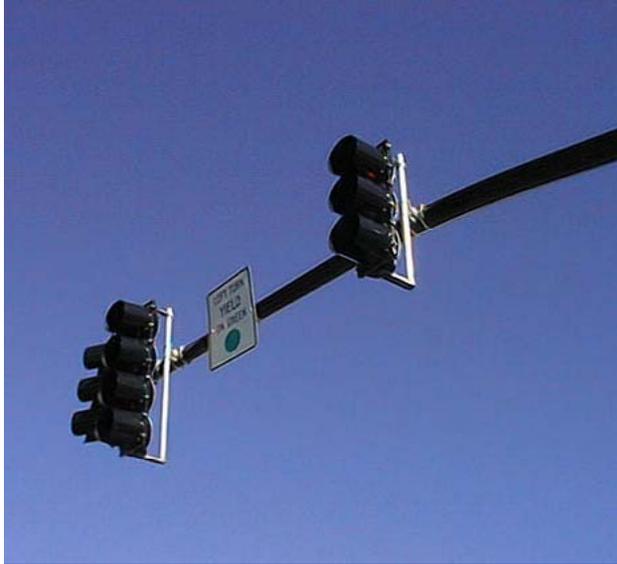


GOAL- Provide attractive equipment for traffic signals

GUIDELINES-

1. Utilize ornamental / fluted post and mast arms. Span wire configurations are obtrusive and inappropriate.
2. All traffic signal equipment including but not limited to mast arms, signal heads, posts, controller cabinets, service meter boxes, hardware and brackets shall have a black coated finish.

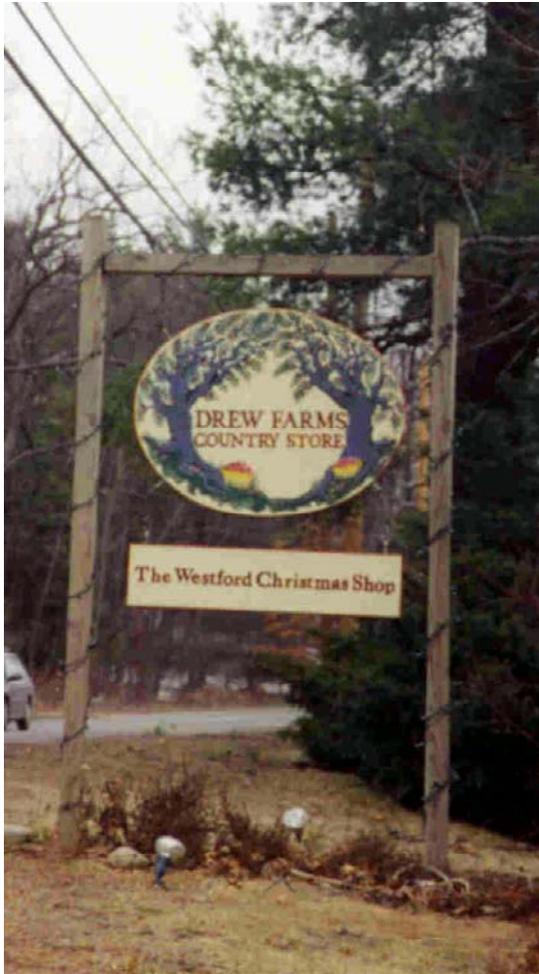
TRAFFIC SIGNALS



Route 110 Master Plan

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SIGNAGE



GOAL - Provide attractive signage within viewsheds of the roadway corridor. This includes business identification signage as well as directional signage withing site developments.

GUIDELINES -

1. The preferred material to be used is wood.
2. Dimensional requirements shall be as per the zoning by-law.

SIGNAGE



Route 110 Master Plan

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GUARDRAILS



GOAL- to provide safety for vehicular and pedestrian traffic where steep slopes occur along the side of the road.

GUIDELINES-

1. The use of steel guardrails is discouraged. Wood is the preferred material.

SHADE TREES



Quercus palustris



Tilia cordata



Acer rubrum

GOAL - develop and preserve a dense, shade tree canopy along the roadway in a naturalized formation, rather than an allee' or colonnade and provide a diversity of species.

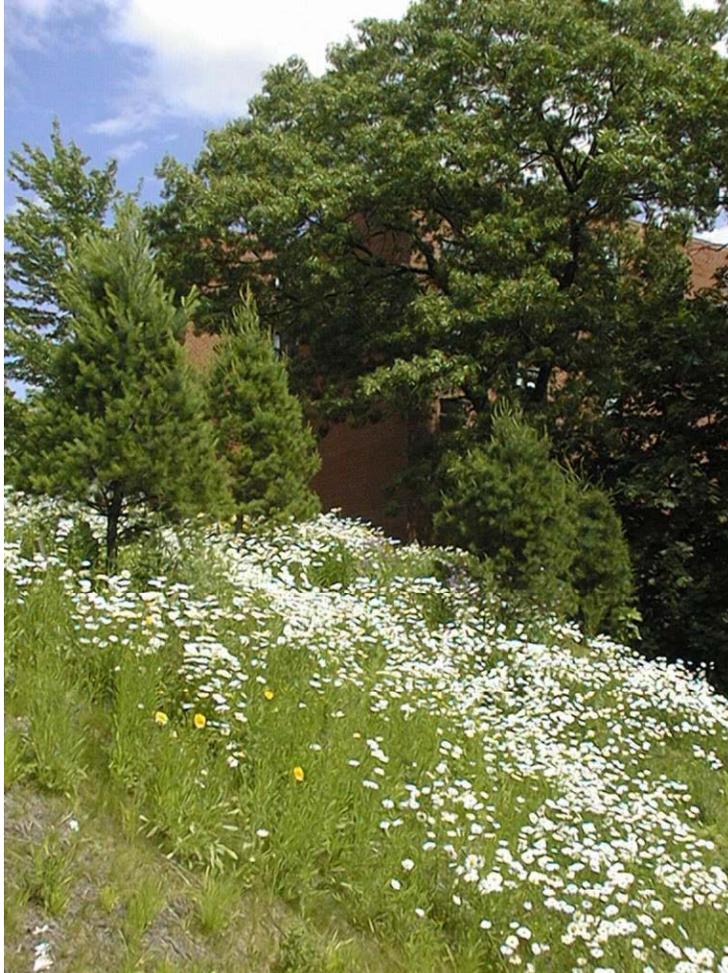
GUIDELINES -

1. Provide shade trees, densely planted, along lot frontage, greater than 3 1/2" caliper, and greater than 14 foot height.
2. Provide shade trees between the sidewalk and curb line.

3. Use a variety of species from the following list:

- | | |
|---------------------|-----------------|
| Acer varieties | Maple |
| - platanoides | Norway |
| - rubrum | Red |
| - saccharum | Sugar |
| Fagus | Beech |
| Cercidiphyllum | Katsura |
| Gleditsia varieties | Honeylocust |
| Quercus varieties | Oak |
| Tilia varieties | Linden/Basswood |
| Zelkova varieties | Zelkova |
| Platanus varieties | London Plane |

WILDFLOWERS



GOAL- to provide a wide array of colors from spring to fall in open field areas. Also, to develop landscapes which provide for low maintenance, minimal watering, and wildlife habitat value.

GUIDELINES-

1. Provide a native perennial mix.
 - reseeding
 - weed control
 - watering
 - fertilization
 - fall mowing & cleanup
2. Establish a maintenance program per the recommendations of the manufacturer incorporating but not limited to:



DETENTION/RETENTION BASINS



GOAL - Locate detention and retention basins in low visibility areas, such as at the rear of buildings. Grade detention and retention basins with curvilinear contours to avoid geometric, engineered solutions. Provide plantings at the bottom of basins which will tolerate periodic inundation. Side slopes shall be a maximum of 1:3 (vertical:horizontal). No rip rap shall be allowed in areas visible to public ways. Plant native shrubs and grasses on basin side slopes to screen views to the basin.

Route 110 Master Plan

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DETENTION/RETENTION BASINS



Route 110 Master Plan

Westford, MA.

DETENTION/RETENTION BASINS

Plant Species appropriate for naturalistic plantings

Scientific Name	Common Name	Scientific Name	Common Name
<u>Deciduous Shrubs</u>		<u>Deciduous Trees</u>	
Callicarpa japonica	Beautyberry	Acer griseum	Paperback Maple
Clethra alnifolia	Summersweet	Acer rubrum	Red Maple
Cornus sericea	Redosier Dogwood	Acer saccharum	Sugar Maple
Cornus sericea	Yellow Twig Dogwood	Amelanchier	Serviceberry
Enkianthus campanulatus	Redvein Enkianthus	Betula nigra	River Birch
Fothergilla gardenii	Dwarf Fothergilla	Carpinus caroliniana	Yellowwood
Fothergilla major	Large Fothergilla	Cornus kousa	Kousa Dogwood
Hamamelis sp.	Witchhazel	Cornus mas	Corneliancherry Dogwood
Hibiscus syriacus	Rose-of-Sharon	Crataegus sp.	Hawthorn
Ilex verticillata	Winterberry Holly	Fraxinus americana	Autumn Purple Ash
Itea virginica	Virginia Sweetpire	Gymnocladus dioicus	Kentucky Coffee Tree
Kerria japonica	Japanese Kerria	Liquidambar styraciflua	Sweetgum
Myrica pennsylvanica	Bayberry	Nyssa sylvatica	Tupelo
Philadelphus coronarius	Sweet Mockorange	Ostrya virginiana	American Hophornbeam
Potentilla fruticosa	Bush Cinquefoil		
Prunus maritima	Beach Plum	<u>Evergreen Trees</u>	
Rosa rugosa	Beach Rose	Abies concolor	White Fir
Vaccinium corymbosum	Highbush Blueberry	Abies fraseri	Fraser Fir
Viburnum sp.	Viburnum	Ilex opaca	American Holly
Weigela florida	Weigela	Pinus nigra	Austrian Pine
		Pinus strobus	Eastern White Pine
<u>Evergreen Shrubs</u>		Pinus sylvestris	Scotch Pine
Kalmia latifolia	Mountain Laurel	Pseudotsuga menziesii	Douglasfir
Leucothoe axillaris	Coast Leucothoe	Thuja plicata	Western Arborvitae
Leucothoe fontanesiana	Drooping Leucothoe	Tsuga diversifolia	Japanese Hemlock
Mahonia aquifolium	Oregon Grapeholly	Tsuga heterophylla	Western Hemlock
Azalea spp.	Evergreen Azaleas		
Rhododendron spp.	Rhododendron		

LANDSCAPE BUFFERS



GOAL - Develop a mix of lawn and planting beds along the roadway corridor, with a lush and densely planted appearance to the shrub and tree plantings to screen parking lots and developments, and to provide a sense of security and safety for pedestrians using the sidewalk.

GUIDELINES -

1. Maintain existing vegetation to the greatest extent possible to screen parking and driveways in landscape islands along the street frontage of developments. Enhance buffers with tall shrubs, deciduous trees and evergreen trees.
2. Provide landscape interest in the ground plane with densely planted beds of a colorful variety of both deciduous and evergreen plantings, wildflowers, ornamental grasses and perennials.
3. Utilize indigenous plant materials.
4. Limit the amount of turf lawn coverage, which is high in maintenance and unnatural in appearance, to minimal areas in landscaped islands between the edge of roadway pavement and site parking or driveways. The remaining ground areas should be planting beds as described above.
5. Utilize “informal”, or “organic” arrangements of beds, as opposed to geometric or formal arrangements.
6. Avoid tall shrubs where they interfere with site lines from entrances, exits and intersections.
7. Plant tall shrubbery where it enhances aesthetics or screens parking lots.

PARKING LOTS



PARKING FIELDS

GOAL - Locate parking fields in the rear of developments. Maximize landscape development between building and street in order to heavily screen parking lots. Stagger landscape islands within parking lots. Utilize inter-bay landscape islands which divide parking aisles. Inter-bay islands should be a minimum of 9 feet in width.

LANDSCAPE BERMS

GOAL - Use changes in grade and raised earthen berms to enhance the screening of parking lots and developments, and also provide interest, drama and a playful character in the landscape.

GUIDELINES -

1. Create raised earthen berms in conjunction with landscape buffers as described in 1.02.
2. Maximum slopes should be 1:3 (vertical:horizontal).
3. Preserve existing grade changes that enhance screening of parking lots and developments.
4. Grading is to be done in a naturalistic or informal style, avoiding straight contours in favor of curvilinear contours.

V. TRAVEL DEMAND MANAGEMENT

Recommendations provided to reduce traffic congestion and promote environmentally friendly transportation systems.

Goal: To reduce vehicle trips generated by existing and new developments within the Route 110 Corridor and to better accommodate generation of pedestrian activity with comfort and safety.

Guidelines: Any new development in the corridor with more than 25 on-site employees, more than 100 vehicle trips per day (entering or exiting based on Town-accepted trip generation data) or more than 25 parking spaces must contain the following elements:

To promote bicycles as a mode choice--An on-site covered secure bicycle rack must be provided.

To promote walking as a mode choice--A sidewalk from the Route 110 right-of-way to a building's entrance must be constructed and maintained. Where a sidewalk presently exists on Route 110 or where a sidewalk is planned (as per the Route 110 design), an ADA compliant connection must be made.

Any new development in the corridor with more than 150 on-site employees must contain the following elements in order to promote an increase in mode shares other than "drive alone":

The developer and/or employer must agree to meet with CARAVAN (1-617-973-7189 or 1-888-4COMMUTE).

An on-site representative should be designated to coordinate and market transportation services with input from the Town of Westford Planning Board.

To promote carpooling as a mode choice--Preferential parking spaces must be designated for carpool users.

The developer must integrate midday trip saving amenities into their development or provide a study which can support reasons that these amenities are not justified. Amenities may include on-site shower facilities, ATM machine, direct deposit, laundry drop-off/pick-up facilities, on-site food service or site-visits by catering vans, post office window, delivery services, day-care facilities.

To reduce commuter peak hour traffic congestion, the employer must offer flexible work schedules and work-at-home options or provide justification why these options are not feasible.

Employers should maintain an employee transportation data bank consisting of the following information: town of residence, method of commuting and work schedule. The employer needs to implement and maintain a plan whose goal is an annual reduction in vehicle-mile traveled (VMT) per employees during the heavy commuting periods of 7:00 - 9:00 AM and 4:00 - 6:00 PM. VMTs may be reduced by increasing the walking trips, bicycle trips, carpooling, working flexible hours, etc.

VI. IMPLEMENTATION STRATEGIES

Amendment to the Westford Rules & Regulations and Zoning Ordinance

The Route 110 Master Plan envisions site development patterns and public improvement specifications which are not necessarily consistent with the current Westford Zoning Map, Rules & Regulations, Zoning Ordinance, and standard engineering practices. Currently, the Town's land use policies for this corridor are strongly influenced by the established narrow, linear commercial/industrial zoning district configurations, and the restrictive dimensional and review process requirements for non-residential development; the combinations of which promotes a more urban strip mall type development pattern. Therefore, the Board of Selectmen and Planning Board are encouraged to review all applicable Town regulations and the Zoning Map for potential changes which may enhance the likelihood of successfully implementing the Route 110 Master Plan and its details.

Recommendations for consideration by the Board of Selectmen & Planning Board include the following:

1. Zoning Ordinance & Rules & Regulations Amendments - Greater flexibility should be incorporated into the regulatory standards of the Town in order to promote the "cluster-like" commercial development concept as a way of concentrating the overall density and preserving a greater amount of open space along the corridor. Alternative approaches to the traditional development review processes should also be considered, including, but not limited to development banking (a process by which density transfers are permitted with conservation restrictions placed on the affected properties) and impact mitigation, and;
2. Zoning Map Amendments - While maintaining the overall density potential within the Littleton Road corridor, the current Commercial Highway (CH) & Industrial Highway (IH) zoning district configurations should be considered in order to promote the desired village-like desired concepts.

BIBLIOGRAPHY

The referencing of the following documents does not necessarily indicate that such documents, and their conclusions, are endorsed by this committee.

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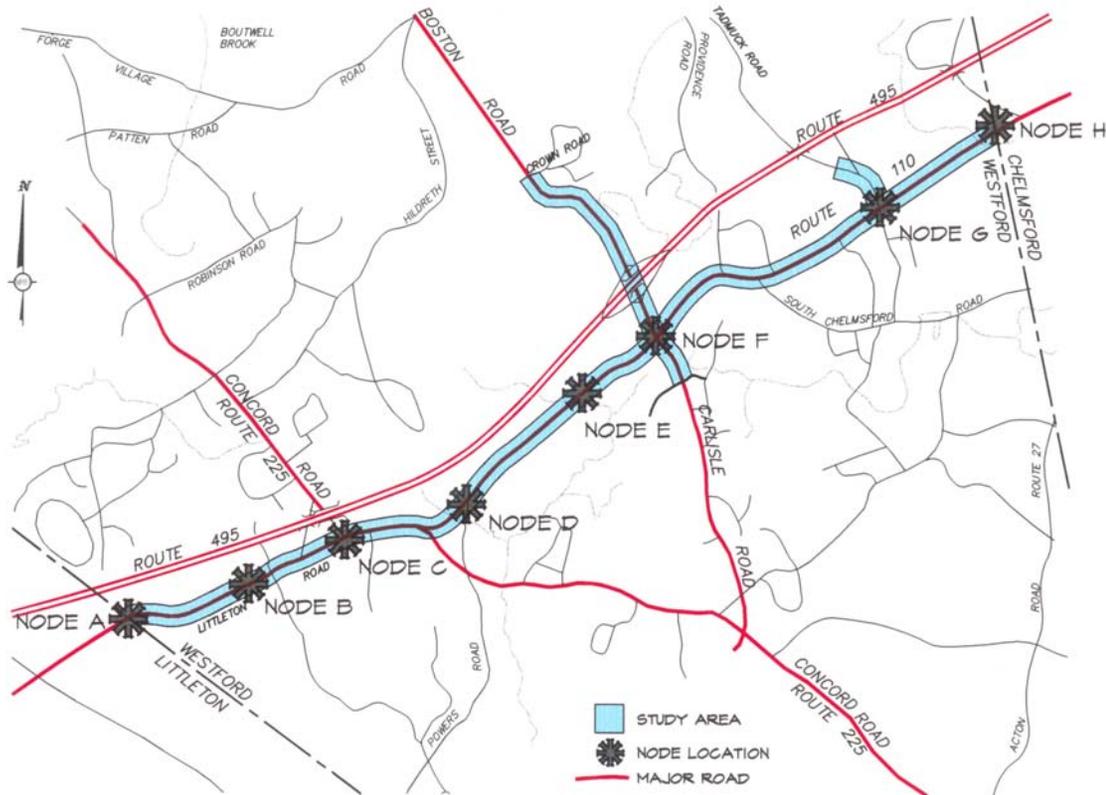
Commonwealth of Massachusetts. Highway Department Standard Specifications for Highways and Bridges. 1995 edition. (Supplemental Specifications issued December 23, 1998.)

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Westford Master Plan Committee. The Westford Master Plan Policies and Directions. May 1995.

APPENDIX A. SCHEMATIC NODE PLANS

Eight locations within the study area were chosen that have importance either from a traffic standpoint, are high visibility, or simply provide opportunities to develop unique landscape which further the development of a rural design aesthetic. These areas have been designated to receive special treatment in the form of landscaping, pavements, lighting, fencing, walls, wildflower meadows, boardwalks etc. On the following pages, plans of these designs are depicted at a schematic design level.



Route 110 Master Plan

Westford, MA.